



# WONCA 2013 PRAGUE

*20<sup>th</sup> World Conference*

*Family Medicine –  
Care for Generations*



**Wonca**

World family doctors. Caring for people.



25–29 June 2013  
Prague, Czech Republic

**BOOK OF ABSTRACTS**



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## 20<sup>th</sup> WONCA World Conference 2013

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# BOOK OF ABSTRACTS

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## KEYNOTE LECTURES

3001

**Family doctors in an era of inequality: From unsung heroes to rising stars**

M. Chan

*Director-General, World Health Organization*

Gaps in income levels, opportunities, health outcomes, and life expectancy are greater today than at any time in recent history. Predictions that globalization would be the “rising tide that lifts all boats” have not proved true. Vast inequalities come at a high cost to economies and societies. As the events of 2011, including the Arab Spring and the Occupy Wall Street movement, demonstrated, public discontent over social inequalities can be strong enough to topple governments. A world that is greatly out of balance in matters of health is neither stable nor secure.

Health systems are social institutions. They do far more than deliver babies and pills. Properly managed and adequately financed, equitable and efficient health systems contribute to social cohesion and stability – prized assets in a troubled world.

Policymakers everywhere face similar problems: rising public expectations for health care, soaring costs, and shrinking budgets. Advances in medical technology contribute to these costs. Unlike flat-screen televisions, mobile phones, and handheld devices, where new products keep getting cheaper and easier to use, advances in medical technology nearly always come at a higher price, with higher skills needed by users. The fact that many specialists are unaware of the costs of the tests and interventions they order adds to the problem of unsustainable costs.

The high-level meeting on the prevention and control of noncommunicable diseases, held at the United Nations in 2011, was a watershed event in terms of raising political awareness of the unique health challenges facing the 21st century. Health everywhere is being shaped by the same powerful forces: demographic ageing, rapid urbanization, and the globalization of unhealthy lifestyles. Under pressure from these forces, noncommunicable diseases have overtaken infectious diseases as the biggest killers worldwide. Once considered the close companions of affluent societies, diseases like heart disease, stroke, diabetes, and cancer now impose their greatest burden on the developing world, where people fall ill sooner, get sicker, and die earlier than their counterparts in wealthy nations. The lopsided rise of these diseases is certain to increase the world’s unacceptable social inequalities even further.

These are the diseases that break the bank. The costs of chronic care are beyond the reach of the developing world and are becoming unaffordable everywhere else. The costs of cancer care, for example, have become unsustainable for health systems even in the world’s wealthiest countries, where clinical care operates in a culture of excess: excess diagnostic tests, excess interventions, and excess hope for patients and their families facing terminal disease. As the political declaration adopted at the United Nations high-level meeting on NCDs concluded, “prevention must be the cornerstone of the global response” to these diseases.

Against this backdrop, consensus is growing that the mindset that drives health care and the organization of health services must change in fundamental ways. In recent decades, the medical and health professions have veered off the historical course of providing comprehensive and compassionate care for people, as members

of families and communities and with prevention at the fore. The first doctors were generalists. Health care needs to go back to the basics.

This lecture explores how these and other trends have shaped perceptions about the role of family physicians – the rising stars in an era of inequality.

**Dr Margaret Chan** obtained her medical degree from the University of Western Ontario in Canada. She joined the Hong Kong Department of Health in 1978, where her career in public health began. Dr. Chan joined WHO as Director of the Department for Protection of the Human Environment in 2003. She was elected to the post of WHO Director-General on 9 November 2006. The WHO Assembly appointed Dr Chan for a second five-year term in May 2012.



3002

**Doctors' health & wellbeing**

A. Howe

Health is strongly influenced by socioeconomic opportunities, the physical environment, cultural and personal factors. How these factors stack up varies across time, place and person, but there are consistent findings about doctors' health which suggest that our occupation has particular risks, as well as aspects that enhance wellbeing. Knowledge alone does not protect doctors from experiencing high rates of psychological morbidity and self harm due to addictions, and the empathy we extend to others does not always seem to tally with caring for ourselves. This has negative consequences both for doctors, and for their patients, colleagues, families and friends. This talk will look at the facts around doctors' health and wellbeing, also at what affects it and why this matters. It will address what is known about how to maximise health and wellbeing at a personal, organisational and professional level. I shall draw on stories from doctors about their own experiences of being ill to highlight issues around prevention and risk, and use the construct of resilience to examine whether and how we maximise this in doctors' training and working environments. I shall also attend to differences between the context of family medicine and other disciplines, and to the different health systems that we work in, but still aim to give some important insights that will be useful to all in their practice. Finally, I shall share some ideas about how Wonca and its member organisations can act to promote wellbeing through its networks and activities.

The key concepts in this talk will be resilience and its underpinnings: wellbeing; mindfulness; creating high reliability organisations and safe practice: and the ultimate need for professionalism in all areas of our practice. It will be more fun than it sounds!

**Professor Amanda Howe MD FRCGP FAcadMED** was elected Honorary Secretary of the Royal College of General Practitioners, in 2009. She practises at the Bowthorpe Medical Centre in Norwich, England, and has been Professor of Primary Care at the University of East Anglia since 2001. She serves on the newly created WONCA Equity Committee and is a member of WONCA Europe's Bylaws Committee.

3003

**Collaborative Workflows: How Mobile Point of Care Enables Real-Time Provider Collaboration and Empowers Patients**

G. Graylish

*Intel VP and GM ESS*

We are rapidly approaching the Third Industrial revolution. The power of computing technology combined with ubiquitous real time communications has transformed industries. Personal banking, online shopping, travel and entertainment industries have undergone dramatic changes in just the last 5 years. And the pace of that change is getting quicker. Things that were unimaginable at the turn of the century are now commonplace and penetration of those changes is spreading across the globe and leaving no country and no culture unchanged. We have seen opportunity open up in both the developed and developing world for peoples across all types of political and social systems. Individuals, citizens, have become empowered as never before. The future for our children remains bright as they envision the world brought together by the wondrous personal empowerment that the internet has unleashed.

I am going to start by telling you about the power of those technologies and how they have the potential to transform our lives and our fortunes. The one thing you can be sure of is the pace of change and innovation is spreading more rapidly that you can imagine

I am going to suggest a future in how these technologies might just transform your industry, the HealthCare Industry, and the role (s) that you all might play in helping that to happen.

In many ways healthcare, especially primary care, has been practiced unchanged for the last 200 years. Yes, the diagnostics tools and the therapeutics you have would seem like magic to the practitioner of old but the processes we use to deliver care would seem very familiar.

For the last two centuries care has been centered on a model where patients come to a central healthcare mecca (the hospital or the clinic) to get "care". Often that care is delivered piecemeal by various specialists and subspecialist with little thought given to empowering patients to care for themselves, or with sharing the data gathered with all the caregivers in the patients ecosystem.

The rising cost of HealthCare delivery threatens the ability of both Governments and private provider organizations to offer quality healthcare services to their citizens. There is mounting evidence that collaboration between provider organizations and patients can dramatically lower the cost of care delivery and improve outcomes. There is a growing body of evidence that shows that empowering patients with their data can produce "transformational results".

For instance, with coordinated care, both readmission to the hospital and unnecessary trips to the ED can be lowered by >40% or more. Empowering patients directly with access to their EMR data can increase medication compliance by as much as 70%. Giving lab data directly to patients can decrease trips to the doctor's office and potential communications errors can be diminished.

Collaborative workflows are the foundation for *Moore's Law for Healthcare*: "Doubling the number of patients cared for, while reducing the cost of care by half".



Come hear how collaborative workflows supported by an advanced secure ICT infrastructure can help transform your healthcare delivery organization.

**Gordon Graylish** is Vice President of the Sales and Marketing Group and General Manager of the Enterprise Solution Sales division at Intel Corporation. Before assuming his current role, Graylish held the position of vice president of Intel Europe, Middle East and Africa and deputy general manager for the region. Graylish's expertise includes the areas of technological development, the disruptive impact of technology and the affect these have on corporate strategies and society. Graylish has a bachelor's degree in Eastern European history from the University of Toronto.

3004

### Diabetes mellitus – the global pandemic

Jan Škrha

*3<sup>rd</sup> Department of Internal Medicine, 1<sup>st</sup> Faculty of Medicine, Charles University, Prague, Czech Republic*

Diabetes mellitus represents one of the most important non-communicable diseases steadily increasing morbidity and mortality in diabetic population. The impaired beta-cell function with the insufficient insulin delivery is the cause of complex metabolic disturbances which are associated with chronic complications, mainly originating in the vascular wall. Both diabetic microangiopathy and macroangiopathy worsen the patient's prognosis and may contribute to his or her premature death. The number of patients with both Type 1 and Type 2 diabetes mellitus has been multiplied in the last decades and present number of more than 370 millions of diabetic patients will be increased to 550 millions in 2030.

Although the initiators of both Types of diabetes are different, the intracellular cascade in the beta-cell leading to its destruction is unique. Genetic background and surrounding factors facilitate development of diabetes. The role of several genes associated with HLA system was already elucidated in Type 1 diabetes whereas candidate genes in Type 2 diabetes have not been sufficiently disclosed. Genetic background may increase or diminish development of diabetes when organism is exposed to deleterious effects of environmental factors. We need to disclose all pathogenic mechanisms for more effective prevention and treatment of the disease.

More than 90 years of experience with insulin treatment showed that we cannot totally imitate fine regulation of the hormone secretion and action as it is in healthy man. We stopped death from diabetic coma and the life with diabetes has been significantly enlarged. However, the above vascular complications have been developed. We can use insulin analogues for more improved glucose control but desired regulation is still lacking. Insulin pumps significantly improved metabolic control and closed loop system is awaiting. Oral antidiabetic drugs play ever more and more positive role in the treatment of Type 2 diabetes although some negative effects may sometimes affect previous enthusiastic opinion. Treatment is more effective but side effects like hypoglycemia have to be taken into account. Modern treatment brings new idea with drugs having incretin effect because no hypoglycemia has been induced. Our targets have to recognize individual needs and treatment should be individually oriented.

Our present knowledge of diabetes leads to conclusion that epidemic of diabetes needs to explore preventive tasks. We cannot influence personal genetic background and change the genes which are prone to diabetes. More can be done with modifiable factors and life-style changes have to be introduced. It is therefore of importance how to implement dietary changes and more physical activity for every day practice by effective education. Reliable life-style should start shortly after delivery with maximum effects already in young population. However, health care providers are aware that such prevention is not only their task but further development of diabetes will be also influenced by governmental decisions. At least part of the population having risk factors for diabetes should improve its life-style and thus diminish possibility of the diabetes development.



**Professor Jan Škrha MD, DSc.** is Vice-Rector of Charles University in Prague and professor of internal medicine at the General Faculty Hospital in Prague, Czech Republic. He has dedicated to research on diabetes and metabolic disease. Prof. Škrha published more than 250 articles, presented variety of research projects internationally and received several awards for scientific work in diabetology. He is Vice-President of Czech Medical Association Jan Evangelista Purkyne and Vice-President of the UEMS.



**3005**

**Do we dare to be different?**

I. Švab

Since the second half of the twentieth century, family medicine has clearly established itself as a discipline that is equal to others which has specific contributions to science, education and quality of care. The renaissance of family medicine that has started in the 1970's has become a part of our history. The development of ideological thinking about the nature of the discipline resulted in more or less complex definitions of family medicine. In Europe, the result of this process was a series of documents about the nature of family medicine that have been published in the early years of the 21st century. These documents have been a powerful instrument in describing the nature of our discipline to others and sometimes to ourselves.

Nevertheless, the position of family medicine throughout the world is very different. There are countries where family medicine has a very strong position but unfortunately there are others where still a lot needs to be done.

When family medicine tried to reach its deserved status within the medical establishment, it had to adapt to the rules accepted by the institutions it tried to join. In trying to do so, it had to prove that its researchers are able to publish in established journals, that its teachers are able to teach students and train future doctors according to the rules of the academia and that its doctors can deliver care according to accepted standards of quality. By proving it could do that, it became accepted by the establishment.

In trying to be equal and similar to others, family medicine may run a risk of not giving enough importance to some of its characteristics that make it different. Humanism and personal contact with a known individual over a long periods of time is the essence of family medicine and it offers an additional level of quality. This contribution is priceless and can not be measured, standardised, put in guidelines or defined as a target in a health contract with our governments.

Insisting on our core values as topics of our research, our teaching programmes and quality projects is key if we want to protect our identity and contribute to the solution of the crisis in medicine. We are at a start of finding an answer why family medicine is important and how it works. The contribution of family medicine to curricula of medical schools has often been impressive when it was different from other subjects, not when it was similar to them. Our standards of quality must take into consideration not only the accepted measures of quality, but must develop also new ones when we will be evaluating quality of our care.

Insisting on its core values, which are often difficult to understand by the establishment is a very difficult task. But only by doing that family medicine may offer some solution to the crisis of medicine marked by technology and standardisation of processes.

**Professor Igor Švab** started his career as a family doctor in a rural practice in Slovenia. Currently he is a professor of family medicine at University of Ljubljana. He served WONCA for many years as a council member and WONCA Europe president. He has been a leading expert and advocate in promoting academic primary care and family practice particularly in Eastern and Central Europe

3006

**The Starfield Memorial Lecture****Improving Coordination between Primary and Secondary Health Care through Information**

K. Kinder

Patients with poorly coordinated care are likely to have more costly and lower quality health care due factors such as excess utilization resulting from redundant investigations, potentially harmful missed drug-disease interactions, and lower patient satisfaction. However, Family Doctors in many countries face growing challenges to provide continuity of care to their patients within an increasingly fragmented and sub-specialized healthcare environment [World Health Organization, 2008]. Meanwhile ageing populations and a growing worldwide burden of non-communicable chronic diseases present rising numbers of complex patients with multi-morbidity, who would most benefit from continuous, comprehensive and coordinated care. In light of this, coordination of patients' care both within the primary care setting (horizontal integration) as well as across the health care spectrum (vertical integration) is essential.

As morbidity burden increases the number of different clinicians seen rises [Starfield, 1998], yet coordination of care is threatened when information does not readily flow between those involved in delivering care. In addition to ensure patients are cared for in the most appropriate setting, professionals' referral behavior, patients' care seeking behavior and the role of secondary versus primary care needs to be explained. In order to do so understanding the overall morbidity burden of patients is essential. This can be facilitated through improved recording and transfer of information (a structural element), and application of such information in the ongoing care of a patient (a process element).

Although countries are at various stages of implementing electronic health records, trends indicate that primary care is progressing in its use of information technology [Schoen, et. al. 2012]. Yet data sitting on a computer does not improve patients' health, this data needs to be collected and analyzed to produce information that can benefit both the patient and clinician(s). Tools to transform routinely collected electronic health data into actionable information can support both the clinician's decision making process and the policymaker to provide better coordinated care through the exchange of clinical data, measurement of patients' needs, and a better understanding of the use of healthcare resources.

Thus the imperative for coordination requires that all information generated in the care of patients be recognized in the care provided over time. Yet implementing an information exchange strategy is not without its challenges. Important information governance issues including confidentiality and data ownership often pose barriers to information sharing [Banfield, et.al. 2013]. Furthermore, non-standardized data information systems can make the sharing of data amongst them difficult.

New strategies are needed to inform the relationship and thus coordination between primary care and secondary care, as well as with other providers of health and social care. Clinicians need to ensure that the data is completely and accurately recorded and the resulting information is applied in their clinical care, whilst further steps are required by policymakers to direct information continuity through policies mandating standardized data capture systems and incentivizing professionals to use them.

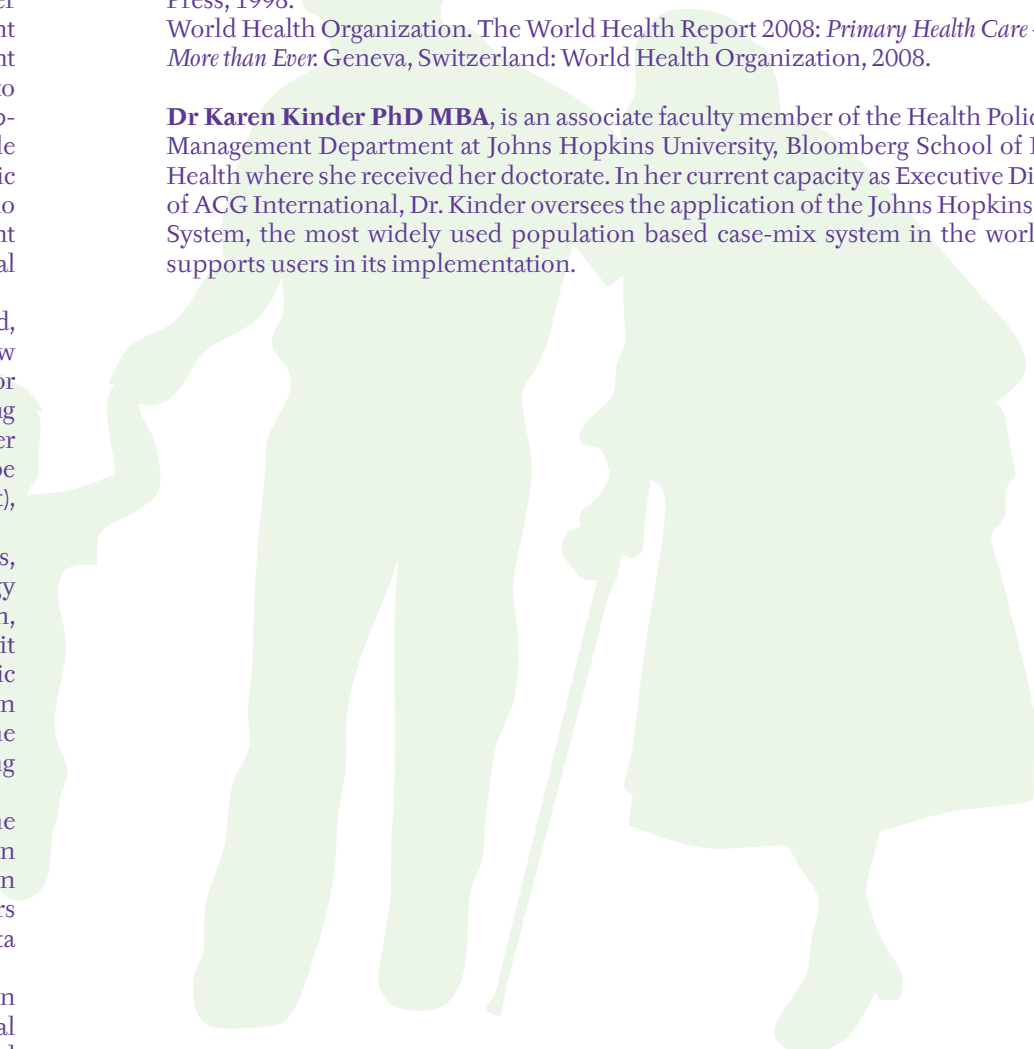
Banfield, et.al., *Unlocking information for coordination of care in Australia: a qualitative study of information continuity in four primary health care models*. BMC Family Practice 2013, 14:34.

Schoen C, Osborn R, Squires D, Doty M, Rasmussen P, Pierson R, Applebaum S., *A Survey of Primary Care Doctors in Ten Countries Shows Progress in use of Health Information Technology, Less in Other Areas*. Health Affairs, November 2012, 10.1377.

Starfield B., *Primary Care: Balancing Health Needs, Services, and Technology*. Oxford Univ. Press, 1998.

World Health Organization. *The World Health Report 2008: Primary Health Care – Now More than Ever*. Geneva, Switzerland: World Health Organization, 2008.

**Dr Karen Kinder PhD MBA**, is an associate faculty member of the Health Policy and Management Department at Johns Hopkins University, Bloomberg School of Public Health where she received her doctorate. In her current capacity as Executive Director of ACG International, Dr. Kinder oversees the application of the Johns Hopkins ACG® System, the most widely used population based case-mix system in the world and supports users in its implementation.



3007

**Family Medicine and Wonca: the challenges ahead**

M. Kidd

Is this the beginning of a new Golden Age for family medicine? In countries all around the world, the message is getting through about the importance of strong primary care and the role of family doctors in ensuring universal access to health care and equitable health care outcomes. As a result strong integrated systems of primary care are evolving and this has important implications for WONCA and our member organisations. This presentation will focus on the changes and challenges ahead for family medicine in areas including quality care, workforce recruitment, retention and training, strengthening of roles in mental health and chronic disease management, meeting the needs of rural as well as urban communities, addressing health inequalities and social disadvantage, preventive care and health promotion, and the need to support primary care teams and new models of care to ensure that high quality primary care is available to all people in each of our nations.

**Professor Michael Kidd** is the President-elect of the World Organization of Family Doctors (WONCA) and will take over as World President in Prague. Professor Kidd has been a member of the WONCA executive since 2004. He is the Executive Dean of the Faculty of Health Sciences at Flinders University based in Adelaide. He also works part-time as a general practitioner in South Australia and the Northern Territory with special interests in the care of people with HIV and Indigenous Health.



## WORKSHOPS AND ORAL COMMUNICATIONS

## 1.1. HYGIENE / EPIDEMIOLOGY

1622

Presentation type: Oral Communication

### Update on overweight and obesity prevalence in Malaysia

M.Y. Mazapuspavina<sup>1</sup>, Aqil Mohammad Daher<sup>2</sup>, Nafiza Mat Nasir<sup>1</sup>, Anis Safura Ramli<sup>1</sup>, Suraya Abdul Razak<sup>1</sup>, Maizatullifah Miskan<sup>1</sup>, Ng Kien Keat<sup>1</sup>, Farnaza Ariffin<sup>1</sup>, Ambigga Devi S. Krishnapillai<sup>1</sup>, Khalid Yusoff<sup>3</sup>

<sup>1</sup> Primary Care Medicine, Faculty of Medicine Uitm, Sungai Buloh Campus, Selangor, Malaysia;

<sup>2</sup> Population Health, Faculty of Medicine Uitm, Sungai Buloh Campus, Selangor, Malaysia;

<sup>3</sup> Cardiology Department, Faculty of Medicine Uitm, Sungai Buloh Campus, Selangor, Malaysia

**Objective:** In Malaysia, the prevalence of overweight and obesity (>18 years old) is escalating with 16.6% and 4.4% in 1996, 29.1% and 14.0% in 2006, and 33.6% and 19.5% in 2008. This study aim at continue monitoring the prevalence and its associations as it is strongly related to cardiovascular death.

**Methods:** A community-based cross sectional study, was carried out in Malaysia between 2007 and 2010, using cut-off points body mass index (BMI) of 23 and 27.5 kg/m<sup>2</sup> for overweight and obese. Data was analysed using STATA version 11.

**Results:** A total of 10,703 subjects with complete BMI readings, out of 11,288 adult (>30 years old) subjects' (mean age 53.0 ±10.9) data were analysed. The prevalence of overweight and obese were 38.7% (95% CI: 37.7- 39.1 %) and 34.3% (95% CI: 33.0-34.8), with female was significantly more obese (37.1%, CI; 35.4-37.8) than male (30.6%, CI; 29.1-31.7), (p<0.001) and urban population was significantly more obese (37.2%, CI; 35.6-38.1) than rural population (31.2%, CI; 29.6-32.1) (p<0.001). Highest prevalence of obesity were in Malays (39.4%, CI; 37.8-39.9), followed by Indians (36.2%, CI; 30.7-41.2) and lowest in Chinese (17.2%, CI; 15.2-19.5). Obese subjects were 1.9 (CI; 1.52-2.45), 2.5 (CI; 1.41-4.45), and 5.6 (CI; 3.34-9.48) more likely to have dyslipidaemia, newly diagnosed diabetes and hypertension, when compared to normal BMI, respectively.

**Conclusion:** This study highlighted the dramatic rise in obesity prevalent which deemed the health system into action strategy at national level, as suggested by WHO in fighting globesity.

Disclosure: No conflict of interest declared

1765

Presentation type: Oral Communication

### Epidemiological profile and care of patients with heart failure of a regional health

V.C. do Lago, M.M. de C. Graciano, H. Samartine Junior, V.C. Marcos

HUAV, UNIFENAS, Alfenas, Brazil

**Objective:** a) To describe the epidemiological and care profile of heart failure patients hospitalized in a university hospital. b) To analyze the medical records. c) Correlate cases with the presence of primary care unit in the patient's area of residence. **Methods:** Cross-sectional, exploratory study using reading profiles of admissions in 2010, regional referral hospital, whose cause was heart failure. Data were entered in Excel 2010 and analyzed using Epi-Info 3.5, by frequency analysis and calculate the odds ratio (OR) with a confidence interval of 95%, taking into account the Fisher exact test. **Results:** We analyzed 54 charts, of which 31.48% were not following the Framingham criteria for the diagnosis of IC. In 72.2% of the CID was not registered. Information search of dyslipidemia (42.6%), ethnicity (31.5%), origin (11.1%) were the most absent. 46.3% were women, 53.7% men and 81% had unit of primary care in the area of their residence. The main etiology of HF was hypertension (72.2%). **Conclusion:** Lack of information in the medical records indicate neglect of this document or lack of diagnostic criteria, prognostic and therapeutic aspects of IC. Taking into account that hypertension is the main underlying cause of HF in this region indicates the absence of risk and preventive approach in Primary Care. Bigger and better care for patients with hypertension and HF risk factors in primary care would impact on the number, frequency and severity of cases of hospitalization.

Disclosure: No conflict of interest declared

## 1.2. PUBLIC HEALTH

793

**Presentation type: Workshop**

### Primary health care professionals – the key to tackling infectious diseases in the European Union, ECDC Workshop

Ü-K. Nurm, I. Dinca, B. Neubauerová, A. Würz  
Public Health Capacity and Communication Unit, European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden

European Centre for Disease Prevention and Control (ECDC) is a leading EU agency focusing on the area of prevention and control of communicable diseases.

Health promotion and health communication interventions are powerful tools that can bring about desired changes in people's behaviour in preventing communicable diseases. Primary health care professionals across the European Union (EU) play a key role as the most trustworthy and credible informants to patients thus not only in information dissemination activities but also in the process of creation and adaptation/ tailoring of European health communication materials focusing on communicable diseases prevention to existing realities in each country. ECDC will showcase its latest initiatives in health communication and behaviour change, with a particular focus on the crucial role primary healthcare professionals play in translating evidence into practice of disease prevention.

The content of the session will cover:

1. Let's Talk about Protection – Pilot interventions on cultural adaptation of vaccine communication materials (project 2012-2013)
2. Influenza Prevention Toolkit – Pilot intervention (project 2012-2013)
3. European Antibiotic Awareness Day – A European health initiative coordinated since 2008 by ECDC to promote prudent antibiotic use in Europe

The planned workshop will aim to seek feedback from the family doctors on the utility and relevance of the above-mentioned products and on making them relevant and meaningful to their daily practice. Such feedback will enable ECDC to evaluate its outputs as well as explore how EU agencies such as ECDC could contribute to improving health promotion in primary health care settings.

Disclosure: No conflict of interest declared

801

**Presentation type: Workshop**

### The academic centre as a catalyst for change in community oriented primary care: Symposium

C. Dowrick<sup>1</sup>, C. van Weel<sup>2</sup>, J. DeMaeseneer<sup>3</sup>, S. Fortes<sup>4</sup>, D. Nease<sup>5</sup>

<sup>1</sup> Mental and Behavioural Health Sciences, University of Liverpool, Liverpool, United Kingdom;

<sup>2</sup> Family Medicine, Radboud University, Nijmegen, Netherlands; <sup>3</sup> Family Medicine and Primary Health Care, University of Ghent, Ghent, Belgium; <sup>4</sup> School of Medicine, State University of Rio de Janeiro, Rio de Janeiro, Brazil; <sup>5</sup> Family Medicine, University of Colorado Denver, Aurora, United States

Academic centres offer important opportunities for the development of community oriented primary care, by acting as catalysts for change. Key elements of this process include

- Facilitation: providing space, structure, timetable and direction
- Translation between the different 'worlds' of practitioners across sectors
- Negotiation of a common agenda between different local actors
- Resourcing: small scale financial inputs and university resources can make a significant difference in communities with limited resources.

The 90 minute symposium will provide a series of international case studies to illustrate how academic centres can be catalysts for change:

- Chris Dowrick will introduce the session and describe the AMP Programme in North-West England, where innovative community engagement strategies have proved essential to improving access to primary mental health care;
- Chris van Weel will present the Nijmegen 'Koploper programme' which has stimulated specialized university departments to have a stronger focus on society and network development.
- Jan DeMaeseneer will present his internationally renowned academic network of community health centres in Ghent, focusing on their initiation and impact.
- Sandra Fortes will describe the introduction of „matrix support“ in Family Health Centers in Rio, where interdisciplinary approaches have enabled a new community-based model of collaborative care.
- Don Nease will introduce a new research programme designed to identify and reproduce successful community-based strategies for managing depression in rural and urban Colorado.

The symposium will conclude with a round table discussion with the audience about how academic centres can stimulate community oriented primary care internationally.

Disclosure: No conflict of interest declared

2006

Presentation type: Workshop

**Joint WONCA-WHO Workshop: Case studies in Environment and Health in Family Medicine**

Moderator: A. Abelsohn (Canada)

Speakers: G. Blashki<sup>1</sup>, E. Mola<sup>2</sup>, M. Del Rosario Perez<sup>3</sup>, N. Arya<sup>4</sup>, E. Lopez<sup>5</sup><sup>1</sup> Australia; <sup>2</sup> Italy; <sup>3</sup> WHO, Geneva; <sup>4</sup> Canada; <sup>5</sup> Argentina

The environment(s) that we live in affect our health in many ways. Radiation exposure may have significant health impacts, especially in children, and this is particularly relevant in medical uses of radiation for diagnosis or treatment. Exposure to many toxic substances affect health e.g. lead exposure in children causes cognitive deficits, and exposure to air pollution exacerbates asthma, COPD, Ischemic Heart Disease, and cardiac failure. Many occupational exposures are harmful to health, and require adequate prevention and monitoring measures. Urban design determines how we commute, by automobile, public transportation, or by walking or riding, important issues in relation to obesity and its attendant morbidities. At a more “upstream” level, destruction or damage to ecological systems affects population health. The most extreme example is climate change, which has enormous and diverse health impacts. In this interactive workshop, we will explore the role of the family doctor, as clinician, researcher and advocate in environmental health. We will base the discussion on cases presented by members of the WONCA Working Party on the Environment, from their own practices. We will extend the discussion to explore future opportunities for collaboration for the WONCA WP Environment.

*Speakers:**G. Blashki (Australia): Climate change: The role of the family doctor**E. Mola (Italy) and Maria Del Rosario Perez (WHO, Geneva): Radiation risk communication in family health care**N. Arya (Canada): Teaching medical students about Ecosystem approaches to health**E. Lopez (Argentina): Occupational health outreach*

2013

Presentation type: Workshop WONCA Working Party on the Environment

**Climate change and health in family medicine**

Moderator: A. Abelsohn

Speakers: G. Blashki<sup>1</sup>, A. Abelsohn<sup>2</sup><sup>1</sup> Melbourne, Australia; <sup>2</sup> Toronto, Canada

Climate change is the challenge of our generation. But is not just an environmental issue. It is also a health issue, and is considered the greatest challenge to public health in our time. The WHO estimates more than 150,000 deaths per year currently. The health impacts are diverse, with direct impacts of increased heat episodes and extreme weather, storms and floods; and indirect effects through food insecurity, drought, worsening air pollution and pollen counts, increased food and water-borne infections, and extended range of many vector borne diseases such as dengue and malaria. There will be many “climate refugees”. The impacts will be disproportionately felt, with the greatest impacts in developing countries.

We all need to actively reduce our carbon footprints, as individuals and as a society (mitigation) as well as learn to adapt to the unavoidable health effects of climate change. This interactive workshop will explore the role of the family physician as advocate in this global crisis, and explore how family physicians might become involved as a resource to their communities.

**The learning objectives include:**

1. To review the current evidence on climate change and health, and to learn how to apply this knowledge to clinical practice.
2. To learn how to green the office/ hospital.
3. To formulate a role for the family doctor and our organizations as an advocate for a healthy planet, both in the office and in our communities.

2014

**Presentation type: Workshop Wonca Working Party on Women and Family Medicine**

### Health Inequality

#### Health Inequality – how can we teach gender equity in medical school, residency and beyond

Lead and Moderator / chair: C. Levitt

C. Levitt<sup>1</sup>, L. Candib<sup>2</sup>, S. Shah<sup>3</sup>, N. Karim<sup>4</sup>, A. Barnard<sup>5</sup>

<sup>1</sup> Department Family Medicine, McMaster University, Canada; <sup>2</sup> Professor of Family and Community Medicine, U-MASS Medical School, USA; <sup>3</sup> Department of Family Medicine, Aga Khan University, Karachi, Pakistan; <sup>4</sup> Family Medicine Resident, University of Toronto, Canada;

<sup>5</sup> Medical School, Australian National University, Australia

This interactive workshop will explore processes and challenges facing educators in teaching students, residents and family doctors about gender equity as a fundamental determinant of health.

Professor Cheryl Levitt, Department Family Medicine, McMaster University will discuss why gender equity matters in medical education, and how an understanding of gender equity in the context of human rights is vital in our educating global family doctors in this millennium.

The panel of international speakers from the Wonca regions will then discuss different approaches to teaching about gender equity, discuss how cultural attitudes influence clinical practice and outline practical strategies for engaging students, residents and family doctors.

Participants will then have the opportunity to reflect on their own experiences and discuss how they might employ some of these ideas in their own work – whether in informal supervision of medical students and residents or in more formal educational settings. There will be opportunity for discussion in small groups and with the panel.

This workshop will be of particular interest to those seeking a deeper understanding of how they as family doctors can have a positive impact on gender related health outcomes.

#### Speakers Panel:

*C. Levitt, Department Family Medicine, McMaster University, Canada – will discuss why gender equity matters in medical education*

*L. Candib, Professor of Family and Community Medicine, U-MASS Medical School, USA – will discuss challenges teaching and learning about violence and sexual abuse*

*S. Shah, Department of Family Medicine, Aga Khan University, Karachi, Pakistan – integrating gender and culture into the family medicine undergraduate curriculum*

*N. Karim, Family Medicine Resident, University of Toronto, Canada – developing and implementing an experiential learning tool to teach gender issues to medical students*

*A. Barnard, Medical School, Australian National University, Australia – the challenges of mainstreaming gender issues in medical education: lessons from the bush*

2032

**Presentation type: Workshop WONCA Working Party on Women and Family Medicine**

### Health and Wellbeing workshop

Lead and Moderator/Chair: A. Howe

Speakers / facilitators: C. Gerada, T. Myo Han

A. Howe<sup>1</sup>, C. Gerada<sup>2</sup>, T. Myo Han<sup>3</sup>

<sup>1</sup> Professor of Primary Care at the Norwich Medical School, University of East Anglia; Honorary Consultant in Primary Care, NHS; Hon Secretary RCGP, UK; Norfolk, UK;

<sup>2</sup> Chair of Council, Royal College of General Practitioners, UK; <sup>3</sup> Secretary of International Relations, Myanmar Medical Association, General Practitioner's Society; Assistant Professor, Medical Statistics Unit, Faculty of Dentistry, International Islamic University, Malaysia; Myanmar and Malaysia

This workshop will invite participants to reflect on the commonalities and differences in doctors' own health and wellbeing that arise from ethnicity, gender and locality / health system. A brief summary of evidence and professional perspectives from different speakers will be followed by interactive discussion and feedback of views. The background issues are:

- Doctors' health is advantaged by their education, status and income, but can be threatened by their workload, work demands (stress, emotional burden, exposure to occupational risk) and professional ethos of putting others before self
- Doctors working in under resourced systems, and those working in situations of physical and political instability, are at risk of additional trauma and its long lasting consequences
- Doctors often lack effective access to suitable health care, and even when it exists they tend to underuse it. Self treatment, concerns about confidentiality, and coping mechanisms which override personal boundaries and self-care can contribute to this
- Although many of these issues affect men and women in a similar fashion, there are gender differences in the pattern of doctors' health problems, with men showing risks of addiction and self harm, and women being more likely to cease work due to depression or emotional vulnerability
- Doctors underuse protective mechanisms such as confiding in colleagues, team solutions, basic healthy lifestyles (exercise, moderate alcohol, enough sleep, relaxation..)

The workshop will focus on positive ways of enabling doctors to be and stay healthy wherever possible, and will explicitly aim to highlight things that participants have found helpful at different stages of their career, and both at individual and collective level. We shall also aim to highlight any issues which our Wonca organizations can help to address.



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**Presentation type: Oral Communication****Starting fitness program**

J.M. Alhamad

*Family & Community Medicine, Security Forces Hospital, Riyadh, Saudi Arabia*

General Practitioners have limited knowledge on how to advise their clients on how to start physical training program. People who want to start physical exercise should be evaluated properly considering their general health, presence of concomitant chronic diseases such as diabetes, hypertension and coronary artery disease; and the presence of underlying medical disease which may cause sudden death during exercise.

In my presentation, I will explain how to assess people before they start exercise program including the history, physical examination and certain investigations if needed.

During my presentation, I will demonstrate the different types of exercises and benefits of each type and also how to practice these exercises in reality.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Awareness of hepatitis B infection among first year college students**

L. ALSowielem

*Family and community medicine-College of medicine, Dammam University, Dammam-Eastern Province, Saudi Arabia*

**Objectives:** To determine the awareness of Hepatitis B infection among 1<sup>st</sup> year college students of medical, nursing and community service of Dammam University and, to compare the knowledge level between them.

**Methodology:** A descriptive cross-sectional study was conducted on 485 first year medical nursing, and community service students of Dammam University (Eastern Province of Kingdom of Saudi Arabia). A self-administered questionnaire was distributed to all the students and their awareness on the definition, modes of transmission, epidemiology, complications, treatment availability and prevention of Hepatitis B was obtained. The data was entered and analyzed using SPSS 16 for Windows. Descriptive statistics with cross-tabulation were performed. The Chi square –test, T-test was used.

**Results:** Overall, 420 (86.6%) students correctly defined hepatitis B and 76.9% knew about the types of hepatitis. The majority of the students believed that hepatitis B was blood-borne but there was poor awareness about other modes of transmission. The medical students were significantly more knowledgeable than their counterparts for the epidemiology and transmission of Hepatitis B. Less than one-fourth of the students knew about needle-stick injury from an infected patient, and drug abuse. Prevention of the disease by vaccination was known to only 54.4 % of the students.

**Conclusion:** The present study concludes that the majority of the students lacked knowledge regarding important modes of transmission. They also had poor knowledge about the complications and prevention of hepatitis B. Health education needs to be given to all students at schools and universities.

**Keywords:** Awareness, Hepatitis B, students, Dammam University

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Adherence to drug therapy in elderly people assisted by a family health strategy in the midwest of Brazil**

T. Coimbra, A. Campos, C. Santos, D. Lima, M. Provin  
*Faculdade de Medicina, SMS – UFG, Goiânia, Brazil*

**Objective:** This study aims to evaluate the adherence to the drug therapy in seniors enrolled by a Family Health Strategy (FHS) of a Health Unit in the Midwest of Brazil.

**Methods:** Data gathering occurred between November 2011 and January 2012 and consisted in a questionnaire with demographic variables, indicators of health conditions and medications. Also, the Morisky-Green-Levine's questionnaire was used to assess the level of compliance in people over 60 years assisted by the FHS. Data were tabulated in the program EXCEL 2007.

**Results:** We interviewed 236 elderly, 29.6% men and 70.4% women. Majority (82.2%) consider their health status between regular and good. Regarding the use of drugs, 84.3% uses continuous, with an average consumption of 3.1 per person. More than half of the elderly (53.27%) were considered non-compliant, and the delay in taking and forgetting were most common forms of non-adherence.

**Conclusions:** It was concluded that most elderly uses the practice of polypharmacy, which is a risk factor for no adhesion to the therapy. It is important to create strategies that encourage adherence to drug therapy in geriatric group and also shows them the importance of that in the maintenance of a good quality of life.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Tackling 'Hi Hi': A study to improve nurse-led patient education and management of hypertension in primary health care clinics in rural South Africa**

P. Duncan<sup>1</sup>, T. Dewhurst<sup>2</sup>

*<sup>1</sup> Academic Unit of Primary Care, University of Bristol, Bristol, United Kingdom; <sup>2</sup> General Practice, The London Deanery, London, United Kingdom*

**Introduction:** The authors are GP trainees from the UK who spent the last year working in Manguzi, a rural town in South Africa. During the year, the first author conducted a study to investigate beliefs about hypertension. The study found that two-thirds of participants had inadequately controlled blood pressure and 60% of patients were overweight. Many patients asked for better education about their hypertension.

**Objectives of the current study:** To provide training to nurses working in the clinics so that they are able to:

1. Educate patients about their hypertension on a one-to-one and group basis
2. Measure blood pressure in line with the South Africa Hypertension guidelines
3. Follow a protocol to start patients on treatment and monitor them in line with current South Africa guidelines

**Method:** We are returning to Manguzi in February 2013 to run a workshop for the clinic nurses. We intend to make the workshop interactive and will use a combination of role-playing, video consultations and a group education session with real hypertensive patients to highlight the importance of good communication skills.

**Outcome measures:** We will collect written feedback from nurses and patients who attend the workshop. An audit to assess nurse-led management of hypertension in the clinics will be completed by medical students prior to and three months after the training workshops. We intend to make a short video of our visit (with consent from patients and nurses), which we hope to present alongside the findings of the study at the WONCA 2013 Conference.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Point-of-care testing – an innovative global strategy for improving health outcomes in the family physician office**

M.D.S. Shephard, L.A. Motta

*Flinders University International Centre for Point-of-Care Testing, Flinders University, Adelaide, Australia*

Point-of-care testing (POCT) refers to pathology testing performed in a clinical setting (eg a family physician office) at the time of patient consultation, generating a test result used to make an immediate informed clinical decision regarding patient care. POCT provides innovative opportunities to improve delivery of pathology services for the detection and management of chronic, acute and infectious diseases in rural and remote primary health settings globally. The capacity to link POCT devices from rural or remote sites to a central management point has enhanced the ability to develop large scale POCT networks and streamline the delivery of POCT services.

This workshop will examine working examples of Australian and global POCT field programs conducted in rural and remote primary care settings and case studies illustrating the clinical, operational and economic benefits of POCT. A practical demonstration of new devices/technologies will also be given.

Education and training of practising health professionals (particularly those working in family practices) is a crucial component of building a global workforce capable of conducting quality-assured community-based POCT into the future. Methods for training health professional staff need to be flexible and innovative. Selected examples of current community-based, undergraduate and postgraduate education programs on POCT delivered by the authors' institution will be discussed.

Professional associations such as WONCA can have a major role to play in advocacy for the use of POCT in the family physician setting. This Workshop will outline a potential strategy to enable WONCA to take up an active participatory role in this field.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Physicians' self-perception of competence regarding childhood Vaccination in Abu-Dhabi, UAE**

F. Nasser, M. Stroud

*Family Medicine, Ambulatory Health Care, Abu Dhabi, United Arab Emirates*

**Introduction:** WHO estimates that three million cases of disease can be prevented annually with appropriate vaccination.

Health care providers can improve the rates of immunization.

Studies have shown that physicians miss valuable opportunities to immunize children in situations that are not true contraindications to vaccination, which may be due to provider's lack of knowledge. Doctors' inadequate knowledge regarding childhood immunization are very harmful and passively affects public health.

**Objective:** To study the demographic characteristic of immunization providers, investigating whether they have appropriate knowledge regarding childhood vaccination, and their self-perception of competency.

**Methodology:** A cross-sectional study was conducted among immunization providers in Abu Dhabi city, UAE, from April to end of September 2012. This study covered 6 governmental primary health care centers, and the data were obtained by self-administered questionnaire, tabulated and analysed using appropriate statistics.

**Results:** The participating physicians were mostly general practitioner (40%), consultant family physicians (30%), specialist family physician (25%), and only (5%) were pediatricians. About 52% of them had had no training in immunization during the preceding 5 years. Self-evaluation revealed that 40% of them ranked themselves as excellent, 57.5% as average and 2.5% as poor immunization providers. Self confidence was associated with specialty, qualifications, years of experience and training on immunization ( $p < 0.05$ ). Most of participating doctors (44.4%) used international protocols as their references. The doctors were least confident in vaccinating immune-compromised children and pregnant and lactating women

**Conclusion:** To improve immunization services, doctors should be trained before and while being involved in this practice.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication**

**May I introduce you to the doctor caring for generations? Influence of gatekeeping, gender and age; results of a survey held by the WES during the WONCA conference in 2011**

E.M. Wiesendanger-Wittmer<sup>1</sup>, H.E.P. Bosveld<sup>1</sup>, S. Bonarius<sup>2</sup>, I. Joziassé<sup>3</sup>, F. Baarveld<sup>4</sup>, A.J. Berendsen<sup>1</sup>

<sup>1</sup> Department of General Practice, University of Groningen, University Medical Center Groningen, Groningen, Netherlands; <sup>2</sup> Department of General Practice, University Medical Center of Utrecht, Utrecht, Netherlands; <sup>3</sup> Department of General Practice, University of Radboud, Nijmegen, Netherlands; <sup>4</sup> Department of General Practice, Dutch Institute of Vocational Training, Utrecht, Netherlands

**Objective:** General practitioners (GPs) become increasingly proactive and effectively coordinate health care of generations. Little is known about the influence of the organisation of the health care system on GP's opinions.

This project determines, besides the influence of gender and age, the effect of gatekeeping on how a GP perceives and executes his profession.

**Methods:** A survey was held during the WONCA conference 2011. A factoranalysis identified four factors which correspond to the main themes of the congress: practice ('prevention'), science ('EBM, research and guidelines') and 2 art factors ('patient specific decision making' and 'intuition'). Through a literature analysis a grouping in gatekeeping and non-gatekeeping European countries was done.

**Results:** The opinions of 426 GPs originating from 33 countries (12 gatekeeping, 13 non gatekeeping, 8 unclassified) are evaluated.

Selection of interesting significant results:

- A majority of all GPs considers evidence based decision making as very important compared to only 48% when asked about active participation in research.
- Female GPs are younger and perceive their reputation as lower.
- Gatekeeping: A higher availability of guidelines is reported in gatekeeping countries. Guidelines influence which preventive tests are done by GPs. The gatekeeping GPs agree with shorter working hours and consider it less important that a patient consults his own GP.

**Conclusions:** Gatekeeping equates with working with guidelines. Guidelines directly influence the proactivity of a GP (e.g. in prevention).

A standardised evidence based approach allows a more flexible work organisation.

An open question is who will write EBM-based guidelines for GPs.

Keywords: general practitioner, gatekeeper, age, gender, survey, crosscultural comparison

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication**

**Field study of a 'Safe Motherhood' initiative in Bihar, India**

R. Singh

Community Medicine, Patna Medical College, Patna, Bihar, India

**Background:** The Government of India has launched several new programmes to improve access, utilization and quality of health services in poor and underserved populations and to achieve the Millennium Development Goals (MDGs). Bihar with high Maternal Mortality Ratio, was marked as a high focus state. To accelerate progress towards MDG5, Janani Suraksha Yojna (JSY) or 'safe motherhood' initiative was launched in Bihar in 2006 to reduce maternal & neonatal mortality by linking cash incentives to institutional delivery, pre and post delivery care.

**Objective:** To evaluate the outcomes of JSY in 3 districts of Bihar.

**Methods:** Multistage stratified sampling and probability proportional to size (PPS) method adopted to select 135 women from each district, who had childbirth during the preceding 24 months. Data on number, timing and completeness of antenatal visits, places of delivery and receipt of cash incentives collected through questionnaires and interviews.

**Results:** Only 53.58% women ever had Antenatal care (ANC); only 28.57% of these were in 1<sup>st</sup> trimester, 20.01% availed complete ANC, mostly in second trimester (50.23%). Altogether 59.56% had institutional delivery; 55.18% deliveries were covered by JSY. Primary Health Centre (PHC) was the preferred place both for ANC (33.17%) and delivery (52.28%). Most common reason for not availing JSY was cost of transportation and stay at facility (30.24%).

**Conclusion:** Cash incentive was significantly associated with institutional delivery but complete ANC was not. Cash incentive through JSY resulted in increase in the proportion of institutional deliveries but it did not ensure better utilization of ANC services.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Perceived equity of work organization associated with psychosocial health of physicians in Taiwan**

H.-C. Lo, D.-R. Chen

*Department of Family medicine and Radiology, Armed Forces Tao-Yuan General Hospital, Taipei, Taiwan*

**Objective:** The purpose of this investigation is to explore the predictive validity of the effort reward/imbalance models and procedural justices for self-reported health status, vitality, mental health and reported health transition in a sample of Taiwanese physician.

**Methods:** A standardized questionnaire including working characteristics, ERI and procedural justice questionnaires was mailed to physicians for investigating the psychosocial health. A total of 294 physicians responded to this study.

**Results:** Effort-reward imbalance interacted with overcommitted personality variable indicates a better predictor of self-report health, minor mental distress and vitality and reported health transition is associated with self-reported health ( $P < 0.05$ , significance level). The interaction effect increases the chance of physicians' minor mental distress, and suggests that different dimensions of intrinsic effort need to be explored for different population under study. Procedural justice is good for health transition. Junior physicians and who lack of exercises tend to show ill health, indicating increase health risks.

**Conclusions:** The results suggest that ERI and procedural justice may have measured different aspects of psychosocial environment of working organizations.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Population based screening tools for abnormal glucose tolerance in the Latvian adult population**

D. Misina, N.C. Barengo, V. Dzerve, V. Pirags

*<sup>1</sup> Department of Medicine, University of Latvia, Riga, Latvia; <sup>2</sup> HJELT Institute, University of Helsinki, Helsinki, Finland; <sup>3</sup> Institute of Cardiology, University of Latvia, Riga, Latvia*

**Objective:** The objectives of this study were to investigate the current prevalence of abnormal glucose tolerance (AGT) and its risk factors in Latvian adult population and to evaluate the performance of the Finnish diabetes risk score (FINDRISC) as a questionnaire in screening for AGT, including type 2 diabetes (T2D) in the middle-aged Latvian population.

**Methods:** A cross-sectional national survey among the 25-74 years old population with the study sample of 6000 adults randomly selected from the Latvian population register was carried out in 2009. The study consisted of an interview-based questionnaire, anthropometric measurements and blood samples, including oral glucose tolerance test (OGTT).

**Results:** The final study sample consisted of 3807 people, corresponding to the response rate of 63.5%. The prevalence of AGT reached 27,1% (95%CI: 24,9-28,5). The FINDRISC questionnaire identified 80% of men and 90% of women of previously undiagnosed AGT using a cut-off level of 11 points. In both genders everybody with 20 points or more had AGT. The area under the ROC curve was 76% in men and 82% in women.

**Conclusions:** This study was the first cross national study revealing the prevalence of the AGT in the representative sample of adult Latvian population.

If only fasting glucose measurement had been used to screen for AGT, 8.9% of people with AGT would remain undetected. Therefore, FINDRISC questionnaire can be used as a self-administered tool to identify people with undetected AGT in the general Latvian population.

Disclosure: No conflict of interest declared

1768

Presentation type: Oral Communication

**Analysis of Brazilian national policy on health promotion, based on its principles, strategies and progress over six years of release**

I. de Araujo Morais, G. Ribeiro

*Departamento de Saúde Coletiva, Universidade de Brasília, Brasília, Brazil*

The concept of health has been changing over time, no longer be absence of disease, starting to be perceived as a set of different factors such as the social determinants and physical well being, mental and social. Health promotion took its first steps towards recognition as a new field of knowledge and see on health in Alma Ata Conference. In Brazil the history of health promotion has strong involvement of social movements, in the same year, we had our 8th National Health Conference, which culminated in the creation Health System in the Brazilian Constitution in 1988. Although health promotion and be part of public health efforts guiding, the creation of the National Health Promotion (PNPS) was only launched in 2006. The objective of this study is to analyze the PNPS of Brazil using as reference the Ottawa Charter and its goals, raising proposals and possible solutions covering policies, actions and strategies for improving public health in the country with regard to health promotion. The research method was conducted to examine descriptively and analytically the general and specific strategies from PNPS, based on literature review of articles published in Brazil and the World Health Organization. At last, initial conclusions of this research reveal divergences of state actions to principles of Health Promotion, mainly on the principle of co-responsibility, intersectionality, social participation. Showing that the policy goes into short steps to the needs of the population with no encouraging empowerment of, besides some strategies for prioritizing biomedical character.

Disclosure: No conflict of interest declared

**1.3. SEXUALLY TRANSMITTED DISEASES**

1615

Presentation type: Oral Communication

**To investigate the knowledge, attitudes and perceptions of HIV positive African men in the Shauri Moyo community in Nairobi, Kenya, regarding the use of condoms as a preventive measure for HIV transmission**

G. Mohamoud

*Family Medicine, Aga Khan University Hospital, Nairobi, Nairobi, Kenya*

**Aim:** To investigate the knowledge, attitudes and perceptions of HIV positive African men in the *Shauri Moyo* community in Nairobi, Kenya, regarding the use of condoms as a preventive measure for HIV transmission.

**Method**

**Settings:** The study was conducted at Primary care clinic and a VCT centre in the *Shauri Moyo* community.

**Study design:** Case-based qualitative study on a population of HIV positive Kenyan African men in the *Shauri Moyo* Community.

**Instruments:** -Face-to-face in-depth interviews with the use of open-ended questions and,  
-Self-respondent semi-structured questionnaire

**Data analysis:** The data was analysed qualitatively using Grounded theory and quantitatively using the excel spread sheet and the SPSS version 11.5 software.

**Results:** The study showed a good level of knowledge about the need to use condoms and there was discrepancy between the knowledge and condom use.

Those able to inform their partners of their status, had stable relationships, were aware of the risk of transmission to their partners, were engaged in casual relationships, and had a high risk perception used condoms more consistently.

Lack of partner notification and trusting the partner in long-term relationships influenced the decision regarding its use.

Both partners being positive lowered the risk perception which led to inconsistent or non-use of condoms.

**Conclusion:** This study showed that knowledge and practice was at variance.

It was interesting to note that couples testing positive for HIV had lower risk perception. 95% felt that cultural perceptions and 96.1% felt that religious beliefs were not a barrier to condom use.

Disclosure: No conflict of interest declared

## 1.4. TOBACCO, ALCOHOL AND DRUGS

2003

Presentation type: Workshop  
International Primary Care Respiratory Group

### WORKSHOP FROM THE IPCRG, SIG OF WONCA EUROPE. Strategies towards smoking cessation. How to maximize the opportunities for smoking cessation in primary care

Moderator: J.C. de Sousa

Presenters: M. Roman Rodriguez, J.Reid, S. Høegh Henriksen, J. C. de Sousa, I. Tsiligianni

International Primary Care Respiratory Group. [www.theipcr.org](http://www.theipcr.org)

Tobacco use will become the world's foremost cause of premature death and disability within 20 years unless current trends are reversed. Many opportunities to reduce this epidemic are missed in primary care. This workshop will try to summarize a new approach based on strong evidence for effective interventions. All primary care health professionals can increase smoking cessation rates among their patients, even when time and resources are limited. Medical and non-medical staff can support patients who choose to quit by providing information, referral to telephone counselling services, and behavioral counseling using motivational interviewing techniques, where resources permit. Drug therapy to manage nicotine dependence can significantly improve patients' chances of quitting successfully, and is recommended for people who smoke 10 or more cigarettes per day. All interventions should be tailored to the individual's circumstances and attitudes

The IPCRG presents an interactive workshop; after a short presentation, open discussion among participants will be led by a team of practising family physicians with experience of different health care systems and with a special interest in respiratory disease. The session will be applicable to General Practice, be pragmatic and concise. The main issues to be covered at the workshop will be:

- **Helping patients quit smoking: brief interventions for healthcare professionals**
- **Which smoking cessation strategies are effective? Tailoring strategies to suit your practice**
- **Pharmacotherapy for nicotine dependence**

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Presentation type: Oral Communication

### Is loss of control in the consumption of alcohol enough to screen the alcoholic dependence in men? Preliminary results

V. Lopez-Marina<sup>1</sup>, D. Rodriguez Vargas<sup>1</sup>, M. Valle Calvet<sup>2</sup>, G. Pizarro Romero<sup>2</sup>, N. Montella Jordana<sup>3</sup>, R. Alcolea Garcia<sup>4</sup>, T. Rama Martinez<sup>5</sup>

<sup>1</sup> Primary Care Center of Piera, Catalan Health Institute, Piera (Barcelona), Spain; <sup>2</sup> Primary Care Center of Badalona 6-Llefià, Catalan Health Institute, Badalona (Barcelona), Spain; <sup>3</sup> Teaching Unit of Family Medicine North Metropolitan, Catalan Health Institute, Barcelona, Spain; <sup>4</sup> Primary Care Center of Besos, Catalan Health Institute, Sant Adria de Besos (Barcelona), Spain; <sup>5</sup> Primary Care Center of Masnou-Alella, Catalan Health Institute, Masnou (Barcelona), Spain

**Objectives:** To determine the prevalence of the patterns of alcohol consumption and to evaluate the validity of the loss of control in alcohol consumption (ICD-10 criteria) as screening of dependence in men.

**Methods: Design:** descriptive multicenter study of evaluation of a diagnostic test. **Placement:** 4 primary care centers. **Subjects:** 493 men >17 years, systematically selected during april/2010-march/2011. **Variables:** age, alcohol consumption in weekly units (standard unit drink [SUD]) and classification (abstinence, moderate and risk drinking). If risk drinking ( $\geq 28$  SUD/week,  $\geq 6$  SUD/drinking opportunity), AUDIT test: if >8 (harmful use and/or dependence), MALT-S test and ICD-10 scale (dependence if >3 and >2, respectively). **Statistics:** descriptive analysis, sensibility, specificity, PPV, NPV, Kappa index.

**Results:** Age (X $\pm$ SD)=55.4 $\pm$ 17.2 years, 66.7% consume alcohol and 17.8% are risk drinkers (CI [95%]=14.5-21.2%). 10.3% (CI [95%]=7.6-13%) have AUDIT>8, 9.3% (CI [95%]=6.8-11.9%) have MALT-S>3, 7.1% (CI [95%]=5-9.3%) have ICD-10>2. Of the risk drinkers, 66.2% (CI [95%]=56-77%) have AUDIT>8, of which 88.5% (CI [95%]=79.8-97.1%) are dependent by MALT-S and 67.3% (CI [95%]=54.5-80%) by ICD-10. Kappa index between MALT-S and ICD-10 is 0.423 (moderate concordance). The loss of control criteria is positive in 97.1% (CI [95%]=91.6-100%) of dependents by ICD-10 and 93.5% (CI [95%]=86.3-100%) of dependents by MALT-S, with sensibility=93.4%, specificity=66.6%, PPV=95.5%, NPV=57.1%, compared with MALT-S.

**Conclusions:** Prevalence of the patterns of alcohol consumption is consistent with other studies. Moderate concordance between MALT-S and ICD-10 to diagnose alcohol dependence for overdiagnosis of MALT-S. Our preliminary results conclude that the loss of control can be used to screen the alcoholic dependence in men.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Delivering facilitated access to an alcohol reduction website in primary care**P. Struzzo<sup>1</sup>, C. Lygidakis<sup>2</sup>, E. Scafato<sup>3</sup>, R. McGregor<sup>4</sup>, R. Della Vedova<sup>1</sup>, L. Verbano<sup>1</sup>, C. Tersar<sup>1</sup>, P. Wallace<sup>5</sup><sup>1</sup> Regional Centre for the Training in Primary Care, Region Friuli Venezia Giulia, Monfalcone, Italy; <sup>2</sup> Giotto Movement, Bologna, Italy; <sup>3</sup> WHO Collaborating Centre for Research and Health Promotion on Alcohol and Alcohol-Related Health Problems, Istituto Superiore di Sanità, Rome, Italy; <sup>4</sup> Codeface Ltd, Hove, United Kingdom; <sup>5</sup> National Institute of Health Research Clinical Research Networks, University of Leeds, Leeds, United Kingdom**Background:** At-risk drinkers are rarely identified in primary care, while delivering a brief intervention can be time-consuming. An alcohol reduction website could be a feasible and attractive alternative to the conventional face-to-face brief intervention; providing clear evidence regarding the effectiveness of such a solution has become a priority for its implementation.**Aim:** The study aims at evaluating whether facilitated access to an alcohol reduction website for at-risk drinkers is not inferior to the face-to-face brief intervention conducted by GPs.**Methods:** Patients in northern Italy will be invited for an online screening by their GPs, which will be based on the three-question AUDIT-C. Those scoring positive will undergo a baseline assessment with the ten-question AUDIT and EQ-5D questionnaires, and will be randomly assigned to receive either online facilitated access to the website or face-to-face intervention by their GPs. Follow-up will take place at three, six and twelve months.

The website will deliver the necessary components for the intervention and will sport a particular design to maximise engagement, optimise response rates and increase the follow-up data. GPs can create a tailored experience for their patients and gamification features will be provided alongside a clear internal value.

**Results:** The outcome will be calculated on the basis of the proportion of risky drinkers in each group.**Conclusions:** By providing the necessary evidence, this study could have a significant impact on the future delivery of behavioural change in primary care.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Association between alcohol induced facial flushing and risk of dyslipidemia**K.P. Kim, J.S. Kim, S.S. Kim, J.G. Jung, S.J. Yoon, J.B. An, H.S. Seo  
*Family Medicine, Chungnam National University Hospital, Daejeon, Korea***Objective :** Facial flushing responses to drinking mean intolerance to alcohol. This study examined the role of flushing responses in the relationship between alcohol consumption and risk of dyslipidemia.(low HDL, high Triglyceride, high total cholesterol, high LDL and total cholesterol/HDL ratio)**Methods:** The subjects were 1443 Korean adult males. (261 nondrinkers, 470 flushers, 712 nonflushers) who had undergone medical check-up at Chungnam National University Hospital. We excluded the cases with dyslipidemia or who had taken medication for dyslipidemia. After adjusting for age, body mass index, exercise status, smoking history and history of hypertension and diabetes. On the basis of comparisons with nondrinkers, the risk of dyslipidemia according to the quantity of alcohol consumption per week was analyzed among flusher and nonflushers by logistic regression model.**Results:** We found a low risk of low HDL dyslipidemia among flushers who consumed 56g < ≤ 112g, 112g < ≤ 224g, > 224g (14g of alcohol = 1drink) per week. (OR = 0.33, 0.25, 0.49) In contrast, lower risk of low HDL dyslipidemia among nonflushers who consumed alcohol ≤28g, 28g < ≤ 56g, 56g < ≤ 112g, 112g < ≤ 224g, > 224g per week. (OR = 0.42, 0.43, 0.48, 0.23, 0.36)**Conclusions:** The amount of drinking associated with the risk of low HDL dyslipidemia in flushers was more than in nonflushers. It means that less positive effect of moderate drinking on low HDL dyslipidemia was observed in flushers. The findings support acetaldehyde-derived mechanisms in lipid and lipoprotein metabolism.

Disclosure: No conflict of interest declared



1121

**Presentation type: Oral Communication****Comparison of usefulness among questionnaires for screening women with alcohol use disorder**

J.B. Ahn, J.S. Kim, S.S. Kim, J.G. Jung, S.J. Yoon, S.J. Cho, Y.R. S

*Family Medicine, Chungnam National University Hospital, Daejeon, Korea*

**Objective:** TWEAK and TACE are well known to be excellent in identifying problematic drinking by pregnant women, but these were confined to pregnant women. The present study was aimed to compare the usefulness among questionnaires for screening woman with alcohol use disorder.

**Methods:** This study has been conducted on 213 drinking women who answered they had ever drunk during the previous one month, out of all the women who took a health check up in Chung Nam National University Hospital from March to November, 2012. To diagnose alcohol use disorder, DSM-IV diagnostic standards were applied by diagnostic interviews. The subjects were asked to answer AUDIT, AUDIT-C, CAGE, TWEAK, TACE and NET questionnaires at the same time and the AUROC of each questionnaire was compared.

**Results:** Out of 213 subjects, 54 (25.4%) were identified to have alcohol use disorders. AUROC of each questionnaire was 0.890 for AUDIT, 0.857 for CAGE, 0.837 for TWEAK, 0.836 for AUDIT-C, 0.777 for TACE, and 0.675 for NET, which shows AUROC of AUDIT was the largest. There was no significant difference between AUROCs of AUDIT and CAGE ( $p=0.11$ ). However, AUROC of AUDIT and AUROCs of TWEAK, AUDIT-C, TACE and NET showed significant differences. The appropriate cut-off point in identifying woman with alcohol use disorder patients using AUDIT was over 5.

**Conclusions:** The present study had compared the usefulness among questionnaires for screening woman with alcohol use disorder. the most useful questionnaire in identifying woman with alcohol use disorder patients is AUDIT.

Disclosure: No conflict of interest declared

1123

**Presentation type: Oral Communication****Reliability and validity of alcohol use disorders identification test – Korean revised version (AUDIT-KR)**

C.G. Kim, J.S. Kim, S.S. Kim, J.G. Jung, S.J. Yoon, J.B. Ahn, H.S. Seo

*Family Medicine, Chungnam National University Hospital, Daejeon, Korea*

**Objective:** This study was designed to calculate the reliability and validity of AUDIT-KR (Alcohol Use Disorders Identification Test-Korean Revised version) and to suggest the cut off values.

**Methods:** The subjects were 593 examiners (men: 292, women: 301) visiting the Health Service Center of Chungnam National University. An AUDIT-KR was filled out, including a diagnostic interview held to evaluate risks for drinking and alcohol use disorders. Cronbach's alpha was calculated to evaluate the reliability of AUDIT-KR. The sensitivity and specificity for each cut-off point of AUDIT-KR was calculated and the Receiver Operating Characteristic (ROC) curve analysis was drawn to contract optimal cut-off points.

**Results:** 196 participants (men: 118, women: 78) were at-risk drinkers and 126 (men: 79, women: 47) had alcohol use disorders. Optimal cut-off points for at risk drinking for the AUDIT-KR was estimated as 4 points (sensitivity: 94.0%, specificity: 94.3%) in men and 3 points (sensitivity: 96.1%, specificity: 90.1%) in women. Optimal cut-off points for alcohol use disorder of AUDIT-KR was estimated as 7 points (sensitivity: 89.8%, specificity: 89.6%) in men and 5 points (sensitivity: 89.3%, specificity: 89.4%) in women. Also the Cronbach's alpha of AUDIT-KR was 0.901 showing excellent reliability.

**Conclusions:** The above results suggest that the AUDIT-KR has high reliability and validity in identifying at risk drinking and alcohol use disorders.

Disclosure: No conflict of interest declared

1161

**Presentation type: Oral Communication****Baclofen: A miracle drug to cure alcohol dependence in primary care?**

A. Rieder, P. Gache

<sup>1</sup> *Department of Community Medicine, Geneva Medical School, Geneva University., Geneva, Switzerland;* <sup>2</sup> *Group Practice, 20 rue des Deux-Ponts, Geneva, Switzerland*

**Background:** Few drugs have been approved for use in alcohol dependence treatment programs and success rates remain low. Empirical evidence shows that baclofen, a well known muscle relaxant and a GABA<sub>B</sub> receptor agonist that hasn't yet been approved for prescription to addiction patients, seems to lessen craving for alcohol and to relieve anxiety. Initial observational studies suggest that up to one in two patients benefit from the treatment. Why isn't everyone prescribing baclofen?

**Aim:** Review of scientific evidence and the experience of a group practitioners in France and Switzerland surrounding the prescription of baclofen to alcohol-dependant patients

**Method:** The workshop will be divided into two parts. In the first part, current treatments of alcohol dependence in primary care will be discussed and the available scientific evidence regarding baclofen will be reviewed. Characteristics of the drug and its probable mechanisms of action as well as counter indications to treatment and secondary effects will be presented. The on-going debate about the prescription in France and other European countries will be discussed. In the second part, the trainers will comment on clinical cases in which baclofen was prescribed. An example of a consent-form and a prescription guide will be presented.

**Results:** At the end of the workshop, the participants will understand why baclofen shows real promise and also why prescription to alcohol-dependant patients remains controversial.

Disclosure: No conflict of interest declared

1191

**Presentation type: Oral Communication****Smoking cessation in a Family Medicine Department**

F.G. Cihan, N. Karsavuran, A.D. Karagulmez, A. Ozturk

*Family Medicine, MoH Konya Training and Research Hospital, Konya, Turkey*

**Objective:** Tobacco use is the most common preventable cause of death. In this study, socio-demographic characteristics and physical examination findings of the patients admitting for smoking cessation were evaluated.

**Methods:** This is a retrospective, cross-sectional, descriptive study. The data of patients admitting family medicine outpatient clinic to quit smoking during May 2012 were analyzed by SPSS 15.0.

**Results:** Through May 2012, 89 patients admitted to quit smoking. 24 (27%) were female and 65(73%) were male. Their ages were between 13-69 years (mean:37.5). 4.5% (n = 4) were under 18 years old. 52.8% of patients had been smoking for 6-30 years. The majority of them (13.5%) were smoking for 10 years. 70.8% (n = 63) had been smoking 11-20 cigarettes a day. 56.2% (n = 50) were normotensive, 24.8% (n = 22) were hypertensive, 19% (n = 17) were hypotensive. 40.4% had normal BMI (20-25), 51.7% had higher BMI ( $\geq 26$ ), 7.9% lower BMI ( $<20$ ). There was a significant relationship between the number of cigarettes per day and the Fagerstrom Test for Nicotine Dependence scores ( $p < 0.05$ ).

**Conclusions:** The number of tobacco addicts is increasing irrespective of age, gender and occupation in our country. About half of the people who don't quit smoking will die of smoking-related problems. Based on solid evidence, simple advice from a physician to stop smoking and counseling by a health professional improves smoking cessation rates. Family physicians play an important role in smoking cessation.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Challenges in the screening & treatment of substance abuse in the United States**

J. David

*New York Chapter, American Academy of Family Physicians, New York, United States*

There is a growing epidemic of alcohol and substance abuse facing family physicians in the United States. Opiate overdose is now the leading cause of accidental death. One of four deaths is also now attributed to drug addiction. The objectives of this oral presentation is to discuss the neurobiology of addiction, discuss the drugs commonly abused, give a review of effective screening techniques that can easily be utilized in an office-setting, and to compare evidence-based pharmacotherapy and alternative treatments available. There will a pictorial slide show of these drugs. 42% of alcoholics and substance abusers have concurrent mental health diagnoses and there are controversies when to start the treatment for their mental illness. The treatment recommendations will be discussed. Laws and regulations and current advocacy efforts to treat addictions will also be reviewed.

Disclosure: No conflict of interest declared

**1.5. FOOD AND NUTRITION**

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**Presentation type: Oral Communication****European Food Information Resource: Supporting healthcare professionals**

S. Astley

*EuroFIR AISBL, EuroFIR AISBL, Brussels, Belgium*

In the early 20<sup>th</sup> century, demand for information about nutrient content led to Regional Food Tables using limited existing data. These developed into national food composition tables (FCT), but reduced funding and changing priorities meant fewer participating laboratories, obsolete methods and unreliable data. FCT are used to develop diets with specific nutrient content in clinical practice and formulate emergency food supplies as well as internationally to assess nutritional values of foods consumed by individuals and populations.

One of the goals of the European Food Information Resource (EuroFIR) Network of Excellence (NoE), funded by the European Commission (2005-2010, FP6-513944), was to overcome fragmentation of European food composition data. Facilitated by EuroFIR NoE, CEN TC387 allows unambiguous identification and description of food information whilst the EuroFIR Food Information Platform (EuroFIR FIP) consisting of 26 authoritative online food information resources describes more than 50 000 foods and delivers harmonised and validated data. With increasing interest in the role of non-nutrients in health, EuroFIR FIP includes 19 500 quality-controlled entries describing putative health benefits of 256 bioactive (non-nutrient) compounds, from 199 plant foods, sourced from more than 450 peer-reviewed publications.

To ensure long-term sustainability and support for users (compilers) and stakeholders, EuroFIR AISBL was established in 2008. Its strategic aim is improve the connectivity between the availability and use of food composition data by science and healthcare communities, regulators and the food industry for the benefit of European citizens.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Junk food intake, hypercholesterolemia and obesity in Indian urban children: Towards management of dietary behaviour**

R. Nigam

*Pathology & Clinical Biochemistry, Rajeev Gandhi College, Bhopal, India*

**Objectives:** Modern age is the age of freedom. Freedom may be of thoughts, expression, or action and diet is no exception to that as far as modern eating patterns of urban life are concerned. Today's urban child, the architect of new jet era, starts and ends his day with the food of his choice, which is the expression of his independence. His major motivators for eating are TV advertisements, friends, and media which generally promote junk foods

**Methods:** A sample of 156 school aged urban healthy children was selected from the schools of Bhopal city of India. A comprehensive dietary schedule was used consisting of Demographic, Nutritional, Biochemical, Dietary and Cognitive Profile.

**Results:** The total calorie intake of the sample was found to be below or near the normal, however, calories from fat and proteins intake were relatively high. Serum cholesterol levels above acceptable limits were also found in half of the sample putting them at high risk of developing hypercholesterolemia later. 52% children were on high junk food diet with a high impact of visual media like TV advertisements (87.0%). Higher levels of serum cholesterol were found in 67% of junk food eaters and 82.6% of such children were overweight or at risk of being overweight.

**Conclusion:** Recommendations for total diet, excess fat, life style and dietary behaviour management were made in order to enhance the healthy dietary practices among urban children. Parents, teachers and media were recommended to play a more responsible role in this regard.

Disclosure: No conflict of interest declared

1790

**Presentation type: Oral Communication****Public health impact of industry nutrition improvement programmes**

H. Zevenbergen

*Global Nutrition Director Unilever, Unilever R&D, Vlaardingen, Netherlands*

Among the major global public health concerns are the increasing rates of cardiovascular diseases and obesity. To address these challenges, Unilever is continuously working to improve the nutritional quality of products, and promote activities aimed at behavior change towards a healthier life style. By 2020 Unilever aims to double the proportion of its portfolio that meets the highest nutritional standards, helping hundreds of millions of people achieve a healthier diet. We use modeling tools to estimate the potential public health effects of our reformulation efforts. These tools show that concerted and collaborative action by the industry and other stakeholders to reduce the intake of nutrients like salt and saturated fat, can make a positive impact on public health.

Disclosure: I am fully employed by Unilever, a global foods and beverage manufacturer.

## 1.6. GENDER ISSUES

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Presentation type: Workshop

### Globally gay: treating gay patients the world over

R.Taibjee, S.Sutton

Co-Chair; UK Gay and Lesbian Association of Doctors and Dentists, London, United Kingdom

**Learning Outcomes:** Learn about the vitally important specific health problems and inequalities that Lesbian, Gay, Bisexual and Transgendered (LGBT) patients experience.

Gain a global perspective on the human rights of LGBT people and their effect on health

Make your service as welcoming and inclusive as possible

Learn how to train your team on LGBT issues

**Content:** Being facilitated by family physicians with a special interest in LGBT Health and Medical Education, this will be a one hour workshop with active participation from all. Small -group learning will allow participants to explore their own experiences and ideas, and help delegates cover a difficult and often delicate area. They will gain tools to help cascade their learning to their practice teams and colleagues.

The workshop will start with a video extract from an e-learning module to stimulate discussion, followed by use of a self-assessment validated homophobia scale, where the participant will review their own values and preconceptions.

We will look at the international position on gay health and rights and lessons that can be learned, and provide an overview of proven specific health inequalities of LGBT patients that every family physician should know. We will in particular look at some of the barriers patients report in discussing their sexuality with their doctor. Finally we will try to dispel commonly held preconceptions about gay men and lesbians and examine the truths about the lives LGBT people lead.

Disclosure: No conflict of interest declared

1141

Presentation type: Workshop

### Is fatigue a gender issue – to what extent does fatigue affect leadership in family medicine?

L. Clearihan<sup>1</sup>, K. Price<sup>2</sup>, G. Gill<sup>3</sup>, A. Barnard<sup>4</sup>

<sup>1</sup> Clinical Education and Professional Development Unit, School of Primary Health Care, Monash University, Melbourne, Australia; <sup>2</sup> Women in General practice committee, Royal Australian College of GPs, Melbourne, Australia; <sup>3</sup> General practice for rural and remote medicine, Deakin University, Geelong, Australia; <sup>4</sup> School of General practice, Rural and Indigenous Health, Australian National University, Canberra, Australia

**Objective:** This workshop seeks to explore the impact of being ,female‘ (or ,male‘) in modern societies and how this impacts on professional behaviour. In particular participants will be encouraged to explore personal perceptions of society expectations and obligations and how these interact with professional expectations and obligations.

**Methods:** The workshop will take a solution focussed approach to encourage participants to explore the topic with outcomes in mind. Participants will work in small groups of 4-6 and will be asked to work through a number of scenarios that confront female general practitioners on a daily basis. They will be asked to identify (i) whether they relate to the scenario (ii) what the impact of the scenario is on them personally (iii) how they deal with it (iv) how they would like to deal with it. Groups will be asked to divide into issues that are either policy, practice or serviced focussed.

**Results:** Small groups will report to the larger group and outcomes will be summarised and circulated post workshop for comment. A post workshop questionnaire will be used to evaluate impact of the findings on post workshop behaviour

**Conclusion:** This workshop will provided participants the opportunity to explore issues that (i) they perceive to relate to their gender (ii) have personal relevance for them, and (iii) impact on their professional lives. This process is designed to help make visible many of the tacit assumptions that underpin current policy, practice and service issue impacting on women’s leadership opportunities in general practice.

Disclosure: No conflict of interest declared

1243

Presentation type: Workshop

**Intimate Partner violence management in primary health care from a family perspective**

L. Pas<sup>1</sup>, P. Franck<sup>2</sup>, H. Dascal-Weichhendler<sup>3</sup>, J. Kenkre<sup>4</sup>, N. Kopcavar Gucek<sup>5</sup>, B. Djikanovic<sup>6</sup>, M. Papadakaki<sup>7</sup>, T. Pekez-Pavlisko<sup>8</sup>, C. Fernandez Alonso<sup>9</sup>, G. Feder<sup>10</sup>  
<sup>1</sup> Flemish Primary Care Concertation Group (Velo), CORIGE studygroup, Leuven, Belgium; <sup>2</sup> Department of Social Welfare, Province of Antwerp, Antwerp, Belgium; <sup>3</sup> Department of Family Medicine, Clalit Health Services, Haifa and West Galilee District & Rappaport School of Medicine, Clalit Health Services, Haifa and West Galilee District & Rappaport School of Medicine, Haifa, Israel; <sup>4</sup> Faculty of Health, Sport and Science, University of Glamorgan, Glamorgan, Wales, United Kingdom; <sup>5</sup> EUROPREV (FAMILY VIOLENCE WORKING GROUP), Society of Slovene family physicians, Ljubljana, Slovenia; <sup>6</sup> Institute of Social Medicine, University of Belgrade Faculty of Medicine, Belgrade, Serbia; <sup>7</sup> Primary care, University of Crete, Heraklion, Greece; <sup>8</sup> EUROPREV (FAMILY VIOLENCE WORKING GROUP), Society of Croatian family physicians, Zagreb, Croatia; <sup>9</sup> Mental Health Research group, Semfyc, Valladolid, Spain; <sup>10</sup> Centre for academic primary care, School of Social and Community Medicine University Bristol, Bristol, United Kingdom

**Objectives:** share guidance and consensus development on the management for intimate partner violence in a family context from primary health care services

**Methods:** An international consensus development process is organised by the Europrev Working Group on Family Violence supported by the province of Antwerp, to improve safety of patients and their families experiencing intimate partner violence (IPV) by initiating a stepped care approach.

Interested participants, researchers on IPV as well as college representatives willing to contribute actively to the consensus process can access preparative work on <http://fs8.formsite.com/RESEARCHNET/corigeint/index.html>

**Results:** Starting from case stories an interactive workshop will be held on how to enquire about abuse when patients present with a range of conditions associated with IPV, respond appropriately and link to specialist IPV services. Special attention will be given to the role of health care providers from the family dimension and to children witnessing violence.

Problems and main issues in the consensus development process and models suggested in different health services settings will be presented, including Australia, Belgium, Croatia, Israel, Spain, Slovenia, The Netherlands and UK.

National policies on data sharing and reporting will be compared. Principles for effective training and online guidance will be presented and discussed.

**Conclusion:** Participants are invited to contribute directly to further development of potential training and support strategies for primary care response to IPV and to specify what guidance would be useful in their countries.

Active contributors will get the opportunity to attend an invitational expert meeting in Belgium and directly inform the development of online guidance materials.

Disclosure: No conflict of interest declared

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Presentation type: Workshop  
WONCA Working Party on Women and Family Medicine**Hidden Violence Workshop**

J. Coles<sup>1</sup>, K. Hegarty<sup>2</sup>, S. Shah<sup>3</sup>, K. Anteyi<sup>4</sup>, C. Thurlow<sup>5</sup>

<sup>1</sup> Director of Research Department General Practice, Monash University, Melbourne, Australia;

<sup>2</sup> Department of General Practice, Lead, Abuse and Violence research program, Primary Care Research Unit, Department of General Practice, University of Melbourne, Australia; <sup>3</sup> Assistant Professor and Consultant Family Physician, Department of Family Medicine, Aga Khan University, Karachi, Pakistan;

<sup>4</sup> Chief Consultant Family Physician, Director of Family Medicine, Residency Training, Federal Capital Territory Health & Human Services, Abuja, Nigeria;

<sup>5</sup> General Practice Academic Clinical Fellow (Specialty Trainee), Norwich, UK

Lead and Moderator: J. Coles,

Speakers and Facilitators: K. Hegarty, S. Shah, K. Anteyi, C. Thurlow

**Introduction:** Family violence is now recognised as a major contributor to poorer mental and physical health across the world, but is often hidden.

**Workshop Objectives:** to discuss the challenges family doctors face in recognising and responding to family violence in different cultures contexts and to develop recommendations, strategies and solutions that can be used in practice.

**Workshop Method:** The workshop will be introduced with a presentation on the importance of understanding the impacts of violence in the context of international family practice drawing on experiences of family physicians from Europe, Australia, Africa and Pakistan.

The workshop participants will then brainstorm the challenges faced by family physicians in recognising and responding well to hidden violence. Small group work will then be undertaken to develop recommendations, strategies and solutions for family physicians.

The whole group will then work together on a list of strategies to facilitate better care in their area of practice and useful resources to share.

A short presentation on current evidence on best education/best practice from expert family physicians will close the workshop.

**Outcomes/Benefits:** The findings, strategies and resources identified in the workshop will be summarised. A report publically available on the Wonca Working Party on Women and Family Medicine <http://www.womenandfamilymedicine.com/>

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Presentation type: Oral Communication

**The use of medical chaperones – is this just a Western concept?**O. van Hecke<sup>1</sup>, K. Jones<sup>2</sup><sup>1</sup> Population Health Sciences, University of Dundee, Dundee, United Kingdom; <sup>2</sup> Department of General Practice, Monash University, Melbourne, Australia

**Background:** The use of medical chaperones (or the presence of a third party observing) during clinical examinations is important whether one practises as a specialist, nurse, medical student or generalist. Minimising risk to patients is an important component of good medical practice<sup>1</sup>. Practice varies between countries but also within them. The UK is no exception<sup>2</sup>. The literature on the use of chaperones globally is limited, often confined to the secondary care setting with isolated international reports relating to primary care. It is unknown whether chaperones are used in certain parts of the world<sup>3</sup>.

**Aim:** To explore the attitudes and experiences of general practitioners (GPs) at an international conference in respect to the use of medical chaperones.

**Method:** Mixed methods study. Semi-structured questions during workshop at an international conference. Thematic content analysis.

**Main Outcome Measure(s):** Attitude and experiences of international GPs in respect to the use of medical chaperones; facilitators and barriers

## Reference

1. Wai D, Katsaris M, and Singhal R, *Chaperones: are we protecting patients?* BJGP, 2008. January; p. 54-57.
2. Rosenthal J, et al., *Chaperones for intimate examinations: cross sectional survey of attitudes and practices of general practitioners.* BMJ, 2005. 330: p. 234-235.
3. *The Attitudes and Practices of General Practitioners about the use of chaperones in Melbourne, Australia.* Van Hecke O, Jones Kay. Int J Family Med. 2012: 768461. Epub 2012 Aug 17

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Family Medicine and Global Womens Health: A critical contributor to impacting the Global Burden of Disease**Noemi C Doohan<sup>1</sup>, K A Kelly McQueen<sup>2</sup><sup>1</sup> Family Medicine, Eisenhower Medical Associates, La Quinta, California, United States;<sup>2</sup> Anesthesia, Vanderbilt Institute for Global health, Nashville, Tennessee, United States

A majority of the world's population does not receive adequate medical care, with women disproportionately affected. The reasons for this gender inequity in the global burden of disease are multi-factorial, and include social determinants of disease that target women. Family physicians impact the global burden of disease in a substantive manner, by treating communicable and non-communicable acute and chronic diseases, while also providing woman focused pre-natal and newborn care, c-sections and surgical intervention for post-partum hemorrhage. As HIV/AIDS and TB have become increasingly chronic, and as the world's population is living longer, non-communicable disease has become a greater contributor than communicable disease to the global burden of disease. As Non-communicable disease increases, surgical interventions are becoming more important. The greatest burden of surgical disease, Africa, is also the home of the fewest surgical and anesthesia providers. This is an important gap which family physicians could fill. The broad spectrum training of family physicians offers the communities they serve options for resuscitation, trauma care, c-sections, and pain management. With this in mind, family physicians are perfectly suited to provide care in hospital settings where death from many of the top 10 global causes of mortality can be prevented. Other important contributions to be made by Family Medicine include early diagnosis, referral, and in some cases treatment of cervical and breast cancer. Further, case tracking, reporting and research is a role for Family Medicine in Women's health.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****The development of social cultural contents in correlation with integrated care of mother and infants' health curriculum to avoid health inequality of women in Undergraduate Medical Curriculum of Universitas Indonesia**

D. Vidiawati

*Community Medicine, Medical Faculty, Universitas Indonesia, Jakarta, Indonesia*

**Introduction:** Maternal and infant mortality rate in Indonesia are still high. Beside some direct causes of death, there were 3 'late's and 4 'too's identified as non-directed causes. The 3 late were: late to decide to be referred, late to reach the referral, and late to be handled in referral. The 4 too were: too young, to frequent, to close from 1 pregnancy to another, and to old to have baby. Medical students must be learned that health inequality in woman as cultural background might increase the maternal and infant mortality. Empathy and Bioethics module was chosen, not only because it was integrated with almost all modules in medical curriculum, but also it taught soft skills.

**Objectives:** To arrange social cultural contents associated with integrated care of mother and infants' health in medical curriculum.

**Method:** Qualitative research. Begin with studying the previous curriculum, in-depth interviews with correlated professors and medical curriculum stakeholder leaders, some workshops and technical assistance from WHO and Harvard Medical School were contributed in the curriculum development.

**Result:** Social Culture content were spread and integrated in almost all modules activities as well as ante-natal care knowledge and skills. Multiple activities integrated into first three years, both as stand-alones, and within specific classes/courses. There were many educational methods, including didactic, case-based, role-play, group discussions, etc. The students have experiential opportunities, including home visits, navigation activities, filming, patient interviews.

**Conclusion:** The draft stressed on pre-clinic modules and need to develop in clinical rotations.

Disclosure: No conflict of interest declared

1593

**Presentation type: Oral Communication****Responding to victims of family violence incorporating medical and forensic perspectives**R. Isaacs<sup>1,2,3</sup>*<sup>1</sup> SAFE Sexual Assault Abuse and Forensic Examinations, Royal Prince Alfred Hospital, Sydney, Australia; <sup>2</sup> Department of Community Medicine, University of Sydney, Sydney, Australia;**<sup>3</sup> Special Interest Network Violence and Abuse, Royal Australian College of General Practitioners, Sydney, Australia*

**Background:** Domestic or Family violence to women, children, and a lesser extent, men is present in all societies and often hidden. Family Practitioners will encounter both direct disclosures of family violence and the physical and psychological effect on health of hidden or unacknowledged violence. Detecting abuse children is a particular challenge for primary care.

**Content:** This workshop (or presentation) will enhance core general practice skills in response to violence, particularly violence against women, while also covering more briefly abuse of children, the elderly and the disabled.

1. Physical, sexual, emotional and financial violence.
2. Victim responses including fear, shame, confusion and denial.
3. Causative factors and associations of family violence. The cycle of violence. Coercion and control.
4. When to suspect domestic violence, facilitating disclosure.
5. Responding to patients who are victims of the physical, psychological and sexual harms.
6. Safe practice: affirming and empowering the victim without doing harm, assisting the victim in planning for safety where possible and safe and helpful documentation.
7. A description of the government and NGO responses in Australia to assist women who are victims of violence including the legal response, court orders for protection, counselling service, refuges and shelters. Problems with the apparent options to leave a violent situation and why women may choose to stay.
8. Discussion of opportunities for primary care personnel to be agents of change in the community and in their practices, promoting safety, freedom from violence, gender equality, nurture of children and care of the elderly and vulnerable.

Disclosure: No conflict of interest declared



## 2.1. PRIMARY CARE POLICY

768

Presentation type: Workshop

### Brainstorm & innovation

C. Steylaerts

Honorary Treasurer, WONCA Europe, Diest, Belgium

**Aim:** To introduce a method that, when regularly performed, introduces innovation in any organisation.

**Method:** The “GPS-method” is a fully tried brainstorm method, and consists of the following procedures:

- introduction of a few themes – 20-30 min
  - stem cell therapy in 2037
  - total recall of every memory in 2037
- the actual brainstorming around scenarios proposed (5 + 1 free theme) – 60 min
  - what if ...
  - with a facilitator: can you express that thought in a word, a sentence?
- clustering of ideas, scoring, getting a priority list – 15-20 min
- SWOT analysis – 30 min

**Proposal:** The usual time frame for a GPS-brainstorm is about 3 hours.

We can run a 90 min session.

### Conclusion:

After the workshop, the attendees will:

- be able to run a session themselves in their own organisation
- take home a few good ideas about stem cell therapy and memory
- have the possibility to set up an Innovation Special Interest Group

Disclosure: No conflict of interest declared

1274

Presentation type: Workshop

### Quality and costs of Primary Care in 35 countries: results of the QUALICOPC survey among 7000 General Practitioners and 70000 patients

W.L.A. Schäfer<sup>1</sup>, M. Vanieri<sup>2</sup>, D. Rotar<sup>3</sup>, QUALICOPC Consortium<sup>1,2,3,4,5,6</sup>

<sup>1</sup> NIVEL, Netherlands Institute for Health Services Research, Utrecht, Netherlands; <sup>2</sup> StAnna, Sant'Anna School of Advanced Studies, Pisa, Italy; <sup>3</sup> ULME, University of Ljubljana, Ljubljana, Slovenia; <sup>4</sup> Department of Family Medicine and Primary Health Care, University of Ghent, Ghent, Belgium; <sup>5</sup> RIVM, RIVM National Institute for Public Health, Bilthoven, Netherlands; <sup>6</sup> University of Applied Sciences, Hochschule Fulda, Fulda, Germany

The financial crisis and demographic changes in Europe make it necessary to cut expenditures in all sectors, including health care. Therefore, decision makers are looking for solutions to achieve more cost-effective and better coordinated health care. In many countries a solution that is chosen, is the strengthening of their primary care system. There are indeed indications that strong primary care have the potential to better controls costs and to have better health outcomes. Knowledge on how this works and what mechanisms are behind this, is however limited. Results from prior studies are inconclusive. Often they have been performed in a limited number of European countries and frequently the focus is limited.

The QUALICOPC (Quality and Costs of Primary Care in Europe) project aims to provide better insight into the mechanisms behind the potential benefits of primary care. During the past year new data has been collected through surveys among 7000 General Practices and 70000 patients in 35 countries (32 European countries, Australia, Canada and New Zealand). The diversity in the organization of primary care in these countries, provides us with possibilities to learn from each other. In this workshop results from the surveys will be presented. The presentations will provide insight in the relationship between the organization of primary care and how patients perceive the quality of primary care, how GPs deliver services and overall health care outcomes (quality, equity and costs). It will be discussed what lessons we can learn from these findings.

Disclosure: No conflict of interest declared

1287

**Presentation type: Workshop****Health driving health care – Complexity SIG workshop**J. Sturmberg<sup>1,2</sup>, J. Price<sup>3</sup>, B. Kissling<sup>4</sup><sup>1</sup> Department of General Practice, Monash University, Melbourne, Australia; <sup>2</sup> Department of General Practice, The Newcastle University, Newcastle, Australia; <sup>3</sup> Department of General Practice, University of Brighton, Brighton, United Kingdom; <sup>4</sup> Bern, Switzerland

**Background:** Healthcare systems around the world are struggling – with increasing demands, increasing costs, and diminishing sense of purpose. We suggest that one important reason for this is loss of appreciation of what constitutes *health*. In fact, it would appear that the system actually always thinks and talks about disease. With disease being the centre of the “health care system”, the system only ever can deliver “disease results”.

**Approach:** Complex adaptive systems, like the health system, self-organise around a focus, or attractor, and all of the systems agents will interact in such ways as to realise the aims of that attractor.

This workshop briefly introduces a complex adaptive model of the health system. Based on this understanding participants will explore the meaning of health. Having described health as the attractor of the health system, participants will explore how the agents of the health system might be configured to work together in an interconnected fashion to achieve *patient-focused health outcomes*. A final consideration will be given to the implications of a health focus on the practice of medicine, research and health professional education.

Disclosure: No conflict of interest declared

1631

**Presentation type: Workshop****Indigenous issues and health outcomes**

T.A. Taylor

General Practice, Royal New Zealand College of General Practitioners, Wellington, New Zealand

**Background:** New Zealand a population of 4 million people with an approximate 3000 strong GP workforce is in the forefront of building bridges amongst its multicultural community. This is underpinned by the Treaty of Waitangi signed between the Crown and Maori the indigenous people of New Zealand in 1840. Current legislation recognises this Treaty and ensures the “special status” for Maori. The overwhelming evidence shows that Maori are over represented in poor housing, low socio-economic status, poor health, high prison rates, domestic violence etc. In 2007, The Royal New Zealand College of General Practitioners released its Cultural Competency Guidelines for General Practice, a substantial part of this document is dedicated to issues around Maori. However, the frame work is generic and can be used for all other cultures and ethnicities. It is helpful when governments and professional bodies are prepared to take on such challenges, however the greater challenge will always remain at the individual level, specifically at the General Practitioner level. In 2012 the New Zealand Parliament hosted the launch of the RNZCGP’s Maori Strategy.

**Objectives:**

- Indigenous health – Health disparities – closing the Gap – The New Zealand experience
- General Practitioners – as health and political advocates
- International challenges and barriers
- Indigenous outlook as a Health Determinant
- Poor health outcomes and indigenous communities
- Building bridges within indigenous environments
- Facilitating cultural exchange provides more safer and efficient health service delivery

Disclosure: No conflict of interest declared

1701

**Presentation type: Workshop****Addressing health equity: The role of general practitioners / primary care doctors**W. Wong<sup>1</sup>, M. Kidd<sup>2</sup>, I. Heath<sup>3</sup>, K. Kinder<sup>4</sup><sup>1</sup> Family Medicine & Primary Care, The University of Hong Kong, Hong Kong, Hong Kong;<sup>2</sup> Faculty of Health Science, Flinders University, Adelaide, Australia; <sup>3</sup> President, The Royal College of GP, London, United Kingdom; <sup>4</sup> Bloomberg School of Public Health, Johns Hopkins University, Baltimore, United States

**Objective** This workshop seeks to explore the extent to which health equity issues are encountered in the daily practice of the general practitioners in the primary care setting and how strategies can be adopted at consultation, community and national levels that could eventually lead to improvements in the equitable delivery of primary health care and in health outcomes.

**Background** Scholarly literature has established a clear link between poverty and poor health. Nonetheless health inequities are not always dichotomously distributed among the rich and the poor but also occur within socioeconomic classes (1). As demonstrated by Macinko *et al.*'s study, the strength of a country's primary health care system was found to significantly improve determinants of population health even after controlling for determinants of population health both at the macro-and micro-levels (2). Many areas such as the provision of health promotion and preventive services from the perspective of "equity in health care services are not explicitly addressed by general practice" (3).

**Methods** By thinking through the goals of equity systematically some of these gaps can be addressed, including, for examples, how messages of equity can be conveyed to the target population and the general public, or how the ideas of equity can be promoted through better training and education within the profession and in the primary care setting. As recommended by Barbara Starfield, a health equity curriculum should involve the "development of a strong evidence base concerning the distribution of health problems, the way in which they present in community practice, and how they are modified by various types of interventions" (4).

**Significance** This workshop will work towards the development of a health equity curriculum and agenda, and open up discussion of the future and potential impact of health equity training among the general practitioners and primary care workers. As part of the workshop, we also propose to seek interest in establishing a WONCA special interest group on health equity.

**Bibliography:**

1. Loyd, D, Newell, S & Dietrich U 2004, *Health inequity: a review of the literature*, prepared for Health promotion Unit, Northern Rivers Area Health Service, Lismore, NSW.
2. Macinko, J, Starfield B, & Shi L 2003, *The Contribution of Primary Care Systems to health Outcomes within Organization for Economic Cooperation and Development (OECD Countries, 1979-1998)*, Health Services Research, 38:3.

3. Rogers, W, Veale B, 2000, *Primary Health Care and General Practice*, Flinders University Scoping Report.
4. Starfield B, *Global Health Equity and Primary Care*, 2007, JABFM 20:6.

Disclosure: No conflict of interest declared



2020

Presentation type: Workshop  
Vasco da Gama Movement

### Shifting perspectives in healthcare: Becoming partners with patients

C. Steylaerts<sup>1</sup>, C. Lygidakis<sup>2</sup>, R. Gomez-Bravo<sup>2</sup>, G. Irving<sup>2</sup>

<sup>1</sup> *WONCA Europe*; <sup>2</sup> *Vasco da Gama Movement*

**Background:** The Internet-savvy users, the so called e-patients, seek online health information, connect and collaborate with others and take advantage of this medium not only for decision making and management of their own condition, but also for education and advocacy purposes. The connectivity and the wide availability of a large amount of data, thanks to worldwide health databases, mobile devices and personal health records, enable the patients to play an active role in healthcare at an individual and community level, as shown by the connected communities of care and the movement of participatory medicine.

Relationships between clinicians and patients are bound to be transformed fundamentally. In this context, it is crucial now, more than ever, that Family Doctors become partners with patients and lead the way into a new paradigm of Medicine.

**Aim:** The aim of this interactive workshop is to present this ever evolving scene and explore the ways with which Primary Care and Family Medicine can stay relevant.

**Expected Results:** This workshop will try to show that the Internet is not a grocery shop, but a vast field with four corners: the corner of what is known (evidence), the corner of what we feel (gut feeling), the corner of what we think (fantasy, perception) and the corner of what we want (dreams, hope).

We expect that by the end of the workshop we will have discussed some of the characteristics of the e-patient communities and outlined some strategies for the cooperation with this new generation of empowered patients.

2024

Presentation type: Workshop  
European Forum for Primary Care

### Primary Care and health of Roma Good practice and policy to optimise interprofessional primary care for Roma patients

P. de Graaf<sup>1</sup>, D. Rotar<sup>2</sup>

<sup>1</sup> *European Forum for Primary Care*, <sup>2</sup> *University of Ljubljana, Slovenia*

**Key words:** Primary care, Roma health, ethnic minorities and health, interprofessional collaboration

**Aims or purpose:** This workshop is part of a one year long exchange of good practice and policy in the field of primary care and health of Roma, between members of the European Forum for Primary care representing the different professional groups working in primary care and civil and patient organisations. The final result will be the development of a Position Paper on this topic, that will be disseminated across Europe.

**Methods:** A number of good practices and policies that have been collected over the past year in various countries will be presented, followed by a discussion between attendants of the workshop. Key questions: (1) Are general approaches to improve accessibility and quality of primary care sufficiently inclusive for Roma in particular and for ethnic minorities in general? (2) What approaches have been found to be sustainable and effective, and relatively context independent, to improve access to primary care for Roma? (3) Identification of approaches to improving primary care for Roma and ethnic minorities by WONCA and its members.

**Results:** Participants leave the workshop with new suggestions for practice and policy and with opportunities for networking. New material for the Position Paper and contacts will lead to a first draft version of the Position Paper after this workshop.

355

**Presentation type: Oral Communication****National Physician Survey in Canada – Lessons in physician data collection and use**

A. Safarov, I. Grava-Gubins, J. Eriksson

*Research, College of Family Physicians of Canada, Mississauga, Canada*

The National Physician Survey (NPS, [www.nationalphysiciansurvey.ca](http://www.nationalphysiciansurvey.ca)) is Canada's largest physician workforce study, carried out conjointly by the College of Family Physicians of Canada (CFPC), the Canadian Medical Association (CMA) and the Royal College of Physicians and Surgeons of Canada (RCPSC) in 2004, 2007 and 2010, and the current cycle, 2012-2014.

Being a census survey, every current & future physician in Canada is invited to participate. The 2010 survey collected data from over 12,000 practicing physicians, 2,500 residents and 3,100 medical students. In 2012, the NPS survey was conducted online with medical students and residents in Canada.

The NPS collects data on a variety of topics, i.e. physician work hours, use of technology, practice organization/environment, remuneration model, services offered, populations served, languages spoken, professional satisfaction, and their plans for the future. The information gathered is made available to Canadian health care organizations involved in advocacy, policy making, and to researchers for health human resource workforce studies.

This presentation will focus on the methodology followed by the NPS team in creating and conducting a census survey, their consultative approach to survey generation, logistics and challenges of administering an online census survey, and collecting the data/knowledge translation tactics used in data dissemination. Lessons learned in maintaining strong response rates, finding cost efficiencies and forming collaborative relationships with other Canadian health care stakeholder organizations will also be shared.

Disclosure: No conflict of interest declared

366

**Presentation type: Oral Communication****Reducing emergency hospital admission through primary care interventions in Ireland**C. M Sheehan<sup>1,2</sup>, M. O Grady<sup>2</sup>, M.R. O'Brien<sup>3</sup>, B. McCarthy<sup>3</sup>*<sup>1</sup> Department of General Practice, UCC, Cork, Ireland; <sup>2</sup> Research Office, MPHIC, Mallow, Ireland; <sup>3</sup> Primary Care, HSE, Mallow, Ireland*

Emergency admissions account for almost 70% of hospital bed days in Ireland. People over 70 years of age are very susceptible to emergency admissions, this cohort accounts for 65% of bed usage, with an average stay of 5 days, with an increased risk of re-admission at huge financial costs. It is difficult to predict and reduce admissions, although there are several threshold and predictive models, for example EARLI, PARR, SPARRA, PEONY and Prism. The information presented is based on a primary care intervention/research, whereby, 1,100 EARLi (Emergency Admission Risk Likelihood Index) surveys were posted to patients over 70 years of age, and registered with Mallow Primary Healthcare Centre (MPHC), Ireland. There was a response of 80%, with 72 patients identified as very high risk/high risk for emergency admission. From December 14<sup>th</sup>, 2011 to of December 5<sup>th</sup>, 2012, an intervention team, based at MPHC was established to evaluate the needs of these very high risk/high risk patients. The team comprised of a GP, Public Health Nurses, and a researcher. The research and intervention has led to a 54% reduction in the Very High Risk patients and 25% for the high risk patients, with a predicted annual national reduction of 30% (saving an estimated €100 million). This presentation discusses the implications of annualised risk reduction as a policy of primary care, the structure of the intervention team, with a special focus on the role of the GP, and the use of threshold /predictive models in primary care to reduce emergency hospital admissions.

Disclosure: No conflict of interest declared

454

Presentation type: Oral Communication

### Using geospatial analyses, tools and datasets to inform population-based primary health care

A. Bazemore

Robert Graham Center for Policy Studies, American Academy of Family Physicians, Washington DC, United States

**Objectives:** Global efforts to move towards population-based primary health care are increasingly informed by linked small geography-level information on social determinants and health care determinants simultaneously. They also require data-driven applications capable of informing policy, displaying information rapidly and simply. In this session, we'll discuss innovative methods and novel online mapping tools created by the Robert Graham Center for the U.S. and Australia which allow geospatial data analysis display to inform primary care policy and planning

**Methods:** Achieving Millenium Development Goals requires an understanding of the primary care landscape in the context of social determinants, using locally-relevant geographies and data. Building from policy cases and needs with stakeholder input, we used Geographic Information Systems and datasets to create regional mapping and data display tools that combine practice level quality information with data revealing health care utilization and costs, disease prevalences, and social determinants in an online Geographic Information System.

**Results:** We will demonstrate our novel UDS Mapper, HealthLandscape-Australia, and NC Community Health Information Portal tools, exploring their use by policymakers and planners to inform decisions about expansion or relocation of services and to drive data-informed conversation about improving access to care. We will also lead a discussion of how similar tools and analyses could be used in other countries.

**Conclusions:** Online geographic information systems that incorporate clinical, social determinant, and population data offer powerful implements to support effective primary health care policy discussions and planning. There is great potential for their expanded use across additional nations in the future.

Disclosure: No conflict of interest declared

707

Presentation type: Oral Communication

### Effectiveness of incentive money and motivated strategies to general practitioners retention in community hospital

E. Chanwanpen, A. wongworachart

Family Medicine, Sichon Hospital, Nakhonsithammarat, Thailand

Shortage of physicians in rural areas was the main problem in Thailand. The major factor was financial issue. Thai government has launched special incentive money and professional opportunity strategies to rural doctors since 2008. The purpose of study was to determine the relation of incentive money and professional opportunity strategies to the retention of physicains in community hospitals. This was cross sectional descriptive study of the physicians in the community hospitals nationwide covering 720 hospitals. Mail questionnaires were distributed and collected data between January 1, 2011 and January 31, 2011. Data were analyzed by SPSS-PC version 11.5 by reporting as descriptive statistics such as frequency, percentage, average, and standard deviation including analytic statistics with Chi-square and binary logistic regression. The results revealed that response rate was 28.88 %. Most of physicians were male 66.59%; average age was 35.92 years old. A 30 bed-sized community hospital was the most current work place 52.64%. The study found that the financial strategy with incentive money related to the retention of physicians and influenced longer duration of working up to 88.00%. There were 71.15% of physicians that strongly disagreed to the exception of this incentive money. Moreover, professional opportunity strategy directly affected physicians with high satisfaction rate 70.95%. This study demonstrated the fincaial strategy such incentive money and professional opportunity strategy were the major factors that related to the retention of physicains in community hospitals. These motivation strategies should be considered and applied to human resource policy.

Disclosure: No conflict of interest declared

945

**Presentation type: Oral Communication****Commissioning in the UK – GP's to lead the way**

G. Howsam, J. John

*Commissioning, RCGP, London, United Kingdom*

General Practice in the UK is about to change as we know it. We have been handed a baton of leadership to commission services for our patients. Previously services were commissioned from local primary care organisations, however following a recent health bill GP's have been directly instructed to commission these services. It is thought we, at the front end of patient engagement, know what is best for our patients. This has brought with it both excitement and fear. Excitement for the potential opportunity to advance care in general practice. Fear for how privatisation could cripple services and lack of funding could damage the doctor – patient relationship. GP commissioning, if done right, makes sense. Thus it is important for us to seize this opportunity to deliver to our communities that which is needed and will benefit the most.

We as GP's work both locally as Commissioners and for the RCGP commissioning board. We are passionate that commissioning is something GP's should be doing for both the benefit of our patients and for greater good of the health service. Commissioning is leadership and power in the hands of primary care.

This interactive workshop will discuss what commissioning is, why it is relevant, both in the UK and as an opportunity to global primary care institutions. We will work through real life case studies and encourage an open forum on this exciting initiative.

Disclosure: No conflict of interest declared

946

**Presentation type: Oral Communication****Primary oral health care: Reasons for seeking treatment for oral health problems at 3 primary care clinics of Kuantan, Pahang, Malaysia**T. Myo Han<sup>1</sup>, M. Aznan Md Aris<sup>2</sup>, D.M. Thuraiapprah<sup>3</sup>, T. Maung Aung<sup>4</sup>, A. Yusoff<sup>5</sup>, R. Adawiah Sulong<sup>2</sup>

<sup>1</sup> *Community Dentistry & Family Medicine (attached), International Islamic University, Malaysia (IIUM), Kuantan, Malaysia;* <sup>2</sup> *Family Medicine, International Islamic University, Malaysia, Kuantan, Malaysia;* <sup>3</sup> *Family Medicine & Academy of Family Physicians, Malaysia, MAHSA University, Kuala Lumpur, Malaysia;* <sup>4</sup> *Oral Surgery, MAHSA University, Kuala Lumpur, Malaysia;* <sup>5</sup> *Community Dentistry, Universiti Sains Malaysia, Penang, Malaysia*

**Objectives:** To explore reasons for seeking treatment for oral health problems at 3 primary care clinics, Malaysia

**Methods:** A cross-sectional descriptive and analytical study was carried out among 77 patients with oral health problems (OHPs) who seek treatment at 3 different primary care clinics – a university primary care clinic (International Islamic University, Malaysia), a public primary care clinic (Balok block) and private polyclinic (Klinik Ar Razi) – of Kuantan, Malaysia from 1<sup>st</sup> April to 31<sup>st</sup> July 2012. A pre-tested semi-structured questionnaire with open-ended questions was used to collect the data. Reasons for seeking treatments were analysed by types of clinics.

**Findings:** Reasons given by patients for seeking treatment for OHPs at 3 primary care clinics were easily accessible to primary care clinics (17%), preferring to and requiring services provided by primary care physicians because of co-morbidity with medical diseases (12%), getting emergency services (5%) and non-specific reasons which were the same as reason for encounter (56%). Reasons for seeking treatment for OHPs were significantly different ( $p < 0.05$ ) among the patients from 3 different primary care clinics.

**Conclusion:** This study proved that primary care physicians may play as one of key partners for oral health promotion, prevention and emergency oral health care because of co-morbidity with medical diseases and nature of practices. Thus, primary and emergency oral health care training should be provided to primary care physicians not only to offer the standard oral health care to patients but also to assist in coordinative care with oral health care providers.

Disclosure: No conflict of interest declared

1042

Presentation type: Oral Communication

**The good, the bad and the ugly of healthcare reform: Achieving universal healthcare coverage in a cold economic climate**L. Pettigrew<sup>1</sup>, G. Irving<sup>2</sup>, S. Wieringa<sup>3</sup>, S. Kumpunen<sup>4</sup><sup>1</sup> International Department, Royal College of General Practitioners, London, United Kingdom;<sup>2</sup> Department of Health Services Research, University of Liverpool, Liverpool, United Kingdom;<sup>3</sup> Centre for Primary Care & Public Health, Blizard Institute, Barts & The London School of Medicine & Dentistry, London, United Kingdom; <sup>4</sup> Department for Health and Social Care, London School of Economics and Political Science, London, United Kingdom**Objective:** This presentation aims to provide an overview of what Universal Health Coverage (UHC) means and how it can be achieved.

Many countries aim to have UHC because it will increase the likelihood of their citizens having improved access to healthcare services, improved health outcomes and being protected from financial risk. The challenging issue is determining what success looks like and how to get there.

**Methods:** Examples of various 'paths' towards UHC will be provided by using a selection of countries with differing income levels as case-studies. Consideration to the breadth, depth and scope of coverage will be given through framework analysis. Particular attention will be paid to the role of primary care in achieving UHC.**Results:** Health professionals should have an understanding of how UHC as an aim of healthcare systems can be achieved in order to advocate for it through their role as clinicians, citizens and potential patients.**Conclusions:** In order to be able to 'Care for Generations' both now and in the future, healthcare systems need to achieve UHC. However many countries have yet to achieve this, and even in those that have already done so through variety of paths, issues around equity and quality of care still need to be addressed.

Disclosure: No conflict of interest declared

1273

Presentation type: Oral Communication

**Is Family Medicine burning out?: A burnout and job satisfaction study in Ankara, Turkey**T.E. Yılmaz<sup>1</sup>, A. Bahadır<sup>1</sup>, A. Özkara<sup>2</sup>, R. Kahveci<sup>1</sup>, İ. Şencan<sup>1</sup>, İ. Kasım<sup>1</sup>, İ. Bülbül<sup>1</sup><sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey;<sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey**Objectives:** According to the most common description at present, burnout syndrome is characterized by exhaustion, depersonalization and reduced satisfaction in job performance. Research indicates general practitioners have the highest proportion of burnout cases. The aim of this study to find out the level of burnout and job satisfaction among family doctors (FD) in Ankara, Turkey.**Methods:** We conducted a structured survey with FDs in Ankara to look for their views and experiences in their daily practice. We applied Maslach Burnout Inventory-MBI and Minnesota Satisfaction Questionnaire-MSQ to survey participants. We sent surveys via e-mail to all FDs in Ankara (n:1250). 507 responded (response rate:46.7%). We analyzed data with SPSS 15.0.**Results:** The median MBI subscale scores in different domains for our study were as follows: depersonalization 4/20, emotional exhaustion 16/36, personal accomplishment 25/32. MSQ mean scores were 66.37 ± 13.72. Job satisfaction was inversely correlated with emotional exhaustion and depersonalization, and positively correlated with personal accomplishment. FDs who work in rural areas have lower scores of depersonalization compared to urban areas (p=0.017). The physicians who have higher patient admissions in daily practice have higher scores of emotional exhaustion (p=0.034). Doctors who have registered patients less than 3000, have higher level of job satisfaction (p=0.004).**Conclusions:** Having been conducted in early stages in family medicine program in Turkey, the findings of this study gives us valuable information regarding FDs' current situation and contribute identification of their views and needs. The study is believed to highlight the actions to be taken by policymakers.

Disclosure: No conflict of interest declared



1408

Presentation type: Oral Communication

**Teeth and more...an interventional approach for the family doctor in dental and periodontal pathology**I. Coelho<sup>1</sup>, N. Veiga<sup>2</sup>, A. Oliveira<sup>3</sup><sup>1</sup> Family Health Unit, Grão Vasco, Viseu, Portugal; <sup>2</sup> Health Sciences, Universidade Católica Portuguesa, Viseu, Portugal; <sup>3</sup> Piaget, Institute, Viseu, Portugal

**Objectives:** Primary prevention is defined as being so important as dental and periodontal disease treatments and the general practitioner must have a important role. The main objective of this workshop is to make an approach on oral diseases and oral health behaviours with a complete explanation and comprehension of the primary prevention methods applied in order to make a complete diagnosis of dental and periodontal diseases and correct instruction of adequate oral hygiene habits.

**Methods:** The 90 minutes section will be divided in two phases:

Phase I – First 30 minutes theoretical component: Review of primary prevention measures in oral health and oral health diseases.

Phase II – 60 minutes practical component: Exclusively practical component which consists of observing the oral cavity by the participants and a complete identification of the main oral pathologies.

**Results:** At the end of the workshop, participants will be able to advise patients of primary prevention measures for oral health and identify the most common oral diseases which will help the general practitioner to orient their patients to dental health services.

**Conclusions:** We expect to motivate general practitioners on the diagnosis of oral diseases and instruct their patients to have adequate oral health behaviours.

Disclosure: No conflict of interest declared

1424

Presentation type: Oral Communication

**AbuDhabi Ambulatory Health Care Services. A new module of Primary Health Care Management**

O. Al Jabri, L. Baynouna, R. Al Qubisi

Ambulatory Health Care Services, Abu Dhabi Health Care Services, Abu Dhabi, United Arab Emirates

**Objective:** Superior quality care with Primary Health Care is well evident. Nevertheless, its implementation is so variable all over the world. In 2008 Abu Dhabi established Ambulatory Health Care services company to manage 27 Primary health care centers in the Emirate that expanded in 2012 to manage all of government Ambulatory Health Care centers. It is considered a newer model not only for the unique structure but also for the scope of practice and services provided.

**Methods and Results:** The company is a government owned business entity chaired by an executive committee and a chief executive officer. It has many departments as supportive, IT, quality and operation. It provide a comprehensive, convenient, accessible and free services for all residents of Abu Dhabi (2300,000 residents and >=1300,000 visits/year). A continuum of care is ensured as patients are treated in facilities connected with one organizational body, SEHA, and unified by one electronic medical record. Care includes; family practice, dental, school screening program, premarital counseling program, pre-employment screening program, visa screening and travel health program and Weqaya program, a cardiovascular screening of all UAE nationals. All supported by at point of care laboratory services, imaging and pharmacy.

**Conclusion and outcome:** AHS was the first ambulatory health care services network, in the world, to obtain JCI accreditation. AHS got the ACGME-I institutional Accreditation and working towards the family medicine program accreditation 2013. Quarterly AHS reports Clinical Key Performance Indicators, Financial Indicators and patient satisfaction surveys.

Disclosure: No conflict of interest declared

1433

**Presentation type: Oral Communication****The development of 13 guidelines of general practice, to manage the most common diseases and health conditions in primary health care: A focus on the process and the methodology**

C. Lionis, I. Vasilaki, T. Karpathiotaki, F. Anastasiou, D. Prokopiadou, I. Tsiglianni, on behalf of the Greek Guidelines Review Group  
*Clinic of Social and Family Medicine, University of Crete, Heraklion, Greece*

**Objective:** A Greek initiative with the aim to develop 13 Guidelines in General Practice and Nursing regarding the management of the most common chronic diseases is currently in place. This initiative involves the application of a specific methodology for this development with the involvement of WONCA networks and working groups.

**Methods:** The process of the development of the clinical guidelines utilizes a modified algorithm introduced by Kaiser Permanente (2012) and the ADAPTE methodological framework (<http://www.adapte.org>) and involves two stages. The first stage involves the identification, review and assessment of selected guidelines by using the local experience gained at the University of Crete and the AGREE tool (<http://www.agreecolaboration.org>). In parallel, the systematic reviews relevant to the clinical questions set by the Greek reviews groups will be assessed by the AMSTAR tool (<http://www.biomedcentral.com/content/pdf/1471-2288-7-10.pdf>), while the quality of the existing literature will be also assessed. The second stage involves the formulation and evaluation of guideline recommendations by utilizing the methodological framework of the Australian National Health and Medical Research Council (<http://www.nhmrc.gov.au>). An expert consensus panel with the involvement of delegates of national stakeholders, colleges, patients' organizations and the WONCA networks and groups, including ESPCCS, ESPCG, PCD Europe, EUROPREV, WONCA W P on Mental Health and IPCRG would discuss and approve the formed recommendations.

**Results/Conclusions:** This is the first time such endeavor with the assistance of WONCA groups, to develop methodology for creating guidelines for general practice in the Greek primary health care setting of the most common diseases and health conditions.

1495

**Presentation type: Oral Communication****Health Links: Ontario's approach to integrating patient care**

H. Angus<sup>1</sup>, M. Greenberg<sup>1</sup>, S. Rafi<sup>2</sup>

<sup>1</sup> Transformation Secretariat, Ontario Ministry of Health and Long Term Care, Toronto, Canada; <sup>2</sup> Deputy Minister, Ontario Ministry of Health and Long Term Care, Toronto, Canada

The sustainability of universal health care in Canada is increasingly at risk due to a challenging fiscal environment and an aging population.

In Ontario, Canada's most populous province with over 12 million people, the Ontario Ministry of Health is working with the health sector to transform how health care services are delivered, putting the person at the centre and ensuring Ontarians receive the right care, in the right place, at the right time and for the right cost.

Better integration of primary care into the health care system is key to Ontario's sustainability strategy. The Government of Ontario recently introduced Health Links, which are bringing together all health care providers in a community to better coordinate health care services for patients in the geographic region. Health Links are voluntary collaborations of providers and build on the work of health services researchers who identified naturally occurring networks that share in the care of a patient population. Health Links initial focus is to improve care for seniors and people with complex conditions, especially the 5% of patients who comprise 66% of Ontario's health care spending. In order to stimulate innovation, Health Links have been offered more flexible policy and program rules.

Health Links will demonstrate progress on a core set of indicators, such as: improving access to family care for seniors and patients with complex conditions, reducing avoidable emergency room visits, reducing unnecessary re-admission to hospitals, reducing time for referral to specialist appointment.

19 early adopter Health Links have begun their work and are establishing baselines with early results by June 2013.

Disclosure: No conflict of interest declared

1501

**Presentation type: Oral Communication****Territory / place: participatory methods of producing health information**

R. Pekelman

*Hospital Nossa Senhora Conceição, Conceição Hospitalar Group, Porto Alegre, Brazil*

**Objectives:** Discuss concepts of territory and territoriality. Articulate these concepts to those of the Primary Health Care (PHC). Present and discuss territorialization experiences developed at the Department of Community Health / GHC in Porto Alegre/RS/ Brazil. Discuss territory research methods as a talkative map or a rapid estimation that establish a dialogue, considering the health indicators, the perspective of participatory population, privileged space for popular education in health.

**Methods:** We believe that the services of PHC should know and understand the territory because it is essential to problematize and to intervene on health through actions. The workshop uses active methods for reflection on the territory and health.

**Results:** Strategies to know and understand the territory, where people build their lives, as well as the health needs of the people who live there, is the central theme of this course, we seek to recognize the territory as a space for production life, identity, integrate the knowledge produced, establish dialogues between them, epidemiology and culture, gender relations and discrimination, etc. For this exercise to understand the reality, which must be accomplished either by the health service, and the population, we should make use of available information, the most diverse natures.

**Conclusions:** PHC in territorial basis can help, especially in poor countries, to identify health needs, inequities existing in the territory and to promote and implement equanimous actions community-oriented and culturally accepted.

Disclosure: No conflict of interest declared

1556

**Presentation type: Oral Communication****Hospitalization for Ambulatory Care Sensitive Conditions in Rio Grande do Sul, Brazil: Associated factors**F.B. Nedel<sup>1,2</sup>, L.A. Facchini<sup>1</sup>, M. Martín<sup>2</sup>, A. Navarro<sup>2</sup>

<sup>1</sup> *Departamento de Saúde Pública, Universidade Federal de Santa Catarina – UFSC, Florianópolis, SC, Brazil;* <sup>2</sup> *Grups de Recerca d'Amèrica i Àfrica Llatines, Unitat de Bioestadística, Universitat Autònoma de Barcelona, Barcelona, Spain*

**Objective:** to describe rates of hospitalization for Ambulatory Care Sensitive Conditions (ACSC) in Southern Brazil, and assess their variability regarding to the coverage and uptime of the Family Health Program (FHP), adjusted by socioeconomic and health system indicators of the municipality.

**Methods:** Ecological study, with the municipality as the unit of analysis. Sample: hospitalization records of residents in the 496 municipalities of the State of Rio Grande do Sul, Brazil, in the year of 2007. Data sources: hospitalization databases of the Brazilian National Health System (Sistema Único de Saúde – SUS); for the resident population and independent variables, there were used various public sources, mainly the SUS. Hospitalizations have been classified according to the Brazilian list of hospitalization for ACSC, and the rates standardized (indirect method) by sex and age, with reference to the rates observed in Porto Alegre, the state capital. The resultant Standardized Morbidity Ratio (SMR) was categorized into tertiles. Multivariate analysis was performed by a multinomial model, with reference to the median tertile.

**Results:** 30.5% of 638,359 hospitalizations were ACSC, a rate of 17.6/1,000 inhabitants. In municipalities with the worst (higher) rates, these were directly associated to the coverage and uptime of FHP.

**Conclusions:** A high coverage of the FHP wasn't enough to avoid hospitalization for ACSC, instead was associated to higher rates. While there is limitations for some of independent variables, the study reflects the importance and utility of impact assessment in primary care with secondary data routinely collected.

Disclosure: No conflict of interest declared

1573

**Presentation type: Oral Communication****The role of primary healthcare teams in the transfer of patients to tertiary healthcare services**

F. Joaquim, L. Lapao

*WHO Collaborating Center for Health Workforce Policy and Planning, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisboa, Portugal*

**Objective:** To study the clinical decision-making process, involving health professionals, patients and their families, in the process of transferring to tertiary healthcare services.

**Methods:** This research is an exploratory case study, with two embedded units of analysis (Ying, 2003): families of elderly with dementia; and primary healthcare teams (PHCT). Data were collected through semi-structured interviews and focus groups. The data analysis was achieved through thematic content analysis (Bardin, 2008) and descriptive statistical analysis supported by SPSS.

**Results:** The results are of significance to policy-making. First, the need for new clinical decision-making models based on shared decision principles; Second, families who had shared their decision-making process with healthcare teams, recognize their fundamental role as mediator between the families and the complexity of moving within the complexity of health and social system; Additionally, the families, who had been follow-up by the PHCT, were more satisfied with their decision. However, still exist some difficulties to address the many options of the systems and to benefit from a more integrated and continued care.

**Conclusions:** The primary-healthcare reform has been an opportunity to create innovation in healthcare delivering value, which is recognize through the families who had been accompanied by the PHCT. However, still exist several bottlenecks, mainly, associated to team work, communication and the use of new technologies.

To achieve a proper culture of PHCT support in the decision-making process it requires more openness to innovation and communication between PHCT and patients. The integration of primary healthcare services is critical to reach improved decision-making.

Disclosure: No conflict of interest declared

1734

**Presentation type: Oral Communication****Home visits: Profile of family center in Central Brazil**

G. Amorim, J. Pedroso, S. Batista, J. Soares, I. Saraiva, F. Pinto, M. Cruz, D. Veloso, J. Pacheco, E. lourenço

*Department of Internal Medicine, Federal University of Goiás, Goiania, Brazil*

**Objectives:** Analyse the family risk profile to home visits (HV) of a Family Health Center in Goiania, Central Brazil by Coelho & Savassi Risk Scale (CSRS)

**Methods:** Registers of 369 families were analysed by observing the 13 sentinels of CSRS (Diabetes Mellitus; Hypertension; >70 years; < 6 months; illiteracy; addiction; unemployment; severe malnutrition; sanitary conditions; physical disability; mental disability; bedridden, relation "r" dweller/ room) each of these has a specific value that results on a final score measured by CSRS.

**Results:** 347 families (94,03%) were scored between 0 and 4, named Risk Zero; 20 families (5,42%) were classified as Risk One (score 5 or 6), 1 (0,27%) family obtained Risk Two, and also 1 family (0,27%), Risk Three. Enrolled in this sample space, were computed 2 bedridden patients, 10 with mental/ physic disability, 3 unemployed, 1 illiterate, 62 older than 70 years, 116 with hypertension and 29 diabetics. Observing the relation R, were founded 27 families with  $r = 1$ , 35 with  $r > 1$  and 351 were  $r < 1$ . Additionally, in this area, there was no report of the existence of addiction, severe malnutrition, lack of basic sanitation and also youngsters than 6 months were not declared.

**Conclusion:** The CSRS is an instrument that assists the Family Health Care Strategy in order to plan a more equanimous covering of the community HV. In this analysis, it is possible to observe that the Family Health Center does not utilise properly the HV, as there is not a  $RC > 0$  HV prioritization.

Disclosure: No conflict of interest declared

## 2.2. PRIMARY CARE FINANCING

1137

Presentation type: Oral Communication

### Capitation for ASKES's primary care provider as a strategy for cost effectiveness

C. Nurcahyo Utomo<sup>1</sup>, D. Hendrawan<sup>2</sup>

<sup>1</sup> Provider Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia; <sup>2</sup> Benefit Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia

In Indonesia, ASKES provides health care for 16.5 million social health insurance members (civil servants, retirees, pensioners, veterans, national independence soldiers and their families). The services are offered with a comprehensive care including health promotion, health prevention, curative and rehabilitative through referral scheme from a primary physician as a family doctor to medical specialist as an advance level.

ASKES optimizing a primary care provider as a gatekeeper and care coordinator. The services are offered through Primary Health Care Centers (PUSKESMAS) and physicians. ASKES implementing a capitation payment system for primary care provider since 1984 until now.

With capitation payment primary care provider organize a members medical needs by primary healthcare evidence based, referral to specialist based on medical indication, optimizing interaction between service level (primary care and specialist treatment), drugs prescription, medical laboratory, utilization review, and also health outcome for quality evaluation, also health promotion and prevention.

Capitation is agreed by ASKES and primary care provider every year, calculated by community risk by class method.

Until October 2012, ASKES have 12.500 Primary Care Providers to provide a health care for 16.5 million social health insurance members around Indonesia

Disclosure: No conflict of interest declared

1332

Presentation type: Oral Communication

### Payment per-items of the service: The view of the Croatian General Practitioners

Z. Knezevic<sup>1</sup>, J. Buljan<sup>2</sup>, M. Vrcic Kegljevic<sup>3</sup>

<sup>1</sup> \*Health Center „Slavonski Brod“, Health Center „Slavonski Brod“, Slavonski Brod, Croatia;

<sup>2</sup> GPs Surgery «Velika Kopanica», \*Health Center „Slavonski Brod“, Slavonski Brod, Croatia;

<sup>3</sup> Department of Family Medicine, „A. Stampar“ School of Public Health, Medical School, University of Zagreb, Zagreb, Croatia

**Introduction:** Payment per-capita was the only method of reimbursement in Croatian General Practice / Family Medicine (GPs) for a long time. Several years ago, payment per-items of the services was introduced as additional one. Evaluation study was performed to look what was going on in this field. The aim of this report is to search for the factors that motivate GPs to introduce more services in everyday work.

**Methods:** All of the GPs working in the County of Slavonski Brod served as a sample. Two methods were used for data collection. The first, the collection of the official reports regarding the content and the number of per-item activities performed in 2011 and the second, questionnaire on the GPs motivation and satisfaction (5-point, Likert scale: 1 not important, 5 very much important).

**Results:** Out of the 54 GPs working within the County, 49 participated in the study. The most important motivating factor was the GP's wish to bring the service near-patient, to fulfill the patients health needs (43/49 GPs marked with 4 and 5 points). The second was the quality improvement (44/49 GPs), and the third was widening the scope of the activities (38/49 GPs). The item on financial incentive has divided the GPs, half of them found important. The enabling factors, those necessary for the introduction of more services were: education (42/49 GPs), practice equipment (35/49 GPs), and the number of patients per day (25/49 GPs).

**Conclusion:** The results support a fact that intrinsic motivational factors are important.

Disclosure: No conflict of interest declared

1594

**Presentation type: Oral Communication****Cost-effectiveness study of primary care model for prevention of cardiovascular diseases in Nairobi slums**S. van de Vijver<sup>1,2,3</sup>, S. Oti<sup>1,2,3</sup>, C. Kyobutungi<sup>1</sup>, J. Lange<sup>2,3</sup><sup>1</sup> Health Program, African Population and Health Research Center, Nairobi, Kenya; <sup>2</sup> Global Health, Academic Medical Center, Amsterdam, Netherlands; <sup>3</sup> Urban Health, Amsterdam Institute for Global Health and Development, Amsterdam, Netherlands

**Objective:** Cardiovascular diseases (CVD) have become the main cause of death in sub-Saharan Africa. Currently primary care systems are weak and cannot cope with this epidemic due to the burden of infectious diseases. This is especially so in slum settlements where access to primary care and resources are limited. The aim of this study was to develop a cost-effective and affordable primary care model for prevention of CVD in low resource settings.

**Methods:** Through a mixed method of analyzing results from prevalence and intervention studies on CVD and focus group discussion with key informants in the slums of Nairobi a primary care model was developed based on the estimated costs and health benefits. The cost effectiveness analysis was conducted according to the WHO framework.

**Results:** The cost-effectiveness of the model is estimated between 760-1200 USD/DALY averted. With a reduction in blood pressure among hypertension patients by 15mmHg through medication and 1mmHg reduction among the population through health promotion 15-24 events will be prevented in the next 10 years, which results in 248-391 DALYs averted. The total costs of the program are 305,000 USD over a period of 10 years among 35,000 slum dwellers. This means that this primary care program can run for less than 1 USD per person per year.

**Conclusions:** Compared to other primary care and CVD prevention programs in low resource settings, this model has the potential to be one of the most cost-effective globally and affordable for governments and NGO's to implement in low resource settings.

Disclosure: No conflict of interest declared

**2.3. FAMILY MEDICINE**

489

**Presentation type: Workshop****Caring for competitive medicine – using awareness-based communication skills to maintain empathy in family practice**C. Klöckl<sup>1</sup>, P. Weber<sup>2</sup><sup>1</sup> Private practice, Marburg, Germany; <sup>2</sup> Family practice, Boulder community hospital, Boulder, Co, United States

Competitive and professional paradigms in medicine often present as a constraint in the doctor-patient relationship. In particular, family-practice for all ages is challenged to be highly patient-centred and yet be more cost-effective than ever.

It is critical to find skilful ways to not let one's overall professional self-esteem deteriorate. The inability to observe the emotional tone of the relationship with the patient might lead to poor compliance, the threat of lawsuit and personal work dissatisfaction.

Cultivating awareness-based skills have enabled patients to better cope with their illness (MBSR) and inspired new approaches in psychiatric treatments. Research shows that medical practitioners training in mindful communication and empathy experience less medical error while achieving patient satisfaction and fulfilment in one's work including burn-out prevention.

For actual daily application successful strategies need to be easy, to the point and time-efficient.

We describe a workshop that focuses on awareness-based communication skills that support the ability to:

1. regain an open perspective within the constraints of a competitive work environment
2. actively re-centre oneself in the rush of daily medical demands.
3. maintain one's sense of empathic care within an overall cost driven practice model.

During the workshop we will present and explore the general scientific evidence and its personal relevance. An adaptation of traditional methods will be introduced for both emotional-awareness and body mindfulness and practiced together in small group interaction, role-play and dyads. The results will be discussed and evaluated. All presented methods are designed and chosen for ready use in medical practice.

Disclosure: No conflict of interest declared

752

**Presentation type: Workshop****How get your outcomes published and promote family doctors into academics**A. Irigoyen-Coria<sup>1</sup>, Pablo Gonzalez Blasco<sup>2</sup><sup>1</sup> Family Medicine Department, Universidad Nacional Autonoma De Mexico, Mexico City, Mexico; <sup>2</sup> Scientific Department, SOBRAMFA- Medical Education and Humanism, Sao Paulo, Brazil

To get papers published is essential for any physician attempting to build an academic position. Family Medicine is still quite away from the academia in many countries, especially in Latin America. Thus, it makes sense to encourage family doctors for publishing and to reach high impact journals. However, this is a big challenge and the family physician's daily practice seldom is structured enough for a broad research, required by the top impact journals. Actually, family doctors who normally publish in those journals are already set in the academia, and supported by family medicine departments. But this is not the circumstance for many Latin America practitioners. Beside the high impact journals is there any other way for publishing experiences from their daily practice? Or for revealing their educational involvement in teaching medical students within the community they take care off?

**Objective and Methods:** The authors will share their experience as editors and collaborators in Latin America Family Medicine Journals. They will be open to questions all the time, and facilitate the audience to understand the importance of:

- Choosing the topics they want to communicate as results from their daily practice, and their relevance.
- Choosing in advance the audience they want to reach with their results.
- Pointing journals to publish (included Open Access Journals)
- How to get colleagues and students involved in publications, and start a publishing local network.

**Results:** We expect an interactive discussion with the audience for encouraging family doctors to transform their practice into publications.

Disclosure: No conflict of interest declared

789

**Presentation type: Workshop****Insight into the thinking and acting of family doctors – an ethnographic film about working in a field of complexity and uncertainty**S. Neuenschwander-Gindrat, MD, MA in Social Anthropology, Filmmaker<sup>1</sup>,B. Kissling, MD<sup>2</sup>, G. Rohrer<sup>3</sup><sup>1</sup> Social Anthropology, Ghornuti Filmproductions, Bern, Switzerland; <sup>2</sup> Family Medicine, Swiss Society of General Medicine SSMG/SGAM, Bern, Switzerland; <sup>3</sup> Family Medicine, Young Family Doctors Switzerland, Bern, Switzerland

**Objective:** To explore and visualize how family doctors implement the theoretical framework of the definition of general practice / family medicine of Wonca Europe in their daily practice by means of three ethnographic films aimed at health professionals and also the general public.

With her three films the filmmaker Sylviane Neuenschwander, a doctor and social anthropologist, shows *how* family doctors think and work with their patients, how they communicate, build a supporting patient-physician-relationship, treat patients with acute and chronic diseases, perform watchful waiting, practice shared decision making; how they cooperate with different specialists caring for multimorbid patients and perform integrated medicine; how they care for the patients in their context with a view on their community and perform preventing measures; how they accompany their patients until their death. Moreover it shows very closely the emotions and non verbal signs of patients and doctors.

Throughout a year a highly professional film team followed real consultations of six Swiss family doctors (one young doctor during her vocational training, five middle aged and older doctors) working in cities and mountains, in single handed and group practices.

**Methods:** Introduction by the filmmaker. Presentation of one of the three films (52 minutes). Discussion.

**Results:** Filmmedia can be used as a scientific tool appropriate to visualize the potential and quality of family medicine.

**Conclusion:** The characteristics of family medicine as defined by the European definition are practicable and learnable essentials for family doctors and are performed in a very personal way.

Disclosure: No conflict of interest declared

2004

Presentation type: Workshop

**Workshop on Access to Person Centered Care**

W. Qidwai

Access to health care is an issue around the world. Inequalities in health status have been growing since mid-1990s and has resulted in an increasing gap between the most advantaged and disadvantaged social groups. There are social, cultural, religious and economical barriers that may impede access to healthcare. It warrants a need to address these barriers on a priority basis.

Access to health care is based on the need, provision and utilization of health services and refers to the ability to get health care or the ease of getting health care. It involves the entry of a given individual or population group into the health care delivery system. Ensuring access is not restricted to providing appropriate health care resources but extends to include its distribution to most deprived one with justice irrespective of social class or standing. The concept of access is multidimensional and includes availability, accessibility, accommodation, affordability, and acceptability as the key component.

Prior to workshop, we will invite participants from seven WONCA regions to participate. We aim to invite preferably a minimum of three participants from each region from amongst those who plan to attend conference. During workshop, regional groups will be asked to brain storm and come up with barriers to access in their region, possible solutions and a list of recommendations. Regional groups will present their group discussions to the larger group and a final discussion will be moderated and recorded. A final document will be prepared based on the discussions and disseminated. Around 25 participants are expected.

2026

Presentation type: Workshop

European General Practice Research Network

**TransForm Decision Support**

TRANSFoRm: Development of a diagnostic decision support tool for primary care

*D. Corrigan, T. Arvanitis, O. Kostopoulou, J.K. Soler*

**Background:** The on-going TRANSFoRm project is currently developing a diagnostic decision support tool that can be deployed as part of a shared electronic infrastructure more broadly supporting translational medicine for primary care. Work to date has focussed on identifying suitable diagnostic strategies for providing decision support along with defined patient safety use cases. These have informed the development of ontological models of diagnostic clinical evidence populated from literature and data mining tools. These cognitive and model outputs are now informing the current design and development of the diagnostic decision support tool interface itself.

**Methods:** Three diagnostic patient safety use cases were developed from evidence based literature sources based on a presenting patient complaint of chest pain, abdominal pain or dyspnoea. A comparative study was carried out with Greek GPs into the effectiveness of “suggesting” versus “alerting” as diagnostic strategies during the family practice consultation using a prototype web tool that implements the patient safety uses cases. The structure of clinical evidence supporting these cases was modelled as ontological models and populated using both literature and association rules derived from electronic sources of coded primary care patient data. Initial designs of the decision support tool provide for “suggesting” or “alerting” as part of a two phase implementation by asking ontology based clinical questions of the underlying models at appropriate decision points during the consultation.

**Results and plan for the workshop:** This workshop will present progress to date on the three strands of decision support activities: diagnostic strategies, clinical evidence modelling and interface design. We will discuss some clinical examples of these activities along with supporting implementation issues including use of coded clinical vocabularies and data mining aggregated sources of primary care patient data.



2027

Presentation type: Workshop  
Vasco da Gama Movement

### Young family physicians / general practitioners – Global Initiative

C. Lygidakis<sup>1</sup>, M. Schmidt<sup>1</sup>, S. MacLean<sup>2</sup>, R. Burman<sup>1</sup>, A. Margarida Cruz<sup>1</sup>,  
R. Gomez-Bravo<sup>1</sup>, G. Irving<sup>1</sup>, S. Rigon<sup>1</sup>, N. Sramkova<sup>1</sup>, Z. Vaneckova<sup>1</sup>, R. Zoitanu<sup>1</sup>

<sup>1</sup> Vasco da Gama Movement; <sup>2</sup> First Five Years in Family Practice Canada

**Background:** Young and future family physicians / general practitioners movements have been emerging all over the globe bringing together the needs and hopes of a new generation of doctors and bridging them with the established senior associations.

**Aim:** The aim of this workshop is to understand the importance of international peer networks for young family physicians / general practitioners and to discuss and elaborate visions for the future of General Practice / Family Medicine (GP/FM).

**Topics:** During this interactive workshop we will present the international networks of young and future family physicians / general practitioners, will provide information about their activities and will focus on several topics, including:

- The improvement of practice, quality, teaching and research of GP/FM in all countries.
- The development of GP/FM to meet the needs of patients in the increasingly complex and diverse world, characterized by raising demands and afflicted by inequalities and an ageing population.
- The working conditions corresponding to the needs of the upcoming generation of family physicians / general practitioners.
- The possibility to carry out international exchanges with a specific educational content.

**Conclusions:** These networks can be the driving force that empowers young family physicians / general practitioners and can be of aid for the countries that try to build the foundations of their primary care future and for those that need to maintain and ensure motivation of an already developed GP/FM.

28

Presentation type: Oral Communication

### Are medical interns motivated to select family medicine as a career specialty in Turkey?

Ü. Avsar, A. S. Khan, T. Set, M. Isik, Z. Akturk

Family Medicine Department, Ataturk University, Erzurum, Turkey

**Background:** The chosen fields play fundamental part in future workforce in health-care system, especially in times of over or undersupply of doctors in some demanding fields like family medicine. Indeed several factors motivate medical students to pursue further and chose their field of interest. We attempted to collect opinion of medical interns regarding motivating factors for selection of specialty.

**Method:** It was multi-centers cross sectional study conducted at four medical colleges in universities of Turkey and has two phases. The first phase completed with interns during 2012 and then during 2<sup>nd</sup> phase, we will follow them for one year after internship and again assess their opinion. We developed a questionnaire based on literature and Delphi technique and after pre-testing applied to collect opinion.

**Results:** The total 188 interns have participated including 112 from Ataturk University, 24 from Bolu University, 22 from Konya University, and 26 from Trakya University. The average age 23.5 years ( $\pm 1.22$ ), males (54.3%) were dominant and only 17% have doctors in their families. The first preference for specialty was ophthalmology (14%) then Ear, Nose and Throat Care (Otolaryngology) (12%) and followed by dermatology (9%). Nonetheless only 1% has selected family medicine as a first preference. The socioeconomic factors, subjects liking, grades in medical college and entrance test's score don't have significant ( $>0.05$ ) association for selecting specialties. However flexible timing, workload and advise of seniors do affect their opinion significantly ( $<0.05$ ).

**Conclusion:** We need more efforts to attract medical students towards family medicine to choose as specialty.

**Disclosure:** No conflict of interest declared

361

Presentation type: Oral Communication

**Doctor-patient relationship and Quaternary Prevention – sharing of experience with a GP from Hong Kong (workshop #298)**

G. Tsoi

Family Medicine, Hong Kong College of family Physicians, Hong Kong, China

**Two case scenarios** presented with similar complaint of palpitation to a GP Dr. T.

1. Md. X, 74 years old widow living alone, a new patient to Dr. T's clinic, accompanied by her younger daughter. An extended consultation, Md. X weeping all along during history taking. Counseling, explanation of likely cause of palpitation based on history, no investigation. Prescription with anxiolytic and beta-blocker. Appointment for follow-up one week later.

2. Dr. Y, a GP in private practice called Dr. T by phone. Dr. Y expressed concerns about recent increase in palpitation. After the discussion over the phone, both agreed to make referral to cardiologist for further investigations. Results were negative for any organic cause. Advise to use beta-blocker if necessary.

The decision making process was in stark contrast which demonstrated the unique attribute of general practice. The location of practice, accessibility and affordability of high tech investigations are crucial factors to be considered. Cultural, religious and regional differences are important background which has influenced clinician's management.

**Discussion:** Where is the boundary of QP? What is the norm or standard of practice, consensus among our peers? What are the medico-legal responsibilities of the GP? What is the reward to a GP for taking up the risk of under-diagnosis? What is the patient's or public's perception about QP as well as other specialties in the medical profession? How can QP be incorporated into the medical education, both undergraduate teaching in medical schools and post-graduate training in different specialties of medicine?

Disclosure: No conflict of interest declared

403

Presentation type: Oral Communication

**Validation of an automated detection algorithm to identify probable and possible patients with bothersome overactive bladder**F. Brenes<sup>1</sup>, J. Angulo<sup>2</sup>, I. Lizarraga<sup>3</sup>, M. Manso<sup>4</sup>, D. Arumi<sup>5</sup>, A. Cañadas<sup>3</sup>, J. Rejas<sup>6</sup>

<sup>1</sup> Primary Care, Llefià Primary Care Health Centre, Badalona, Spain; <sup>2</sup> Urology, Getafe University Hospital, Madrid, Spain; <sup>3</sup> Medical, Pfizer SLU, Madrid, Spain; <sup>4</sup> Health Outcome Research-Treatment Value, Kantar Health, Madrid, Spain; <sup>5</sup> Medical, Pfizer PIO, Madrid, Spain; <sup>6</sup> Health Economics and Outcomes Research, Pfizer SLU, Madrid, Spain

**Objective:** To determine the validity of an automated screening algorithm to identify subjects with probable and possible bothersome overactive bladder (OAB) in a population setting.

**Methods:** Seventy males and females over 18 years of age extracted at random from a cross-sectional study in the community were used to test the validity of an automated algorithm against two clinician experts in urology judgment. A structured questionnaire including the hallmark symptoms of OAB, testing for bothersome symptoms, and exploration of OAB-related coping strategies was administered to subjects using an online method. Physicians used the same questionnaire to classify subjects with probable, possible, or no-OAB. The physicians' classifications were compared with the automated algorithm categorization for concordance and reliability.

**Results:** The concordance between the two physicians' classifications of subjects was significantly high, showing a kappa index of 0.850 (95% CI: 74.9%-95.3%). All subjects classified as having "probable OAB" or "possible OAB" by physician #1 were identically classified by physician #2. The only discordance involved 8 subjects classified as having "no-OAB" by physician #1 who were classified as having "possible OAB" by physician #2. The concordance between the automated algorithm and physician #1 was significantly high showing a kappa index of 0.849 (74.7%-95.2%). There was total concordance between the automated algorithm and physician #2, with a kappa index of 1.000.

**Conclusion:** The automated algorithm tested here provides high concordance with physician classification of subject as having "no OAB," "possible OAB," or "probable OAB" and allows subjects to be identified accordingly.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Training physicians to be change agents for improving population health**

B. Sheline, V. Martinez-Bianchi

*Community and Family Medicine, Duke University, Durham, North Carolina, United States*

Worldwide, community health care needs and delivery systems are evolving in ways that will have uncertain consequences. For physicians to meet health care needs in the 21<sup>st</sup> century, clinical training alone is no longer adequate. Physicians need a broad assortment of skills to improve population health, whether this means managing patients with chronic disease, redesigning clinical care delivery systems, or working with interdisciplinary teams to further preventive health initiatives. Skills for managing population health will become all the more necessary as patient-centered medical homes (PCMH) and accountable care organizations become an integral part of the health care system. Physicians will need to combine clinical acumen with community-engaged strategies to work in partnership with public health departments, local agencies, policy-makers and community organizations.

With an overall goal of training physicians to be change agents for improving population health, the Duke University School of Medicine launched the Primary Care Leadership Track (PCLT) in 2011 and the Department of Community and Family Medicine redesigned its Family Medicine Residency program in 2007. Both the 4-year PCLT curriculum and the 3 year residency program require learners to contribute to existing community health initiatives, perform community-engaged research, and participate in leadership training. Although in its early years, the programs have created opportunities for students and residents to become leaders in community medicine and advocates for their communities. The programs also serve as a model for novel approaches in medical education. Our presentation will introduce both programs and open a forum for further discussion with attendees' participation.

Disclosure: No conflict of interest declared

684

**Presentation type: Oral Communication****Changes in the knowledge of and attitudes towards Family Medicine along the degree**

C. Ayuso, F. Escobar, J. López-Torres Hidalgo, J. Montoya, J. Téllez

*Family Medicine, SESCAM, Albacete, Spain*

**Aim:** To determine changes in the knowledge of and attitudes towards family medicine (FM) between 2nd and 6th year of the degree of medical students who completed a course in primary care (PC) in their 2nd year.

**Design:** Cohort study.

**Setting:** Albacete Medical School.

**Participants:** Fifty five students at the 6th year of the degree in 2011-2012 academic year (from a cohort of 81 who took a course in PC in 2007-2008).

**Main outcome measures:** They were asked to respond the brief CAMEF, a questionnaire with 21 closed response items after completing a course in PC, and at the end of the 6th year. The students' answers were analysed and compared (Wilcoxon test for paired samples).

**Results:** The students average age was 23.4 years (SD: 0.6); 89.1% were women. We found significant differences at the end of the degree, related to 2nd year, in 6 items. There were higher level of agreement with family doctor's "large responsibility in prevention" ( $p=0.002$ ) and "a course in PC in the medical school is appropriate" ( $p=0.007$ ). In contrast, the level of agreement decreased with "better healthcare compared to the previous ambulatory system" ( $p=0.001$ ), "good knowledge of family doctor's tasks" ( $p=0.005$ ) and "low efficiency of health system directed exclusively to diagnosis and treatment" ( $p=0.037$ ). Only 2 students, compared with 6 at the 2nd year, considered "FM as their first career choice" ( $p=0.05$ ).

**Conclusions:** At the end of the degree, the interest in FM, which students showed after completing a course in primary care, had decreased.

Disclosure: No conflict of interest declared

784

**Presentation type: Oral Communication****Does patient-centered care improve sleep status?**

Y. C. Takemura

*Department of Family Medicine, Mie University School of Medicine, Tsu, Mie, Japan*

**Objectives:** Increasing numbers people suffer from sleep disorders including insomnia worldwide. Patient-centered care has been promoted as having good effects on patient health outcomes as well as the patient-physician relationship. Can patient-centered care improve sleep status? The objective of this study was to investigate the associations between patient-centered care and both patient satisfaction and degree of insomnia.

**Methods:** The subjects of this study were 924 patients who visited outpatient facilities of a university hospital, community hospitals, and clinics in Japan. To measure patient-centeredness and patient satisfaction, we developed two self-administered questionnaires, a patient-centeredness scale and patient satisfaction scale. Both questionnaires had been assessed for validity and reliability beforehand. The subjects were divided into two groups, a patient-centered-care group and a non patient-centered-care group, based on their scores on the former scale. We also assessed the degree of insomnia in patients using the Japanese version of the Insomnia Severity Index, and the use of hypnotics as a confounding factor. The differences in patient satisfaction and degree of insomnia between the two groups were investigated using Student's t test, and adjustment was done by a GLM procedure, using SAS.

**Results:** A significant positive association was found between patient-centered care and patient satisfaction ( $t=-42.28$ ,  $p<0.0001$ ). A significant negative association was also shown between patient-centered care and degree of insomnia ( $t=5.40$ ,  $p<0.0001$ ). The association existed after adjusting for the confounder.

**Conclusions:** Patient-centered care might improve both patient satisfaction and sleep status.

Disclosure: No conflict of interest declared

834

**Presentation type: Oral Communication****Struggle in establishing Family Medicine Specialty in Indonesia**

S. Wonodirekso

*Histology, Faculty of Medicine University of Tanjungpura, Pontianak, Indonesia*

**Background:** I am not telling my story; instead it is a qualitative study, and specifically a case study. The case is I. The struggle could also happen in any country. It is peculiar to be discussed simply because I analyzed my own experience in establishing Family Medicine Specialty to share with other people who still struggling as well. Still other I would like to attract suggestions to facilitate the development of Family Medicine Specialty in Indonesia.

**Method:** Retrieving my own experience since 1980ies until 2012.

**Results:** Are you the pioneer? Not really, I am continuing what other colleagues have formulated. Do you fight alone? No, lots of dedicated colleagues help me very much. Is it hard? Yes it is. Does it harm you? Not really. Do you enjoy of struggling? I am not struggling, I love to do so, and I was going to make my dreams come true. Do you think you are going to be such a specialist in your late age? Not necessarily, I just try to enable younger Indonesian GPs serve peoples better.

**Conclusion:** aerodynamically a bumblebee will not fly but it keeps trying and eventually it flies.

Key words: Struggling, FM Specialty, Indonesia.

Disclosure: No conflict of interest declared

885

**Presentation type: Oral Communication****The effect of family dynamics on the burden of caregivers**

T. Kusaba<sup>1</sup>, K. Sato<sup>1</sup>, Y. Matsui<sup>1</sup>, S. Matsuda<sup>1</sup>, T. Ando<sup>1</sup>, K. Sakushima<sup>2</sup>, T. Wakita<sup>3</sup>, S. Fukuma<sup>4</sup>, S. Fukuhara<sup>4</sup>

<sup>1</sup> Family Medicine, The Hokkaido Centre for Family Medicine, Sapporo, Japan; <sup>2</sup> Department of Neurology, Hokkaido University School of Medicine, Sapporo, Japan; <sup>3</sup> Psychology Major, Kansai University, Faculty of Sociology, Suita, Japan; <sup>4</sup> Department of Healthcare Epidemiology, Kyoto University School of Medicine and Public Health, Kyoto, Japan

**Objective** In aging society, the care for the elderly increasingly becomes serious problem. In Japan the role of family about care is so big that we have to tackle with decreasing the burden of caregivers. This study assessed the effect of family dynamics on the burden of caregivers.

**Methods** Cross-sectional observational study. Adult patients who needed daily care were selected from 6 primary care clinics. 3 questionnaires were sent to their caregivers, family doctors and care managers. The information of baseline data, items evaluating family dynamics and burden index of caregivers (BIC) was collected. The Family Dynamics Index of Caregivers (FDIC) was created based on the sum of 4 important items (Trans-generation problems, Co-dependence, Scapegoat and Separation : each 0-3 and total score 0-12). We revealed its validity and reliability in another study.

**Results** 199 patients were recruited and their caregivers were mostly women (78.8%), old (Average 63.2 year-old). The care time was 32.3 hours per week and 58.7% of them used social care service. The average FDIC score was 2.4 and we built 3 groups (low, middle, high) about the severity of dynamics according to FDIC score. Analysis of variance showed significant difference of BIC among 3 groups (low 13.9, middle 15.9, high 19.3,  $p < 0.004$ ) and multivariate analysis of BIC showed estimated value of FDIC 3.60 ( $p = 0.03$ ).

**Conclusions** The severity of family dynamics has relationship with the burden of caregivers. To decrease the caregivers' burden, we should also explore the strategy to evaluate and improve family dynamics.

Disclosure: No conflict of interest declared

959

**Presentation type: Oral Communication****Patient education in general practice in the Netherlands: Evidence based and web based**

R. Beijaert

Patient education, Dutch College of General Practitioners (NHG), Utrecht, Netherlands

**Objective:** Patient education is an essential component in primary care management. The Dutch College of General Practitioners created a website supporting GPs in educating their patients and shared decision making. This website can be used before, during or after visiting the GPs practice.

**Methods:** All patient information materials based on our evidence-based guidelines were translated into web language (concise and easy to read). To enhance the accessibility we developed three search strategies: alphabetical, anatomical (through body images), and free text.

In March 2012 the Dutch Minister of Health launched our website (*thuisarts.nl*). We published advertisements in medical journals. All Dutch GPs received flyers, posters and paper blocks with 'web prescription leaflets' for writing down specific web pages to be consulted after the GP visit.

**Results:** From March to December 2012, *Thuisarts.nl* received 2,4 million visits 7,5 million page views and 15.000 visitors per month, which is high compared to other websites with patient information. GPs increasingly use *thuisarts.nl* in daily practice. Many Dutch medical institutions link to *thuisarts.nl*.

**Conclusions:** *Thuisarts.nl* is a very successful website in the Netherlands, supporting patient education in general practice. Patients, GPs and medical institutions consider it to be one of the most relevant sites for information and education on a large number of medical conditions. At the congress we will present actual visiting data on *thuisarts.nl*.

Disclosure: No conflict of interest declared

1051

**Presentation type: Oral Communication****Family doctors leading palliative care in a general community hospital: A Brazilian successful experience**

R. M. Irie<sup>1</sup>, M. A. Janaudis<sup>1</sup>, G. Moreto<sup>1</sup>, M. R. Levites<sup>1</sup>, C. A. S. Monteiro<sup>2</sup>, P. G. Blasco<sup>1</sup>, H. M. U. Hirose<sup>2</sup>, P. Ventura<sup>2</sup>, V. P. Ventura<sup>2</sup>

<sup>1</sup> *Scientific Department, SOBRAMFA – Medical Education and Humanism, Sao Paulo, Brazil;*

<sup>2</sup> *Integral Medicine Program, Hospital e Maternidade Sao Cristovao, Sao Paulo, Brazil*

**Context:** Palliative care is performed in Brazil by several specialists who, although providing good care, don't have palliative medicine at the core of their specialty. Family Doctors, attached to patients through relationship, are suitable practitioners when their patients are out of therapeutic possibilities. At this stage, to manage symptoms, provide quality of life, and strengthen communication with patients and their families are the goals for delivering good care.

**Objective:** Describe how family doctors provide palliative care in a general hospital and their clinical and educational outcomes.

**Method:** The São Cristovão Hospital, is a general community hospital in São Paulo, Brazil, delivering care for almost 80.000 people. Family Doctors from SOBRAMFA, along with a multi professional team, run the Integral Medicine Program (IMP), providing care for a population of 800 patients in which chronic and complicated patients with comorbidities are included. Patients needing palliative care (268) have been included in the last four years, and not just from the IMP but also referred by several specialties.

**Results:** From 268 patients, 247 (92%) died. The death happened: 4 (2%) at the ICU, 175 (71%) at the wards, 24 (9,8%) at the emergency room, 6 (2,7%) at a nurse home, and 27 (11%) at their own home. Since the beginning the days of hospitalization before death decrease from 6,9 to 2,5.

**Conclusion:** Family Doctors leading palliative care are able to manage patients' symptoms and to support families. They have also a key role with other specialists and health professional, through coordinating care.

Disclosure: No conflict of interest declared

1077

**Presentation type: Oral Communication****Factors related to burnout in family doctors in public practice: A cross-sectional study in Singapore**

D. Tan

*Medical, National Healthcare Group Polyclinics, Singapore, Singapore*

**Background:** Public primary healthcare in Singapore is a stressful and high volume work environment. There is a high level of burnout amongst doctors working in this setting, with resulting high levels of attrition and turnover.

**Aim:** The aim of this presentation is to describe the levels of burnout amongst family doctors working in the public setting, and factors associated with burnout.

**Methods:** A cross-sectional survey of doctors in a public primary healthcare cluster in Singapore was conducted using a custom-designed questionnaire incorporating the validated Maslach Burnout Inventory Human Services Survey (MBI-HSS) as well as questions about demographic factors, work experience, health, lifestyle and job satisfaction. MBI scores were analysed in the dimensions of emotional exhaustion (EE), depersonalisation (DP) and personal accomplishment (PA). Frequency analysis and Spearman rank correlation were carried out where applicable.

**Results:** 126 doctors were surveyed, giving a response rate of 66.3%. Respondents experienced higher degrees of burnout than normative data provided by Maslach, with mean scores of 28.15 (SD=12.66) for EE, 11.22 (SD=8.09) for DP, and 32.84 (SD=8.30) for PA. Factors related to burnout included longer working hours, shorter lunch breaks, lower job satisfaction and less sleeping hours per day. There was no correlation with post-graduate qualifications or allocation to administrative work apart from clinical work. There was also no correlation between burnout and running special interest clinics.

**Conclusion:** Burnout is a serious issue in public primary care, and this has serious consequences on the quality of patient care and the well-being of family doctors.

Disclosure: No conflict of interest declared

1183

**Presentation type: Oral Communication****Diabetes: Compliance and non-compliance with prescribed therapy**

A. Malik, F. Popoola, M. Sufi an Butt

*Family Medicine, Medical University of Lodz, Lodz, Poland*

**Background:** Compliance can be defined as the willingness of a patient to follow the prescribed course of treatment. A patient's reluctance to comply with the physician's orders is a serious issue that every physician faces in our society today. So, what is it that motivates or stops a patient from complying? Are patients more likely to continue their medicine once they see an improvement? Or, are they going to ignore the physician's orders after getting better?

**Objective:** The purpose of this study is to determine the likelihood of compliance in patients with diabetes. Diabetic patients are more likely to suffer from symptoms almost immediately after stopping the therapy, which should enhance compliance.

**Methods:** A questionnaire survey is constructed and placed at several different family physician clinics around Lodz, Poland. Diabetic patients coming for a routine visit to their family physician will be asked to answer the survey. It includes questions about their therapy and how well they are able to follow their doctor's orders.

**Results:** The results from the survey will be collected from a wide population of diabetics including patients with both recent diagnosis of diabetes and those with a long-standing history of diabetes.

**Conclusion:** The survey conducted in this study is expected to provide results that would confirm our hypothesis that patients with diabetes are rather compliant with their medicine because they have visible symptoms and complying with their treatment is essential to getting better.

Disclosure: No conflict of interest declared

1237

**Presentation type: Oral Communication****Older patients' views about medicine use: A qualitative study**

N. Ozcakar, M. Kartal, S. Hatipoglu, G. Limmili

<sup>1</sup> *Department of Family Medicine, Dokuz Eylul University Medical Faculty, Izmir, Turkey;*<sup>2</sup> *Primary Health Care Center, Ministry of Health, Izmir, Turkey;* <sup>3</sup> *Primary Health Care Center, Ministry of Health, Usak, Turkey*

**Objective:** With age, the use of multi-drug treatments in addition to the reduction of cognitive and functional capacity issues may lead to a number of challenges in drug use. Within many studies little attention has been paid to patients' ideas about medicines. This qualitative study set out to describe the ideas and difficulties of elders about using medicines.

**Methods:** Four focus groups sessions were conducted with 27 patients between ages 65-88. Interviews were taped, transcribed, and coded by two independent researchers, who identified major themes by relevance.

**Results:** The main themes emerging from the analysis were: perceived properties of medicines; orientation towards medicines and actual usage of medicines.

Participants described these in their words as;

"I'm not worried about taking them, mostly because if they're going to kill me earlier I don't care because I just want the problem to go away."

"Everyone have a disease, but I'm on top of drugs and had to use a lifetime."

"I do not know their names; I separate them by the size and the color."

"I need to get a continuous way, but sometimes I do not. If I forget to drink I take it after remember."

**Conclusions:** To understand elderly patients' medication experience and behaviors helps to meet their medication related needs. Also it's important for avoiding prolonged problems due to the use of wrong dose and treatment intervals. The implication of this study for a family physician is the identification of areas which could be usefully explored before writing prescription.

Disclosure: No conflict of interest declared

1254

**Presentation type: Oral Communication****Development and validation of the family dynamics index of caregivers**K. Sato<sup>1</sup>, T. Kusaba<sup>1</sup>, Y. Matui<sup>1</sup>, S. Matuda<sup>1</sup>, T. Ando<sup>1</sup>, K. Sakushima<sup>2</sup>, T. Wakita<sup>3</sup>, S. Fukuhara<sup>4</sup><sup>1</sup> Family medicine, The Hokkaido Centre for Family Medicine, Hokkaido, Japan; <sup>2</sup> Department of Neurology, Hokkaido University Graduate School of Medicine, Hokkaido, Japan; <sup>3</sup> Department of Sociology, Psychology major, Kansai University, Osaka, Japan; <sup>4</sup> Department of Epidemiology and Healthcare Research, Kyoto University Graduate School of Medicine, Kyoto, Japan**Objective:** In aging society, increase of the care for elderly people and burden of their caregivers is serious problem. Family doctors can intervene in their family dynamics through “Family-oriented primary care” and decreases the burden of caregivers. But few studies are available about assessment tool of family dynamics for caregivers. So we developed a new measure, Family Dynamics Index of Caregivers (FDIC), and verified its reliability and validity.**Methods:** We identified the index items about family dynamics for caregivers through focus group discussion by family doctors based on family system theory and developed a questionnaire consisted of 4 items using 4-point Likert scale. Cross-sectional observational study was carried out using this questionnaire for 199 adult patients who needed daily care, their caregivers, their family doctors and care managers. Criterion validity was assessed by another question measuring former patient-caregiver relationship and 12 items evaluating burden of care on established textbook about family-oriented primary care. Construct validity was assessed by factors analysis. Reliability was assessed by Cronbach  $\alpha$ .**Results:** FDIC was developed based on the sum of 4 items (Trans-generation problems, Co-dependence, Scapegoat and Separation : each 0-3 and total score 0-12). Its Cronbach  $\alpha$  was 0.73. Factor analysis suggested 1 distinct factor in the 4 items. About criterion validity, FDIC correlated well with former patient-caregiver relationship (trend test  $P < 0.05$ ) and other 12 items (Person's  $r = 0.79$ ,  $P < 0.01$ ).**Conclusions:** The reliability and validity of FDIC based on family-oriented primary care are relatively high in spite of the limitation of developmental process.

Disclosure: No conflict of interest declared

1515

**Presentation type: Oral Communication****Lessons from family medicine development in Vietnam**

N. Minh Tam, P. Le An, N. Phuong Hoa, S. Cummings, J. Markuns

<sup>1</sup> Family Medicine, Hue University of Medicine & Pharmacy, Hue, Vietnam; <sup>2</sup> Family Medicine, Ho Chi Minh City University of Medicine & Pharmacy, Ho Chi Minh City, Vietnam; <sup>3</sup> Family Medicine, Hanoi Medical University, Hanoi, Vietnam; <sup>4</sup> Family Medicine, Boston University, Boston, United States**Objective:** In fifteen years, Vietnam has progressed from a country with no specialty dedicated to primary care to the cusp of developing a robust national program for integrating Family Medicine (FM) into the core of the entire health system. This session will describe the case of Vietnam, a remarkable story beginning with the building of initial relationships to the declaration of FM as an official specialty to the development of FM residency programs in universities across the country to the advocacy for national policy to promote Family Medicine in primary care.**Methods:** The Ministry of Health (MOH) declared FM an official medical speciality, and a training curriculum was developed. CK-1 postgraduate training programs were begun in multiple universities, followed by development of a rural-based program at a district hospital with support from a major medical university.**Results:** Evaluations results of the new rural FM program showed that self-reported knowledge and confidence were improved, and observations of practice indicated graduates were improved in their application of core principles of primary care.**Conclusions:** The success of the training programs is evident with over 500 FM graduates and continued training at most universities. In addition, FM has been approved for inclusion as a mandatory part of the undergraduate medical curriculum. As a result of the success of FM in Vietnam, the MOH is developing a national plan for FM expansion to develop national policy to support new FM doctors as well as encourage additional trainees.

Disclosure: No conflict of interest declared



1545

**Presentation type: Oral Communication****Avoiding Dangerous Caring: Quaternary Prevention and Multi-morbidity (Workshop 298)**

D. Mangin

*Public Health and General Practice, University of Otago, Christchurch, Christchurch, New Zealand*

Multi-morbidity is the norm for family physicians caring for patients over 65, however the absolute number of patients under 65 with multi-morbidity is even greater. Dealing with multi-morbidity is the core business of family doctors.

Patients with multi-morbidity are at great risk for Dangerous Caring: medical care that is ineffective, or worse, that on balance does more harm than good. Rates of mortality and morbidity as a result of the adverse effects of treatment are high and as great a threat to health as the diseases they are prescribed for.

There are many frameworks for family physicians that provide the evidence and support for the therapeutic imperative – to ,do something‘ for single diseases or, increasingly commonly, the risk of future disease. There is little support for family physicians in doing what they are best placed to do – that is providing complex care for patients with multiple complex problems and making patient focussed decisions on which treatments not to give – reducing the possibilities for Dangerous Caring. This takes nerve and experience in the face of single disease based ,standards‘ for delivering and measuring care.

This section of the workshop will highlight the vulnerability of patients with multi-morbidity to harm from overdiagnosis and overtreatment and the drivers for this, and then at the possibilities for improving care of patients with multi-morbidity by applying quaternary prevention principles in primary care. This will be interactive and look at practical translation at the consultation level by individual family physicians.

Disclosure: No conflict of interest declared

1741

**Presentation type: Oral Communication****General practitioner trainees‘ clinical questions: how do they search for and find answers?**

M.F. Kortekaas, L. Boelman, M.E.L. Bartelink, G.H.M.G. van der Heijden, A.W. Hoes, N.J. de Wit

*UMC Utrecht, Julius Center, Utrecht, Netherlands*

**Objective:** Clinical questions about daily patient care are common in general practice (GP). About 10 years ago GP trainers/colleagues were most frequently used resources for providing answers to residents‘ clinical questions. Nowadays the Internet is probably a frequently used resource, as it is widely available and easily accessible. The purpose of this study is to get insight into the seeking-behavior of GP trainees in the Netherlands.

**Method:** In 2011, 76 randomly selected third-year GP trainees kept a log for eight days during daily practice. Number and clinical field of the patient contact, number and type of clinical questions, sought of an answer, search moment, resources consulted, impact on clinical decision-making and search duration were collected. Frequencies and percentages of the different variables were computed.

**Results:** Seventy-six GP trainees had 1580 clinical questions over 7621 presented complaints (0.21 per complaint). For 1230 cases (79%) trainees attempted to answer their clinical question, in which they succeeded mostly (84%) with improvement of the clinical decision-making (26%) in most cases. Most common resources were colleagues/GP trainers (27%) and national professional GP guidelines (25%). Searching took place in front of the patient most of the time (61%). Mean duration of the search was nearly 5.5 minutes.

**Conclusions:** GP trainees frequently have clinical questions and frequently attempt to find answers for them. They still primarily use GP-trainers/colleagues and paper resources to answer their questions. The question is whether the current educational program provides sufficient stimulation of the use of Internet resources for answering clinical questions.

Disclosure: No conflict of interest declared

## 2.4. PRACTICE ORGANIZATION

2019

**Presentation type: Workshop Wonca Working Party on Women and Family Medicine**

### Bringing about organisational change

Leads and moderators: Z.E. Leopando, A. Barnard  
Z.E Leopando<sup>1,2</sup>, A. Barnard<sup>3,4</sup>, L. Arias-Castillo<sup>5,6,7</sup>, K. Anteyi<sup>8</sup>, N. de Silva<sup>9,10</sup>  
<sup>1</sup> Professor of Family and Community Medicine; <sup>2</sup> Department of Family and Community Medicine, College of Medicine, University of the Philippines, Manila, Philippines; <sup>3</sup> Chair, WWPWFM; <sup>4</sup> Associate Dean, School of Rural & Indigenous Health, Australian National University Medical School, Canberra, Australia; <sup>5</sup> Chair – Department of Family Medicine, Universidad del Valle; <sup>6</sup> Past Dean Health Sciences Faculty, Universidad del Valle; <sup>7</sup> Past President Ibero American Confederation of Family Medicine, Valle, Colombia; <sup>8</sup> Chief Consultant Family Physician, Director of Family Medicine, Residency Training, Federal Capital Territory Health & Human Services, Abuja, Nigeria; <sup>9</sup> Emeritus Professor of Family Medicine at the Faculty of Medicine, University of Kelaniya, Sri Lanka; <sup>10</sup> Chairperson of Membership of Colleges of General Practitioners (MCGP), Sri Lanka

**Background:** We all belong to professional organisations, and sometimes they can seem slow and even immovable. Organisational change is possible, initiated even by those who may initially feel only one small voice. This workshop will invite participants to reflect on the commonalities and differences in bringing about change in professional and representative organisations. WWPWFM members shall present brief case studies which reflect success stories of organizational change within Wonca, across regions and within their national working environments. From these, common issues, challenges, and most importantly was of overcoming these to achieve success, will be presented. Workshop participants will have the opportunity to discuss these in relation to their own professional work, and reflect on ways to work for the change they want to see.

#### Panel speakers:

A. Barnard, Chair of the WWPWFM – “Change in Wonca – the advocacy of WWPWFM”  
Z. Leopando – “Organizational change within Wonca Asia Pacific towards the end of the millennium and how it impacted on where Wonca AP”  
L. Arias Castillo – “The development of Family Medicine in Ibero American Region, highlighting the role of women in the development”  
K. Anteyi – “The development of Family Medicine in the African region, in particular Nigeria, giving emphasis on overcoming difficulties to bring about change”  
N. de Silva – “Change in institutions – achieving changes in general practice education and in Universities”

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**Presentation type: Oral Communication**

### Leading and managing in your practice

C.M. Thomas<sup>1</sup>, R. Burman<sup>2</sup>, A. Shiner<sup>3</sup>, J. Watson<sup>4</sup>

<sup>1</sup> General Practice Vocational Training Scheme, NHS, Liverpool, United Kingdom; <sup>2</sup> National Centre for Emergency Primary Health Care, Uni Health, Bergen, Norway; <sup>3</sup> Lawson Road Surgery, Norwich, United Kingdom; <sup>4</sup> Academic Unit of Primary Health Care, University of Bristol, Bristol, United Kingdom

**Objectives:** This workshop is aimed at trainees and young GPs, but is suitable for practitioners at any level of experience. GP training often focuses on gaining clinical skills, yet once qualified many GPs also have responsibility for running a business, requiring a range of leadership and management skills. We aim to explore the provision of training and training needs for family doctors/GPs in leadership and management and compare practice between nationalities.

We aim to facilitate participants to:

- Examine and compare relevant models of leadership and management competencies
- Understand the benefits of engaging in leadership & management, regardless of seniority
- Reflect upon experiences of leadership and management training
- Share their own needs, concerns, ideas and solutions surrounding leadership & management training in family medicine/GP

**Methods:** Focusing on interactive small group work; examining case studies and models, sharing experiences and intercultural perspectives, generating new ideas and proposing solutions to the challenge of training young GPs to be the leaders and managers of the future.

**Results:** Participants should leave the session:

- Feeling more inspired to engage in leadership and management
- Knowing where to seek further information and training
- Possessing a clearer picture of the elements they need to consider when developing their leadership and management skills

**Conclusions:** This workshop will help motivate participants to take a closer look at their own leadership and management skills and consider how these can be developed. Participants will also gain insight into the variance in practice/delivery of leadership and management training to trainees/young GPs across different nationalities.

**Disclosure:** No conflict of interest declared

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Presentation type: Oral Communication

### Identifying management activities in primary healthcare – analysis of primary care centre groups

S. Machaqueiro, L. Lapão

WHO Collaborating Center on Health Workforce Policy and Planning, Instituto de Higiene e Medicina Tropical, Lisbon, Portugal

**Objective:** The Portuguese primary healthcare (PHC) reform brought a new organization centred on PHC Centre Groups (ACES) with administrative and managerial autonomy. This new governance paradigm called for new management and leadership skills embodied by the Executive Director (ED) as catalyst for change. As a manager, the ED's work is highly complex, reconciling strategic and administrative activities, operational and clinical goals. To study management models in PHC it's essential to understand managers' daily activities, time-distribution, decision-making and use of management tools, which this project aims to characterise.

**Methods:** This is an exploratory observational study, where a shadowing method was used for collecting empirical data on managers' competences and activities, recorded through direct observation of one ED. A survey was developed for the assessment of managerial practices, first validated with one ACES and then applied to six others.

**Results:** The most frequent activities of the ED involve *direct communication, moving around the ACES and making phone-calls*, which are also the most time-consuming activities, as well as *unplanned meetings and sending emails*. Concerning management competences, the ED spends more time *overseeing tasks, approving patient transport, monitoring employees' assiduity, delegating tasks and solving patient-related issues*.

The survey shows that managers in different positions within ACES spend more time *exchanging emails, coordinating teams, overseeing tasks and writing/filling documentation*, thus confirming the shadowing results.

**Conclusions:** Management work in PHC is complex and diverse, with a significant bureaucratic and administrative burden. *Overseeing tasks and team coordination* emerge as core management and governance activities in ACES.

Disclosure: No conflict of interest declared

777

Presentation type: Oral Communication

### Comparison of primary care experiences among adult patients in different primary care organisational models in Southern China

H.H.X. Wang<sup>1</sup>, S.Y.S. Wong<sup>1</sup>, M.C.S. Wong<sup>1</sup>, X.L. Wei<sup>1</sup>, J.J. Wang<sup>2</sup>, D.K.T. Li<sup>3</sup>, J.L. Tang<sup>1</sup>, G.Y. Gao<sup>1</sup>, S.M. Griffiths<sup>1</sup>

<sup>1</sup> School of Public Health and Primary Care, The Chinese University of Hong Kong, Shatin, Hong Kong; <sup>2</sup> School of Public Health, Guangzhou Medical University, Guangzhou, China; <sup>3</sup> Bauhinia Foundation Research Centre, Bauhinia Foundation Research Centre, Hong Kong, Hong Kong

**Objectives:** China has launched a primary care-orientated healthcare reform, with national policy calling for multiple organisational models of Community Health Centres (CHCs). This study aimed to measure quality attributes of primary care delivered by different organisational models of CHCs in southern China, using an internationally developed and cross-culturally validated Primary Care Assessment Tool (PCAT) – Adult Edition from patient's perspective.

**Methods:** The instrument has a proven good reliability and validity. 3,360 adult patients were interviewed from 28 CHCs in Pearl River Delta, southern China, using multistage cluster sampling methodology. Inter-rater reliability among 5 interviewers was established through standardised training procedures. PCAT scores were compared across CHC organisational models after adjusting for socio-demographic characteristics, health and service utilization characteristics.

**Results:** The study achieved an overall response rate of 86.1%. Service users of government owned and managed CHCs had the highest adjusted overall PCAT scores, compared to service users of CHCs either managed by hospitals (95.29 vs. 90.57;  $p < 0.001$ ), or owned by private entities (95.29 vs. 91.62;  $p = 0.012$ ), as a result of its achievements in the scales of first contact care (better first contact utilization) and coordination of care (better service coordination and information system).

**Conclusions:** The study adds to the evidence suggesting that government owned and managed CHCs may be able to provide better first contact care in terms of utilization and coordination of care. The findings are expected to help policy makers make better decisions in the development of the future primary care organisational models and healthcare system in China.

Disclosure: No conflict of interest declared

1018

Presentation type: Oral Communication

**Systematization of care for high blood pressure (HBP): Implementation and outcome evaluation in family medicine groups (FMGs), Quebec, Canada**

S. Groulx, J. Beaudry, Y. Filion

*Monteregie Public Health Directorate, Health and Social Services Agency of Monteregie, Quebec, Canada, Longueuil, Canada*

Despite recent progress in HBP control in Canada, case finding and management of this crucial cardiovascular risk factor remain suboptimal. FMGs are new primary healthcare organizations in the province of Quebec, in which physicians and nurses work together to improve the health of a defined population. To address the multiple challenges of HBP care in this new setting, the Monteregie Public Health Directorate designed and implemented since 2007 a six steps care system inspired from the *Put Prevention Into Practice* and *STEP-UP* programs, supported by local Clinical Prevention Nurse Facilitators (CPNFs).

**Objectives:** 1- To document the facilitators and barriers to the implementation of the system and its effects on perceived effectiveness and efficiency of HBP care, interprofessional collaboration and professional satisfaction; 2- To compare experimental and control FMGs for their adhesion to the recommendations of the *Canadian Hypertension Education Program* (CHEP).

**Methodology:** 1- Qualitative: case study of five FMGs, using interviews with the CPNFs, physicians and nurses. 2- Quantitative: telephone questionnaire of 240 patients and audit of their medical records.

**Results:** Methodological issues and preliminary results will be presented.

**Conclusion:** This study will allow provincial, regional and local stakeholders in clinical prevention and primary care organization to assess the strengths and limits of systematization as a strategy to fight cardiovascular and other chronic diseases, to identify favourable conditions to ensure and to estimate resources needed for its implementation. It will also help FMGs physicians and nurses to improve the effectiveness of their own care system.

Disclosure: No conflict of interest declared

1247

Presentation type: Oral Communication

**Chronic conditions and the new demands to health care services: Reorganization of the Community Health Service – Brazil for a better answer to the present needs in health**S.Takeda<sup>1</sup>, C.Mendonça<sup>1,2</sup>, M.Diercks<sup>1</sup>*<sup>1</sup> Serviço de Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil; <sup>2</sup> Saúde Coletiva, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil*

**Introduction:** The Community Health Service (CHS) is a primary care service comprising 450 interprofessional staff and 100,000 patients/users. Between 2010/2014 the CHS aims to improve the quality of health care (HC) to people suffering from chronic conditions (CC), specifically hypertension and diabetes. A total of 20,120 hypertensive and 6,190 diabetic patients is estimated.

**Objectives:** To introduce changes in management, assistance, and educational processes. To evaluate the quality of HC by means of access and effectivity.

**Methodology:** Multiple methodologies based on the chronic conditions care model (CCM): participatory management; staff permanent education (SPE) – critical peer education; process and outcomes indicators; “Evaluation of SH and DM care in PHC”, a 4-year-long longitudinal study evaluating changes in management, assistance, and educational processes.

**Results:** a) offer of appointments appropriate to the CCs; b) development of systematic and continuous SPE; c) evaluation of indicators for 2010-2012: **SH:** coverage increase – 34%/58%. Control increase – 60%/65%. Target-organ damage (TOD): decrease – 14%/13% in ischemic cardiopathy; 11%/9% in heart failure; CVD – equal at 6%. Hospitalization due to PHC-sensitive conditions (PHCSC): hypertension – 12 patients-2010/5-2012; angina: 20/5; heart failure: 93/25; CVD: 106/52. **DM:** coverage increase – 5%/52%; control equal at 52%; TOD: amputation: 1%/1%; diabetic foot: 2%/2%; nephropathy: 8%/8%; retinopathy: 5%/4%. PHCSC: DM: 49 patients-2010/16-2012.

**Conclusions:** We are under a change process. The indicators show that we are following the right path. Systematic EPP and GP have been essential to achieve these outcomes.

Disclosure: No conflict of interest declared

1693

**Presentation type: Oral Communication****„Code white“ access to emergency room**

A. Menin, G. Visentin

*Csermeg, Csermeg, Monza, Italy*

**Objective:** Overcrowded Emergency Rooms by people classified as „code white“ raised a discussion in Italian National Health Service. Primary Care is believed to be responsible because often Gps are not able to be available full time also in day time.

This paper describes clinical and demographic characteristics and reasons why patients without urgent problems (so called „codes white“) decide to refer to Emergency Room instead of General Practice.

**Method:** 15 GP's trainees from different school have been enrolled during the period of training in ER to administer a questionnaire to 27 patients classified as „code white“ after the triage.

Total number of ER accesses has been recorded in order to perform a quantitative analysis, and the questionnaire asks the reason for referral, and if the patient has already called his GP, and what is her/his expectation from the visit to ER.

**Results:** Referral to ER is believed as a consequence of a poor service offered by Primary care, but this study shows that patients look for treatment or diagnostic procedure usually not offered in Primary care.

**Conclusions:** Reason for referral to ER are not only due to inefficient General Practice organisation, but also to other factors linked to patient's beliefs and Health Service organisation, for instance cultural problems, subjective perception of serious disease, diagnostic test and specialist referral with long waiting list, expensive tickets.

Disclosure: No conflict of interest declared

**2.5. CONSULTATION SKILLS**

1431

**Presentation type: Workshop****We Doctors, our patients, the illness and burnout – Balint groups 2013**M. Budow<sup>1</sup>, D. Nease<sup>2</sup>, A. Elder<sup>3</sup>

<sup>1</sup> *Family Medicine, Tel Aviv University, Petach Tikvah, Israel;* <sup>2</sup> *Family Medicine, University of Colorado, Denver, United States;* <sup>3</sup> *General Practice, British Balint Society, London, United Kingdom*

**Background:** Professional Burnout and Compassion Fatigue are common amongst Family Physicians worldwide. Symptoms include exhaustion, boredom, feelings of guilt, depression and loss of compassion and empathy. A recent article showed that burnout is very common among American Family Physicians. Swedish participants in a Balint group found joy and challenge in their relationships with patients, making a Balint group a unique method for combating burnout. An Australian article discussed how Balint groups can help medical decision making as a by-product of increased satisfaction with being a doctor.

Michael Balint began his work with GPs in London in the early 1950's. The essence of Balint Groups has always been to share experiences and enable people to observe and rethink aspects of their relationships with patients and their work as doctors.

**Method:** Our workshop will start with an introduction to Balint work and then we shall run a group with the workshop participants. A volunteer will tell the unprepared story of a consultation or patient, describing what happened between him/herself and the patient. It should relate to something that continues to occupy his/her mind. It may be puzzling, or leave the presenter feeling angry, frustrated or sad. The group will then discuss the relationship between the doctor and patient and try to understand what evokes these feelings, hopefully leading to a better understanding of the patient. We encourage the participation of delegates unfamiliar with Balint work, details of which can be found on the International Balint Federation website [www.balintinternational.com](http://www.balintinternational.com)

Disclosure: No conflict of interest declared

1533

**Presentation type: Workshop****Attachment and general practice: Developing & sustaining a secure base**D. Nease<sup>1</sup>, A. Elder<sup>2</sup>, M. Budow<sup>3</sup>

<sup>1</sup> Department of Family Medicine, University of Colorado – Denver, School of Medicine, Aurora, Colorado, United States; <sup>2</sup> General Practice and Primary Care, Marlborough Family Care, London, United Kingdom; <sup>3</sup> Department of Family Medicine, University of Tel Aviv, Tel Aviv, Israel

**Objective:** Attachment theory has rarely been applied in general practice. Bowlby first described the importance of attachment to childhood development and later adult life. Chechnowski has described the importance of attachment styles in interactions with the healthcare system. Finally, Elder has discussed how attachment may be important in a primary care practice in providing a secure base for patients. We will draw upon and expand these themes in our workshop, making the case for the centrality of attachment for patients, clinicians and staff in primary care.

**Methods:** Our workshop will begin with a didactic presentation laying out the relevant theory and the potential role for a practice based Balint style group to develop and sustain the secure base within a general practice. A demonstration group will next be convened with workshop attendees joining the group and leadership by the workshop faculty. Finally, the workshop will close with a reflections by the attendees and faculty on the group process and theories expressed. Potential next steps for attendees wishing to adopt this process will be discussed.

**Results:** The combination of didactic presentation, experiential group process and reflection will allow attendees to gain an understanding of the role of attachment within their own professional work and consider ways to use this to enrich their practices.

**Conclusions:** Michael Balint's group process within the context of a general practice has the potential to develop and or sustain the function of the practice as a secure base where difficulties in forming functional and therapeutic attachments arise.

Disclosure: No conflict of interest declared

693

**Presentation type: Oral Communication****Is ICPC-2 an appropriate tool to code ICE (Ideas, Concerns and Expectations) to better describe the reason for encounter in general practice**D. Schrans<sup>1,2</sup>, P. Boeckxstaens<sup>1,2</sup>, T. Kühlein<sup>3,2</sup>, J. Matthys<sup>1</sup>, T. Christiaens<sup>1</sup>, D. Avonts<sup>1</sup>

<sup>1</sup> Family Medicine and Primary Health Care, Ghent University, Ghent, Belgium; <sup>2</sup> Member of, Wonca International Classification Comite, -, Germany; <sup>3</sup> General Practice and Health Services Research, University Hospital Heidelberg, Heidelberg, Germany

**Objectives:** The reason for encounter (RfE) is an important component of the primary care consultation and should be thoroughly understood by the General Practitioner and agreed upon by the patient. Therefore it is most useful to elicit the Ideas, Concerns and Expectations (ICE) of the patient. This is a central issue in good consultation and communication skills. The objective of this study is to test whether the International Classification of Primary Care (ICPC-2) is suitable to code ICE appropriately and what codes might be missing for this use case of the classification.

**Methods:** Data concerning ICE were collected by GP-trainees (n=36) in 36 different GP teaching practices in Belgium, during 613 consultations of their trainers. The trainees were instructed to observe and record patients' expressions of ICE narratively as elicited by their trainers in the consultations. Two researchers are coding independently the symptoms and ICE recorded with ICPC-2. ICE not codable with ICPC-2 are collected in residual classes. The content of these residual classes are analyzed to identify missing concepts. The content of the codes assigned and the inter-rater correlations are analyzed quantitatively.

**Results:** Currently the narrative recordings of the trainees are coded. Results will be presented at the conference

**Conclusions:** It is expected that coding of ICE with ICPC-2 is feasible. It might be a valuable tool to realize a person centered approach in primary care, and therefore it should be listed in the electronic medical records.

Disclosure: No conflict of interest declared

900

**Presentation type: Oral Communication****Training, key point for nurses leading the management and resolution of spontaneous visits in primary care**

M. Leal Negre, C. Alvarado Montesdeoca, C. Domènech Rodríguez, A. Garijo Borja, S. Moreiras López  
C.S. Molí Nou, Institut Català de la Salut, Barcelona, Spain

A cornerstone to achieving excellent organization within the health system is effectively managing spontaneous visits which have been increasing in recent years. We created a new service where a nurse was responsible for management and resolution of spontaneous visits in primary care, to show that nurses produce excellent results. The aim of this study is to demonstrate nursing's resolution ability in the spontaneous visits in primary care and check the pathologies in which nurses need more training.

An eight months descriptive study, where a nurse attended all adult patients who requested spontaneous visit. The visits were solved by our own protocols. We consulted all clinical histories and we divided the resolution as „nursing decision“ if only nurses intervened or „joint resolution“ if a doctor contributed. For the statistical analysis was used SPSS version 11.0. It was used measures of central tendency and dispersion for quantitative variables and proportions for qualitative variables.

The global resolution increases in time and reaches to 75.7% last month of study. Nursing resolved above 80% of administrative visits, wounds/burns and toothache, between 50% and 70% gynaecology, ophthalmology, internal medicine and digestive issues, between 30-50% otorhinolaryngological problems, urologic, trauma, respiratory and below 30% neurological and dermatological problems.

More responsibility and resolution capability of nurses produces good results, reason why nurses are highly qualified in the management of spontaneous visit. In this process, nurses learn and increase their experience, however there are some pathologies in which the resolution is low and GP nurses need more training.

Disclosure: No conflict of interest declared

1117

**Presentation type: Oral Communication****Asylum seekers: family doctors can make a big difference**

L. M. Candib  
*Family Medicine and Community Health, Family Health Center of Worcester/Umass Medical School, Worcester, MA, United States*

Among refugees to industrialized nations, a portion seek asylum due to persecution in their homeland for membership in political, religious, ethnic, or other social groups. Whereas refugees are granted legal status before immigration to the host country, asylum seekers must first make landfall, then apply for asylum status. Most have fled without documents and must seek legal asylum to prevent deportation back to their countries where imprisonment, torture, and death may await. In the application process, asylum seekers must provide convincing evidence of having been the target of persecution prior to fleeing their homeland. Family doctors can play a crucial role in supporting this application by documenting how the applicant's medical history, physical examination, and psychological evaluation are consistent with the narrative of persecution. Family doctors can also assist asylum seekers by identifying medical needs and providing care. Many who have undergone torture or other human rights violations appear in primary care with somatic symptoms such as pain, and/or mental symptoms like depression and PTSD, resulting from the physical and psychological trauma they have endured.

This workshop will focus on two ways family doctors can work with asylum seekers: by identifying needs and providing suitable care, and by performing medical evaluations and providing legal affidavits. The seminar leader will describe her experiences doing this work, discuss specific cases, and comment on the intrinsic meaning of this work for family doctors. A workshop format will allow ample time for participants to ask questions and reflect on and share their own experiences.

Disclosure: No conflict of interest declared

1289

**Presentation type: Oral Communication****Suicide risk evaluation in Primary Care – a revision**

M. Neves

*General Practice, USF Serpa Pinto, Porto, Portugal*

The suicidal behaviour is a continuum that goes from the fleeting thought about putting an end to life to the suicidal act.

Given the importance of this problem the World Health Organization started a program for suicide prevention (SUPRE) in 1999.

The aim of this revision is to define some orientations to evaluate the suicide risk in Primary Care.

Talking about suicide is not going to encourage the patient to do it. Instead, it will give the patient the opportunity to share his thoughts and feel relieved for having that chance.

To prevent suicide, doctors have to know ricks factor and look for them.

The clinical history must include personal and familiar history of mental diseases and suicidal attempts, substance abuse and recent important events. The evaluation of mental status is very important, including mood, affects and cognitive evaluation.

The interview should start with general opened questions showing empathy, and if the answers suggest suicidal ideation, proceed with questions that would give the idea of the strength of this ideas and if there is a structured plan.

There are some semi-structured interviews to help the clinician in this evaluation, and questionnaires and scales are may be a help, but should never be used as a diagnosis tool.

There is no unique adequate way of accessing suicide risk of a patient, but to know to whom, when and how to make an initial evaluation of suicide risk in Primary Care can save lives.

Disclosure: No conflict of interest declared

1421

**Presentation type: Oral Communication****Coaching for health an experiential workshop; a person centred approach with patient, practitioner and economic benefits**

R.Viney, L.Miller

*Workforce Development, London University, London, United Kingdom*

**Objectives:** To enable the participants to empower patients.

“Helping people gain the knowledge, skills, tools and confidence to become active participants in their care so that they can reach their self-identified health goals”

An incidental benefit of a coaching and mentoring scheme for doctors and dentists was improved communication with patients. The impact on patients was confirmed in a multicentre study of mentoring programmes.

‘Mentoring allows you to look at patients in a different way. It’s actually improved my consulting skills immensely.’

**Method:** A practical fun and interactive workshop

**Result:** A greater emphasis on self-management and patient empowerment, thereby enhancing clinician job satisfaction, morale, and reducing absence and “burn out”.

Improving patient self-efficacy demands a shift to a more collaborative relationship. Health coaching incorporates motivational interviewing and positive psychology.

The World Health Organisation predicts that by 2015, 41 million out of 64 million deaths will be due to chronic diseases globally. However medication adherence, acute admissions to hospital and perceived health status (proportionate to health expenditure) improve with enhanced self-efficacy compared with information giving. These approaches can specifically benefit those with low health literacy; 11.4% of adults in the UK and 90 million adults in the USA.

A mentoring and coaching culture for clinicians; “...will have benefits for your practice, wellbeing and development. Above all, it will help you with managing change and problem-solving in our unsettled healthcare environment.”

**Outcome:** Empowered, self-efficacious patients and improved job satisfaction for clinicians

Disclosure: No conflict of interest declared



1655

Presentation type: Oral Communication

**Does educational intervention improve doctors' willingness and interest to practice in primary care?**

A.D. Al-Khathami

*Saudi Postgraduate Family Medicine Program, MOH, Al-Khobar, Saudi Arabia*

**Background:** Good doctor-patient communication is a core clinical skill and an essential component of the clinical competence. It improves both physicians' and patients' satisfaction and reduces conflict through enhanced understanding. Exploring the patient's perception can increase the patient's adherence to the treatment plan and improve the health care outcome.

**Aim and Objectives:** This study describes implementation and evaluation of a short training course in communication interview skills to measure the relevance of integrated patients' perception – ideas, concerns, expectation, and the impact of the problem in the patient's life – to the physicians' perception, welling and satisfaction to work in PHC setting.

**Design and methods:** It is an intervention of one-day training session. Twenty-five PHC physicians had been selected randomly and assessed before and after the training. A self-demonstrated scaled questionnaire was used as assessment tool. Related contents had been demonstrated through variety of learning strategies with constructive feedback. Tyler Objectives and Kirkpatrick four level evaluation models were used for evaluation.

**Results and findings:** Results data have indicated positive changes in PHC physicians' perception following the training and change the physicians' willingness to modify their interview approach. The trainees' interest and satisfaction has improved as a result.

**Conclusions:** a short-training program to integrate the patients' perception into patients interview could improve the PHC physicians' perception, interest, satisfaction, and willing for promotion.

Disclosure: No conflict of interest declared

**2.6. INTERDISCIPLINARY COOPERATION**

930

Presentation type: Workshop

**Interprofessional collaboration (IpC): A new challenge for primary care**N. Kopcavar Gucek<sup>1</sup>, D. Aarendonk<sup>2</sup>, A. Stavdal<sup>3</sup><sup>1</sup> Vice-Presidency, UEMO, Bruxelles, Belgium; <sup>2</sup> Board-coordinator, EFPC, Amsterdam, Netherlands; <sup>3</sup> Vice, WONCA, London, United Kingdom

**Background:** "Although it is widely acknowledged that the complex health problems of chronically ill and elderly persons require care provision across organisational and professional boundaries, achieving widespread multidisciplinary co-operation in primary care (PC) has proven problematic."

Can we make sense of multidisciplinary co-operation in PC by considering routines and rules?

Health and Social Care in the Community (2011); 19(1): 33–42.

**Objectives:** After the workshop, the participants should:

-**differentiate** between IpC and multi-professional collaboration

-**understand** the advantages of IpC

-**appreciate** the cultural, professional, ethnical, educational factors involved

**Methods:** Introduction by moderator (5 mins)

1. Lecture 1 (20 minutes): definition of IpC, distinction between inter- and multiprofessional collaboration, goals
2. Work in small groups (15 mins): dilemmas and afterthoughts: tension over established roles, challenging previous identities, ethnical and conceptual differences
3. Reports from the small groups (5 mins)
4. Lecture 2: (20 minutes): examples of good, established practices introducing doctor's assistants, nurses for first-contact care, delegation of duties: "task shifting" / "task sharing", social workers as care managers
5. Plenary discussion, a Q and A session with the lecturers (20 mins)
6. Conclusion by moderator (5 mins)

**Results:** Problems and dilemmas encountered in different settings will be discussed, possible solutions presented by participants as "models of good, already established practices". Principles of effective training, implementation and follow up of IpC will be discussed and registered.

Disclosure: No conflict of interest declared

249

**Presentation type: Oral Communication****A focus group study of primary health care in Johannesburg Health District, South Africa: 'We are just pushing numbers'**

S. Moosa, A. Gibbs

*Family Medicine, University of Witwatersrand, Johannesburg, South Africa*

**Objectives:** South Africa is striving towards strong primary health care. Family Medicine has been implemented in Johannesburg since 2007 to improve quality of care with improved access to doctors, coordination of health services and referrals. There were visible difficulties around clinical quality, the role of increasing numbers of doctors and the value of Family Medicine as a new discipline in Johannesburg. This study aimed to explore priorities for improving clinical care and views on the role of doctors and of Family Medicine in the District.

**Methods:** Qualitative focus group discussions with groups of nurse-clinicians, clinic managers, senior managers, doctors and interns across Johannesburg. The content was thematically analysed and a model developed.

**Results:** There were nine focus group discussions with 92 participants. Clinical quality in primary care was challenged by burnout of staff and poor management. Discussing the role of doctors immediately raised deep conflicts between doctors and nurses. Doctors were expected to help 'push the queues'. It took some time for further roles to emerge: helping in referrals, training, research and administration. There was initial confusion and tension when asked about Family Medicine. However their role was seen as useful.

**Conclusion:** Nurses appear to be suffering burnout and resenting the increasing burden on them in primary care in Johannesburg. The role of doctors appears to be confounded by doctor-nurse conflict, poor teamwork and power issues with confused lines of supervision and accountability. Family Medicine can make a difference but it will require the system to be re-organised.

Disclosure: No conflict of interest declared

525

**Presentation type: Oral Communication****Paradigm shift in managing Non-communicable diseases: Partnership beyond health sector**A. Lee<sup>1,2</sup>*<sup>1</sup> School of Public Health and Primary Care, The Chinese University of Hong Kong, Shatin, Hong Kong; <sup>2</sup> Centre for Health Research, University of Brighton, Brighton, United Kingdom*

**Objectives:** Effective management of Non Communicable Diseases (NCDs) should include primary, secondary and tertiary prevention to protect the population from risk factors and complications. This presentation illustrates case studies in Hong Kong (HK) adopting inter-sectoral approach for preventive care.

**Methods:** The presenter led the Research Centre for Health Education and Promotion (CHEP) to conduct a randomised controlled study of a partnership programme between General Practitioners and social workers to enhance self-management of diabetes mellitus by improving self efficacy as tertiary prevention. For secondary prevention, after screening obesity among primary schools students, randomised controlled study was conducted with intervention group adopting an integrated Health Promoting School approach consisting of improvement in school policies and environment in healthy eating and active living, health skills empowerment. In primary prevention, CHEP developed Home-School-Doctor model to improve the uptake rate of Human Papilloma Virus (HPV) vaccine amongst adolescent girls for prevention of cervical cancer as HK does not provide universal HPV vaccination.

**Results:** For diabetes mellitus, significant improvements were observed in HbA1c, central obesity and eating behaviour among the intervention group. For childhood obesity, improvement of the body composition (body weight and body fat %), dietary and exercise habits, and no rebound in body fat % was found half year after the completion of the intervention programme. For HPV prevention, over 30% of adolescent girls were vaccinated amongst the schools participating in the programme compared with only 7% in 2009 survey.

**Conclusion:** Integrated care model going beyond health boundary would enhance management of NCDs

Disclosure: No conflict of interest declared

1260

Presentation type: Oral Communication

### An education program through work for gender and sexuality: A model-building approach to the issues of gender and sexuality in a public primary health care center in Rio de Janeiro

R. Gonçalves de Moura<sup>1</sup>, D. da Silva Teixeira<sup>1,2</sup>, K. Santo Athié<sup>1</sup>, M. Luís Barbosa Júnior<sup>1</sup>, G. Alejandro Vergara Figueroa<sup>1,2</sup>, C. Alves dos Santos<sup>1</sup>, T. Gonçalves Ferrão de Carvalho<sup>1,2</sup>, F. Rocha Pina<sup>2</sup>, N. Vinícius Hércules Rodrigues Miranda<sup>1</sup>

<sup>1</sup> Integrative Medical, Family and Community Department, State University of Rio de Janeiro, Rio de Janeiro, Brazil; <sup>2</sup> Family Clinic Sérgio Vieira de Melo, Health and Civil Defense Municipal Secretariat, Rio de Janeiro, Brazil

**Objective:** Develop models of collaborative work to approach issues related to gender and sexuality.

**Methods:** Work done by active methods of teaching and learning, involving the following team: 8 health care professionals (medicine, social work, nursing, physiotherapy and psychology), 19 undergraduate students of medicine, psychology, nursing and service social of the State University of Rio de Janeiro, 5 residents in family medicine and the workers of the health center in a urban region of the city of Rio de Janeiro, serving approximately 23,000 people with a heterogeneous profile

**Results:** Activities held during the 1st semester: survey research literature, identification of local intersectoral resources; mapping of integration problems between the actors; training the health center team focused on issues related to gender/ sexuality; continuing education of the team, always through collaborative work. The model used by the working group operates through joint consultations, interconsultation, team meetings, home visits and group activities.

**Conclusions:** The issues of gender and sexuality do not appear in the daily work of the teams. This is a problem since the issues remain adjacent and non integrated in the professionals approach. The challenge has been the integration and alignment of idea, using references of the human rights of children and adolescents, women, and problematizations related more broadly to build consistency of care among caregivers.

Disclosure: No conflict of interest declared

1406

Presentation type: Oral Communication

### Interprofessional communication guideline: Greet-Invite-Discuss A model from Southeast Asia

M. Claramita<sup>1</sup>, M. Sedyowinarso<sup>2</sup>, E. Huriyati<sup>3</sup>, M. Sri Hartati Wahyuningsih<sup>4</sup>

<sup>1</sup> Medical Education Department Faculty of Medicine Gadjah Mada University, Skills Laboratory, Interprofessional Education, Yogyakarta, Indonesia; <sup>2</sup> Nursing Department Faculty of Medicine Gadjah Mada University, Skills Laboratory, Interprofessional Education, Yogyakarta, Indonesia; <sup>3</sup> Health Nutrition Department Faculty of Medicine Gadjah Mada University, Skills Laboratory, Interprofessional Education, Yogyakarta, Indonesia; <sup>4</sup> Pharmacology Department Faculty of Medicine Gadjah Mada University, Skills Laboratory, Interprofessional Education, Yogyakarta, Indonesia

**Objectives:** A guideline on doctor-patient communication tailored to Southeast Asian context; the *Greet – Invite – Discuss* was developed and validated by physicians working at primary care services. The objectives of this study were: (1) Adjusting and validating the guideline for other health professional communication; nurses, pharmacists and nutritionists (2) Adjusting and validating the guideline for interprofessional communication and (3) testing the adjusted interprofessional communication guideline.

**Methods:** To adjust and validate the guideline for other health professional communication we did three times focus group discussions with 10 nurses, 10 pharmacists and 10 nutritionists. To adjust and validate the guideline for interprofessional communication we did nominal group technique with the other 10 nurses, 10 pharmacists and 10 nutritionists. To test the adjusted interprofessional communication guideline we did a quasi experiment with 30 medical students. A training on interprofessional communication using simulated patients, feedback and reflection session; which was participated by students from other health professionals, was done between pre and post test on students' perceptions. Qualitative data were analyzed by content analysis and quantitative data were analyzed by t-test dependent sample.

**Results:** Adjustment on the *Greet – Invite – Discuss* communication guideline for nurses, pharmacist and nutritionist, also for interprofessional communication, were made and validated. Medical students showed significantly better perceptions on interprofessional communication after the training.

**Conclusion:** The adjusted *Greet-Invite-Discuss* maybe used for many other health professionals and interprofessional communication towards better communication with patients.

Disclosure: No conflict of interest declared

1743

**Presentation type: Oral Communication****Soothing pain with laughter: One experience to be perpetuated**

L.A. Alves Reis, F.K. Melchior Silva Pinto, J.H. Vieira Pedrosa, G.A. A Amorim, D.H. Hohl

*Department of Internal Medicine, School Medicine of University Federal of Goias, goiania, Brazil*

**Objective:** Report the experience of the students that integrate the Pronto Sorriso (making a free translation Emergency Smile) extension program and how this experience helps their professional formation.

**Method:** The program is divided in two modules. At first, dynamic classes stimulate the self-knowledge in the process of creating the “clown doctor”. The students also learn to express themselves and deal in a better way with the hospital and the patients. The project uses classes with performing arts techniques, circus, jugglery, makeup elaboration, balloons and storytelling.

Later, the teaching aims to upgrade the contact with patients. At this point, the experiences of the students at the visits are very important. They also learn to deal with adversity and lack of receptivity of the patients.

**Result:** The program is building a relationship of solidarity, respect, friendship and ethics between students and patients of the Hospital das Clinicas (HC) of the UFG. The upgrading of the doctor patient relationship, way beyond the simple pathological processes, becomes an essential quality for today doctors, and this program gives this edge to its graduates.

**Conclusion:** With over 10 years of existence, Pronto Sorriso has minimized pain using humor and solidarity as treating tools. Besides, it has been stimulating self-knowledge and positively influencing the graduation and the future doctor patient relationship of its participants. Its results are positive and should be followed

Disclosure: No conflict of interest declared

1769

**Presentation type: Oral Communication****Delivering bad or difficult news; A 4 hour workshop for physicians, trainees and allied health**

S. Argenio

*Family medicine, Mayo Clinic, Jacksonville, Florida, United States*

Argenio, S.L. Family Medicine; Lipke, G. ER; Paul, J.W. Internal Medicine; Oldenburg, W.A., Vascular Surgery; Perdakis, G. Plastics; Veneziale, T. Quality and Safety; Sayre, Jerry, FM, Mayo Clinic; Sayre, Judith, PhD., Maples, W, Hematology-Oncology, Mission Hospital, North Carolina.

**Objective:** This abstract describes a 4 hour course designed with the objective to teach multiple communication skills to physicians, trainees and allied health for delivering bad or difficult news. This could also stand alone as a 4 hour work-shop.

**The goals are defined below:**

1. Learn communication skills necessary in End of Life discussions
2. Review strategies for breaking bad news
3. Identify perceived barriers, supports and changes needed to improve EOL care in the ICU
4. Explore moral distress associated with difficult decisions

**Methods:** Course was designed by a multi-specialty and allied health faculty. Brief didactics, large group and small group practice and role play are utilized.

Skills practices include the following:

1. Review personal experiences in delivering or receiving bad news. Facilitated small group discussion.
2. Practice personal examples using PEARLS
3. Moral distress workgroup: Share situations where asked to do something that conflicted with personal values.
4. Discussion: Define Barriers to EOL care especially in ICU.
5. Group practice: use of SPIKES.
6. Review giving bad news by telephone.

**Results:** Attendees report increased comfort and skill in delivering bad news to patients and families.

**Conclusions:** A 4 hour course presents knowledge and skills to allow physicians and allied health to improve knowledge, skills and comfort in the difficult communication task of delivering bad news.

Disclosure: No conflict of interest declared

1781

**Presentation type: Oral Communication****Rural focused urban specialists – clinical specialists supporting rural communities**

M. London

*South Westland Practice, West Coast District Health Board, South Westland, New Zealand*

**Objective:** A project was proposed in June 2009 to the World Rural Health Conference in Crete called 'Rural Focused Urban Specialists' (known as RUFUS), for city based clinical specialists to travel to rural and remote areas on a periodic basis to attend patients, supervise rural immersion medical students and offer continuing professional development to the extended practice team. The extra benefits of this would be for the urban specialists to better appreciate the context in which rural primary care is delivered and to build professional relationships with the practice teams. This would further enhance telephone and videoconference support with both patients and staff when needed at other times.

**Methods:** Networking between the South Westland Practice and the West Coast and Canterbury District Health Boards convinced them of the benefits of this concept for clinical integration and specialist appointments were duly made in this basis.

**Results:** We now have RUFUS doctors in paediatrics, psychiatry, older persons health and palliative care coming into South Westland, one of the most remote parts of New Zealand. Similar projects are being tried in other parts of rural New Zealand.

**Conclusions:** The presentation will report on the success of this project in its first few years (to the extent that the expression 'RUFUS' is now being used by District Health Boards and the Ministry of Health) plus some of the challenges to enhance and extend the service.

Disclosure: No conflict of interest declared

**2.7. RESEARCH IN GENERAL PRACTICE**

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**Presentation type: Workshop****Realist research methods: Underpinning principles**

G. Wong

*Centre for Primary Care and Public Health, Queen Mary, University of London, London, United Kingdom*

This is a workshop on the fundamentals underpinnings of realist research methods. Researching primary care is challenging. Many interventions contain multiple components that interact independently, inter-dependently and/or non-linearly. The outcomes are also context dependent – e.g. when components are enacted in a different context, outcomes may differ. These observations have led to them being labelled 'complex' interventions or programmes.

This 'complexity' plus the inability to fully control the context they exist in means that establishing outcome causation cannot usually be done through experimental research designs such as randomised controlled trials (RCTs). In RCTs, it is argued that randomisation controls for variables other than the intervention itself, enabling the inference that the intervention is causal, without necessarily having to understand what it is about the intervention that has caused the desired outcome. When this is not possible (or desirable), or when the aim is to build understanding of causal processes and the role of context, other research approaches are required.

Realist research methods seek to unpack, dissect out and understand causation through the use of a realist philosophical lens. In brief, causation is generative – outcomes occur because mechanisms cause them to occur. Context influences if a mechanism might be triggered and interventions and/or programmes exert their effect by altering context.

In this workshop the benefits of adopting realist research methods is explained through short presentations and group work.

This workshop is suitable for researchers interested in learning the fundamentals underpinning realist research methods. No preparation or prior experience required.

Disclosure: No conflict of interest declared

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Presentation type: Workshop

**The Vasco da Gama Movement World Cafe for early stage researchers in general practice and family medicine**W.J. Herrmann<sup>1</sup>, D. Blane<sup>2</sup>, V. Welsh<sup>2</sup>, T. Freund<sup>1</sup>, H. Lygdakis<sup>3</sup>, G. Irving<sup>2</sup><sup>1</sup> Research Theme Group, The Vasco Da Gama Movement, Germany; <sup>2</sup> Research Theme Group, The Vasco Da Gama Movement, United Kingdom; <sup>3</sup> Research Theme Group, The Vasco Da Gama Movement, Italy**Objective:** Early stage researchers in general practice are often isolated from other young colleagues in their field. Thus, the objective of this workshop is to enhance mutual exchange and feedback between early stage researchers in general practice and family medicine from all over the world.**Methods:** An interactive workshop based on the concepts of world cafe and open space. All participants are divided into small groups of ideally 4 maximum 6 persons. Every participant presents his own research project or his own research idea in the small group. The other group members give feedback and the research ideas are going to be discussed. The groups are reassembled for a second round of exchange.**Participants:** GPs in training or within five years of completion of training who do research or who are interested in doing research. Every participant should casually present a research project or a research idea, which can be just a first sketch.**Results:** Our long-term objective is to establish lasting exchange and connections leading to a community of practice of early researchers in general practice and family medicine.

Disclosure: No conflict of interest declared

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Presentation type: Workshop

**Implementation of supports for crosscultural communication: The value of Normalisation Process Theory**M. van den Muijsenbergh<sup>1,2</sup>, C. Dowrick<sup>3</sup>, E. van Weel – Baumgarten<sup>1</sup>, E. Teunissen<sup>1</sup>, C. Prinz<sup>4</sup>, W. Spiegel<sup>4</sup><sup>1</sup> Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands; <sup>2</sup> Pharos, Dutch national knowledge centre on migrants, refugees and health care, Utrecht, Netherlands; <sup>3</sup> Primary medical Care, University of Liverpool, Liverpool, United Kingdom; <sup>4</sup> Department of General Practice, Center for Public Health, Medical University of Vienna, Vienna, Austria**Aims and purposes:** Despite scientific evidence many interventions that are proven to be effective are not implemented in daily practice. This is also the case with supports (for instance formal interpretation services) to overcome language barriers in cross-cultural consultations. These translational gaps between evidence and practice require attention to enable evidence to impact on service users' health. The aim of this workshop is to explore how theory in implementation research can help to bridge this gap. This is an important area for researchers in General Practice as well as for GPs who want to implement innovations in their practice.**Methods:** The session will begin with a description of a European Union funded project RESTORE [**RE**search into implementation **ST**rategies to support patients of different **OR**igins and language background in a variety of **E**uropean primary care settings]. RESTORE uses NPT and Participatory Learning and Action (PLA) methods to investigate and support the implementation of guidelines and training initiatives to support communication in cross-cultural primary care consultations in five European settings.

The session will then in an interactive way focus on participants' knowledge and experience of implementation research and practice and explore the use of a contemporary social theory, Normalisation Process Theory (NPT), to inform their own research and practice.

**Results and Conclusion:** Participants will receive an overview of key literature regarding cross-cultural communication and the need for theory in implementation research and enlarge their knowledge and understanding of the usefulness of NPT for implementation research and practice.

Disclosure: No conflict of interest declared

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**Presentation type: Workshop****Clinical drug research in primary care**C.F. Enters-Weijnen<sup>1</sup>, N.J. de Wit<sup>2</sup>, F.D.R. Hobbs<sup>3</sup>, D.E. Grobbee<sup>1</sup><sup>1</sup> *Primary Care Research, Julius Clinical, Zeist-Utrecht, Netherlands;* <sup>2</sup> *Department of General Practice, Julius Center for Health Sciences and Primary Care, Utrecht, Netherlands;*<sup>3</sup> *The Department of Primary Care Health Sciences, University of Oxford, Oxford, United Kingdom*

**Objective:** Clinical trials in primary care are necessary to guarantee the development and implementation of new drugs for the population at large. As the primary care setting in many countries is well organized, this provides an ideal setting to perform research. To enhance the effectiveness and quality of clinical research performed by primary care physicians, the exchange of ideas, experiences and best practices related to drug research is essential. This will position the primary care physician at a more professional level vis-à-vis the pharmaceutical industry.

**Methods:** Important criteria to make clinical trials in the primary care setting successful will be presented during an interactive workshop. Various specialists in this field will share their experiences in academic involvement, operating in international research infrastructures and networks and transferring data and training of participating physicians. Quality issues, innovation and the added value of (academic) consortia will be discussed in depth. There will be ample room for questions and sharing of experiences among the participants.

**Results:** Participants can apply knowledge gained from this workshop to improve both the quality and the impact of their research. This workshop can be a platform where key researchers from different countries exchange ideas and create a basis for collaboration in the future.

**Conclusions:** Cooperation and collaboration between primary care networks and academic consortia will enhance the quality and effectiveness of critical drug research and allow primary care physicians active in this field to become full partners with the pharmaceutical industry.

Disclosure: No conflict of interest declared

964

**Presentation type: Workshop****Research methods to evaluate primary care practice change**

W. Perry Dickinson, L. Miriam Dickinson, D. Fernald, F. de Gruy

*Department of Family Medicine, University of Colorado School of Medicine, Aurora, CO, United States*

**Objective:** Primary care practices in many countries are facing major practice transformation efforts, presenting opportunities and challenges for research and evaluation. The objective of this workshop is to bring together researchers to discuss methods of evaluating primary care practice change. The group will address the following issues: 1) conceptual frameworks for practice change, 2) the importance of contextual factors, 3) incorporating time into models, and 4) mixed qualitative and quantitative methods.

**Methods:** Key themes from quality improvement and the RE-AIM (Reach, Efficacy, Adoption, Implementation, and Maintenance) conceptual frameworks will be presented. Discussion of quantitative approaches will focus on general (generalized) linear mixed models to accommodate hierarchical and longitudinal data. Qualitative and mixed methods approaches to understanding context and complex interrelationships will also be discussed.

**Results:** Examples of specific quantitative and qualitative methodologies from several large-scale efforts in Colorado will be presented and discussed, including a study of an intervention to implement the chronic care model for diabetes in 40 primary care practices, a PCMH initiative in over 150 primary care practices, and a quality improvement program to assist 51 primary care practices to build and strengthen their health information technology infrastructure, improve care coordination, increase the quality of care, and slow the growth of health care spending.

**Conclusions:** Existing qualitative, quantitative, and mixed methods approaches can be adapted to implementation and practice redesign work, functioning in a synergistic way to provide better understanding about how change processes work in practices to implement interventions and achieve better patient care and outcomes.

Disclosure: No conflict of interest declared

1055

**Presentation type: Workshop****Applying for EU funding in the health sciences: Tips for the development of research proposals**

M. Papadakaki, M. Galenianos, C. Lionis

*Clinic of Social and Family Medicine, Faculty of Medicine, University of Crete, Heraklion, Greece*

**Objectives:** The workshop aims to inform the participants on the available funding opportunities for the health sciences at EU level as well as improve their knowledge and skills in the development of successful proposals.

**Methods:** Experience gained from completed and ongoing EU-funded projects with a focus on FP7 collaborative projects that have been implemented by the University of Crete will be discussed. Brief exercises and work in small groups will be employed for the participants to practice skills in protocol development. Frequently asked questions will be used to highlight common pitfalls and best practices, while written material and electronic demos would be utilized.

**Results:** Participants will become acquainted with EU funding schemes and will learn to navigate to various thematic areas relevant to the health sciences. They will learn about the principles of consortium development and the necessary components of a research protocol. They will become familiar with cost estimation methods and the rules of reimbursement. Attention will be also given to the evaluation procedures followed at EU level and tips will be provided on how to effectively meet the evaluation criteria in future proposals.

**Conclusions:** Participants will become competent in developing their own proposal and applying for EU funds. The workshop will further provide them with the opportunity to exchange ideas on new research proposals and seek for partners among the other participants.

Disclosure: No conflict of interest declared

1580

**Presentation type: Workshop****WONCA Working Party on Research and International Federation of Primary Care Research Network****Practice-based primary care research networks: towards universal establishment in an Age of Austerity**C. Lionis<sup>1</sup>, J. Beasley<sup>2</sup>, W. Qidwai<sup>3</sup><sup>1</sup> *Clinic of Social and Family Medicine, Faculty of Medicine, University of Crete, Heraklion, Greece;*<sup>2</sup> *Department of Family Medicine, University of Wisconsin, Madison, United States;* <sup>3</sup> *Department of Family Medicine, Aga Khan University, Pakistan, Pakistan**\*On behalf of the WONCA Working Party on Research and International Federation of Primary Care Research Network*

**Objective:** Practice-based primary care research networks (PBPCRN) as “groups of practices networked together to serve ambulatory patients, usually affiliated with professional organizations or university schools of medicine with the objective of asking and answering questions” (definition by Jones C, 2006) have been established under different formats in US, UK and Australia. Their main mission is to improve patient care and at the same time to involve primary care practitioners in research by transforming clinical questions into research.

**Methods:** Towards that direction, WONCA created the International Federation of Primary Care Research Networks, while in parallel the WONCA WP on Research was working on stimulating the interest worldwide and accumulating the experiences of many primary care researchers. At the same time the many countries have been affected by the recent economical crisis with serious impact on spending reductions that affect the area of medicine and mainly the medical research.

**Results:** This workshop aims to discuss the pre-requisites of building a PBPCRN within a regional or local level and to that purpose some selective initiatives from Asia, Europe and America will be presented and discussed.

**Conclusions:** Thoughts and reflections from the audience is expected to contribute to the formulation of some recommendations to the tasks of the WONCA WP on Research.

Disclosure: No conflict of interest declared



1647

**Presentation type: Workshop****Writing for publication: A joint VdGM / EGPRN / EJGP workshop**J. Stoffers<sup>1,2,3</sup>, T. Freund<sup>4,5</sup>, Charilaos Lygidakis<sup>6,5</sup>, Greg Irving<sup>7,5</sup>

<sup>1</sup> General Practice/Family Medicine, Maastricht University Medical Centre, Maastricht, Netherlands; <sup>2</sup> EJGP, European Journal of General Practice, Maastricht, Netherlands; <sup>3</sup> EGPRN, European General Practice Research Network, Maastricht, Netherlands; <sup>4</sup> General Practice and Health Services Research, University Hospital Heidelberg, Heidelberg, Germany; <sup>5</sup> VdGM, Vasco da Gama Movement, Bad Homburg, Germany; <sup>6</sup> AUSL of Bologna, Regional Health Service of Emilia Romagna, Bologna, Italy; <sup>7</sup> Health Services Research, University of Liverpool, Institute of Psychology, Health and Society, Liverpool, United Kingdom

Peer reviewed medical journals are important media for the publication of articles e.g. research papers, reviews of literature, clinical lessons, and opinion papers, relevant to General Practice/Family Medicine. They are the means to disseminate original research results and educational information, discuss available evidence and share experiences. However, many colleagues find writing and submitting a (research) paper a challenge.

**Aim:** To give participants knowledge about successfully preparing a manuscript for medical journals

**Audience:** Authors interested in research or medical writing and with little or no previous experience in publishing. More experienced authors are welcome to join this workshop to share their experiences.

**Methods:** The workshop will have the format of a highly interactive presentation. It will focus on the preparation and submission of research papers and clinical lessons. Topics are: the value of these article types, their basic structure, language and presentation, and common errors and how to prevent them. In addition, the peer review process will be discussed. Optional topics might be choosing the appropriate journal, (dis)advantages of open access journals, authorship and potential conflicts of interest, or the organisation of your writing work.

Participants are welcome to share their thoughts and ask questions on Twitter prior to the conference using the #vdgm hashtag (tweeting to @vdgmeu, @egprn or @EurJGenPract); these will be used during the workshop.

**Expected results:** Participants will have received introductory information and practical advice on how to prepare an appropriate manuscript to be published as research paper or clinical lesson in a peer-reviewed medical journal.

Disclosure: No conflict of interest declared

2018

**Presentation type: Workshop**  
**WONCA Working Party on Research****Workshop on Primary Care Research Strategies to improve global health**

W. Qidwai (Pakistan), J. Beasley (USA), Felicity Good year Smith (New Zealand)

An invitational meeting was held at Kingston, Ontario, Canada in 2003. Nine recommendations came out of this meeting:

1. Research achievements in family medicine should be displayed to policy makers, health (insurance) authorities, and academic leaders in a systematic way.
2. In all countries, sentinel practice systems should be developed to provide surveillance reports on illness and diseases that have the greatest impact on the population's health and wellness in the community.
3. A clearinghouse should be organized to provide a central repository of knowledge about family medicine research expertise, training, and mentoring.
4. National research institutes and university departments of family medicine with a research mission should be developed.
5. Practice-based research networks should be developed around the world.
6. Family medicine research journals, conferences, and Web sites should be strengthened to disseminate research findings internationally, and their use coordinated. Improved representation of family medicine research journals in databases, such as Index Medicus, should be pursued.
7. Funding of international collaborative research in family medicine should be facilitated.
8. International ethical guidelines, with an international ethical review process, should be developed in particular for participatory (action) research, where researchers work in partnership with communities.
9. When implementing these recommendations, the specific needs and implications for developing countries should be addressed.

We will invite conference participants to participate. Nine groups of preferably minimum three participants each will be formed. Each group will look at one recommendation. Nine groups will make presentations to larger group. Discussions will be moderated, recorded and later disseminated.

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**Presentation type: Oral Communication****Adherence to hypertension management and lifestyle modifications in patients attending GOPD, BPKIHS Dharan**

P.P. Gupta, M.J. Moore, R. Bhandari, I.P. Mahato

*Department of General Practice And Emergency Medicine, B.P.Koirala Institute of Health Sciences, Dharan, Sunsari, Nepal***Background:-** Hypertension is a huge problem worldwide. It should be managed with a combination of lifestyle modifications and medication.**Objectives:-** To find out the level of understanding of hypertensive patients regarding lifestyle modifications; to find their level of application in their daily activities; and to study their effects on the management of hypertension.**Materials and methods:-** We conducted an observational study with hypertensive patients who presented to GOPD at BPKIHS. We assessed the level of knowledge of those patients with a structured survey. Patients were told about lifestyle modifications following JNC 7 guidelines. Patients were reassessed using the same survey at one month and three month follow-up.**Results:-** A total of 100 patients were included- 50 males and 50 females. 6% had pre-hypertension and 94% had stage 1 or 2 hypertension. Only 26% of patients knew about lifestyle modifications. After being told about lifestyle modifications 100% stated that they had adopted them at follow-up. 68 patients came for one-month follow-up and 51 patients for three-month follow-up. There was significant weight reduction: average wt loss 3.54kg over 3 months. ( $p < 0.001$ ) At one-month the percentage of subjects with controlled hypertension was 13.2% and at three month follow up it fell to 2%. ( $p < 0.001$ ) 71% patients' blood pressure was controlled without medication at one-month and 77% at three-months.**Discussion:** – A minority of patients knew about lifestyle modifications. After counselling, their implementation was associated with weight reduction and improved control of blood pressure. Good lifestyle counselling is a crucial and effective part of hypertension management.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Milestones precepting : 1/2/5 – An innovative precepting model**

M Rali

*Southside Hospital Family Medicine Residency Department, Hofstra- NSLIJ School of Medicine, Bay Shore, NY, United States***Introduction:** ACGME has challenged teaching programs to design better methods to educate, assess and evaluate resident performance and document resident's competency in core areas of patient care, medical knowledge, interpersonal and communication skills and components of professionalism in the Ambulatory care settings.**Objective:**

1. To develop and implement a model of Milestones Precepting : 1/2/5, an innovative precepting model at Ambulatory clinic in Family Medicine Residency Program
2. To use the potential of the POWER model of Active precepting to contribute to improved patient care, teaching and better flow in the Family Medicine Teaching clinic.

**Methods:** Five teaching Microskills Model is used for proposed Milestones Precepting 1/2/5 minute for Third, Second and First Year Residents respectively.

1. Get residents to commit to a diagnosis, work-up or a therapeutic plan
2. Probe for supporting evidence
3. Teach general rules
4. Reinforce what the resident has done right
5. Correct resident's mistake

**Design:** We allocate appropriate time depending upon the level of training and competency achieved, the goal being to advance from Novice To Advanced beginner To Competent To Proficient To Expert To Master by the end of Third year. Faculty Preceptors will make sure that the residents advance appropriately in their training or if need be, reverse the order depending upon the competency of the resident.**Results:** will get results in 3 months of time after starting the intervention.**Plan:** To improve preceptor perceptions regarding resident behaviors and to get feedback from the residents and preceptors through "Monkey Survey"

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Context matters: Achieving balanced treatment allocation in cluster randomized trials**L. Miriam Dickinson<sup>1</sup>, Wilson Pace<sup>1</sup>, Allison Kempe<sup>2</sup>, W. Perry Dickinson<sup>1</sup><sup>1</sup> Family Medicine, University of Colorado, Denver, Colorado, United States; <sup>2</sup> Center for Research in Implementation Science and Prevention, University of Colorado, Denver, Colorado, United States

**Context:** Studies in primary care settings often randomize practices. Imbalance between study groups can be a serious problem in cluster randomized trials (CRT), especially in patient or practice level variables that can affect implementation of the intervention or patient outcomes. Covariate constrained randomization approaches address this problem.

**Objective:** To describe a method for achieving balance in cluster randomized trials. **Design:** CRT to implement an intervention to improve care for patients with CKD. **Setting:** 18 primary care practices. **Participants:** 4303 patients with stage 3 or 4 CKD.

**Intervention/Instruments:** Use a balance criterion approach to evaluate all possible randomizations, and select from a set of “acceptable randomizations” in which baseline differences between treatment groups are minimized.

**Main and Secondary Outcome Measures:** Balance criterion (B), defined as the sum of squared differences between treatment groups on standardized variables (# FTE physicians, GFR, HbA1c, CKD stage, diabetic, BP, race/ethnicity).

**Results:** A set of acceptable randomizations was identified from the set of all possible randomizations using a maximum allowable value of B as a criterion. Differences in raw means or proportions on variables used to define the balance criterion were significantly smaller in the acceptable randomization set for all variables (all  $p < .05$ ). A single randomization was selected from this set.

**Conclusions:** Practice characteristics may affect a practice’s response to quality improvement and practice redesign efforts and should be taken into account in planning a cluster randomized trial. Covariate constrained randomization can be used to achieve balanced treatment allocation on key practice and patient level variables.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Linking generations in general practice research – The Vasco da Gama Movement Junior Researcher Award 2013**T. Freund<sup>1</sup>, G. Irving<sup>2</sup>, C. Lygidakis<sup>3</sup><sup>1</sup> Department of General Practice and Health Services Research, University Hospital Heidelberg, Heidelberg, Germany; <sup>2</sup> Institute Psychology, Health and Society, University of Liverpool, Liverpool, United Kingdom; <sup>3</sup> Executive Board, Vasco da Gama Movement, Bologna, Italy

**Objective:** Since 2011, the Vasco da Gama Movement (VdGM) promotes sciences among junior general practitioners who combine research with patient care by awarding outstanding careers and ideas with the Junior Researcher Award. The award honours GP-trainees or junior GPs with up to 5 years working experience after graduation.

**Methods:** One national candidate for the award was asked to be proposed by each national representative of VdGM. The three finalists selected by an international jury will present both their ideas for future research and their personal career. Every presentation will be followed by a discussion.

**Results:** The auditorium is invited to learn from junior champions in research. This workshop sets the stage for bringing together junior researchers and/or trainees, senior researchers with outstanding expertise and interested GP trainees to learn from each other in order to promote future careers combining general practice research and training.

**Conclusions** Linking senior and junior generations in general practice research is expected to promote exchange of ideas, methods and opportunities for funding and collaboration. By this workshop European GP-trainees and junior GPs may become enthusiastic about a future lifetime career in research and practice.

Disclosure: No conflict of interest declared

### Person related information (PERI) – What affects our decisions in general practice? A qualitative study

T. Kuehlein<sup>1</sup>, D. Schrans<sup>2</sup>, D. Pinto<sup>3</sup>, P. Boeckxstaens<sup>2</sup>, S. Juncosa<sup>4,5</sup>, G. Kamenskyi<sup>5</sup>, Ferdinando Petrazzuoli<sup>6</sup>, S. Moosa<sup>7</sup>, K. van Boven<sup>8</sup>

<sup>1</sup> Department of General Practice and Health Services Reserach, University Hospital Heidelberg, Heidelberg, Germany; <sup>2</sup> Vakgroep Huisartsgeneeskunde en Eerstelijnsgezondheidszorg, UZ Gent IK3, Gent, Belgium; <sup>3</sup> Departamento de Clínica Geral / Medicina Geral e Familiar, Faculdade de Ciências Médicas da Universidade Nova de Lisboa, Lisbon, Portugal; <sup>4</sup> Unitat Docent Metropolitana Nord ICS, University of Barcelona, Barcelona, Spain; <sup>5</sup> Center for Public Health, Medical University Vienna, Vienna, Austria; <sup>6</sup> Family physician, Private practice, Napels, Italy; <sup>7</sup> Department of Family Medicine, University of Witwatersrand, Johannesburg, South Africa; <sup>8</sup> Eerstelijns geneeskunde, Radbouduniversiteit Nijmegen, Nijmegen, Netherlands

**Objectives:** Family physicians (FP) aim to provide person-centered care. However, the International Classification of Primary Care (ICPC-2) might not efficiently capture clinically relevant person-related information (PERI) like contextual or subjective factors. To analyze person-centered care in family practice, PERI should be related to other clinical data. Therefore as a first step we want to know what classes (categories) of PERI should be documented and coded.

**Methods:** To answer our research question we chose a qualitative design. Experienced FPs from different countries, familiar with the theoretical principles of person-centered care, will be asked to prospectively write down narrative case histories where personal factors played a role in decision-making. In an inductive process, the case histories will be categorized at a higher aggregate level according to classes of PERI that influenced the process of care. These classes will be applied deductively on the subsequent cases until saturation is reached. The coding will be accomplished independently by three of the researchers. In a consensus process, categories of PERI will be derived.

**Results:** To date a pilot has been done. Five FPs submitted 24 cases. One of them was analyzed according to classes of PERI by small groups of the researchers. The number of classes found varied considerably. Discussion of the findings generated some first categories of PERI. Final results will be presented at the conference.

**Conclusions:** With the classes of PERI identified in this study, the next question will be: How can they be comprehensively coded?

Disclosure: No conflict of interest declared

### Using Participatory Learning & Action (PLA) research methodology and techniques in European primary health care research – potential, pragmatics, possibilities?

M. O'Reilly-de Brún<sup>1</sup>, T. de Brún<sup>1</sup>, A. MacFarlane<sup>2</sup>, on behalf of the RESTORE project

<sup>1</sup> Discipline of General Practice, National University of Ireland Galway, Galway, Ireland;

<sup>2</sup> Graduate Entry Medical School, University of Limerick, Limerick, Ireland

**Aim:** Participatory Learning and Action (PLA) is an innovative and rigorous action research methodology which has a strong focus on community engagement/user involvement and is appropriate and useful for qualitative and participatory research in primary healthcare.

The key aim of this workshop is to describe an application of PLA in European primary healthcare research (RESTORE), and to provide workshop participants with an interactive live demonstration of one of several PLA techniques currently being used in the RESTORE project. Experienced PLA trainer/practitioners will provide workshop participants with opportunities to explore and discuss the use of PLA and its potential application to their own work.

#### Objectives:

- Introduce workshop participants to Participatory Learning & Action (PLA) methodology, approach, principles and pragmatics (short Power Point presentation and discussion).
- Describe the research fieldwork context in which we are currently applying PLA (4-year European FP7-funded project, RESTORE) in Austria, England, Greece, Ireland and the Netherlands, focussing on Phase 2 fieldwork (short Power Point presentation and discussion).
- Offer workshop participants an experience of engaging in a live interactive demonstration of a PLA democratic decision-making technique (Direct Ranking) currently being used in Phase 2 fieldwork. This practical interactive session is the core of the workshop, involves all workshop attendees, and will be provided by PLA practitioners/trainers with over 20 years' experience in the field.
- Provide opportunity for observation, feedback and identification of core 'learnings' from the demonstration.
- Invite participants to consider whether, how, why and where they might introduce and/or apply PLA in their own work and research.

Disclosure: No conflict of interest declared

### Satisfaction of older persons with their primary health care practice. Driven by age or complexity of health problems? Results from the ISCOPE study

A.J. Poot, W.P.J. den Elzen, J.W. Blom, J. Gussekloo

Department of Public Health and Primary Care, Leiden University Medical Center, Leiden, Netherlands

Patient satisfaction is widely used to evaluate and direct delivery of medical care. Previous studies have shown complicated relationships between satisfaction, morbidity and age. Satisfaction is influenced positively by age and negatively by morbidity and the associated complexity of health problems.

**Objectives:** To investigate the relation between complexity of health problems and patient satisfaction with their primary health care practice, hypothesising that the positive relation between increasing age and satisfaction is only present in older persons without complex problems.

**Methods:** The present study is embedded in the ISCOPE (Integrated Systematic Care for older persons) study. 11617 patients of 75 yrs and older from 59 primary care practices in the Netherlands (N=12066) received a written questionnaire exploring the presence of health problems in four domains (somatic, functional, psychological and social). A selection of respondents (N=2664) were interviewed, exploring satisfaction with their primary health care practice, demographic and clinical characteristics.

**Results:** Among respondents (mean age 82 yrs, female 68%) with problems in 0 domains, 0.4% were dissatisfied; 8% were dissatisfied among those with 4 domains, i.e. complex problems (P<0.001). Logistic regression showed a 1.7 times increased risk of dissatisfaction with each successive increase in the number of domains with problems (OR1.74(1.41-2.15) 95%CI). This remained unchanged when adjusted for age (OR1.74 (1.40-2.16) 95%CI).

**Conclusions:** Amongst older persons dissatisfaction with their primary care practice correlates strongly with complexity of health problems; this relation is independent of age. This should be taken into account when using satisfaction to assess care performance, especially in challenging circumstances.

Disclosure: No conflict of interest declared

### Correlation of hormone level and male andropause at Cilandak sub-district south Jakarta, Indonesia

M.A. Soerjoasmoro<sup>1,2</sup>, R.K. Kusumaratna<sup>1,3</sup>, N.I. Sudharma<sup>1,2</sup>

<sup>1</sup> Public Health Department, Medical Faculty, Trisakti University, Jakarta, Indonesia; <sup>2</sup> Family Medicine Department, Medical Faculty, Trisakti University, Jakarta, Indonesia; <sup>3</sup> Elderly Health Department, Medical Faculty, Trisakti University, Jakarta, Indonesia

Andropause is a syndrome in ageing male due to interaction between hormonal, psychological and physical factors. Twenty percent males aged 60-80 years old have abnormal total testosterone levels. Factors affecting testosterone level are smoking, obesity, physical activity and disease. Andropause prevalence varies with ethnicity, age, and definition, being 4-36% in Europe and 25% in US. It increases with age, but declines in the oldest population (>70 years).

**Objective:** This study aims to explore the correlations between andropause and testosterone levels in Cilandak sub-district, South Jakarta.

**Method:** This was a cross-sectional study on 269 healthy males 40 years old and above, selected by cluster random sampling, excluding males with degenerative disease. Data was collected from June-July 2011 by structured interviews, physical examination, and laboratory testing.

**Results:** Age: 77.1% was 40-59 years old and 22.9% 60-70 years old. Marital status: 92.7% married, 3.0% unmarried, and 4.3% widower. Body mass index (BMI): normal (32.1%), underweight (5.2%), overweight (20.9%), and obese (41.8%). Mean testosterone 548.15 ng/dL, SHBG 42.94 nmol/L and Free Testosterone Index 47.8 %, Fasting Plasma Glucose 108.92 mg/dL. Correlation coefficients (r) between Total Testosterone and fasting plasma glucose (FPG), HDL, triglyceride (TG) and BMI were -.236, +.239, -.290 and -.460 respectively. R between SHBG and FPG, HDL, TG and BMI were -.195, +.343, -.291 and -.436 respectively, and between Free Testosterone Index and Energy, Protein and BMI were +.154, +.161, +.271 respectively.

**Conclusions:** Testosterone is significantly correlated with risk factors and dietary consumption.

**Keywords:** testosterone, sex hormone binding globulin, free testosterone index, andropause

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****ABC of practicing family-centered research I: Grounding research into theory**D. Garcia-Huidobro<sup>1,2,3</sup>, W. Doherty<sup>1</sup><sup>1</sup> Department of Family Social Science, University of Minnesota, Saint Paul, MN, United States;<sup>2</sup> Department of Family Medicine and Community Health, University of Minnesota, Minneapolis, MN, United States; <sup>3</sup> Department of Family Medicine, School of Medicine, Pontificia Universidad Catolica de Chile, Santiago, Chile

**Background:** Traditionally, research in family medicine has been focused on individuals. However, nowadays larger environments have been identified as relevant actors shaping the health of individuals. In this regard, the family's role is not questioned. Being aware of family theories and the challenges when conducting family-centered research is fundamental to increase high quality research in primary care.

This is the first of two workshops. This workshop will allow participants to identify differences between traditional behavioral and family-centered theoretical frameworks to explain human behavior and enabling them to integrate theories of both fields. The second workshop will allow participants to identify design, measurement, data collection, ethical, and statistical analysis challenges when conducting family-centered research.

**Objectives:** At the end of this workshop participants will:

1. Recognize the importance of theory-driven research.
2. Identify frequently used theories in behavioral and family-centered research.
3. Describe how family theories contribute to psychosocial theories to explain health behaviors.
4. Reflect on the integration and use of these theories in their research.
5. Take a list of suggested readings to further increase their knowledge on family-centered theoretical frameworks.

**Expected Outcomes:** After participating in this workshop, participants will gain a broad perspective on family theoretical frameworks that need to be considered when conducting family-centered research, and therefore will enhance their ability to conduct high quality family research in primary care.

People with experience conducting family-centered research are encouraged to attend. This workshop will rely heavily on the critical analysis of published research articles.

Disclosure: No conflict of interest declared

731

**Presentation type: Oral Communication****ABC of practicing family-centered research II: Conducting the research**D. Garcia-Huidobro, MD<sup>1,2,3</sup>, M. Reuther, PhD<sup>1</sup><sup>1</sup> Department of Family Social Science, University of Minnesota, Saint Paul, MN, United States;<sup>2</sup> Department of Family Medicine and Community Health, University of Minnesota, Minneapolis, MN, United States; <sup>3</sup> Department of Family Medicine, School of Medicine, Pontificia Universidad Catolica de Chile, Santiago, Chile

**Background:** Traditionally, research in family medicine has been focused on individuals. However, nowadays larger environments have been identified as relevant actors shaping the health of individuals. In this regard, the family's role is not questioned. Being aware of family theories and the challenges when conducting family-centered research is fundamental to increase high quality research in primary care.

This is the second of two workshops. The first workshop described different theoretical frameworks that inform family-centered research, highlighting how these theoretical models contribute guiding behavioral research. This workshop will allow participants to identify differences between traditional biomedical and family-centered research approaches, enabling them to recognize special challenges not present when studying just individuals.

**Objectives:** At the end of this workshop participants will:

1. Identify differences and similarities between traditional individual and family-centered research approaches.
2. Describe study design (sampling, recruitment, and retention), measurement, data collection, ethical and statistical analyses challenges when conducting family-centered observational and experimental research.
3. Identify how to overcome these challenges, and apply them to example proposals.
4. Take a list of suggested readings to further increase their knowledge on family-centered research.

**Expected Outcomes:** After participating in this workshop, participants will gain a broad perspective on challenges that need to be considered when conducting family-centered research, and therefore will enhance their ability to conduct high quality family research in primary care.

People with experience conducting family-centered research are encouraged to attend. This workshop will rely heavily on people's research experience and on the critical analysis of published research articles.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****WONCA SIG introductory workshop on systems and complexity in health**J. Sturmberg<sup>1,2</sup><sup>1</sup> Department of General Practice, Monash University, Melbourne, Australia; <sup>2</sup> Department of General Practice, The Newcastle University, Newcastle, Australia

Complexity sciences offer a different way of approaching the problems facing medicine and general practice/family medicine. Complex adaptive systems theory offers a framework through which to understand the interactions between system agents and the outcomes they achieve.

This workshop will be in four parts – in the first part it will give a brief introduction into the nature of complexity theory and sciences; the second part will introduce some of tools of complexity sciences; the final part will present complexity based studies across the field of the health sciences, before opening up to a discussion with all participants.

Expected outcomes

- Participants will have a working understanding of complex adaptive systems
- Participants will be able to distinguish complex problems from complicated ones
- Participants will be able to appreciate the additional insights gained from applying complex adaptive system sciences to health related problems

Disclosure: No conflict of interest declared

1078

**Presentation type: Oral Communication****Developing competent primary medical care researchers: Lessons from Australia**

G. Gill

General Practice, Deakin University, Geelong, Australia

**Objective:** To describe characteristics of Australian GPs awarded medical subject doctorates from Australian universities between 1 Jan 2005 and 31 Dec 2009 and to compare these to those from other disciplines awarded high prestige National Health and Medical Research Council (NHMRC) doctoral scholarships.

**Methods:** From key informants and public domain databases these GPs were identified. It was possible to identify year of primary medical qualification, the institute awarding it and the institute awarding the doctorate, the place of practice, any university staff affiliation and postgraduate qualifications. Pubmed identified peer reviewed publications and the date of first publication. The characteristics of those awarded a NHMRC doctoral scholarship over the same time were similarly identified.

**Results:** 41 GPs were found. The gender mix was equal and these GPs were significantly more likely to have a masters degree or the FRACGP. No university predominated and appropriate numbers of GPs practiced in rural locations. They has been medically qualified for a median of 22 years and published their first article a median of 10 years prior to being awarded the doctorate. 292 NHMRC doctoral scholarships were awarded over the same period. A third of candidates came from one university, and none practiced in rural locations. They had been medically qualified for a median of 10 years and few published articles in Medline registered journals prior to the scholarship award.

**Conclusions:** Australian general practice produces fewer medically qualified high calibre researchers much later in their medical careers than other Australian medical disciplines.

Disclosure: No conflict of interest declared

1312

**Presentation type: Oral Communication****Assessing fitness to drive in cognitive impairment – a GP perspective**

U. Doherty, A.-L. Hawke, J. Kearns

*Western General Practice Training Scheme, University College Hospital, Galway, Ireland*

**Objectives:** Assessing fitness to drive is part of our role as general practitioners. Cognitive impairment affects fitness to drive and this is a problem that GPs are faced with regularly. There is no randomised evidence to advocate any particular assessment in dementia and driving to support safe drivers to remain mobile or to reduce crashes. The aims of our study were to question GPs about their experience of assessing patients with cognitive impairment for driving fitness and to explore their attitudes to this role.

**Methods:** We performed a quantitative cross-sectional anonymous postal survey of 200 GPs in counties Galway, Mayo and Roscommon. We obtained ethical approval from the Irish College of General Practitioners. We posted reminders at 6 weeks. Data was analysed using Epi Info.

**Results:** Our response rate was 62.5% (n=125). 69.1% of GPs used guidelines when assessing fitness to drive in cognitive impairment, the majority using the Road Safety Authority guidelines. 66% of respondents formally assess cognitive function. 97.5% of respondents would not certify an individual as fit to drive if they had concerns about cognitive impairment. 41% of respondents would certify someone as fit to drive with verbal restrictions. 81% of respondents feel confident in assessing fitness to drive. 60% of respondents would like further education.

**Conclusions:** We found that GPs are confident at assessing fitness to drive; that it may interfere with the doctor patient relationship and that GPs are certifying people fit to drive with verbal restrictions.

Disclosure: No conflict of interest declared

1522

**Presentation type: Oral Communication****Applying Primary Care Assessment Tool (UR-PCAT-PE, provider version) in Uruguay. Jardines del Hipódromo, Montevideo, 2011**J. Ponzo<sup>1,2,3</sup>, M. Pizzanelli<sup>1,2,3</sup>, A. Terra<sup>2,4</sup>, M. Buglioli<sup>5,1,6</sup>, E. Harzheim<sup>7,1</sup>, L. Hauser<sup>7,1</sup>, J. Macinko<sup>8,1</sup>

<sup>1</sup> *Research Team PCAT.uy, PCAT.uy, Florida, Uruguay;* <sup>2</sup> *Departamento de Medicina Familiar y Comunitaria, Facultad de Medicina, UDELAR, Montevideo, Uruguay;* <sup>3</sup> *Comisión Directiva, SUMEFAC, Sociedad Uruguaya de Medicina Familiar y Comunitaria, Montevideo, Uruguay;* <sup>4</sup> *SUMEFAC, Sociedad Uruguaya de Medicina Familiar y Comunitaria, Montevideo, Uruguay;* <sup>5</sup> *Departamento de Medicina Preventiva y Social, Facultad de Medicina, Universidad de la República Oriental del Uruguay, Montevideo, Uruguay;* <sup>6</sup> *Facultad de Medicina, UDELAR, Montevideo, Uruguay;* <sup>7</sup> *Primary Care Research Center, UFRGS, Porto Alegre, Brazil;* <sup>8</sup> *New York University, PCAT Reserch Team, New York, United States*

Primary Care Assessment Tool, provider version (UR-PCAT-PE) was applied after translation and cultural adaptation. This first application was done in the public health system, the most important in the country.

**Objectives:** Test the instrument in order to assess primary care in Uruguay. Initiate the evaluation of health services in the context of health system reform.

**Methodology:** Meetings to coordinate and agree the process with managers of the health center.

Residents of health services administration and family and community medicine were selected to do training to become interviewers.

The applying method was face to face interview using printed form in the office (workplace) previous coordination of the encounter. Data base input was online by network designed in the New York University. Data base analysis was done to obtain scores by attribute and a general overall score. Knowledge transfer included the returning of results to the assessed health professionals.

**Results:** 24 interviews: 7 pediatricians, 12 family and community specialists, 5 general practitioners. Nine interviews in the health center, 15 in decentralized offices. Scores for all services assessed (scale 1 to 10 being 10 the maximum): Access 4.9, Ongoing care 7.6, Coordination 7.6, Coordination Information Systems 6, 1, Comprehensiveness (available) 6.1, Comprehensiveness (provided) 8.5, Family centeredness 8.2, Community orientation 6.4, Culturally Competence 4.9. Overall score 6.7.

**Conclusions:** UR PCAT PE was effective to assess primary care. Managers and professionals achieved acceptance and involvement. The process encouraged reflection on practice and the organization of the health service.

Disclosure: No conflict of interest declared



1579

Presentation type: Oral Communication

**Introducing a European project with a focus on migrant care within the primary care setting in a country undergoing the austerity period**C. Lionis<sup>1</sup>, M. Papadakaki<sup>1</sup>, M. Vlahadi<sup>1</sup>, A. Saridaki<sup>1</sup>, K. Maltezis<sup>1</sup>, A. MacFarlane<sup>2</sup><sup>1</sup> Clinic of Social and Family Medicine, Faculty of Medicine, University of Crete, Heraklion, Greece;<sup>2</sup> Graduate Entry Medical School, University of Limerick, Limerick, Ireland

**Objective:** The University of Crete serves as a partner in a EU-funded project titled RESTORE [REsearch into implementation STRategies to support patients of different ORigins and language background in a variety of EEuropean primary care settings] that aims in identifying interventions supporting cross-cultural communication and testing their implementation in various primary care settings. This presentation reports on the initial findings from Greece that is in a political situation with a budget deficit, serious spending reductions in the health sector, emerging rightist views and unfavourable public attitudes towards migrants.

**Methods:** The RESTORE project uses the Normalisation Process Theory (NPT) and Participatory Learning and Action (PLA) methods in a series of focus groups with local stakeholders including GPs and nurses. The first focus groups were entitled „WIDE“ and their main aim was to introduce the RESTORE project to stakeholders and examine whether they were interested to engage in the next step. The focus groups were tape recorded and analysed using content analysis.

**Results:** Among the themes identified were titled “priority in the project’s topic”, “role uncertainty” and “unfavourable attitudes”. Some key quotes were the following “What we care about right now is the shortage of equipment and staff not the language difficulties that migrants face...” and “if I had a migrant and a Greek in the patients’ list I would give priority to the Greek”.

**Conclusions:** The results of this project augment the importance of this project and the study findings would be well judged in the current conditions of Greece.

Disclosure: No conflict of interest declared

1602

Presentation type: Oral Communication

**Establishment of Research Consultation Clinics as impetus to facilitate and support primary care research in SingHealth Polyclinics in Singapore**N.C. Tan<sup>1,2,3</sup>, P.T. Kin<sup>1</sup><sup>1</sup> Department of Research, SingHealth Polyclinics, Singapore, Singapore; <sup>2</sup> Department of Family Medicine, DUKE NUS Graduate Medical School, Singapore, Singapore; <sup>3</sup> Division of Family Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore

**Background:** In Singapore, SingHealth Polyclinics (SHP) is an accredited Family Medicine (FM) training centre which managed 1.78 million patient-visits in 2011. In the process of transforming into an academic medical centre and to promote FM research, research training workshops are organised twice annually. In addition, research consultation clinics (RCC) were introduced in May 2010 to enable free face-to-face consultation between experienced and novice researchers on specific research agenda. Each RCC session allows an hour for the multi-disciplinary SHP staff to seek advice and clarification on specific research issues that they encounter. The consultants include two FM researchers with postgraduate research qualifications.

**Aim:** This article aims to review the implementation of RCC from 2010 to 2012 and its impact on research activities and outcome indicators in the same period of time.

**Method:** A three-year (2010 – 2012) retrospective review of the RCC administrative record was conducted. The total number of RCC sessions, hours utilised, categories of profession of the participants were computed, and used to correlate with research activity indicators.

**Results:** The participants consumed 47.5/46 hours and 46/40 session of RCC in 2011 and 2012 respectively, corresponding to the initiation of 6/8 new projects and 14/13 publications during these 2 years. The common topics consulted included refinement of research question, study design and method, publication and research presentation.

**Conclusion:** The RCC compliments structured research training programme in SHP and caters to the specific needs of novice researchers, filling their gaps and enabling them to advance in their research endeavours more expeditiously.

Disclosure: No conflict of interest declared

1780

Presentation type: Oral Communication

**Women's evaluation of abuse and violence care in general practice: Six and twelvemonths outcomes**K. Hegarty<sup>1</sup>, L. O'Doherty<sup>1</sup>, A. Taft<sup>2</sup>, P. Chondros<sup>1</sup>, S. Brown<sup>3</sup>, J. Valpied<sup>1</sup>, J. Astbury<sup>4</sup>, A. Taket<sup>5</sup>, L. Gold<sup>5</sup>, G. Feder<sup>6</sup>, J. Gunn<sup>1</sup>

<sup>1</sup> General Practice and Primary Health Care Academic Centre, The University of Melbourne, Parkville, Australia; <sup>2</sup> Mother and Child Health Research Centre, La Trobe University, Melbourne, Australia; <sup>3</sup> Murdoch Childrens Research Institute, Royal Childrens Hospital, Parkville, Australia; <sup>4</sup> School of Psychology and Psychiatry, Monash University, Melbourne, Australia; <sup>5</sup> School of Health and Social Development / Deakin Health Economics, Deakin University, Melbourne, Australia; <sup>6</sup> School of Social and Community Medicine, University of Bristol, Bristol, United Kingdom

**Objectives:** Intimate partner violence (IPV) is a common hidden problem in general practice and the leading cause of morbidity and mortality for women of childbearing age. General practice lacks evidence-based guidance on how to respond.

This project is the first large, general practice based trial testing the effect of screening and intervention on abused women's quality of life, safety, and mental health.

**Methods:** This study was a cluster randomised controlled trial involving 55 GPs from Victoria, Australia. For each GP, 400 women (16-50 years) who attended in the last year were screened for fear of (ex)partner in the last year. Following the baseline survey, GPs were randomly assigned to usual care; or to an 8-hour training program, and their 'fearful' patients invited for women-centred counselling. Outcomes assessed included quality of life, safety, mental health and depression.

**Results:** 5742/19879 women returned the screening survey. Of these, 731 (12.7%) were afraid of a partner; 388 were eligible; 272 enrolled in the trial. At 12 months there was moderate evidence of a difference between intervention and comparison groups on depression caseness (37.6% vs 58%; OR 0.3 (0.1, 0.7)), and at 6 months on GP inquiry about safety of women (32.4% vs 13.2%; OR 5.1 (1.9, 14.0)) and children (35% vs 18%; OR 5.5 (1.6, 19.0)).

**Conclusions:** Screening women, training of GPs and counselling by GPs shows evidence of effect in areas of depression and GP inquiry about safety. With further refinement and testing, the intervention shows promise for implementation into policy and practice.

Disclosure: No conflict of interest declared

**2.8. EDUCATION AND PROFESSIONAL DEVELOPMENT**

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Presentation type: Workshop

**Cinemeducation: Where we have been and where we are going**P. Gonzalez Blasco<sup>1</sup>, G. Moreto<sup>1</sup>, M. Alexander<sup>2</sup>, P. Lenahan<sup>3</sup>, A. Pavlov<sup>4</sup>

<sup>1</sup> Scientific Department, SOBRAMFA- Medical Education and Humanism, São Paulo, Brazil; <sup>2</sup> Department of Family Medicine, Carolinas Medical Center, Charlotte NC, United States; <sup>3</sup> School of Social Work, University of Southern California, Irvine, CA, United States; <sup>4</sup> Behavioral Medicine, Pomona Valley Hospital Medical Center, Pomona, CA, United States

**Background:** Experienced Family Medicine educators have long recognized that engaging learners emotionally and promoting reflection are essential elements to enhance learning and foster family medicine core values. Teaching through movies—the Cinemeducation methodology—provides a unique learning vehicle to engage learners to reflect on emotions, attitudes, communication and promote professionalism. As new formats have evolved, use of medical themes portrayed on television, Reality TV and YouTube have also been included.

**Objective:** The presenters are the Editors and Authors of the Cinemeducation Guide Books (volume I 2005, volume II 2012-Radcliffe Publishing Ltd.) and will share their broad experience in the Cinemeducation Methodology to teach about family functioning and health, specific disease states, mental health, and compassion in medicine.

**Methods:** Presenters will provide a rationale for Cinemeducation, a brief historical perspective, and an overview of several applications using film and television. They will demonstrate using film clips to promote empathy, affective understanding and humanism. Material from medical dramas will be used to demonstrate teaching about patient behavior as well as physicians' emotional reactions to patient non-adherence. Time will be allowed for questions.

**Results:** We expect an interactive discussion with the audience, high feedback from the participants, and a pleasant scenario to better understand the Cinemeducation Methodology and envision the broad educational perspectives possible.

**Conclusion:** Cinemeducation is an academic methodology for teaching through movies and other "moving" images. The audience will be able to use the scenes and techniques demonstrated with their learners.

Disclosure: No conflict of interest declared

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**Presentation type: Workshop****How you deal with your challenges in teaching? A Faculty development workshop**P. Gonzalez Blasco<sup>1</sup>, J.W. Sayre<sup>2</sup>, C. Chouler<sup>3</sup>, J.W. Tysinger<sup>4</sup>, G. Moreto<sup>1</sup>, M. Levites<sup>1</sup>, M. Aurelio Janaudis<sup>1</sup><sup>1</sup> Scientific Department, SOBRAMFA Medical Education and Humanism, São Paulo, Brazil; <sup>2</sup> Family Medicine, Mayo Clinic, Jacksonville FL, United States; <sup>3</sup> Family Medicine, University of Cape Town, Cape Town, South Africa; <sup>4</sup> Family Medicine, University of Texas Health Science Center at San Antonio, San Antonio TX, United States

**Background:** Faculty face challenges when they teach and have few opportunities to share them and reflect with their peers. They belong to this class of professional who work with the “doors closed”. Nobody is able to see them; nobody, but the students, and probably these would not give them useful feedback on their teaching skills. On the other hand, when teacher discuss educational issues with their colleagues, they often spend most of this time talking about problematic students, problems with learning environment, and problems with the university. As teachers we need to state new paradigms in education, learn how to share our weakness and frustrations, and find resources for keep up the flame and energy for a better teaching performance.

**Objective:** The presenters will share their experience in faculty development, within a multicultural framework (Latin America, USA and South Africa). The participants will learn how:

- 1) They can use regular peer contact for sharing their challenges in education.
- 2) A peer reflective scenario could help them for improving teaching.
- 3) Sharing difficulties and successes improves motivation and creativity.
- 4) Humanities facilitate this faculty development scenario.

**Methods:** This workshop is proposed to those who are involved in family medicine teaching. Presenters will ask the audience to introduce themselves, and then list the main challenges they face in their teaching set. This list will be the starting point for the discussion.

**Results:** We expect an interactive discussion with the audience, high feedback from the participants, and a useful peer reflection on teaching.

Disclosure: No conflict of interest declared

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**Presentation type: Workshop****The RCGP First5 initiative – supporting new GP’s in their first 5 years**Dr Lindsay Moran<sup>1</sup>, Dr Jaspreet Grewal<sup>1</sup>, Dr Clare Taylor<sup>1</sup>, Dr Robin Ramsey<sup>2</sup>, Dr Luisa Pettigrew<sup>2</sup>, Dr Jessica Watson<sup>2</sup>, Dr David Blane<sup>2</sup><sup>1</sup> First5, RCGP, London, United Kingdom; <sup>2</sup> Junior International Committee, RCGP, London, United Kingdom

In 2010 the UK RCGP launched the First5 Initiative – a scheme to support new GP’s in their first 5 years of practice. The GP Trainee’s committee had been successful in promoting the voices of trainee’s within the college, but it was realised that after qualification new GP’s no longer have the support of their trainers and faced potential isolation and unsupported working. Thus the First5 committee was formed to support new GP’s.

Leads were established in all areas of the UK and they worked promoting five key pillars: 1. Connecting with the College, 2. Facilitating Networks, 3. Supporting Revalidation, Career Mentorship, 5 Continuing Professional Development (CPD).

The First5 scheme has been promoted by numerous methods, including setting up personalised websites, facebook groups and twitter feeds. Various First5 events have been held to promote networking and aid CPD. Mentorship schemes have also been implemented. More than ever new GP’s are better connected with RCGP. The First5 scheme has also generated international interest. It has been implemented in Canada and Portugal are hoping to follow this soon. We know that other countries are interested to learn more too.

The aim of this workshop is to promote the success of the UK’s RCGP First5 venture, to discuss the 5 pillars and to explore the international interest. It is hoped that countries interested in First5 will take the idea and implement it themselves and that we in the UK can take away great ideas to further support new young GP’s.

Disclosure: No conflict of interest declared

1052

**Presentation type: Workshop****The arts as an under utilised educational tool in primary care**R. Charlton<sup>1,2</sup>, R. Prince<sup>2</sup>, M. Xavier<sup>2</sup>, M. Wilkinson<sup>2</sup><sup>1</sup> *Division of Primary Care, University of Nottingham, Nottingham, United Kingdom;* <sup>2</sup> *West Midlands Postgraduate Medical Education Deanery, Local Education and Training Board, Birmingham, United Kingdom***Objective** To ascertain to what extent the arts are employed in medical education in Europe and their future role.**Methods** A background will be provided with four examples; poetry, prose, music and art. When considering the medical humanities, other arts can also play a role including; history, bioethics, philosophy, theology and anthropology and these will also be briefly introduced. The workshop will consider how the arts can encourage reflection on illness and so a holistic approach. Caring as a concept will be discussed in relation to healing, curing, needs and feelings of patients which may on occasion conflict with our scientific constructs of health. As participants arrive for the workshop they will be provided with the examples of prose and poetry to read whilst waiting for the start. Interaction will be encouraged by asking for thoughts on how this literature might relate to patient care. After playing a piece of music using instruments to their extremes, in small groups its impact will be discussed together with the opportunity also to consider a painting. The facilitators will encourage people to voice thoughts on implications this may have for their daily practice and future teaching.**Results** The findings will presented at a plenary and common themes will be recorded to produce for dissemination after the conference through email with the chance for further consideration.**Conclusions** This opportunity to share expertise will allow the facilitators to make a consensus statement as to employing humanities as an educational tool in making illness more meaningful.

Disclosure: No conflict of interest declared

1135

**Presentation type: Workshop****Using a reflective practice educational approach to enhance professional development for both trainee and trainer in a cross cultural family medicine program**L. Clearihan<sup>1</sup>, Y. Hui<sup>2</sup>, S.Thomas<sup>3</sup>, X. Wang<sup>1</sup><sup>1</sup> *Clinical education and Professional Development Unit, School of Primary Health care, Faculty of Medicine Nursing and Health Sciences, Monash University, Melbourne, Australia;* <sup>2</sup> *Primary Health Care Research Unit, School of Primary Health care, Monash University, Melbourne, Australia;* <sup>3</sup> *Deputy Dean International, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, Australia***Objective:** This workshop highlights the benefits of using a reflective practice approach that has underpinned a train the trainer educational program designed to enhance the knowledge and skills of doctors developing and delivering family medicine in China.**Methods:** The process of using a reflective practice approach in a train the trainer program will initially be demonstrated. Small groups of 4-6 participants will have the opportunity to explore the relevance of this approach for themselves by drawing on examples from their own clinical/educational situations and discussing how this approach might change their approach to their teaching programs.**Results:** The workshop will be evaluated using before and after evaluation techniques to explore familiarity with the technique and preparedness to trial it in a cross cultural program situation.**Conclusions:** This approach has particular utility in a cross cultural training context, where professional expectations and clinical practice assumptions may be different. It allows the trainer the opportunity to analyze their own implicit clinical assumptions, which may be preventing or impeding understanding of the development or translation of context specific clinical skills. It also provides the trainee the opportunity to more clearly announce their understanding of what they are being taught and how much of this is of *relevance* and *implementable* in a different clinical context. This creates a shared learning environment, which creates a learning exchange rather than a linear teaching experience.

Disclosure: No conflict of interest declared

1186

Presentation type: Workshop

**Training for family physicians: time to go global? A collaborative workshop of VdGM with EURACT**J. Watson<sup>1</sup>, L. Pettigrew<sup>2</sup>, A. Shiner<sup>3</sup>, G. Irving<sup>4</sup>, R. Burman<sup>5</sup>, L. Redwood-Campbell<sup>6</sup>, J. Evert<sup>7</sup>, Y. Leeuwen<sup>8</sup>, R. Maagaard<sup>9</sup><sup>1</sup> Academic Unit of Primary Health Care, University of Bristol, Bristol, United Kingdom;<sup>2</sup> International Department, Royal College of General Practitioners, London, United Kingdom;<sup>3</sup> GP, Lawson Road Surgery, Norwich, United Kingdom; <sup>4</sup> Department of Health Services Research, University of Liverpool, Liverpool, United Kingdom; <sup>5</sup> National Centre for Emergency Primary Health Care, Uni Health, Bergen, Norway; <sup>6</sup> Department of Family Medicine, McMaster University, Ontario, Canada; <sup>7</sup> Medical Director, Child Family Health International, San Francisco, United States; <sup>8</sup> Department of General Practice, Maastricht University, Maastricht, Netherlands; <sup>9</sup> Hon. Secretary, EURACT, Aarhus, Denmark

**Objective:** In the increasingly interdependent world of the 21<sup>st</sup> century, global health is on our doorsteps and in our consulting rooms. People travel and diseases move beyond national borders more rapidly than ever. Family doctors increasingly serve multicultural societies with diverse needs. Physicians are powerful advocates for health, requiring engagement with issues of globalisation, health inequalities, climate change and political instability.

There is an increasing recognition of the importance of global health education at an undergraduate level, however less work has been done at a postgraduate level, in particular with a focus on primary care.

This workshop will allow participants to discuss what global health means, how it is relevant to the work of a family doctor, and explore how it could form part of formal post-graduate training.

**Methods:** This interactive workshop will be suitable for GP trainees and trainers and anyone with an interest in global health. Examples from countries that are exploring or have already developed global health curricula will be shared. Participants will share their experiences, needs and ideas about global health training in family medicine.

**Results:** By the end of the workshop participants should be aware of the relevance of global health to primary care. The workshop will enable VdGM and EURACT to explore what global health knowledge is needed by a family physician, and how these organisations can facilitate the delivery of this.

**Conclusion:** This workshop will show that education in global health is a truly international endeavour with applicability across geographical and cultural barriers.

Disclosure: No conflict of interest declared

1340

Presentation type: Workshop

**Can portfolio based learning used in continuing professional development?**R. Kalda<sup>1</sup>, J. Bednář<sup>2</sup>, M. Vrcic-Keglevic<sup>3</sup>, E. Jurgova<sup>4</sup><sup>1</sup> Department of Family Medicine, University of Tartu, Tartu, Estonia; <sup>2</sup> Department of General Practice, Charles University Prague, Prague, Czech Republic; <sup>3</sup> School of Public Health, University of Zagreb, Zagreb, Croatia; <sup>4</sup> Family Medicine, Family Medicine, Piestany, Slovakia

There is increasing demand that all medical professionals will need to produce evidence of their continuous professional development activities. Portfolios provide a flexible, multifaceted means of collecting evidence of the achievement of competence over time. Although, portfolios are not new, their use especially in continuing professional development (CPD) in medicine is still very seldom. There is, however, good evidence that if well implemented, portfolios are effective and practical in increasing personal responsibility for learning and supporting professional development. Portfolio based learning (PBL) bases on the principles of experiential learning, it encourages of a adult learner to act and learn autonomously and reflectively, as well as to identify the future learning needs. In CPD more emphasis should be placed on continuing education that occurs when clinicians search for answers to questions that arise in clinical practice, instead of that which occurs at an arbitrary time designated for CME. Study of a CPD/CME Committee of a EURACT revealed that passive learning is highly more common among general practitioners in different European countries, PBL was used only in some cases. Why active learning methods are unpopular? In which circumstances can PBL be used in everyday clinical practice? What are advantages and disadvantages of PBL? What are the links of portfolios and CPD? This questions will be discussed in a workshop. Also, different methods of collection of learning experience as well as principles of PBL will be discussed.

Disclosure: No conflict of interest declared

1475

**Presentation type: Workshop****Medical leadership as a competency for GPs**

S. Wieringa, R. Weersma

*PML, Platform Medical Leadership, Utrecht, Netherlands*

**Objective:** Scientific research as a competency has been well embedded in the medical profession for decades. Medical students are trained, research fellowships are granted and GP professors are highly respected. But how about medical leadership? GP practices are becoming large organisations, primary care is facing more complex care for an ageing population and policy makers want a stronger grip on healthcare quality and expenses. Do GPs have the skills and capacity to organise healthcare to benefit patients, themselves and society as a whole? Initiatives from doctors, like FMMU (UK), SIMM (Italy) and Platform Medisch Leiderschap (Netherlands) have been set up to promote medical leadership as a full competency equivalent to scientific research. Still, new solutions are needed to sustain the care for generations. This will affect recruitment and selection procedures of GP trainees, coaching services for young GPs and education for any GP.

**Methods:** This workshop is organised by PML – a joint venture of young dutch GPs (Generation Next), GP trainees (Lovah), specialist trainees (Jonge Orde), trainees in public health (LOGGIO) and the Royal Dutch Medical Society (KNMG). In this interactive workshop participants will have the opportunity to meet other GPs who are involved in medical leadership. Together we want to explore the concept of medical leadership in general practice, connect current networks and find new ideas to improve leadership as a skill for GPs.

**Results:** Participants will have a greater understanding of the key concepts behind medical leadership and have had an opportunity to discuss its implementation in general practice.

Disclosure: No conflict of interest declared

1543

**Presentation type: Workshop****A structured method to train family residents to better manage chronic care patients' medical visit agendas**

M. Polson

*Department of Family Medicine, Cascades East Family Medical Residency-Rural, Oregon Health Sciences University, Klamath Falls, Oregon, United States*

**Introduction:** Family medicine residents in the US manage increasing percentages of chronic care patients with multiple chief complaints. Residents struggle to manage each patient's complaint expectations within a 15 minute visit. Many residents wish to satisfy the patient yet cannot effectively manage 3-8 complaints per patient in a busy office day. Medical schools or residencies provide little training on how to effectively manage patient agendas. Our rural university residency trains residents to follow a structured method to better manage patient agendas.

**Workshop Goal:** The workshop goal is to demonstrate a structured didactic/video small-group education method that trains residents in rural areas on how to structure and manage the Pt's expectations for the medical visit through negotiating with the Pt. what the resident can address effectively *within the visit's scheduled time constraints*. The resident learns to manage potential disagreements between his or her professional judgment vs. the Pt's expressed agenda for the visit.

**Educational Objectives:** Participants in the workshop can expect to learn the following:

- The three types of patient agendas: the disorganized patient ("Just occurred to me"), the direct, organized, clear patient ("Doc") and the sneaky-manipulative patient ("S&M")
- Common agenda expectations for each patient agenda; how to recognize each type
- Structured communication/negotiation strategies for managing each agenda type
- A didactic teaching method with role modeling by physician preceptors to residents on how to manage the three types of patient agendas
- A structured video monitoring/playback method to improve resident management of patient agendas from videotaped visit encounters with actual patients.

Disclosure: No conflict of interest declared

1561

**Presentation type: Workshop****Sharing the skills to survive in a rapidly changing medical workplace**

A. Rochfort

*Doctors Health in Practice Program, Irish College of General Practitioners, Dublin, Ireland*

**Objective:** What pressures do you face in your work dealing with health service administration, patients, relatives and staff? The level of pressure on GPs / Family Physicians and Practice staff has been well documented in recent years. There are expectations to provide instant solutions to patient problems, to resolve infections, reverse disability and prevent death while avoiding complaints and legalities. All this despite the massive burden of mortality and morbidity from patient lifestyle related chronic diseases.

The skills of survival in adverse conditions can be taught as part of education within continuous professional development, just as they are effectively taught to other professionals such as power system engineers, the military, emergency, fire, marine and rescue services.

**Methods:** There will be a presentation on the major sources of pressure in general practice, and the impact of severe or sustained stress on the GP/FP with examples. Delegates will work together in groups to contribute options for planning a cohesive practical approach to survival in general practice / family medicine.

**Results:** We can learn survival skills from others to proactively overcome work related challenges and to take control. Implementing these skills can help to reduce stress and burnout and assist with recognition and management of difficulties in ourselves and our colleagues.

**Conclusions:** This interactive session will add to the existing knowledge base, by encouraging sharing of solutions and survival skills for general practice among delegates from different countries.

Disclosure: No conflict of interest declared

2007

**Presentation type: Workshop****WONCA Working Party on Education****Developing Global Standards in Postgraduate (Vocational) Family Medicine/ General Practice**A. Walsh<sup>1</sup>, Marcelo Demarzo<sup>2</sup>, Roar Maagaard<sup>3</sup>, Nandani de Silva<sup>4</sup>*<sup>1</sup> College of Family Physicians of Canada; <sup>2</sup> Departamento de Medicina Preventiva Escola Paulista de Medicina – UNIFESP; <sup>3</sup> University of Aarhus, Denmark; <sup>4</sup> University of Kelaniya, Sri Lanka*

The Wonca Working Party on Education has been developing global standards for postgraduate education in family medicine/general practice, through meetings and email discussions. At this session, the work that has been developed so far will be presented, and then small groups will discuss several questions related to the continuation and utility of what has been achieved.

- 1) Do these standards reflect the goals of postgraduate family medicine education in multiple global contexts?
- 2) How can we finalize and reach consensus about this material?
- 3) How could this work be used to enhance education in family medicine/education globally?

**Objectives:**

By the end of this session, participants will:

- 1) Understand the global standards that have been developed so far
- 2) Contribute to the process to bring this work to fruition
- 3) Discuss how this work can further family medicine/general practice education globally

2023

**Presentation type: Workshop European Academy of Teachers in General Practice****Workshop problem based learning: Teaching in small groups**Y. van Leeuwen<sup>1</sup>, F. Gomes<sup>2</sup><sup>1</sup> GP, the Netherlands; <sup>2</sup> GP, Portugal

Evidence indicates that a problem based learning curriculum, with working in small groups as a key feature, does not deliver more knowledgeable doctors but indeed more active and motivated learners, during and after medical training. The format seems especially suitable for teaching and learning general practice.

How does it work? What is the starting point of discussions? What is the role of the tutor / teacher? Which assessment 'drives learning' in a desirable way?

During the workshop parts of the process will be simulated.

Conclusions will be drawn aiming at a 'small-size' introduction of PBL-sessions in any curriculum.

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**Presentation type: Oral Communication****Random case analysis as an assessment and teaching method in health professional education**G. Ingham<sup>1</sup>, S. Morgan<sup>2</sup><sup>1</sup> Director of Supervisor Education, Beyond Medical Education, Bendigo, Australia; <sup>2</sup> Medical Educator, GP Valley to Coast, Newcastle, Australia

Random case analysis (RCA) is a powerful, but under-utilised, formative assessment and teaching method in health professional education. It is particularly useful in identifying hidden learning gaps, and for teaching advanced learners. It has the potential to address a number of critical areas of clinical practice, including core knowledge; clinical reasoning and decision making; and quality record keeping.

This interactive workshop will explore the educational value of RCA in health professional teaching, and facilitate skills in effective use of case note review as a teaching method. A new tool for random case analysis will be introduced and participants will have the opportunity to develop skills through role-play.

At the end of the session, participants will be able to describe the educational value of random case analysis (RCA) and use RCA as a teaching method in the practice setting.

Disclosure: No conflict of interest declared



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**Presentation type: Oral Communication****Knowledge of CANMEDS-FM roles: A survey of Canadian family medicine residents**V. Ng<sup>1</sup>, C. Burke<sup>2</sup>, A. Narula<sup>3</sup><sup>1</sup> *Medicine, Western University, London, Canada;* <sup>2</sup> *Family Medicine, Western University, London, Canada;* <sup>3</sup> *Family Medicine, McMaster University, Hamilton, Canada*

**Objective:** Developed in 2009, the CANMEDS-FM Roles were created to form the basis of a new competency based curriculum in Family Medicine (FM). While the original CANMEDs (Canadian Medical Education Directives for Specialists) Roles have been used extensively in undergraduate medical education and Royal College specialty programs, the penetration of CANMEDs into FM teaching has been limited. This study evaluates the self-perceived familiarity and understanding of the new CANMEDs-FM Roles by FM residents.

**Methods:** Between May and June 2011, a 22 question online survey was distributed to all core family medicine residents registered in a Canadian residency program. The survey assessed FM residents' familiarity with and understanding of CANMEDs-FM Roles. Cross-tabulations with the independent covariates were generated using Z-test for proportional comparison and using a Bonferroni correction when required.

**Results:** 88.9% (463/521) of FM residents have awareness of CANMEDs-FM Roles with no statistical difference between 1<sup>st</sup> and 2<sup>nd</sup> year residents. 76.4% of FM Residents feel that their core FM teaching is guided by CANMEDs-FM, while 41.8% feel the same on off-service rotations. Similarly, 85.9% of FM Residents feel that they are evaluated based on CANMEDs-FM Roles while on FM service, while 66.7% feel the same on off-service rotations.

**Conclusion:** It appears that the majority of FM residents are aware of the CANMEDs-FM Roles. While core FM medicine training and evaluation seem to be grounded in CANMEDs-FM, residency program directors should endeavor to ensure that the same principles apply during off-service rotations.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Reflective learning initiated by medical errors**

H. Raghoebar-Krieger, A. Verhoeven

*Department of General Practice, University Medical Centre Groningen, Groningen, Netherlands*

**Objective:** Our goal is to analyse reflection reports written by doctors about their medical errors in order to define: (1) the topics and characteristics of reflection and (2) the timing of reflection.

**Methods:** We analysed 12 reflection reports about medical errors written by doctors and published by the Dutch Quality Institute for Health Care. Two independent researchers analysed the reports using a thematic content analysis. To map content we used a priori categories from the ALACT model for professional development (Action, Looking back on the action, Awareness of essential topics, Creating alternative methods, Trial).

**Results:** We identified 38 topics (such as: lack of training, collaboration, emotions, fatigue, organizational rules, gut feelings, habits) that doctors become aware of when they review their errors. Most topics describe mental behaviour guiding their visible actions. Additionally, mental behaviour varies between doctors, but also within a doctor. Doctors didn't reflect during the process of making the error, but only after making the error, sometimes even after 20 years. Therefore they were not able to use the results of their reflection in time.

**Conclusion:** Reflective narratives revealed:

(1) a variety of topics that influence the error; and (2) that the moment of reflection happened too late. We recommend reflective teaching focusing on:

- a. knowledge about essential topics in making medical errors;
- b. skills to discover one's own mental behavior.

To make effective use of the results of reflection the moment of reflection should be earlier in time.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Developing and implementing a national competency-based curriculum in Canadian postgraduate family medicine: Challenges and strategies**

A. Walsh, I. Oandasan

*Family Medicine, College of Family Physicians of Canada, Mississauga, Canada*

**Objective:** The College of Family Physicians of Canada and all the family medicine training programs have been engaged in the process of implementing a national competency based curriculum that is comprehensive, focused on continuity of education and patient care, and centred in Family Medicine. It is known as the Triple C Competency Based Curriculum (Triple C).

The process and challenges of implementing this new curriculum will be described. The website address containing products of the work will be made available.

**Methods:** An iterative and long-term national process has been underway since 2006, beginning with a curriculum review, the development of the CanMEDS-Family Medicine competency framework, and on-going work on assessment tools. Regular consultations with Department heads and educational leads as well as doctors in training result in further development of implementation strategies and tools.

**Results:** All postgraduate training programs in Canadian Family Medicine are engaged in the process of becoming competency based, in line with the Triple C curriculum. Challenges have included implementation of a national curriculum in a geographical large and diverse country at a time of constrained resources. National working groups and task forces, drawn from across the country and with wide perspectives including those of learners, teachers, and administrators have facilitated implementation, as have frequent meetings with those responsible for delivering educational programs. Changing accreditation standards will also enable change.

**Conclusions:** Canada is in the process of a major curriculum renewal: engagement of educational leaders, administration, teachers and learners has been critical.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Professional behavior of medical students in general practice**

P. C. Barnhoorn, MD, J. H. Bolk, MD, PhD, M. W. Ottenhoff, MD,

A. J. de Beaufort, MD, PhD

*Department of Public Health and Primary Care, Leiden University Medical Center, Leiden, Netherlands*

**Objective:** Professional behavior of medical students has received increasing attention during the past decade. Still, many hurdles have to be taken.

Do all physicians mean the same, when they talk about professional behavior? Which are the core values, our profession is based on? How do we identify unprofessional behavior? How do we remediate it?

After this workshop participants will have an overview of the field of professionalism. Furthermore they have gained (practical) insight in how to address unprofessional behavior in the daily practice of teaching medical students.

**Method:** We will present an overview of definitions used in the field of professionalism, and see if there is a workable definition for our daily practice. We will make a list of values that must be covered by such a definition.

We will exchange experiences with unprofessional behavior of medical students as well as with the difficulties of identifying and remediating unprofessional behavior.

In small subgroups we will discuss these experiences and share possible solutions.

**Results:** Each subgroup will present its conclusions about defining, identifying and remediating unprofessional behavior in medical students.

**Conclusions:** As most of us are not only (family)doctors but also medical educators, we all will be confronted with unprofessional behavior of medical students. Many of us will acknowledge that we lack the language and skills to identify and remediate it. In this workshop we hope to give each other ideas and tools on how to deal with unprofessional behavior in medical students.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Experiences of a professional behavior board addressing unprofessional behavior among medical students; which apples spoil the barrel?**

P. C. Barnhoorn, J. H. Bolk, M. W. Ottenhoff, A. J. de Beaufort

*Department of Public Health and Primary Care, Leiden University Medical Center, Leiden, Netherlands*

**Objective:** Professional behavior has become a cross-cutting element in medical curricula. Our definition of professional behavior is “observable behavior from which the norms and values of the medical professional can be inferred”. Professional behavior can be divided into three domains, i.e. ‘dealing with tasks/work’, ‘dealing with others’ and ‘dealing with oneself’. At our medical school, a student who behaves unprofessional, can be referred to the LUMC professional behavior board. This board consists of MDs as well as a psychologist and invites the student to discuss his/her case. In conjunction with the student a remediation program will be started.

**Method:** We categorized the reported cases (June 2009-January 2013) in terms of the three domains, in terms of the phase in the curriculum, gender and background of the student.

**Results:** Over the past 3,5 years, 69 cases were reported (about 1 % of the students), most of them during the internships. The majority was male (n=46, i.e. 67% of the reported students, where as of the total amount of students only 35% is male), about 30% (n=21) was of foreign background and in most cases a combination of domains was impaired.

**Conclusions:** Unprofessional behavior is most often observed during internships. Men and foreign students are over-represented. The outcomes at LUMC seems to match with the outcomes of other medical schools, but more research is needed to confirm this.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Balint-style clinical supervision among general practitioners: Prevalence, needs and attitudes**M.A. Torppa<sup>1</sup>, K. Toivola<sup>2</sup>, J. Ruskoaho<sup>2</sup>, K.H Pitkälä<sup>1</sup>*<sup>1</sup> University of Helsinki, Faculty of Medicine, Department of General Practice and Primary Health Care & Helsinki University Hospital, Unit of Primary Health, University of Helsinki & Helsinki University Central Hospital, Helsinki, Finland; <sup>2</sup> Primary Health Care, University of Helsinki, Helsinki, Finland*

**Objectives:** We studied how large proportion of general practitioners (GP) compared with other doctors have participated in or report a need for Balint-style clinical supervision (BSCS) and how GPs’ experiences of patients’ requests are associated with these issues.

**Methods:** A postal survey for all working- aged Finnish doctors was performed in 2008. Special questions concerning BSCS and experiences of patients’ requests were included.

**Results:** Response rate for the survey was 74% (N=13708). Special questions were responded by 10559 doctors; 1252 were GPs. Of GPs 42%, and 29% of other doctors had participated in BSCS (p<0.001). A further 25% of GPs reported a need for BSCS while it not being available. GPs with experience of or a need for BSCS were more often females, had participated more actively in continuing medical education, and reported increases in patients’ requests for diagnostic tests or certain medicines in recent years more often than other GPs.

**Conclusion:** Participation in or an un-fulfilled need for BSCS is common among Finnish GPs. Experiences patients’ requests might reflect needs for BSCS among GPs.

**Practice implications:** Studies exploring content, significance and effectiveness Balint-style clinical supervision among GPs are needed.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Family medicine education in China: Outpatient community health curriculum for medical students**M. Egan MD, MHPE<sup>1</sup>, R. Sherer<sup>1</sup>, M. Potter<sup>2</sup>, J. Benson<sup>3</sup>, Z. Zunyong<sup>4</sup>

<sup>1</sup> Department of Family Medicine, Pritzker School of Medicine/University of Chicago, Chicago, United States; <sup>2</sup> Department of Family Medicine, University of Illinois-Chicago Medical School, Chicago, United States; <sup>3</sup> Department of Family Medicine, Northshore University Medical Center, Evanston, United States; <sup>4</sup> Teaching Administration, First Clinical College of Wuhan University, Wuhan, China

China's health care system has changed dramatically over the last 50 Years. As the economy has shifted towards a market system, health care services have evolved to include mostly specialty and hospital based care that results in higher reimbursement for providers. Primary care practice have been largely abandoned as not being financially sustainable. In 1999, the Chinese Ministry of Health declared that the new specialty of Family Medicine would play a key role in the restructuring of the healthcare system towards a primary care based model. The University of Chicago Pritzker School of Medicine (PSOM) Family Medicine faculty, as part of the Wuhan University Medical Education Reform (WUMER) project, have been consulting with Wuhan University Medical School to develop a community-based family medicine clerkship. The family medicine clerkship has been successfully implemented including medical students rotating in outpatient community health centers. Faculty from PSOM have gone to Wuhan to observe the clerkship sessions and provide faculty development on teaching in the outpatient setting. Surveys and evaluations have been collected from students, Wuhan faculty and community health center preceptors about their educational experiences. The University of Chicago organized a conferences in Beijing on medical education in family medicine in China in May, 2012. This academic event brought together participants from five Chinese universities that are currently delivering ambulatory based medical curricula and educational experiences in family medicine in China. Our presentation will describe our experiences, the student and faculty survey analyses, and plans for future clerkship education and faculty development in China.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Introduction of a new Family Medicine Assessment to a region – the impact to Family Medicine development**

E. Parry-Jones

*International, Royal College of General Practitioners, London, United Kingdom*

The Royal College of General Practitioners of the UK has 11 years experience of setting up and assisting local teams to hold Family Medicine exams in countries outside the United Kingdom. The exam, called the Member of the Royal College of General Practitioners, International MRCGP (int.) is currently run by the college in 6 regions. The exam is run by local family medicine trainers in the country or region where the exam is held. Development and assessment advisers from the Royal College of GPs assist in the setting up of training and assessments.

Once candidates pass the exam they become International Members of the college of GPs, UK. Such members are not allowed to work as GP s in the UK. To do this they would need to work in the UK and join a UK GP training scheme leading to the UK MRCGP. The purpose of the exam is to help develop and support family medicine globally. It is hoped that the RCGP brand will help to raise the status of family medicine in these regions.

To help understand the impact of the exam on the careers of family doctors and on the status and development of Family Medicine, statistical information has been gathered about the careers of passing candidates. This, together with interviews from doctors and trainers gives an impression the exam's impact.

This information would be presented during a workshop to stimulate debate on the benefits and possible negative effects of this intervention.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****What does gold standard end of life care look like?**

K. Thomas, J. Artmstron-Wilson, L. Giles

*End of Life Care, The National Gold Standards Framework Centre, Shrewsbury, United Kingdom*

**Aim:** To assess the impact and outcomes of GSF training programme in end-of-life-care.

**Method:** GSF Accreditation is endorsed by the Royal College of GPs and supported as a means of promoting best practice. Foundation Level GSF is used by the majority of GP practices in the UK, and several hundred have undertaken the Next Stage GSF 'Going for Gold' training. This involves 6-practice-based meetings and action planning, focusing on practical implementation of key changes with comparative before and after measurements. The whole practice team were involved including receptionists and managers. This was followed by pilot GSF Accreditation, including assessment of key ratios, portfolio submission, practice audit of deaths and a phone call assessment.

**Results:** Significant improvements were demonstrated including 'transformational change' in the way the practice teams care for people with long-term conditions and frail elderly. There was greater involvement of non-clinical staff, a more systematic approach to population-based assessment, and qualitative and quantitative improvements in care. These trail-blazing practices demonstrated trebling numbers identified for the Palliative Care register (numbers on the register/total numbers of deaths in the practice), trebling non-cancer and care homes patients, quadrupling advance care planning discussions and increasing numbers dying at home, carer's assessment and bereavement protocols.

**Conclusion:** The pilot accreditation demonstrated significant changes in practice, quality assurance plus evidence of sustainability. This GSF Accreditation is therefore transferable to other practices in assessing a 'gold standard' end of life care. With the ageing population, good Primary Care delivery of end of life care is crucially important.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Introduction to evidence-based medicine physician numeracy**

G. Rao

*Family Medicine, University of Chicago, Chicago, United States*

**Objective/Background:** Evidence-based medicine (EBM) is taught throughout the world in medical schools, post-graduate programs, and to practicing physicians and other health care professionals. The skills emphasized in most teaching include formulating sound clinical questions, searching the literature, and critical appraisal (usually using simple tools designed for this purpose). Little emphasis is placed upon gaining a thorough understanding of the results of original research by learning key concepts of research design, biostatistics, and medical decision making. Collectively these concepts make up the approach to EBM known as EBM physician numeracy. Though understanding the quantitative aspects of research is underemphasized in EBM teaching, physicians and physicians-in-training consistently acknowledge the importance of having a basic understanding of biostatistics and related concepts to both practicing and teaching EBM, express an interest in learning more, and recognize their own poor knowledge and skills in this area. The purpose of this workshop is to introduce the concept of EBM physician numeracy, and to demonstrate its application in a brief, interactive teaching session.

**Methods:** Participants will attend a lecture discussion and then complete a short exercise in small groups on diagnostic reasoning in medicine.

**Expected Results/Conclusions:** It is anticipated that participants will be able to define EBM physician numeracy, its importance, and the advantages of making EBM physician numeracy the emphasis in EBM teaching. Participants will also be able to describe a general approach to teaching about diagnostic reasoning, using EBM physician numeracy as a primary strategy.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Family medicine specialism training in Family Health Center in Bursa integrated with the University Medical Faculty Department of Family Medicine, in line with European Union criteria**

O. Goktas

*Family Practice, Uludağ University Family Health Center, Gorukle Campus, Nilufer, Bursa, Turkey*

**Objective:** The aim of the project is, for the first time in Turkey, for a family health center on the field to be opened under an actively working family physician specialist who is an associate professor, along with the staff of a university department, and for that family health centre to become affiliated with the university department to deliver family medicine specialism training which includes field practice, in accordance with European Union criteria.

**Methods:** The Bursa Nilüfer Uludağ University Family Health Center, with all its features, is to be integrated into the University Department, in accordance with the regulation 16.03.083; as supplement of "Authorised Family Practice". This is the beginning of a university department of family medicine which includes a Family Health Center in its structure and is under the leadership of an academic, complying with European Union criteria along with the Turkish Association of Family Physicians (TAHUD) and the Turkish Board of Family Medicine (TAHYK) Syllabus.

**Results:** This project provides for the delivery of the "Family Medicine Specialism Syllabus," prepared in line with European Union guidelines and the conditions obtaining in Turkey by appointed teachers who have the status of family medicine academicians, in existing University Family Medicine Departments and Teaching and Research hospitals under the organisation of the family medicine leadership.

**Conclusions:** In Turkey, family medicine specialism training will be delivered by academicians in the University Departments of Family Medicine, will include field practice and use the format outlined in this study in line with European Union criteria.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Strengthening family medicine in low and middle income countries: Weaving faculty development, collaboration and innovation**K.D. Rouleau<sup>1</sup>, L. Redwood-Campbell<sup>2</sup>, N. Arya<sup>2</sup>, T. Renaldi<sup>3</sup>, R. Indah<sup>3</sup>, F. Lemire<sup>4</sup><sup>1</sup> *Family and Community Medicine, St-Michaels/University of Toronto, Toronto, Canada;*<sup>2</sup> *Family Medicine, McMaster University, Hamilton, Canada;* <sup>3</sup> *Faculty of Medicine, Syiah Kuala University, Aceh, Indonesia;* <sup>4</sup> *Global Health Committee, College of Family Physicians of Canada, Toronto, Canada*

In November 2012, the College of Family Physicians of Canada and the Besroure Centre for Innovation in Global Health hosted a consultation meeting to inform the strategic plan of the Centre. The first of its kind in Canada, the meeting gathered sixteen of the seventeen Canadian academic departments of family medicine and representatives from twelve low and middle countries (LMIC) currently partnered with Canadian departments to strengthen family medicine. Among the key strategies identified for the Centre was support towards the development of effective family medicine faculty. Goal: The goal of this workshop is to present and build on the ongoing work of the Besroure Centre to enhance faculty development in family medicine globally.

By the end of the session participants will be able to:

- Describe the history, vision and mission of the CFPC Besroure Centre
- Identify the role, enablers and challenges related to family medicine faculty development in Family medicine capacity-building in LMIC
- Discuss and critique the components of a faculty development competency matrix as a tool for the enhancement of faculty development in family medicine globally.
- List five tips to build capacity in family medicine locally through faculty development

After a brief presentation of the November 2012 Besroure Consultation meeting, the session will engage participants in two separate interactive activities to achieve the stated educational objectives. Barriers and enablers to faculty development in LMICs will be discussed and suggestions to move forward developed.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Evidence-based medicine journal club during GP vocational training: A success**

W. de Ruijter

*Public Health and Primary Care, Leiden University Medical Center, Leiden, Netherlands*

**Objective:** In vocational training for GPs in the Netherlands growing attention is paid to evidence-based medicine (EBM) competencies. The objectives of this study are to explore the characteristics of the participants of the first 3 years of an EBM journal club, their feedback and self-reported effects of participation.

**Methods:** A semi structured questionnaire sent to all 40 participants from 3 consecutive seasons.

**Results:** Response was 75%, equally distributed over the 3 years; male-female ratio 1:2, in keeping with the sex distribution of all GP-trainees. Most participants were in first year of training (50%). Attendance was high: 8-10 sessions by 53%, <5 sessions by 3%. The majority (70%) had no prior experience with critical appraisal. Main reasons for participation were: lacking competency with critical appraisal (67%), lacking scientific content during 'come-back-days' at university (50%) or at their training practice (43%). Increased EBM knowledge after completion of the course was reported by 97%, increased EBM skills by 93%, and a more positive attitude towards EBM by 57%. Their over-all rating (1-10) of the course was 8 (mean, SD  $\pm 0.61$ ; range 7-10). As main effects they reported better competencies in critical appraisal of randomised-controlled trials (80%) and systematic reviews (77%). The majority of participants (57%) stated that an EBM journal club should become standard during GP-training, and 90% would seriously consider joining a journal club after GP-graduation.

**Conclusions:** An EBM journal club during GP-training fills a need, increases EBM knowledge and skills, and is highly appreciated. Incorporation in standard training should be considered.

Disclosure: No conflict of interest declared

485

**Presentation type: Oral Communication****Educational Impact of "The Voices of the Street Project" on medical students: Aiming to help, and being transformed**E. Sasaki<sup>1</sup>, D. Careta<sup>1</sup>, A. Carolina Ribeiro<sup>1</sup>, M. Aurelio Janaudis<sup>2,1</sup>, S. Moraes<sup>1</sup>, P. González Blasco<sup>2</sup>, G. Moreto<sup>2</sup>, F. Nadai<sup>1</sup>, L. Inada<sup>1</sup>, N. de Lima Froio<sup>1</sup><sup>1</sup> *Public Health, Jundiai Medical School, Jundiai, Brazil;* <sup>2</sup> *Family Medicine, Brazilian Society of Family Medicine, Sao Paulo, Brazil*

**Context:** The "Voices of the Street Project (VSP)" was started four years ago, and is fully promoted by medical students of Jundiai Medical School- JMS (São Paulo, Brazil). The students are in charge; they volunteer for the VSP, have their own board, and run it as an extracurricular activity, with no academic formal credits.

**Objective:** The VSP aims to help underserved population with Health Prevention, Health Promotion and fostering Citizenship among the populations as well.

**Design:** A faculty member of the JMS (who also belongs to SOBRAMFA – Medical Education and Humanism Board) holds unofficial meetings with the students and help them to transform their experience into outcomes so they could acquire academic impact.

**Results:** For many of the students this is the first time they have the opportunity to know underserved people and help them in their Health Issues. A strong relationship between the population and the students happens; the students realize that they are not just helping but also learning about human beings. This provides them with essential resources for become better physicians: the humanistic perspective of doctoring, building a therapeutic relationship, and practicing a patient-centered approach. The students feel gratified with this opportunity, they spread the word among their colleagues, and the number of students involved has increased each year. Throughout the project, the students are transformed, gaining maturity about the way of taking care of patients, which will be helpful in their professional future.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Community medicine training for family medicine residents in Taiwan**Tang-Tat Chau<sup>1</sup>, Huan-Cheng Chang<sup>2</sup><sup>1</sup> Department Community Medicine, Taiwan Landseed Hospital, Peng-Jen, Taoyuan, Taiwan;<sup>2</sup> Department of Family Medicine, Taiwan Landseed Hospital, Peng-Jen, Taoyuan, Taiwan**Objective:** Sharing experiences of community Medicine training for residents in Taiwan.**Methods:** 4-8 months community Medicine training is required in the three-year training program. The goals of training are to enable resident doctors to have the capabilities of providing holistic healthcare for individuals, families and community, integrating the community health care resources of primary health care, public health, preventive health care, and long-term care, as well as consolidating health workers and community workers to solve community health problems together and to narrow the gaps in health care. The training program includes : (1) Community health assessment, (2) Community oriented primary health care, (3) Management of community primary care and practice, (4) Utilization of community health resources, (5) Organization and operation of community health care network, (6) Community disease prevention and control, and (7) Environmental and occupational health. The training is achieved in accordance with the basic principles of the training content as well as coordinated implementation of clinical practice and teamwork.**Results:** At present, approximately 150 resident doctors per year can be trained, accounting for 10-12% of the annual number of medical graduates. They are enabled to devote themselves community healthcare services after completing three years of training.**Conclusions:** The scope of family physician is to take care of people in the community. To fulfill the capacities of holistic health-care for individuals, families and the community, a good training in community medicine that provides a comprehensive array of health care services within a community-based is required.

Disclosure: No conflict of interest declared

606

**Presentation type: Oral Communication****Contract conditions of GPs in training in ambulatory care in Germany**W.J. Herrmann<sup>1,2</sup>, K. Weinert<sup>1</sup>, P. Thiel<sup>1</sup><sup>1</sup> Education and Training Theme Group, JADE – the German Working Group for New and Future General Practitioners, Berlin, Germany; <sup>2</sup> Institute of General Practice and Family Medicine, Otto-von-Guericke-University of Magdeburg, Magdeburg, Germany**Objective:** The working conditions of GPs in training in ambulatory care in Germany have been unknown yet. Thus, our aim was to assess the contract conditions of GPs in training in ambulatory care in Germany, such as gross wage, vacation days and free days for education.**Methods:** An online survey for all GPs in training in Germany who work in ambulatory health care. Sampling was conducted as snowball sampling making use of federal and local organizations of young GPs. For this presentation, we conducted a descriptive analysis for GPs in training working full time.**Results:** 144 persons took part in the survey, of which 112 were working full time as GPs in training. 67% of the total sample were female and 63% worked in a group practice. The gross wage was 3870 Euros (SD=568), ranging from 2600 to 6150 Euros. 73% of all full time GPs in training earned 3500 Euros. The mean rate of vacation days per year was 29 days (SD=3.2). The mean rate of days free for educational purposes was about 4 days (SD=6), ranging from 0 to 52 days. 52% of all full time trainees have no free days for educational purposes at all.**Conclusions:** The uneven distribution of gross wages describes a need for general regulation for the gross wage of GPs in training in Germany. Most GPs in training who have no free days for educational purposes. Hence, there is a need for mandatory free days for educational purposes during training as a GP.

Disclosure: All authors are GPs in training.



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**Presentation type: Oral Communication****Differences in procedural skills of male and female medical school graduates in the United States**

G. Dickson

*Department of Family and Community Medicine, University of Kansas School of Medicine-Wichita, Wichita, United States*

Clinical experiences may differ for male and female medical students leading to gender variation in ability to independently perform common procedures in United States family medicine residency programs.

**Objective:** To determine if the ability to independently perform each of 41 procedures differs between male and female medical school graduates at the start of family medicine residency in the United States.

**Methods:** First year residents (3,287) in Accreditation Council of Graduate Medical Education (ACGME) accredited, US family medicine residency programs were invited to participate in a cross-sectional survey in July 2011. 311 males and 368 females participated. Graduates were asked if they were able to independently perform each procedure at the start of residency irrespective of billing, liability or institutional policies. «Independently perform» was defined.

**Results:** Statistically significantly more males than females self-reported the ability to perform 13 procedures including intravenous line insertion (73% vs. 60%,  $p < 0.01$ ), arterial blood gas (46% vs. 34%,  $p < 0.01$ ), endotracheal intubation (43% vs. 31%,  $p < 0.01$ ) and central line insertion (18% vs. 8%,  $p < 0.01$ ). Statistically significantly more females than males self-reported the ability to perform wet mount/ KOH studies (73% vs. 58%,  $p < 0.01$ )

**Conclusions:** Differences in self-reported ability to independently perform procedures exist between male and female medical school graduates. Further work is needed to determine why such differences exist and if they persist through residency training. With an increasing proportion of women physicians in the United States, gender differences in training may have significant workforce implications including changes in procedural services routinely provided by family physicians.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****The effect of training in primary health care centers on medical students' clinical skills**

F. Abdullatif Alnasir

*Family & Community Medicine, Arabian Gulf university, Manama, Bahrain*

**Background:** The effective training of medical students in clinical skills is one of the most important objectives of any medical school. When adequate training is provided, students who graduate as doctors will have sufficient skills to consult a patient by taking proper history and conducting appropriate physical examination. The question under scrutiny is the optimal place for providing such training. Literatures highlight the importance of implementing such training in primary health care centers since the aim is to graduate general physicians.

**Methods:** For this, a special clinical skills training program was developed for Year 4 medical students of the Arabian Gulf University during the academic year 2011-2012. These students were in the pre-clerkship phase and it was important for them to acquire certain skills before transfer to the clerkship phase when they deal directly with patients. For the 130 students involved in this study, a self-assessment and clinical exam were conducted at the beginning and end of the program.

**Results:** The study showed that students benefited greatly from this training program with significant differences between their pre-existing known skills and clinical skills acquired by the end of the program. Hence it is recommended that primary health care centers are the ideal place for organizing and conducting such training; first, because of the training setting which is usually one tutor to two students; second, because of value of students facing a real patient environment.

**Conclusion:** In conclusion, a community-based clinical skills training module enables students to achieve these valuable learning objectives.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Implementation of regulation and guidelines for specialist medical training in general practice**

E. de Fine Licht, C. Vestlund, L. Nordeman

*Education unit and Research and Development unit in primary health care, Södra Älvsborg, Region Västra Götaland, Sweden, Borås, Sweden*

**Objective:** In 2008, Sweden got new regulation and guidelines for doctors' specialist medical training (ST) in general practice. Regional guidelines were developed in the Region Västra Götaland (VGR) and the goal statements to train ST were delegated to the local education units under leadership of the Director of Studies (DS). One interim target is to achieve a medical scientific approach through participation in research and development. A compulsory course in research methodology (7,5 higher education credits) is given together with an individual project by supervision from the R&D unit. Implementations of the guidelines have been designed in various ways and the model used in Södra Älvsborg, VGR is presented.

**Method:** The background and conditions to implement the new guidelines is presented by the DS with a subsequent discussion and the cooperation with the R&D unit will be shared. ST will share their experience and three present their study protocols. All ST have been asked to fill in a questionnaire to evaluate the model.

**Results:** Preliminary results show that 33 ST have completed the course and have projects in various statuses. One ST has started PhD-studies and one after the specialist exam. The evaluation showed both positive and negative approaches to the model. One third was inspired to continue research and 22% have planned to publish their study.

**Conclusion:** The implementation of new guidelines is suggested to give basic scientific schooling and might contribute to improve the conditions for ST who is motivated for research.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Health at School Program: A governmental strategy to promote Community Center Learning**

R. Basso, J. Pasquini, A. Andrade, V. Santos, L. Froisi, S. Gannam, D. Ballester,

A. Correia, J.L.M. Machado

*School of Medicine, UNICID, Sao Paulo, Brazil*

**Introduction:** The education of today's doctors requires the understanding of health as a product of a complex network. Health professionals must be responsive to the needs of the populations they serve. A challenge is how to create a curriculum based on activities that use the community extensively as a learning environment and is actively engaged in providing medical education that is relevant to community needs. The Health at School Program (HSP) is a governmental initiative with the goal to promote a permanent integration between education and health. HSP aims to contribute to the education of students addressing the vulnerabilities that compromise the full development of children in public schools.

**Objective:** To evaluate the activities developed by students at the HSP.

**Methods:** We analyzed the activities that third year medical students engages at the Public Health Course in the HSP.

**Results:** Students developed activities together with the health-workers from the Health Center and with the target population seeking community needs. Examples of activities: assessment of nutritional status and eyesight, screening for hypertension and diabetes, and promotion of health through campaigns involving violence, sexual health, alcohol and drugs. Students asked the children/teenager what were their concerns. Students declared it was a great opportunity for learning and actually being involved with the community. They felt their actions meaningful.

**Conclusion:** Integration between Medical Schools and Governmental programs could be a way to promote community centered medical education and meaningful learning to students.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Effecting change to promote the rational use of medicines – a whole of system approach: “The challenge of balancing evidence, expert opinion and patient choice“**L. Toop<sup>1</sup>, A. Alderton<sup>2</sup>, A. Copeland<sup>2</sup>, B. Hudson<sup>1</sup>, D. Mangin<sup>1</sup>, P. Beresford<sup>2</sup><sup>1</sup> Public Health and General Practice, University of Otago, Christchurch, New Zealand;<sup>2</sup> Education, Pegasus Health, Christchurch, New Zealand

This workshop will explore ways of promoting evidence informed patient (family) centred care using the resources and skills of organised extended primary care networks linked in with secondary care. A whole of system approach is needed when emerging clinical problem areas are identified when actual practice in both primary and secondary care diverges from «current best interpretation of evidence.» The situation is further complicated when emerging evidence runs counter to increasing health sector / industry driven consumer demand for the treatment of normal variations in health / development.

This will be illustrated by an example where the exponential rise of a dangerous, expensive and ineffective prescribing practice was identified which was unnecessarily putting healthy babies and infants at risk. This alarming trend has been effectively and abruptly reversed by deploying a Regional „whole of system“ approach, coordinated by a mature peer led education programme based in Organised General Practice / Primary Care (Pegasus Health\* / Partnership Health). This initiative involved the cooperation and collaboration of several disciplines in primary and secondary care agreeing on the problem and working with a common purpose alongside community agencies to inform health professionals and involve / educate the patients / families of infants. (The harmful and expensive practice in question remains on the rise internationally).

An exciting challenge remains in constructively harnessing the tension created when conflicting expert interpretations of evidence dictate multiple best practice realities, some or all of which are mutually exclusive to patient centred choice.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Future capacity for expert generalist care: A critical view of European training**G. Irving<sup>1</sup>, A. Shiner<sup>2</sup>, J. Watson<sup>3</sup>, A. Howe<sup>4</sup>, J. Reeve<sup>1</sup><sup>1</sup> Department of Health Services Research, University of Liverpool, Liverpool, United Kingdom;<sup>2</sup> Lawson Road Surgery, Norfolk Primary Care Trust, Norwich, United Kingdom; <sup>3</sup> Academic Unit of Primary Health Care, University of Bristol, Bristol, United Kingdom; <sup>4</sup> Faculty of Medicine and Health Sciences, University of East Anglia, Norwich, United Kingdom

**Objective:** Strengthening medical generalism, ‘expertise in whole person medicine’, is essential to meet the demands facing twenty-first century health systems. We need practitioners equipped with expertise in personalised decision making underpinned by skills in interpretive medicine. This study explored international colleagues’ views about how and whether training prepares them for this role.

**Methods:** Two focus groups were conducted at the 2012 UK Royal College of General Practitioners (RCGP) Conference with trainees or newly qualified GPs from 12 Wonca European countries. Interview schedules and data analysis were informed by the Generalist Capacity Assessment framework; offering a whole-system view of enablers and constraints for generalist practice informed by Normalization Process Theory.

**Results:** Training supports recognition that holistic person-centred care is different, and matters. Trainees recognise their role as one of interpretation and “integration”. Experiential learning is key to developing expertise; supported by continuing reflection with both peers and patients. Practice is viewed as “intuitive” and enhanced by experience, but not as “expert”; leaving trainees fearful of defending practice against external scrutiny. Trainees lack support in building accountability and trust in their own work, and in the generalist approach, with an external audience.

**Conclusions:** Trainees describe experience of personalised decision making, but also a lack of training in the critical judgment of interpretive practice needed to strengthen medical generalism. We will consider how these findings may be used to further develop vocational training; strategies that support the ‘expert generalist’ approach.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

### The construction of interdisciplinarity through Integrated Curriculum, a pedagogical experience to the formation of health teams in primary health care

R. Pekelman, M. Silva Diercks

Hospital Nossa Senhora Conceição, Grupo Hospitalar Conceição, Porto Alegre, Brazil

**Objectives:** The study aimed to analyze the construction of interdisciplinarity in Integrated Curriculum (IC), an educational activity accomplished with residents of Family and Community Medicine and Integrated Health Residency (nurses, dentists, nutritionists, pharmacists, social workers, psychologists) with emphasis in Family Health at Conceição Hospitalar Group, Porto Alegre / RS – Brazil, to the formation of health teams.

**Methods:** This is a qualitative research. It was systematized and analyzed the evaluation of the pedagogical process (2005 to 2009) of the IC -like device for the construction of interdisciplinary health teams in Primary Health Care.

**Results:** We performed content analysis identifying three categories: the first refers to the *Interdisciplinary Experience*, where the formation of multidisciplinary groups and discussion of common themes mark the IC as effective in building interdisciplinary, promotes the teamwork, the formulation of collective understandings and proposals for intervention in problems; the second, *Dialogue*, stands out as an exchange of knowledge, as a collective construction, aims to recognize each other and themselves as participants in a context, building dialogue and a democratic participation, reconstructing identities; *Method*, third category, presented as how to problematize, debate the practice as praxis constructing, place for reflection, leadership and knowledge building.

**Conclusion:** For residents, the IC has achieved its objectives as an area of formation with an interdisciplinary character and an integrality construction, looking forward health teams in Primary Health Care.

Disclosure: No conflict of interest declared

874

Presentation type: Oral Communication

### Does training in family medicine in Hong Kong helps in the quality of care and enablement of patients with chronic illness?

F. Yu<sup>1</sup>, K. Kung<sup>1</sup>, S. Wong<sup>2</sup>, S. Mercer<sup>3</sup>

<sup>1</sup> Department of Family Medicine, New Territories East Cluster, Hospital Authority, Hong Kong, Hong Kong; <sup>2</sup> Division of Family Medicine and Primary Healthcare, Jockey Club School of Public Health and Primary Care, Hong Kong, Hong Kong; <sup>3</sup> Institute of Health and Wellbeing, University of Glasgow, Glasgow, United Kingdom

**Objective:** To determine if family medicine training helps in enhancing the quality of care and enablement for patients with chronic illness.

**Methods:** This is a cross-sectional questionnaire survey using the validated Chinese version of the Consultation and Relational Empathy (CARE) Measure as well as Patient Enablement Instrument (PEI) for evaluation of quality and outcome of care in the perspective of patients.

Data were collected from 1149 patients with chronic illness attending 27 doctors at 3 primary care and 2 secondary care clinics. The CARE measure and PEI score were compared amongst doctors in primary care clinic and secondary care clinics with different training background: family medicine training, internal medicine training and those without specialist training.

**Results:** In the secondary care clinics, the mean CARE score for doctors who have attained family medicine fellowship and internal medicine fellowship were 38.3 and 35.4 respectively. In the primary care clinics, the mean CARE score for doctors with family medicine fellowship and those without specialist training were 32.0 and 29.1 respectively. The difference between these 4 groups of doctors were statistically significant ( $P < 0.05$ ). For PEI, doctors in the secondary care clinics score significantly higher than those in the primary care clinics, but there were no significant difference in PEI between doctors with different specialty training within the same clinic setting.

**Conclusion:** Family medicine training does help in improving quality of care for patients with chronic illness. In addition, the mode of clinic service delivery also played a major role in patient enablement.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Development of interdisciplinarity in PBL and Problematization methodology and PBL graduating qualified professionals in pontifical university catholic of Goias – Brazil**R.M. de Oliveira, V.G. Ferreira, M.D. Ascencao, J. S. D. e Moura  
*Medicine, PUC GOIAS, Goiânia, Brazil***Objective:** Present the development of disciplinary integration through formative methodologies in the medical school of Pontifical University Catholic of Goias (PUC-Goias).**Methods:** The medical course of PUC-Goias develops within its Integrated Theoretical-Practical axis, the formative methodologies: Problematization Methodology and Problem Based Learning (PBL). The first is studied basing on a problem-case that students identify in the community, discuss with entire module team of teachers and subsequently is prepare a feedback to the community in order to solve the problem of the case; the second is developed through clinical cases, prepared by teachers, worked in tutorial sessions. Both have as main goals the acquirement of necessary knowledge to understand the health-disease process and facilitate the integration of knowledge of basic and clinical sciences, covering biological, psychosocial and ethical aspects.**Results:** These methodologies are focused on the development of knowledge, skills and attitudes in the students through coordinated interaction between disciplines (knowledge areas), linked to self-assessment, critical thinking, teamwork, self-directed learning, without neglecting the commitment with social work and development of holistic view by students.**Conclusion:** The multidisciplinary and contextual understanding of the problem situation proposed by these methodologies provides increased effectiveness of teaching by motivating and encouraging the student to knowledge and problem solving, and reflection critically by identifying the causes and consequences of the problem, promoting empowerment, group and social intervention and transformation, making the students prepared for the reality and able to give a quality care for the users of health services in Brazil.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Training and capacity building in general practice: status quo and future prospect in under-developed rural areas in China**H.H.X. Wang<sup>1</sup>, J.J. Wang<sup>2</sup>, M.C.S. Wong<sup>1</sup>, Z.H. Zhou<sup>2</sup>, X.H. Fang<sup>3</sup>, W.X. Huang<sup>2</sup>, L.W. Zhang<sup>2</sup>, X.W. Wang<sup>4</sup>, S.Y.S. Wong<sup>1</sup>, S.M. Griffiths<sup>1</sup><sup>1</sup> School of Public Health and Primary Care, The Chinese University of Hong Kong, Shatin, Hong Kong; <sup>2</sup> School of Public Health, Guangzhou Medical University, Guangzhou, China; <sup>3</sup> School of Public Health, Guangdong Pharmaceutical University, Guangzhou, China; <sup>4</sup> Guangdong Education and Training Centre for General Practice, Guangzhou Medical University, Guangzhou, China**Objectives:** This study aimed to assess the current achievements of general practice (GP) training and capacity building in under-developed rural areas in southern China, under the current call from six ministries at the national level for re-building a community-orientated GP-based primary care system. Future direction to address challenges from the shortage of qualified primary care workforce in rural China will also be discussed.**Methods:** A cross-sectional survey was conducted among a total of 4,714 primary care workforce from 7 under-developed rural county-level cities in Guangdong province in southern China. A validated self-evaluation instrument using a 100-point score was developed to measure knowledge and skills before and after the standardised GP training. Multiple regression analysis was used to investigate significant factors that influence training achievements.**Results:** The survey showed that only 13.1% of rural primary care workforce has obtained undergraduate education level or above, and the ratio of registered physician/nurse was only 1:0.69, lower than that of urban areas (1:0.92;  $p < 0.001$ ). Among 1,330 GPs who received standardised GP training, the self-evaluation scores improved significantly (62.5 vs. 44.6;  $p < 0.001$ ). The higher scores in scales of resident health management ( $p = 0.019$ ) and community health services ( $p = 0.046$ ) are positively associated with improved overall GP training scores.**Conclusions:** A focus on resident health management and community health services is more likely to result in greater GP training achievements. Ongoing efforts are still highly needed to narrow the gap between national policy and local practice in GP training and capacity building in under-developed rural areas in China.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****The Hippokrates Exchange Programme: Everybody on board the VdGM raises the anchor!**S. Rigon<sup>1,2</sup>, S. Begg<sup>3</sup>, A. Nunes Barata<sup>4</sup>, M. A. Lora<sup>5</sup>, C. Lygidakis<sup>1,6</sup>, M. Attridge<sup>7,8</sup>, A. M. Pedro Pijoan<sup>9,5</sup>, P. Kallestrup<sup>10</sup>

<sup>1</sup> *Medicina Generale ASL Bologna, Servizio Sanitario Regionale Emilia-Romagna, Bologna, Italy;* <sup>2</sup> *Exchange Group, Vasco Da Gama Movement, Bologna, Italy;* <sup>3</sup> *St John's Hill Surgery, Begg Practice, London, United Kingdom;* <sup>4</sup> *Beyond Europe Group, Vasco da Gama Movement, Lisbon, Portugal;* <sup>5</sup> *Exchange Group, Vasco da Gama Movement, Barcelona, Spain;* <sup>6</sup> *Chair, Vasco Da Gama Movement, Bologna, Italy;* <sup>7</sup> *Junior International Committee, RCGP, London, United Kingdom;* <sup>8</sup> *Exchange Group, Vasco da Gama Movement, London, United Kingdom;* <sup>9</sup> *International Department, Spanish Society of Family and Community Medicine (semFYC), Barcellona, Spain;* <sup>10</sup> *Center for Global Health, Århus University, Århus, Denmark*

**Objectives:** This workshop aims to present the Vasco da Gama Movement's Hippokrates Exchange Programme for General Practice along with the other activities of the group and inform participants on how they can take part on the programme either as visitors or hosts. The benefit of international exchanges and its relevance to professional development will also be highlighted

**Methods:** The workshop will be divided into 3 parts: Firstly participants will hear about the VdGM Exchange Group activities: the Hippokrates exchange programme along with other kind of exchanges. There will then be small work groups looking at the value of taking part in such activities, the potential barriers one may face in trying to organise an exchange and solutions to these. Finally, we will present this year winners of the Hippokrates Exchange and Corsino Prizes.

**Results:** Participants should understand by the end of the workshop the reasons why international exchanges are valuable and how to organise one by joining the VdGM exchange network.

**Conclusions:** Encouraging exchange and mobility among GPs provides a broader perspective to the concepts of Family Medicine, which will hopefully enhance the collaboration among Junior GP Associations around the world, that can work together to reduce inequalities in the standards of GP training and primary healthcare provision worldwide.

Disclosure: No conflict of interest declared

933

**Presentation type: Oral Communication****Family medicine in sub-Saharan Africa (SSA): What happened since Durban 2001?**

W. Heres, S. Mennink

*WHIG working party, NHG and NVTG, Utrecht, Netherlands*

**Objective:** developments in postgraduate training in Family Medicine in sub-Saharan Africa and postgraduate training in Tropical Medicine/International Health in the Netherlands.

The last 12 years postgraduate training in Family Medicine (FM) has developed in Kenya among other countries in SSA. In 2008, the WHO launched its report: "Primary Health Care, now more than ever", 30 years after the Alma-Ata Declaration which focused on the primary health care in national health services. In 2005 the Kenyan Moi University embarked on the Master of Family Medicine (FM) Training Program. It had to counterbalance the domination of vertical programs.

In this symposium we will focus on what has been achieved so far and discuss plans for the future. FM in the African context is different from Europe or America. What is the impact of FM on the healthcare system? What is the role of the Government and Non Governmental Organizations? What is the role of WONCA? How does the African context influence teaching FM in Africa?

Steve Reid, Ian Couper (both RSA) and Patrick Chege (Kenya) are asked to reflect on their experience and research. Hans Bakker is asked to reflect on his experience as teacher/trainer in Kenya. Des Spence (UK) is asked to comment on the promise of FM for Africa. Sylvia Mennink (chair WHIG) is asked to comment on the new development in The Netherlands for GP trainees and GP's with healthcare-experience in SSA and Wim Heres will comment on the new profile in postgraduate training for tropical doctors in the Netherlands.

Disclosure: No conflict of interest declared

1050

Presentation type: Oral Communication

**Medical education – what makes a good reflection?**R. Charlton<sup>1,2</sup>, M. Wilkinson<sup>2</sup>, R. Prince<sup>2</sup>, M. Xavier<sup>2</sup><sup>1</sup> Division of Primary Care, University of Nottingham, Nottingham, United Kingdom; <sup>2</sup> West Midlands Postgraduate Education Deanery, Local Education and Training Board, Birmingham, United Kingdom**Objective:** To define what makes optimal reflection in an electronic portfolio in order to enhance this skill in every day practice**Methods:** Electronic portfolio learning and assessment is increasingly being used in undergraduate and postgraduate medical education. Similarly, generations of family physicians are using this key skill of reflection for their reaccreditation (revalidation) portfolios as they log their continuing professional development, significant events, audit, patient and colleague feedback in order to be re-licensed five yearly in the UK. An important role for all educators is enhancing trainees and colleagues to reflect on their daily practice and put this into writing. Many models exist on assessing the adequacy of reflection, but no consensus exists between those in clinical practice as to what makes a 'good reflection'. Models which will be illustrated include; Reflection-in-Action, PUNs and DENs, Kolb's Learning cycle and writing a Personal Development Plan(PDP).**Results:** This workshop will determine if a trainee asking two questions will facilitate a good reflection following a clinical encounter, learning event or feedback; "So what and how did this make you feel?" Participants will be asked to write a reflection on a recent memorable clinical encounter and then share this in pairs. In small groups interaction will be encouraged to further discuss what makes a good reflection. During a plenary recurrent themes will be recorded to produce for dissemination after the conference through email offering the chance for further consideration.**Conclusions:** This opportunity to share expertise will allow the facilitators to create a consensus statement.

Disclosure: No conflict of interest declared

1056

Presentation type: Oral Communication

**The VdGM Hippokrates Exchange Programme: A Spanish and Italian perspective**A.M. Pedro Pijoan<sup>1</sup>, S. Rigon<sup>2</sup>, R. Avino<sup>3</sup>, R. Gomez Bravo<sup>4</sup>, C. Lygidakis<sup>2</sup>, B. Tarazone Chocano<sup>4</sup>, K. Pisconte Alayza<sup>4</sup>, M. Sarmiento Cruz<sup>5</sup>, S. Belinchon Moyano<sup>4</sup>, M. Teran Diez<sup>1</sup><sup>1</sup> VdGM Exchange group Spain, Vasco da Gama / SemFYC, BARCELONA, Spain; <sup>2</sup> VdGM Exchange coordinator group Europe, Vasco da Gama, BOLOGNA, Italy; <sup>3</sup> VdGM Exchange group Italy, Vasco da Gama, TRENTO, Italy; <sup>4</sup> VdGM Exchange group Spain, Vasco da Gama / SemFYC, MADRID, Spain; <sup>5</sup> VdGM Exchange group Spain, Vasco da Gama / SemFYC, PALMA DE MALLORCA, Spain**Objectives:** The main objectives to present how Hippokrates Exchange Programme of the Vasco da Gama Movement (VdGM) has benefitted the GP trainees from two different countries of the south of Europe, Italy and Spain. Moreover, the value of exchanges and their relevance to professional development of future General Practitioners will be highlighted.**Methods:** Since 2008, VdGM has established an international observational two-week exchange period in a selection of GP Practices of Europe. This observational descriptive study compares the Hippokrates Exchange enquires, planning and completed exchanges of Italy and Spain for the year 2012. The destination countries, the organized exchanges, the completed protocols and the issued Certificates of Completion were analyzed for the two countries.**Results:** In 2012 a high participation in the Hippokrates Programme in Spain and Italy was observed, with an increase in number of requests as well as completed exchanges. Even though the most popular destination was still United Kingdom, the Northern Countries also hosted many GP trainees. Moreover, a growing interest for other European countries, such as Italy, France, Germany, Croatia and Israel, was noticed.**Conclusion:** Hippokrates Exchange Programme provides an insight into the context of General Practice in the primary healthcare system of other European countries and inspires the participants to undertake an active part in the development of Family Medicine at all levels. The interest for such an exchange programme is growing rapidly among GP trainees, which helps us recruit not only new participants, but also hosts and new destinations such as Israel and Latvia.

Disclosure: No conflict of interest declared

1075

**Presentation type: Oral Communication****Risk profile of medicine students and attitude towards preventive medicine: comparison of 1st and 5th year**L.H. Alba<sup>1</sup>, N. Badoui<sup>1</sup>, F. Gil<sup>2</sup><sup>1</sup> Preventive and Social Medicine Department, Pontificia Universidad Javeriana, Bogota, Colombia;<sup>2</sup> Epidemiology Department, Pontificia Universidad Javeriana, Bogota, Colombia

**Objective:** To describe the impact of medical school in the risk factor profile of medicine students (Javeriana University, Bogota-Colombia) and its association with attitude towards counseling.

**Methods:** We applied the Healthy doctor-Healthy patient questionnaire in 1st and 5th year students. We determined and compared the prevalence of risk alcohol consumption, smoking, unhealthy food habits and sedentary lifestyle. We evaluated students' opinion about the curriculum and university environment and the association between attitude, acquired knowledge and presence of risk factors.

**Results:** Alcohol consumption and smoking decrease from 1<sup>st</sup> to 5<sup>th</sup> year (59.3% vs 37% p=0.021 and 31.5% vs 25.93% p=0.5) whereas unhealthy food behaviors and sedentary lifestyle increase (42.6% vs 100% p<0.001 and 53.7% vs 66.7% p=0.014).

Of 5<sup>th</sup> year students, 55.5% believe there's an emphasis on preventive medicine and 27.7% think that healthy behaviors are encouraged. Level of knowledge is greater than in 1<sup>st</sup> year (58.5% vs 42.5%; p<0.001).

Being male is associated with alcohol consumption (OR 5.5 IC95% 2.0-14.6) and smoking (OR 4.1 IC95% 1.2-13.7) while being in 5th year reduces this risks (OR 0.3 IC95% 0.1-0.9 and 0.10 IC95% 0.02-0.4).

Physical activity is associated with a positive attitude towards preventive counseling (OR 7.5 IC95% 1.9-29.7).

**Conclusions:** Risk profile does not have a consistent modification. Topics that are emphasized in the curriculum and have institutional policies have the best results. Being physically active favors a positive attitude towards preventive counseling and is associated less risk behaviors. The university should strengthen its curriculum regarding the acquisition of healthy habits.

Disclosure: No conflict of interest declared

1109

**Presentation type: Oral Communication****Humanization in the medical universities: The point of view of a student of the 5<sup>th</sup> year of medicine**

L. Figueira, M. Janaudis

Public Health, Faculdade de Medicina de Jundiaí, Jundiaí, Brazil

Recently I was in a class at my college and the theme presented in the form of seminar was „Humanization“. This topic has been discussed for a long time, but only in this century has given importance to the topic. That's because many scholars have realized the „dehumanization“ that has occurred in the medicine and, worse, is occurring so rapidly that students who had started the medical course with their faces humanization chests, start to leave the course with the concern of how much money they will have in their wallet. So, why and how this happens? I'll try to answer that question with my own experiences during these five years in the course and what I experienced so far and that makes me believe that medicine can still be better humanized.

The teacher asked what we thought about the theme. The room was silent... Some uncomfortable students with that situation talked about different forms of humanization.

It was then that I decided to question my teacher: „Professor, with his experience and published articles on the subject, do you think you can TEACH humanization?“. He returned the question. I said no, but, providing tools and sharing experiences would be important methods for instigating a reflection about „being humane“. In my case, the social projects that I developed over the years kept me my humanistic ideal, even though I have gone through by bad situations and meet worse professionals, learning to break down the barriers of knowledge and inequality.

Disclosure: No conflict of interest declared



1147

**Presentation type: Oral Communication****A hands-on workshop on diagnostic ultrasound of the thyroid gland and abdominal aorta, foreign body and injection granulomas**P. Moeremans<sup>1</sup>, J. Felez<sup>2</sup><sup>1</sup> Family Practice, General Practitioner, Mechelen, Belgium; <sup>2</sup> EAP, Canaletes, Barcelona, Spain

**Objective:** A personal ultrasound machine is like having a camera on your fingertip. But you only find what you are looking for and you will only look for what you know. Certificate of appropriate training will be given after a postgraduate course. Technological progress made lightweight, small and simplified medical apparatus. Learned helplessness does not save lives nor prevents morbidity.

**Methods:**

1. Topographic anatomy;
2. Systematic looking at suspected pathology with a checklist for this anatomic area;
3. Pitfalls and limitations of the technique;
4. Hand-on training in small groups;

**Results:**

1. Papillary thyroid carcinoma: punctuate micro calcifications; ill-defined tumor with irregular outlines; incomplete halo; invasion to muscles; esophagus, trachea; differential diagnosis.
2. Medullary thyroid carcinoma: coarse shadowing tumor calcifications, hypo echoic nodes.
3. Thyroid non-Hodgkin lymphoma: in follow-up of Hashimoto thyroiditis: solid non-calcified echoic thyroid mass in elderly women.
4. Anaplastic thyroid carcinoma and thyroid metastasis;
5. Multi nodular goiter and Hashimoto thyroiditis;
6. Aortic aneurysm is considered when its diameter exceeds 3,5 cm outer wall to outer wall; Concentric layers of thrombus may line in the interior wall;
7. Soft tissue infections: edematous fat is echogenic, thickened interlobular septa, peri-septal fluid;

**Conclusions:** Avoiding the routine practice of high risk examinations, we can teach easy and rewarding topics than can easily be done in family practice. Assessing the diameter of the abdominal aorta in case of recurrent or severe umbilical pains of unclear origin enhanced the survival from 1/18 to 17/24 in my practice.

Disclosure: No conflict of interest declared

1150

**Presentation type: Oral Communication****Incorporating interdisciplinary agricultural medicine into CPD for rural GPs in Queensland**J. Harte<sup>1,2</sup>, S. Kitchener<sup>1,2</sup>, S. Brumby<sup>3</sup><sup>1</sup> Research, Queensland Rural Medical Education, Toowoomba, Australia; <sup>2</sup> School of Medicine, Griffith University, Toowoomba, Australia; <sup>3</sup> CEO, National Centre for Farmers Health, Hamilton, Australia

**Objective:** In 2012 Queensland Rural Medical Education (QRME), in partnership with the National Centre for Farmer Health, delivered an interdisciplinary Agricultural Health and Medicine continuous professional education module in regional Queensland. The Agricultural Health and Medicine Module was specifically aimed to increase understanding of clinical, physical and mental health factors that result in higher rates of injury, illness and death in rural farming communities and enhance practitioners' ability to address these issues in their clinical practice. This paper overviews the process and the outcomes of this educational innovation as well as future plans to offer a similar module in other parts of the region.

**Methods:** Topics on which seminars, lectures and discussion groups were based included: agriculture today, farm injuries/ muscular-skeletal health, zoonotic disease, respiratory health, addiction, skin cancer, eye injuries and health, veterinary and agricultural chemicals, biosecurity, personal protection, co-morbidities, mental health, farm dangers and injuries. A visit to a working farm enabled participants to understand the variety of potential farm dangers which exist, from both machinery and animals and the working environment. In addition, a comprehensive health check was conducted on all participants. Educational delivery methods involved a combination of interactive, experiential and didactic sessions.

**Results:** Sixteen participants enabled the module to be trialled and evaluated. Evaluations were extremely positive.

**Conclusions:** The module was most successful in relation to the educational components, learnings gained and general organisation. Future interdisciplinary modules should be better marketed to a wider variety of professionals.

Disclosure: No conflict of interest declared

1236

Presentation type: Oral Communication

**Permanent education in hypertension and diabetes for primary care interprofessional health care teams**

S.Takeda, M.Diercks, L.Kopittke, C.Mendonça

*Serviço da Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil*

**Introduction:** Description of educational process for primary health care teams. It's an evaluates-interven-es-evaluates 'intervention' research entitled "Care evaluation in systemic hypertension and diabetes mellitus in primary health care". The intervention provides permanent education for the 329 staff of the Community Health Service 12 interprofessional teams. Focused on primary care services within the context of integrated networks; chronic conditions; interprofessional teams; integration of management, assistance, and educational processes.

**Objectives:** To improve health care quality; to develop and evaluate educational processes; to improve programmatic actions implementation; to produce knowledge in PHC.

**Methodology:** Identification of learning needs on evidence-based clinical guidelines use, person-centered approach, family approach, mental health and chronic conditions, supported self-care, clinical and population-based approach. Evaluation according to Kirkpatrick' dimensions (change in knowledge, practice, attitudes, and outcomes). Critical peer education pedagogic process, in small groups, emphasizing sharing of experience, knowledge, tools, and methods. Structured pedagogic material, using everyday situations and local health indicators. Workshops, seminars, case discussions in the health care centers, visits to other services, etc.

**Results:** In this first of a 4-year long Project, 92% of the staff actively participated in 20 hour-per-week workshops. There were statistically significant changes in knowledge, attitudes, and intention to change the practice. Changes in the results will be evaluated in the second data collection (March 2013). Satisfaction with the pedagogic methodology.

**Conclusions:** Staff members wish to be updated and to incorporate new working methodologies. It is important to develop activities aimed towards the whole team, as well as to each professional category.

Disclosure: No conflict of interest declared

1239

Presentation type: Oral Communication

**Challenges of the clinics in systemic hypertension and diabetes mellitus: workshops of case discussion and evidencebased protocols**M. Diercks<sup>1</sup>, S. Takeda<sup>1</sup>, L. Kopittke<sup>1</sup>, L. Lima<sup>1</sup>, C. Mendonça<sup>1,2</sup><sup>1</sup> *Serviço de Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil;*<sup>2</sup> *Departamento Saúde Coletiva, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil*

**Introduction:** This is an evaluates-interven-es-evaluates type of 'intervention' research entitled "Care evaluation in systemic hypertension and diabetes mellitus in primary health care". The intervention step consists of permanent education for 329 staff of 12 interprofessional teams formed by family doctors, nurses, nursing technicians, dentists, oral health technicians, psychologists, social workers, nutritionists, and pharmacists. Social-demographic population changes demand that the services reorganize and develop "new technologies". Among these, the systematic use of evidence-based assistance guidelines/protocols is highlighted.

**Objectives:** To discuss clinical situations; to use systemic hypertension and diabetes mellitus (SH/DM) protocols; to use specific SH/DM algorithms for each professional category.

**Methodology:** Identification of learning needs per category; creation of clinical situations based on patient records; workshops per professional category with pedagogic facilitators on SH and DM; use of clinical protocols. Critical peer education pedagogy, structured pedagogic material, use of everyday situations and local health indicators. Kirkpatrick's evaluation (change in knowledge, practice, attitudes, and outcomes).

**Results:** Qualitative evaluation: significance of the periodic accomplishment of the activities, experience exchange among peers, updated clinical learning, use of evidence-based clinical protocols, use of evidence according to the patients' needs and problems. Having algorithms of each protocol for each category is essential. The evaluation of the use of protocols' contents will be accomplished in April 2013, during the second measure of the mentioned research.

**Conclusions:** Professionals wish to be updated and to incorporate new working methodologies. It is important to develop activities aimed towards the whole team, as well as to each professional category.

Disclosure: No conflict of interest declared

1257

**Presentation type: Oral Communication****The function of Balint's Groups as a coping strategy for medical students**

M.D. Ascensão, T.E.D. Santos, J. S. Almeida, G.C.F. Cantarelli

*Departamento de Medicina, Pontifícia Universidade Católica de Goiás, Goiânia, Brazil***Objective:** Demonstrate the Balint Groups importance as coping strategy for medical students.**Method:** Experience report of medical students of Pontifical Catholic University of Goiás (PUC-Goiás).**Results:** Medical students receive a large load of requirements. They are charged by teachers, family and themselves, in addition to receiving all the expectations placed by patients. In many situations, they are charged like professionals already formed and are frustrated when they don't match what was expected of them. Thus, they become susceptible to Burnout syndrome, which affects not just professionals already graduated, but also students in training. In order to protect the mental health of its students, Balint Groups are performed in order curriculum in medical school at PUC-Goiás.. They represent a time when students are able to report situations that somehow causes anxiety and restlessness. After the report of the case, the other students participants discuss what has been reported based on the Michael Balint's theory of Doctor-Patient Relationship.**Conclusion:** The Balint group is an important ally for the mental health of medical students acting as a coping strategy. The academics find on the group a way to expose the feelings caused by the case reported. Furthermore, through the colleagues collaborations, they are able to observe other perspectives on what they have experienced. Balint groups contributes to reduction of stress, emotional exhaustion and the possibility of development of Burnout syndrome caused by medical course routine.

Disclosure: No conflict of interest declared

1422

**Presentation type: Oral Communication****Acute kidney injury and chronic kidney disease – reset of concepts and attitudes**E. Oliveira<sup>1</sup>, I. Coelho<sup>2</sup>, N. Veiga<sup>3</sup><sup>1</sup> Internal Medicine, Centro Hospitalar Tondela/Viseu, Viseu, Portugal; <sup>2</sup> Family Health Unit, Grão Vasco, Viseu, Portugal; <sup>3</sup> Health Sciences, Universidade Católica Portuguesa, Viseu, Portugal**Objectives:** Acute Kidney Injury and Chronic Kidney Disease, which present considerable prevalence in our country, is increasing as a morbidity and mortality risk factor among aging population.

The main objectives of this workshop consists of the following:

I: Updating of knowledge within these two pathologies, with regard to its etiology, control of modifiable risk factors, pathophysiology, complications and approach in primary healthcare;

II: Provide clinicians with more knowledge on semiotics and on the approach of the patient, so that, in clinical practice, the clinician can distinguish between the two entities;

III: Define when referencing to the hospital in a elective and / or emergency case.

**Methods:** The workshop, which is planned to be interactive, consists of two parts:

Part I: A theoretical review of 45 minutes;

Part II: Also 45 minutes, in where clinical cases are presented to illustrate the main syndromes associated with these pathological entities, expected to have a active participation of the participants.

**Results:** It is expected that after the workshop, the participants become updated according to the new criteria and classifications for these kidney diseases. It is also expected that the participant will acquire more skills in addressing the patient, in order to prevent and control.**Conclusion:** A update of the various aspects of these diseases will permit the clinician to identify signs and symptoms that will be a major aid for hospital referential with a consequent improvement in the quality of healthcare provided to the population.

Disclosure: No conflict of interest declared

1437

**Presentation type: Oral Communication****First observations of Ataturk University medical students in different outpatient clinics**Umit Avsar<sup>1</sup>, Ummu Zeynep Avsar<sup>2</sup>, Turan Set<sup>1</sup>, Yasemin Çayır<sup>1</sup>, Mustafa Gorgun<sup>1</sup>, Ercan Ozyıldırım<sup>3</sup><sup>1</sup> Family Medicine, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>2</sup> Medical Education, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>3</sup> Public Health, Ataturk University Medical Faculty, Erzurum, Turkey**Aim:** We aimed to determine the observations of the first year students of faculty of medicine on health care given by outpatient clinics.**Method:** This study was conducted among the first year students of Ataturk University, Turkish division of Medical Faculty, in December 2012 (Erzurum, Turkey). There is an 8 hours course named the introduction to medical practice in the curriculum of first year. Students were taken to outpatient clinics and made observations for 2-hours. All students were asked to fill a structured questionnaire. Results for 213 students were analyzed.**Results:** Students visited outpatient clinics of internal [57.7% (n=123)] and surgical medical branches [42.35% (n=90)]. Mean interview duration with a patient was 6.97±3.3 minutes. This ratio was 7.40±3.8 and 6.4±2.6 for internal and surgical branches respectively (t=2.127, p=0.035). The ratio of offering life style modification to their patients was 75.6% and 47.8% for internal and surgical branches respectively ( $\chi^2=17.442$ , p<0.001). The ratio of offering exercise to their patients 43.1% and 27.8% for internal and surgical branches respectively ( $\chi^2=5.250$ , p=0.022). The ratio of offering dietary counseling practices to their patients 57.7% and 37.8% for internal and surgical branches respectively ( $\chi^2=8.272$ , p=0.004).**Conclusion:** There were significant differences between internal and surgical disciplines with regard to mean interview duration, life style modifications and dietary counseling practices. Although all variables have less than expected values, surgical disciplines have even less scores. Given the importance of chronic diseases of today's live, physicians should give more emphasis on behavioral change, exercise and diet during their consultations.

Disclosure: No conflict of interest declared

1504

**Presentation type: Oral Communication****Quality constraints as a reason for misconduct**

P. Vychytil, J. Remr

INESAN, INESAN, Praha, Czech Republic

**Hypothesis:** Our hypothesis was that inadequate training requirements could cause a higher rate of misconduct in GP/FM training.**Background:** There is a high demand for quality improvement in practically all levels of health care and medical training. Educational curricula tend to become much more comprehensive and complicated while empirical experience shows that many educational requirements cannot be fulfilled. As a result they tend to be fulfilled purely formally.**Methods:** We performed a qualitative study among GP trainees (N=11) and supervisors (N=10). This qualitative research describes attitudes, typical patterns, and strategies employed by trainees and supervisors to meet the requirements of the GP-training. Afterwards we conducted a quantitative study among newly qualified GPs (N=227) with a response rate of 55% (124 individuals filled-in the questionnaire).**Results:** The following types of misconduct were identified: knowing the final exam test questions in advance (72%); shortening of the working time of the clinical rotation (65%); reduction of required curricular content (56%); asking for (17%) or offering (11%) certification of clinical rotations without attending them. The most frequently reported justifications of misconduct were: frequent curriculum changes (92%); financial constraints (89%); unreasonable requirements (79%); and lack of engagement of the supervisor (75%).**Conclusion:** We found a high rate of diverse misconduct among GP-trainees in the Czech Republic. This behaviour seems to be very closely related to excessive requirements of the GP/FM training.

Disclosure: No conflict of interest declared

1517

**Presentation type: Oral Communication****Implementation and development of a Family Medicine retraining program in Laos**J. Markuns<sup>1</sup>, M. Sing<sup>2</sup>, S. Cummings<sup>1</sup><sup>1</sup> Family Medicine, Boston University, Boston, United States; <sup>2</sup> Faculty of Medicine, University of Health Sciences, Vientiane, Lao People's Democratic Republic

**Objective:** Lao PDR has been developing multiple postgraduate programs in a variety of specialties, including Family Medicine (FM). In this presentation, we will share the experience from a post-graduate retraining program developed in the north of the country.

**Methods:** The Lao PDR FM retraining program was begun in 2010 as a three year program after modification of the AUNP FM curriculum. This current curriculum involves three month blocks of training at a provincial hospital, alternated with three month blocks in their home district site of practice with distance education assignments. The program was monitoring by periodic informal qualitative assessments, and we will share preliminary results of a final formal evaluation of the program and graduates.

**Results:** All five entrants in the program are one training block from completion in February 2013. Preliminary results suggest that trainees pleased with the program. Trainees are markedly improved in computer skills, able to better assess community health, more confident in clinical skills, more likely to manage a greater range of illness locally, and have delivered training programs to other local medical staff in their district on important topics learned in their training program.

**Conclusions:** The retraining program is believed to be a success based on preliminary assessments. The Ministry of Health is now considering what lessons this program offers and how it might be continued in the future. Such a modular training curriculum holds promise as a training program for participants in a new program of mandatory rural service immediately following medical school graduation.

Disclosure: No conflict of interest declared

1547

**Presentation type: Oral Communication****The medical solution IS the problem: Teaching resident skills transition from acute to chronic care management**

M. Polson

Department of Family Medicine, Cascades East Family Medicine Residency-Rural, Oregon Health &amp; Sciences University, Klamath Falls, Oregon, United States

**Introduction:** The training literature laments the lack of educational models to teach family residents effective skills in chronic care management. As Baby Boomers age and chronic illnesses increases, residencies face increasing demand to teach management skills for chronic care.

**Workshop Goal:** We present our rural educational model for curriculum consideration. Residents learn algorithms to determine an acute or chronic care approach for their differential, diagnostics, and intervention(s). Treatment planning integrates Prochaska's Transtheoretical Model, 12-24 month patient pace of change, principles of motivation, coaching strategies targeting lifestyle behaviors, engaging family members, and harnessing community resources. Residents learn to *recalibrate their expectations* from rapid change (acute) to the slower cumulative pace of change inherent in chronic care solutions.

**Educational Objectives:** Participants will develop the skills to implement our chronic care model through the following components:

- Assessing Patient Readiness to Change (Prochaska)
- Strategies for altering resident expectation of rapid change to a more realistic metric of 12-24 months
- Using basic human behavioral principles of motivation and/or rewards for Pt's adapted to the 12-24 month treatment plan,
- Utilizing simple coaching, deemphasizing traditional physician educational strategies to target lifestyle behaviors
- Developing manageable strategies to involve family members in the life style change process
- Understand teaching techniques that harness community resources as part of chronic care management
- Developing strategies to actualize the treatment plan in the context of 15-20 minute visits over 12-24 months. This changes the pace and resident metric for problem improvement for the Pt from an acute to a chronic care perspective.

Disclosure: No conflict of interest declared

1554

Presentation type: Oral Communication

**Decline of medical student idealism in early training**C.P. Morley<sup>1</sup>, C. Roseamelia<sup>1</sup>, J. Smith<sup>1,2</sup>, A.L. Villarreal<sup>1,3</sup><sup>1</sup> Department of Family Medicine, SUNY Upstate Medical University, Syracuse, United States;<sup>2</sup> Department of Biostatistics, University of Pittsburgh, Pittsburgh, United States;<sup>3</sup> Communications, NYC Department of Health & Mental Hygiene, New York City, United States

**Objective:** Idealism declines in medical students over the course of training, with some studies identifying the beginning of the decline in year 3 of U.S. curricula. This study tested the hypothesis that a decline in medical student idealism is detectable in the first two years of medical school.

**Methods:** We sought to identify differences in survey responses between first-year (MS1) and second-year (MS2) medical students at the beginning (T1) and end (T2) of Academic Year 2010 on three proxies for idealism, including items asking about: 1) motivations for pursuing a medical career; 2) specialty choice; 3) attitudes towards primary care. Principle components analysis was used to extract linear composite variables (LCV) from responses to each group of questions; linear regression was then used to test the effect of being an MS2 at T2, relative to MS1/T1, on each LCV, controlling for race, ethnicity, rural or urban origins, gender, and marital status.

**Findings:** MS2s placed more emphasis on employment concerns ( $\beta=.235$ ,  $p=.039$ ) and status/income concerns ( $\beta=.249$ ,  $p=.030$ ), and much less emphasis on idealism as a motivator ( $\beta=-.252$ ,  $p=.027$ ), in pursuing a medical career; more likely to consider lifestyle and family considerations ( $\beta=.277$ ,  $p=.017$ ), and less likely to consider idealistic motivations ( $\beta=-.200$ ,  $p=NS$ ); and were more likely to endorse both negative/antagonistic ( $\beta=.472$ ,  $p<.001$ ) and negative/sympathetic ( $\beta=.257$ ,  $p=.028$ ) attitudes towards primary care.

**Conclusion:** The results are suggestive that idealism decline begins earlier than noted in other studies, implying a need for curricular interventions in the first two years of medical school.

Disclosure: No conflict of interest declared

1576

Presentation type: Oral Communication

**General Practice training across European borders**

K. Heleniak

General Practice, University of Rouen, Rouen, France

General Practice (GP), known in some countries as Family Medicine, has become a specialty in its own right. WONCA Europe gave a definition for GP. This was a huge step forward for the discipline, and it constantly leads to proposals to reform training. However, we must not forget the Bologna Process. In this work, we investigate the standardization of training in GP in Europe.

This was a comparative study of official programs in GP in nine European countries chosen according to a specific criteria. We compared five areas: access to training, length, rotations, theory, and evaluation.

We found a lot of diversity between the countries. Access to the program was most often done through a national standardized test. The length of the training varied between 3 and 5 years. We found large differences in the curriculum. Some programs had a common core (internal medicine, gynecology, pediatrics). The emergency training was mandatory in most countries. The compulsory rotation in GP took a different length of the total training time: 16% in France to 54% in Poland. There were also differences in the type of the rotations: compulsory rotation in surgery in five countries and three other optional, mandatory internship in psychiatry in four countries.

For the standardization of higher education in Europe and to allow the free movement of doctors between the countries, it is important to study the progress of the specialty in different countries. To date, there are still large disparities in training in GP in Europe.

Disclosure: No conflict of interest declared

1657

**Presentation type: Oral Communication****Illness narratives of doctors' health: understanding the cultural messages**

M.P. Kay

*Discipline of General Practice, The University of Queensland, Brisbane, Australia*

**Objective:** This study explores doctors' illness experiences as reported within the medical literature. The case report style provides the doctor-patient with a defined framework to legitimately share their narrative with their peers.

**Methods:** Using a systematic review of the literature, including extensive citation searches, this study collates over 200 case studies published within the medical literature; each documenting a personal experience with illness. Analysis of these studies reveals a series of key themes. A more detailed analysis of the discourse used within these studies provides important insights into the propagation of the cultural understandings of doctors' health.

**Results:** The diversity of health issues confronted by doctors is clearly evident in these studies which report both mental and physical health issues. Three key themes were identified, each with sub-themes – include the decision to access care, the process of accessing health care, adopting the role of patient and the value of the patient experience. Specific expressions recur throughout these narratives, including self-treatment, denial and reluctance. The powerful cultural meanings embodied within these words are explored. The findings juxtaposed against the current understandings of doctors help-seeking behaviours.

**Conclusions:** By gathering together these apparently isolated voices of 'wounded healers', this study provides important insights into doctors' health, and identifies how cultural issues impact upon doctors' access to health care. Recognising the power of the discourse of doctors' health opens new opportunities for teaching about these issues.

Disclosure: No conflict of interest declared

1710

**Presentation type: Oral Communication****Doctors' health access – a sociological perspective**

M.P. Kay

*Discipline of General Practice, The University of Queensland, Brisbane, Australia*

**Objective:** To provide an understanding of how doctors access health care for themselves that is grounded in the current sociological understandings of community health access.

**Methods:** This study involved gathering data from a systematic literature review of doctors' health access, a review of the narrative of doctors' illness experiences and an Australian qualitative study that gathered new data on doctors' health access. These findings were mapped onto a sociological model of health access, the lay referral pathway. This process enabled a comparison between how doctors access health care and the health access behaviours of the lay community.

**Results:** This study provides a detailed understanding of the similarities and difference in how doctors and lay people access health care. By providing a new perspective for considering health access behaviours, current concerns raised in the doctors' health literature, such as self-treatment and corridor consultations, are revisited and reinterpreted. Four specific points of vulnerability are recognised where the doctor is most likely to encounter a barrier to progress along the pathway to health care. Specific socio-cultural factors that reinforce these barriers are identified; emphasising how barriers can be inadvertently reinforced by medical peers. Factors that facilitate progress at each of these points are recognised as key learning points for future educational programs for medical students and doctors.

**Conclusions:** Integrating the understandings of doctors' difficulty accessing health care with sociological modeling can provide a practical framework that can assist in grounding future medical education programmes that focus on doctors' health.

Disclosure: No conflict of interest declared

1712

**Presentation type: Oral Communication****Long-term experiences of Training the Trainers – courses are positive**P. Vainiomäki<sup>1</sup>, M. Ellilä<sup>1</sup>, A. Jurgutis<sup>2</sup>, A. Jauhiainen<sup>3</sup>, A. Jauhianen<sup>3</sup><sup>1</sup> General Practice, University of Turku, Turku, Finland; <sup>2</sup> Public Health, Klaipeda University, Klaipeda, Lithuania; <sup>3</sup> Faculty of Education, University of Turku, Turku, Finland

Health care centre doctors, as part of their work, train medical students and postgraduates. Medical competence is not enough for this. In the university hospital district of Varsinais- Suomi Finland, two pilot courses and one multinational course in Lithuania for training the trainers were organised applying EURACT -courses. Teachers were educationalists and general practitioners (GP) and main topics *learning, teaching, supervising, basic competencies of a GP, assessment and feedback*. Training modules were followed by homework. Participatory learning methods were used. Our aim was to analyse how GPs experience this course immediately and in the long run.

Out of 42 participants 35 completed the training in Finland and all 18 in Lithuania. Evaluations after modules and final evaluation (n=34) at the end of whole period using questionnaires were carried out. A follow-up study one-two years later (n=25) was carried out in Finland and Lithuanian course will be evaluated in the same time window. The results are descriptive.

The immediate evaluation results were positive by all participants. Knowledge and adopted skills provided tools for training in a useful manner. Supervising the core competencies of a GP became more effective during the course. According to the follow-up evaluation the positive experiences seem to stay long.

It is valuable to provide training courses for GP trainers, and it seems to be the case, positive experiences stay and help in training.  
Contact information: merja.ellila(at)utu.fi

Disclosure: No conflict of interest declared

**2.9. UNDERGRADUATE TEACHING**

1600

**Presentation type: Workshop****Developing integrated scenario of simulated patients in OSCE**

D. Widyandana

*Dept. of Medical Education and Skills Laboratory, Fac. of Medicine, Gadjah Mada University, Yogyakarta, Indonesia*

**Objective:** After join this workshop, participant able to develop integrated scenario of simulated patients in OSCE

**Methods:** This is an interactive workshop that divided into four phases:

First phase is brain storming to develop minimum component for scenario of simulated patient using colorful paper.

Second phase is working in a small group to develop specific scenario on simulated patients that usually used in OSCE, such as: communication skills, physical examination skills, and also procedural skills.

Third phase is open discussion on how to improve those scenarios become more integrated and adequate for OSCE. Each group have to present their discussions results using LCD projector and get feedback from other groups.

Forth phase is summarize the result of the discussion, and concluded as minimum format of scenario for simulated patients in OSCE.

**Results:** The outcome of this workshops, each participant have minimum format of scenario for simulated patients as result of their discussions in this workshop.

Disclosure: No conflict of interest declared



364

Presentation type: Oral Communication

**The general practice and family medicine rotation – Occurrence and content of teaching points made by general practitioners**

S. Bösner, G. Duncan, L. Roth, E. Baum

*Department of Family Medicine, University of Marburg, Marburg, Germany*

**Objective:** A general practice and family medicine rotation is mandatory as part of undergraduate medical education in Germany. However, little is known about the student-teacher interaction which takes place in this setting. This study aimed to gain quantitative and qualitative information concerning different points of interest. Occurrence and content of teaching points is one of them.

**Methods:** From April through December 2012 two researchers collected structured field notes and procured videotapes of over 360 individual patient consultations in twelve teaching practices associated with the Philipps University Marburg, Germany. Informed, written consent was provided by all participants. Data were analysed quantitatively using SPSS and qualitatively using content analysis.

**Results:** According to a preliminary analysis of 361 consultations, teaching points were made in 65% of consultations. General teaching points occurred in 75%, case related teaching points in 47% of consultations. Of seven possible topics, therapy was most common, followed, in frequency of occurrence, by patient history, diagnostic procedure, physical examination, disease pathology, differential diagnosis, risk factors and case presentation.

**Conclusions:** Even though the majority of consultations conducted within student presence contained teaching points, most concentrated on therapy, whereas case presentation did not seem to be an issue. Does this mirror student ability or practitioners' fixation on certain topics? The fact that teaching points are made in the majority of consultations is encouraging.

Disclosure: No conflict of interest declared

522

Presentation type: Oral Communication

**Current position of family medicine in undergraduate medical education in Turkey**S. Mistik<sup>1</sup>, D. Toprak<sup>2</sup>, G.C. Peker<sup>3</sup>*<sup>1</sup> Family Medicine, Erciyes University Medical Faculty, Kayseri, Turkey; <sup>2</sup> Family Medicine, Sisli Etfal Training and Research Hospital, Istanbul, Turkey; <sup>3</sup> Family Medicine, Ankara University Medical Faculty, Ankara, Turkey*

**Objective:** The aim of this study was; (1) to define the present role of family medicine teachers in undergraduate medical education (2) to analyze the family medicine lectures in Turkey.

**Methods:** A standard questionnaire comprised of seven questions was administered to the medical teachers in 42 departments of Family Medicine. The questionnaire which was sent by e-mail contained questions about demographic data and an open question demanding the details of the lessons given by the medical teachers.

**Results:** Of the 122 medical teachers lecturing in 42 departments of Family Medicine, 99 (81%) responded the questionnaire. Forty-seven (47.5%) were male and 52 (52.5%) were female. The mean age±SD was 44.8±6.1. Of the medical teachers, 14 (14%) had no lectures at all, whereas 28 (28%) had lectures 10 hours or less a year. Medical school year distribution of lectures were: 1. year 42 (42%), 2. year 43 (43%), 3. year 49 (49%), 4. year 18 (18%), 5. year 10 (10%), 6. year 20 (20%). The teachers lecturing only one medical year were 33 (38%). The mean age±SD of hours of total lectures was 35.6±58.4 with the maximum hours observed at the third year with 9.9±22.5. The least lecture hours was at the fifth year with 1.4±7.6 (mean±SD) followed by the fourth year 1.9±6.8 (mean±SD).

**Conclusions:** There is a necessity for defining and implementing the minimum standards for undergraduate medical education in Family Medicine in Turkey.

Disclosure: No conflict of interest declared

586

Presentation type: Oral Communication

### A round robin faculty approach to a family medicine clerkship

T. Iroku-Malize, M. Delman, R. Bonanno, N. Philippe

*Family Medicine, Hofstra North Shore-LIJ School of Medicine, Long Island, United States*

**Objective:** To create an innovative family medicine clerkship experience for medical students incorporating multiple resources.

**Methods:** The Southside Hospital Family Medicine Residency Program faced a challenge with suboptimal clerkship feedback from the medical students.

The entire curriculum was redone. The main resource was the recently updated Society of Teachers of Family Medicine (STFM) clerkship manual. Sample curricula from across the United States and Canada were also reviewed. New teaching methods from the residency program were integrated into what is the “round robin” approach (students rotate through different faculty for various experiences).

Each student is completes a 4 week clerkship. For three weeks they are assigned to a family physician in the outpatient setting (Mondays, Wednesdays and Fridays). For one week they are assigned to the family medicine team working on the inpatient setting. On Tuesday mornings, they have a round table discussion on a clinical topic with one faculty and in the afternoons they participate in the simulation lab managing computerized patients with a team. On Thursday mornings they are involved in either grand rounds or the procedure workshop and on Thursday afternoons they have a family medicine career topic discussion as well as a student case presentation.

**Results:** Since the implementation of this revamped clerkship, the number of students applying to our program for residency training has increased and the program evaluation has improved.

**Conclusion:** The round robin approach of a family medicine clerkship is an appropriate tool for engaging students in undergraduate medical education.

Disclosure: No conflict of interest declared

763

Presentation type: Oral Communication

### Appraising Empathy among Medical Students: A Comparative Analysis using two different scales in a Brazilian Medical School

G. Moreto<sup>1</sup>, J. Aparecida Lira<sup>2</sup>, B. Dermendjian<sup>3</sup>, S. de Oliveira Pinto<sup>2</sup>, P. Gonzalez Blasco<sup>1</sup>

<sup>1</sup> *Scientific Department, SOBRAMFA – Medical Education and Humanism, São Paulo, Brazil;*

<sup>2</sup> *Medical School, Anhembi Morumbi University, São Paulo, Brazil;* <sup>3</sup> *Medical School, UNISA: Santo Amaro University, São Paulo, Brazil*

**Context:** While medical knowledge experiences quick technological progress, the doctor-patient relationship heads to impersonality. Empathy rises as an indispensable component for developing an efficient relationship regarding doctors and their patients, since it could be the bridge between evidence base medicine and a patient centered approach in practicing. Empathy scores can be measure through specific tools like the JSPE-Jefferson Scales of Physicians Empathy (evaluates the cognitive component of empathy in health professionals and medical students) and IRI- Davis Interpersonal Reactivity Index (multidimensional scale designed to measure both cognitive and emotional components of empathy).Appraising empathy in medical students, and its development or erosion, establishes a required issue in medical education.

**Objective:** To appraise empathy scores in medical students at the last years of medical school.

**Methods:** The JSPE and the IRI were applied simultaneously to 122 medical students from the last two years of a Medical School in São Paulo, Brazil. It was performed a comparative analysis between the scores achieved in both scales looking for possible connections.

**Results:** From the whole sample (122), when considering the JSPE, 61 students (51,6%) obtained scores above the 80% of the index maximum in this scale. However, just 10 students (8,6%) scored above the 80% of the index maximum when IRI-Davis was applied. No correlation was found when comparing those students who scored higher in both scales.

**Conclusion:** The disparity between the results in both scales, advises new approaches considering the emotional component of empathy are required for creating effective educational strategies.

Disclosure: No conflict of interest declared

851

**Presentation type: Oral Communication****Medical Student Experiences in Family Medicine: A global consensus**

A. Walsh

*Family Medicine, Wonca Working Party on Education, Hamilton, Canada*

**Objective:** The Wonca Working Party on Education (WWPE) was asked by the International Federation of Medical Student Associations (IFMSA) to develop a checklist for student experiences in family medicine.

**Methods:** WWPE members used an iterative process to develop a checklist focusing on principles in family medicine. A Delphi technique was used initially, with further review involving Wonca members and medical students. Responses were received from 15 countries and 5 continents.

**Results:** The checklist evolved to include broader experiences than clinical presentations and procedural skills. Incorporation of health promotion activities, patient advocacy, and communication components was considered important. Space to add experiences relevant to local context was included. The checklist is posted on the Global Family Doctor website.

**Conclusion:** The WWPE has developed a checklist for medical student experiences in family medicine. This will be one step in enabling student exchanges in primary care, jointly promoted by IFMSA and Wonca. The list also represents the WWPE global consensus on key experiences for medical students in a Family Medicine placement and could be used to facilitate curriculum development or evaluation.

Disclosure: No conflict of interest declared

907

**Presentation type: Oral Communication****Training undergraduates in family practices in Sri Lanka: Perception of trainers and trainees**

R. P. J. C. Ramanayaka, R. D. N. Sumanasekera, D. P. Perera, A. H. W. de Silva, L. A. C. L. Athukorala, K.A.T.Fernando

*Department of Family Medicine, University of Kelaniya, Ragama, Sri Lanka*

**Introduction:** Family medicine was included in undergraduate medical curricula since the 1980s. In Sri Lanka this consists of four weeks of clinical training at the University Family Medicine Clinic and three sessions with community-based Family Physicians.

**Methodology:** Descriptive study conducted on medical-students where they were given a self-administered questionnaire at the end of the 4<sup>th</sup> year.

Qualitative analysis of experiences of eleven Family Physicians in teaching undergraduates was obtained using in-depth, semi-structured interviews.

**Results:** Students (n=176) response rate was 97%. A majority of undergraduates had learnt the following at the family practices: identify common diseases (90%), early stages of diseases (89%), functions of a family doctor (90%), holistic approach (78%), management of chronic diseases (77%) and good communication skills (79%). Most students said family practices had **limited space** and only **aminimum of procedures** were conducted by the Family Doctors.

Main motivators for trainers were their love of teaching, altruistic reasons and continuing medical education due to engaging in teaching. Most stated that the consultation time was increased when students were present. Barriers to teaching were the limited time and attitudes of some undergraduates. Trainers highlighted that though the remuneration for teaching was poor, it was **not a barrier** for teaching. Most trainers agreed that they would benefit from more formal training on clinical teaching skills.

**Conclusions:** When revising the curricula, the student feedback needs to be taken into consideration to optimize their learning experience. The motivational factors and the barriers faced by trainers too need to be addressed when expanding the community-based family medicine trainers.

Disclosure: No conflict of interest declared

942

**Presentation type: Oral Communication****What learning outcomes are expected from a family medicine clerkship in Albania?**

E. Turkeshi

*Family Medicine, Faculty of Medicine, University of Tirana, Tirana, Albania*

**Objectives:** Healthcare reforms in Albania are strengthening primary care aiming to develop family medicine (FM), but undergraduate medical students have no exposure with primary care and the specialty of FM. International models of undergraduate medical education are increasing the exposure of medical students to primary care recognizing its unique learning contributions. This study aims to identify the expected learning contributions of a future FM undergraduate course (clerkship) in Albania.

**Methods:** As part of a needs assessment cross sectional study for a FM clerkship in Albania, a questionnaire survey of the final year medical students (148) at the Faculty of Medicine, University of Tirana included an open ended question on what did students expect to learn during a future FM clerkship, while a focus group discussion explored the expectations of future FM clerkship tutors (8).

**Results:** The majority of students in the survey (75%) responded to the open ended question providing a variety of expected learning outcomes grouped in 3 main categories: common medical conditions, principles of FM and roles of family physicians, communication and clinical skills. Future FM clerkship tutors identified similar areas of contributions in the focus group discussion.

**Conclusions:** Eventhough FM is still a new and unappreciated specialty in Albania, a FM clerkship is considered an important learning opportunity by graduating medical students not yet exposed to such a course. Their expectations are comparable with those of future clerkship tutors as well as recognized and validated as contributions of FM clerkships in other international studies.

Disclosure: No conflict of interest declared

1129

**Presentation type: Oral Communication****Preparing students for general practice: A mixed methods needs analysis**C.D. Pond<sup>1</sup>, J. Phillips<sup>1</sup>, M. Guppy<sup>2</sup>, N. Paterson<sup>1</sup>, G. Horton<sup>1</sup>, A. Dabson<sup>1</sup>, K. Sweeney<sup>3</sup>, D. Mutton<sup>1</sup>, M. Towie<sup>2</sup>

<sup>1</sup> *Discipline of General Practice, University of Newcastle, Newcastle, Australia;* <sup>2</sup> *Discipline of General Practice, University of New England, Armidale, Australia;* <sup>3</sup> *General Practice Training – valley to coast, General Practice Training – valley to coast, Newcastle, Australia*

**Objective:** This study aimed to investigate medical students' needs for preparation prior to General Practice placements, in the context of placements conducted as part of the university course leading to their medical degree

**Methods:** A mixed methods approach was followed, collecting information from over 100 student questionnaires and two focus groups, 130 GP supervisor questionnaires including GP registrars and two GP academic teleconference focus groups, involving academics from a number of universities.

**Results:** A number of issues of concern emerged. Students highlighted issues about personal safety and the need to know what to do when patients exhibited mental health problems or cried; GP supervisors highlighted the need for adequate clinical skills preparation and a perceived gap between what students are taught and how medicine is practised "in the real world"; GP academics expressed the need to explore methods of preparing students for undifferentiated patient presentations and to assist them in identifying what issues (particularly around lifestyle, prevention and health promotion) are actually being covered in a consultation that might seem to the student to be somewhat unstructured. A variety of possible ways of addressing these issues will also be discussed, including the need for adequate preparation of supervisors.

**Conclusions:** The value of General Practice placements might be enhanced by student preparation in a number of areas. The views of students, supervisors and academics can contribute to the curriculum for this preparation.

Disclosure: No conflict of interest declared

1226

**Presentation type: Oral Communication****MüGe: A web-based curriculum planning system for undergraduate medical education**Z. Akturk<sup>1</sup>, Z. Cansever<sup>2</sup>, M. Erdem Sagsoz<sup>3</sup><sup>1</sup> Family Medicine, Atatürk University Medical Faculty, Erzurum, Turkey; <sup>2</sup> Medical Education, Atatürk University Medical Faculty, Erzurum, Turkey; <sup>3</sup> Biophysics, Atatürk University Medical Faculty, Erzurum, Turkey

**Introduction:** Curriculum development is a highly demanding issue for medical educators. Even after the structure of the education is decided, the program outcomes are set, aims and objectives are made ready, there is a lot of way go during the timetabling. We developed a web-based curriculum planning system for the faculty of medicine at Atatürk University, Turkey. In this presentation we will aim to discuss the structure and basic features of MüGe and make a short demonstration.

**Methods:** Funded by the Scientific Research Projects Department of Atatürk University, we initiated a project on July 2011. Software production and hardware preparation finished by July 2012. The system is being test and planned to be utilized during the 2013-2014 teaching period.

**Main Features:** MüGe has the following functions:

1. Generation of a curriculum list
2. Feeding of aims/objectives for each lecture
3. Timetabling
4. Updating of Bologna Portal information
5. Collaboration with the question bank system
6. Student feedback collection
7. Reporting option for students, teachers, and administrators
8. Hosting of lecture materials and presentations

**Conclusion:** The web-based curriculum planning system is expected to aid the planning and improvement of undergraduate medical education.

Disclosure: No conflict of interest declared

1570

**Presentation type: Oral Communication****Innovation in health promotion education: Teaching nutrition to future physicians**

S. Pati

Indian Institute of Public Health Bhubaneswar, Public Health Foundation of India, Odisha, India

**Objective:** Despite concerns raised for expanding nutrition training in health professional education globally, its implementation is much left to be desired. The road to effective and efficient integration of nutrition in training of future physicians and allied health care providers is still unpaved in developing countries. This is especially important in India where both under and over nutrition are the prime causes of morbidity and mortality and pose considerable public health challenge. Present work is an innovative experiment in nutrition education for medical students. We attempted to provide nutrition education in first year when students get familiar to basic medical sciences with the objective of taking up nutritional inquiry when they enter clinical years.

**Methods:** Forty-four randomly picked first-year medical students were taught on dietary behavior with a grounding on principles of medical anthropology and behavioral health; basics of dietary intake assessment through FFQ. They calculated own anthropometrics, assessed self eating behavior from dietary intake analysis and compared the same with national dietary guidelines and recommendations. Next, using the data collected and consultations with registered dietitians working in hospital, they developed dietary prescriptions to improve their nutritional wellness. Subsequently, students practically applied the learnt skills to perform nutritional assessment and provide prescriptions to the patients.

**Results:** A significant difference in knowledge and attitude was observed among participants with demonstrated nutrition practice skills.

**Conclusion:** Teaching nutrition to medical students in first years of education could prepare them well to impart effective nutritional counseling and support to their patient in clinical years.

Disclosure: No conflict of interest declared

1740

Presentation type: Oral Communication

**Quaternary Prevention on medicine undergraduation: Challenges and possibilities**

J. Pedroso, F. Melchior, S. Batista, D. Hohl, G. Amorim, L. Reis

*Department of Internal Medicine, Federal University of Goiás, Goiania, Brazil*

**Objectives:** Report the experience of the subject “ Quaternary Prevention(P4): Diagnostic and Treatment Excess” performed at Medicine School of Federal University of Goiás.

**Methodology:** The course was devolved between October and December, 2012, as a 60 hours optional discipline on Medicine School of Federal University of Goiás, Brazil. Adhesion was made voluntarily with all over students belonging to health area and one journalism academic.

**Results:** Were discussed several thematics about the subject. Broadly, it appears strangeness on the first contact, but as the course unrolls, the importance and applicability of the subject becomes evident. Some lessons learned: P4 should be inserted on the routine of the learning, instead of on an isolated discipline(longitudinal axis); the P4 education has a great importance relation with the health system and, mainly, because of the Primary Health Care strength in this system; The learning of P4 must have his point on the student. The academics feedback at the end of the course shows that the concepts of quaternary prevention are trivial to new health professionals acquire hability to deal with,both preventive and curative, misplaced demands, and improve the transposition of the scientific knowledge to a increasingly individualized treatment, person-centered.

Disclosure: No conflict of interest declared

**2.10. QUALITY AND SAFETY**

1516

Presentation type: Workshop

**Are doctors different – do doctors need special healthcare services?**A. Rochfort<sup>1</sup>, Z. Ozvavic Adzic<sup>2</sup>, J. Gensichen<sup>3</sup>, M. Kay<sup>4</sup><sup>1</sup> *Doctors Health in Practice Program, Irish College of General Practitioners, Dublin, Ireland;*<sup>2</sup> *Department of Family Medicine, University of Zagreb, School of Medicine, Zagreb, Croatia;*<sup>3</sup> *Department of General Practice and Family Medicine, University of Jena, Jena, Germany;* <sup>4</sup> *Level 8 Health Sciences Building, The University of Queensland, Brisbane, Australia*

**Objective:** This symposium / workshop will explore the following concepts: Is illness in a doctor a special situation? Do doctors need special services and supports for their healthcare? Should undergraduate and postgraduate medical education include doctors' health and healthcare?

**Methods:** A series of presentations will be given from a panel of experts in the field of doctors' health, focusing on whether or not doctors need special healthcare services. The presenters will provide the stimulus for debate using examples of current services available for doctors in different countries and recognising the diversity of services that have emerged to address the health needs of doctors. Drawing upon the growing body of research and literature and increased provision of medical education on doctors' health and healthcare, the presentations will be followed by an interactive session that encourages input from delegates attending this session. Important questions such as: Can a doctor be their own doctor? Do doctors need to be specially trained to treat doctors? Should doctors be permitted to prescribe all medication for their own use?

**Results:** Participants will explore the concepts raised during the presentations and the subsequent interactive debate with the intention of highlighting doctors' responsibilities in providing safe and effective healthcare to their colleagues, recognising that doctors may require care for both mental and physical health problems.

**Conclusions:** In this interactive session, the audience will debate and discuss the issues above and will determine whether or not a doctor is a special patient in need of special care or not.

Disclosure: No conflict of interest declared

1535

Presentation type: Workshop

**Wonca Europe / EQuIP anniversary project: Patient Empowerment in Chronic Conditions**T. Eriksson<sup>1</sup>, A. Rochfort<sup>2</sup>, J. Gensichen<sup>3</sup>, I. Kunnamo<sup>4</sup>, C. Collins<sup>2</sup><sup>1</sup> EQuIP, Wonca Europe Network organisation, Copenhagen, Denmark; <sup>2</sup> ICGP, Irish College of General Practitioners, Dublin, Ireland; <sup>3</sup> Department of General Practice and Family Medicine, University of Jena, Jena, Germany; <sup>4</sup> EBMeDS, Duodecim, Helsinki, Finland

**Objective:** EQuIP is the Wonca Europe Network for advancing the quality and safety of patient care in European General Practice / Family Medicine (GP/FM) and is supported by Wonca Europe in a project on Patient Empowerment in Chronic Conditions (2012-2015). In recent years, a development in chronic condition management is the involvement of patients in their own care to improve outcomes.

**Methods:** Presentations will be given by EQuIP and project partners focusing on early findings of this Wonca Europe project including an overview of educational interventions for primary care health professionals designed to improve self-management in patients with chronic conditions. Clinical case vignettes will be used to stimulate debate among delegates from different countries to explore the clinical skills that can be used in primary care to enhance patient self management in chronic disease.

**Results:** This interactive session will explore practical, effective and efficient ways to support patient empowerment and patient engagement in chronic disease self management in primary care.

**Conclusions:** Patient empowerment and promotion of patients' active involvement in their own healthcare was adopted as the 12<sup>th</sup> Characteristic of European General Practice by Wonca Europe in 2011. This workshop will disseminate information on the ongoing Wonca Europe Anniversary project and will input into the project to assist in coordination of education for GPs/FPs and Practice Nurses so that they can effectively and efficiently empower patients to improve their self manage of chronic conditions (non-communicable disease) in order to improve patient outcomes.

Disclosure: No conflict of interest declared

2005

Presentation type: Workshop  
WONCA Working Party on Quality and Safety in Family Medicine**Workshop on Quality and Safety in Family Medicine**

Convener: D.M. Thuraiappah

**Topic: Professional Health****How do Malaysian Primary Care Physicians Take Care Their Health?**D.M. Thuraiappah<sup>1</sup>, M.H. Tin<sup>2</sup><sup>1</sup> Academy of Family Physicians Malaysia and MAHSA University, Malaysia; <sup>2</sup> Academy of Family Physicians Malaysia and International Islamic University, Malaysia (Kuantan campus)

**Introduction:** Altruism and self-governance take on new urgency and new meaning with reference to the high rate of burnout, depression and suicide within the profession. Healthy physician's lifestyle must lead the way towards optimal care to the patients.

**Objective:** To assess the health of primary care physicians (PCPs) in Malaysia.

**Methods:** A cross sectional descriptive study was conducted among 112 Malaysian primary care physicians/general practitioners in 2012. Health problem of the participants, treatment seeking perception and behaviour of having an own family medical doctor for their own family, were assessed by using a pre-tested self administered questionnaire.

**Results:** Out of 112 family physicians (ages from 30-60 years old), 40% of them had at least one medical problem within 5 years. Among them, 19% (21/112) had chronic medical diseases. Self-medication with analgesic was 73%, antihistamine 86%, antibiotics 79%, non-steroidal anti-inflammatory drugs (NSAID) 59%, anti-hypertensive 6.2%, anti-diabetic 3.6%, anti-lipid 11.6% and self- investigations 88%. Having a regular personal doctor, consulting with another doctor were 17% and 34% respectively. 50% kept a problem list for themselves and their families and perceived that a personal physician is needed for self (48%) and their family (74%).

**Conclusions:** This study revealed many new findings that fell short of altruism and self-governance among PCPs in Malaysia. Although PCPs advocated each family should maintain one family physician, they themselves did not observe their own advice. Management of their own health went against objectivity of care. Further studies are needed to discover the reasons for these perceptions and behaviour.

**Reference**

1. Thomas Cole, Thelma Goodrich & Ellen Gritz: "Faculty Health in Academic Medicine", Humana Press – a part of Springer Science+Business Media, LLC 2009

**Topic: Book of tools****Quality in Family Practice Book of Tools**

C. Levitt, L. Hilts

*Department of Family Medicine, Faculty of Medicine Macmaster University, Canada*

**Purpose:** To review the published and HTML version of the Quality in family practice Book of Tools (QBT) The book is a uniquely Canadian quality improvement tool with helpful web-based links and indicators designed to improve quality and safety in family practice. The QBT was developed using a rigorous scientific methodology, resulting in a comprehensive compendium of categories, subcategories, indicators and criteria

**Methodology:** The scientific process to develop the book involved a literature review, international review of other quality tools, pilot testing in two phases, modified Delphi and rewrite with revisions. The book, published in November 2010, is available for free download or purchase. To best use the Quality tool we developed an open access HTML electronic version with a unique URL, creative commons copyright, log-in/sign-in membership designed to help monitor interest and network family practices using the book.

**Results:** The purple and yellow sunflower metaphor is used for the Quality book. There are 8 Categories, 70 Indicators (43 practice management and 27 clinical), 188 Criteria and 198 links to Further Information..

**Conclusions:** The QBT is both a published book and an electronic, HTML version, easy to navigate, free Quality Book of Tools version is demonstrated at [www.qualitybookoftools.ca](http://www.qualitybookoftools.ca).

**Topic: Behaviour change****Changing Physician Behavior to Achieve Quality Goals: Using Motivational Techniques for Differing Generational Physicians**

J. Sayre

*Mayo Clinic, USA*

Changing Physician Behavior to Achieve Quality Goals: Using Motivational Techniques for Differing Generational Physicians

An essential yet challenging element in the creation of any quality project is the ability to change physician behavior. Previous experience with quality project direction has shown that changing physician behavior is one of the most difficult tasks, yet one critical to project success. Previous techniques to achieve physician behavior change have included peer pressure, mandates, economic incentives and disincentives, education, competition, and appeals to professionalism. With the exception of economic incentives, most of these tactics have been shown to produce minimal and short-lived results in effecting physician behavior change. Motivational interviewing techniques, however, have been used in non-medical settings and have been shown to effect change in personnel behavior. This technique also has been used clinically to effect changes in patient behavior.

Many physicians are familiar with the technique of motivational interviewing to influence patient behavior. Using the motivational change first described by the Prosci Research Corporation in 1998, this project has incorporated these industrial techniques to influence physician behavior. This approach uses ADKAR:

- Awareness of the need for change;
- Desire to participate and support the change;
- Knowledge on how to change;
- Ability to implement required skills and behaviors; and
- Reinforcement to sustain the change.

Rather than using a generic motivational behavior change model, the change message needs to be tailored to the prospective audience. By tailoring the message to the specific audience, focusing on their goals and values, a more effective message is delivered.

The current United States physician workforce is made up of three generations: Baby Boomers, Gen-X, and the Millennials. Each generation possess differing values, career goals, priorities, and dynamics. This presentation will discuss the unique communication styles that are required to influence behavioral change in these divergent groups.

**Reference:**

Improving Hypertension Control in Diabetes: A Multisite Quality Improvement Project That Applies a 3-Step Care Bundle to a Chronic Disease Care Model for Diabetes With Hypertension

Mark E. Lindsay, et al



**Topic: Standards****Practice standard in primary care: Initiation of continuing quality improvement programme for general practitioners in Myanmar**

M.H. Tin, T. aye<sup>2</sup>, W. Zaw<sup>2</sup>, T. Tin Hla<sup>2</sup>, L. May Oo<sup>2</sup>, S. Aung<sup>2</sup>,  
D.M. Thuraiapparh<sup>3</sup>, E. Kay Khaing<sup>2</sup>

<sup>1</sup> Academy of Family Physicians Malaysia and International Islamic University, Malaysia;

<sup>2</sup> General Practice Society, Myanmar Medical Association; <sup>3</sup> Academy of Family Physicians Malaysia and MAHSA University, Malaysia

**Aim:** Sharing the experiences of Continued Quality Improvement (CQI) Programme for general practitioners / primary care physicians in Myanmar

**Background** of the Continuous Quality Improvement programme (Myanmar) for general practitioners/primary care physicians: Myanmar General Practitioners' society (MMA-GPs) conducted a survey in 2010 to assess the knowledge and perception of the general practitioners in order to design a relevant continuous quality improvement (CQI) programme for them. Its findings, acceptable knowledge on CQI programme and high perception of the GPs encouraged setting off the CQI programme for general practitioners in Myanmar.

**Implementation** of CQI (Myanmar): In 2012, the CQI (Programme) was introduced among 108 private general practitioners' clinics from selected six townships by MMA-GPs. There are three phases; the phase-1 is carrying now out in 2012-2013; total 55 essential items and 127 optional items will be installed in the clinics under CQI programme to meet a standard practice environment and the facilities in line with the private health care services laws (2007) set by Ministry of Health. The phase-2 of CQI programme includes support to adhere the clinical practice guidelines, participation in preventive and screening programme, and engagement in post-graduate family medicine education. In phase-3, the quality services of CQI clinics will be set based on patient centre approach. The plan of phase-2 and phase-3 will be continued under the light of the findings of its phase-1 evaluation. Out-comes and constraints of the implementation of CQI (Myanmar) programme will be discussed with international participants to improve it. (WC- 273)

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**Presentation type: Oral Communication****IHI Collaborative Approach used in Health Centers in Jordan**

Oraib Alsmadi<sup>1</sup>, M. Tarawneh

<sup>1</sup> Family Medicine, Ministry of Health, Amman, Jordan; <sup>2</sup> Family medicine, Royal Medical Services, Amman, Jordan

**Objective:** To improve quality of services in PHC through shared learning, continuous monitoring, on-site coaching and regular communication to assist health centers in achieving the Health Care Accreditation Council/PHC Accreditation Standards.

**Background:** IHI Collaborative Improvement approach is known quality improvement approach created by Institute of Health Care Improvement in many countries; the Collaborative are designed to address a specific problem common to the Health Centers.

**Methodology:** HCAC /PHC Accreditation Standards. Contain 8 clusters, every two months, the participating Health Centers come together, share challenges, exchange ideas for solutions and learn from their peers on what works. The bi-monthly meetings also serve as opportunities to recognize each other's achievements in addressing performance issues. Since the Improvement Collaborative approach requires 18 months each 6 months the participated Centers will be assessed, all of the Health Centers that have participated in the Improvement Collaborative assessed and all of them get the HCAC accreditation certificate.

**Results:** The Collaborative started in July 2010; the first assessment done by Health Care Accreditation Council surveyors for the first two clusters with very significant improvement in achieving the standards and the second assessment for 4 clusters, was more positive, the final assessment was in April 2012, the mock and final survey conducted in June-July 2012.

**Conclusion:** MOH can use results in designing strategies to improve the Improvement Collaborative process, and assume full management responsibilities for their related collaborative to prepare all Health Centers for accreditation.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Adherence to guidelines for treatment of lower urinary tract infection in out-of-hours primary care settings: The role of simple intervention**Z. Klemenc-Ketis<sup>1,2</sup>, J. Kersnik<sup>1,2</sup><sup>1</sup> Department of family medicine, Medical School, University of Ljubljana, Ljubljana, Slovenia;<sup>2</sup> Department of family medicine, Medical School, University of Maribor, Maribor, Slovenia

**Background:** The guidelines for treatment of different medical conditions foster quality of patient management. Previous studies showed that the adherence to such guidelines in primary care is low, but not many data on this subject exists in terms of out-of-hours primary care. A recent study in Slovenia showed low adherence to treatment guidelines in patients with lower urinary tract symptoms (LUTI) in out-of-hours care (OOHC).

**Aim:** Aim of this study was to determine whether a simple intervention could foster adherence to treatment guidelines in women with uncomplicated LUTI in OOHC.

**Method:** This prospective intervention study was conducted in OOHC in Slovenia. We included 14 OOHC walk-in centres; seven were assigned to the intervention group and seven to the control group. Each centre ought to include 10 consecutive consultations with eligible patients. The centres in the intervention group received a poster with a schematic presentation of LUTI treatment guidelines which was hanged on the wall.

**Results:** A final sample consisted of 118 (84.3%) female patients. Mean age of the sample was 43.2 ± 17.3 years. Intervention group consisted of 64 (91.4%) patients with mean age 40.2 ± 16.4 years and the control group consisted of 54 (77.1%) with mean age 46.7 ± 17.8 (p = 0.043). Treatment guidelines were followed in 42 (41.6%) patients; in 32 (53.3%) in the intervention group and in 10 (24.4%) in the control group (p = 0.004).

**Conclusion:** A simple intervention can significantly enhance the adherence to treatment guidelines in patients with LUTI managed in OOHC.

Disclosure: No conflict of interest declared

416

**Presentation type: Oral Communication****Effects of a cultural intervention on patient safety in Dutch general practices**N.J. Verbakel<sup>1</sup>, D.L.M. Zwart<sup>1</sup>, M. Langelaan<sup>2</sup>, C. Wagner<sup>2</sup>, Th. J.M Verheij<sup>1</sup><sup>1</sup> Julius Center, University Medical Center Utrecht, Utrecht, Netherlands; <sup>2</sup> NIVEL, Netherlands institute for health services research, Utrecht, Netherlands

**Objective:** Assessing the effectiveness of patient safety culture interventions in general practice.

**Methods:** Thirty practices participated in a three-armed pragmatic controlled trial. The two intervention arms both completed a patient safety culture questionnaire. Intervention arm I (AI) could download their results. Intervention arm II (AII) additionally participated in a workshop based on their questionnaire results. The workshop aimed at facilitating dialogue among staff on patient safety in their practice in order to compose a practice specific action plan on patient safety improvement. First results of both interventions were evaluated by interviewing participants on any follow-up actions after the intervention. Facilitators and barriers were explored.

**Results:** Eighteen practices were interviewed, nine in both arms (size: 4-20 healthcare professionals). Fifteen practices reported progression, such as conducting a first incident reporting week, actual incorporating patient safety as a theme in their regular practice meetings, stickers on glass doors and implementation of protocols. Four practices had not taken any action (AI: n=3; AII: n=1). All but one practice of AII explicitly reported raised awareness among staff. The action plan (AII: n=4) and the questionnaire (AI: n=2) were seen as facilitators. Lack of time, sickness and holidays were mentioned as barriers.

**Conclusions:** Both safety culture interventions engaged participants in patient safety. However, the workshop group showed more enthusiasm and reported bigger steps in actual patient safety improvements in their GP practice.

Disclosure: No conflict of interest declared

860

Presentation type: Oral Communication

### Influence of patient characteristics on quality indicators scores for diabetes care in general practice

M. Nielen, J. Korevaar, R. Verheij

General Practice, NIVEL (Netherlands Institute for Health Services Research), Utrecht, Netherlands

**Objective:** Quality indicators are often used to estimate quality of care for diabetes patients in primary care. In the Netherlands, indicator scores are compared between general practices without taking differences in composition of the patient population into account. Therefore, we studied the influence of patient characteristics on quality indicator scores.

**Methods:** We selected 10,832 patients with diabetes mellitus from 62 general practices of the Netherlands Information Network of General Practice (LINH) in 2011. A set of 14 quality indicators was used including measures of HbA1c, blood pressure, LDL cholesterol, total cholesterol, body mass index, kidney function and smoking status. Indicator scores were associated with patient characteristics (age, gender and comorbidity) with multilevel logistic regression analyses.

**Results:** All 14 quality indicators were associated with at least one patient characteristic ( $p < 0.05$ ). For instance, the chance of getting a blood pressure measurement was higher for older patients (OR=1.6 for 46-64 years, OR=2.4 for 65-74 years and OR=2.9 for  $\geq 75$  years (reference: 18-45 years)), patients with hypertension (OR=1.6) and hypercholesterolemia (OR=1.3), but lower for patients with retinopathy (OR=0.6). The chance of having a blood pressure below 140 mmHg was higher for patients with a cardiovascular diseases (OR=1.2) and a psychological disease (OR=1.1) and lower for patients with hypertension (OR=0.5) and retinopathy (OR=0.7), but also for older patients (OR=0.5 for 46-46 years, OR=0.4 for 65-74 years and OR=0.3 for  $\geq 75$  years).

**Conclusions:** Quality indicator scores are related to patient characteristics, such as age and presence of comorbidity. For a good comparison of indicator scores between general practices case mix correction is needed.

Disclosure: No conflict of interest declared

1153

Presentation type: Oral Communication

### Waiting time in a consultation and factors associated with it in primary care clinics

S. Hoosein, W. Qidwai, K. Nanjiani

Family Medicine, Aga Khan University Hospital, Karachi, Pakistan

**Introduction:** Delays are expensive not only in terms of the direct costs they incur, but also in terms of the potential costs of decreased patient satisfaction. The aim of this study was to assess the actual time patient spends in waiting and the factors associated with it.

**Methods:** A cross sectional study was conducted on a sample of 100 patients visiting the Community Health Centre clinics of the Aga Khan University Hospital. The survey included self-reported information on waiting time, its reasons and recommendations to reduce it. The data was entered and analyzed using SPSS version 19.

**Results:** The total mean waiting time found in this study was 66 ( $\pm 33$ ) minutes in a single consultation. Various factors were identified as a reason for delays. Doctor's involvement with other patients was perceived as the major reason for delay by 48.6% patients. Approximately 20% patients responded that one of the reasons for delays is due to the non-presence of doctors in their specific rooms. While 12% said that delay in files provision as a cause of delay in service by doctors. Seventy percent patients were satisfied with the time spent in usual care and 15% recommended that doctors should limit time with each patient.

**Conclusion:** The study results suggest that doctors should prioritize and limit their time according to the patient's condition, while ensuring their timely availability in clinics. Further studies can be carried out to evaluate the effectiveness of the strategies implemented to reduce the waiting time in consultations.

Disclosure: No conflict of interest declared

1214

Presentation type: Oral Communication

**Comparison of quality and content of Violence Guidelines for the health sector; Reflections for primary care**İ. Yaşar<sup>1</sup>, R. Kahveci<sup>1</sup>, İ. Kasım<sup>1</sup>, İ. Şencan<sup>1</sup>, M. Heybet<sup>1</sup>, A. Özkara<sup>2</sup><sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Workplace violence (WV) is defined as „Incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health“. WV –both physical and sychological- has recently drawn attention as the incidence has been increased due to several environmental and physical factors. WV has become a global problem and health sector is at major risk. Promotion of violence free work-place requires contribution of several stakeholders such as health policy-makers, providers, professionals and patients. Many countries create guidelines for understanding the cause of the problem, preventing workplace violence and building up solutions for it. Although Turkey has the same issues, no related guideline is available. This study aims to compare quality and content of international WV guidelines for the health care sector, and run a preliminary study to produce optimum guideline for Turkey.

**Methods:** A broad literature review will be done to find international guidelines for violence in health care. The quality of guidelines will be evaluated with AGREE instrument which is an internationally recognized tool for this purpose. The validity of the content of guidelines will be evaluated by a group of experts in the field by qualitative approach.

**Results and Conclusions:** This study is still running and the results are planned to be presented in WONCA Prag meeting. The comparison of these guidelines are expected to be of interest for the international community and the new draft guideline useful for Turkey.

Disclosure: No conflict of interest declared

1225

Presentation type: Oral Communication

**European Patient safety in rural primary care – joint EURIPA, EQuIP Initiative – part of the Linnaeus Network**John Wynn-Jones<sup>1</sup>, Tina Eriksson<sup>2</sup>, Oleg Kravtchenko<sup>1</sup>, Christos Lionis<sup>1</sup>, Zsuzsanna Farkas-Pall<sup>1</sup>, Tanja Pekez-Pavlisko<sup>1</sup>, Sophie Corbett<sup>1</sup>, Evangelos Drosos<sup>1</sup>, Jean Pierre Jacquet<sup>1</sup><sup>1</sup> EURIPA, WONCA Europe, Institute of Rural Health, Newtown, Powys, United Kingdom;<sup>2</sup> EQuIP, WONCA Europe, Att DSAM, Copenhagen, Denmark

**Objective:** EURIPA, EQuIP and the Linnaeus European Patient Safety Network have formed a partnership to address the issue of patient safety in rural Europe. This ongoing collaboration has carried out a review of the literature and is developing a toolbox to improve patient safety in rural practice, including:

1. Ways to report, process and learn from medical error – an Education Guide adapted for local rural practices for use with reporting tools
2. A way to asses and improve safety culture – using a rural adapted the MAPSAF instrument
3. Ways to involve patients in patient safety issues in rural practice

**Methods:** This joint workshop (EQuIP, EURIPA/Linnaeus) will describe the general progress by the Linnaeus Project. Anticipated outcomes will include:

1. Presentation and dissemination of the progress to date
2. Discussion on amendments in light of the discussion during the workshop
3. Promotion of concept and principles of patient safety
4. Presentation of methods ensure patient safety in rural practice
5. Demonstration of the importance of WONCA Europe networks working together to achieve greater goals through collaboration and sharing aspirations

**Conclusions:** All doctors have a moral and professional responsibility to ensure that the healthcare they provide is safe and that patients do not incur any adverse consequences as a result.

Disclosure: No conflict of interest declared

1438

**Presentation type: Oral Communication****Quality of non-steroidal anti-inflammatory agents prescription in the elderly**R. Carvalho, L. M. Santiago, C. Matias, A. R. Simões, P. Miranda, P. Botas, M. G. Neto  
*Centro de Saúde de Eiras, ACES BMI, Coimbra, Portugal***Objective:** Evaluate the quality of NSAIDs prescription in the elderly.**Methods:****Population:** half of patients aged 65 to 84 who had an appointment at our Health Centre from 01.01.2012 to 17.01.2012 (1<sup>st</sup> assessment period) and from 01.05.2012 to 17.05.2012 (2<sup>nd</sup> assessment period).**Data source:** electronic clinical process.**Data analysis:** growth dynamics ( $\Delta$ ).**Evaluation type:** internal, between-peers and retrospective.**Quality criteria:**

- 1 – Prevalence of NSAIDs prescription in the elderly;
- 2 – Naproxen prescription;
- 3 – Nimesulide prescription;
- 4 – COX-2 inhibitors prescription;
- 5 – NSAIDs prescription in patients with medical contraindications to its use;
- 6 – NSAIDs prescription in patients at risk of drug interactions with them;
- 7 – NSAIDs association;
- 8 – „No objection“ to NSAIDs prescription.

**Intervention:** oral presentation at service meeting on NSAIDs theoretics and first assessment period data.**Intervention goal:** 20% general improvement (increase on criterion 2; decrease on further criteria).**Results:** Sample: 241 and 258 patients, on 1<sup>st</sup> and 2<sup>nd</sup> assessment periods. Criteria growth dynamics: 1 –  $\Delta$  -9.3%; 2 –  $\Delta$  20.5%; 3 –  $\Delta$  -48.3%; 4 –  $\Delta$  75.5%; 5 –  $\Delta$  7.1%; 6 –  $\Delta$  -15.4%; 7 –  $\Delta$  -30.9% and 8 –  $\Delta$  -17.3%. Intervention goal was achieved on criteria 2, 3 and 7. Criterion 4 had substantial worsening.**Conclusions:** There is still need to improve the quality of NSAIDs prescription in the elderly, particularly regarding COX-2 inhibitors. In future works different intervention strategies should be considered and reasons for the high prescription of COX-2 inhibitors in elderly could be explored.

Disclosure: No conflict of interest declared

1559

**Presentation type: Oral Communication****The views of rural women and health professionals on continuity of maternity care in Tasmania, Australia**H. Hoang, Q. Le  
*Rural Health, University of Tasmania, Launceston, Australia*

This study investigates Tasmanian rural women's and health care professionals' experiences and views of continuity care.

A mixed-method approach using a survey questionnaire and semi-structured interviews was adopted. Women who have had rural childbirth experiences from six Tasmanian rural communities and health professionals who are maternity care providers and are currently employed by the health system in Australia were invited to participate in the study to explore women's experiences and views on continuity of care.

The survey found that rural women who gave birth more recently are less likely to experience continuity of carers. Therefore, it affects their views on continuity of care and their satisfaction with antenatal care. The interviews confirm the survey results. Three main themes emerged from the interview data, namely continuity of care; public health care system and continuity of care; and quality of care.

Both health professionals and rural women believed in the benefits of continuity of carers as it helps women build up trust and relationship with the caregiver. Having various health professionals has been linked with inconsistency of care, impersonal care and mismanagement of information. However, the majority of health professionals and rural women believed that it was almost impossible to have continuity of a main carer in the public hospital system. Women paid more attention on the quality and consistency of care rather than carer. Health care system should take into account these views in order to provide care which satisfies both health professionals and women.

Disclosure: No conflict of interest declared

## 2.11. RURAL CARE

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**Presentation type: Workshop  
EURIPA**

**The needs of and the solutions for rural practice in European countries:  
Our national points of view**

J.M. Lopez-Abuin, C. Lionis, EURIPA International Advisory Board members

<sup>1</sup> EURIPA, *European Rural and Isolated Practitioners Association*; <sup>2</sup> *Institute of Rural Health, Spain*; <sup>3</sup> *EURIPA International Advisory Board, Greece*; <sup>4</sup> *Clinic of Social and Family Medicine, Faculty of Medicine, University of Crete*

The European Rural and Isolated Practitioners Association (EURIPA) has recently established its own International Advisory Board (IAB) inviting all the European Family Practice National Associations to bring a rural representative to the IAB in order to receive a stronger input from the European rural General Practitioners at their own national levels. In addition, EURIPA is committed from 2009 to develop a pan-European Rural Health Strategy for Europe, which requires a closer approach at the local and national level before completing the conclusions of this strategy.

The purpose of the workshop is to allow the opportunity for General Practitioners to discuss from their point of view and experience what is required in order to improve Rural Health at their local and national level to the planned pan-European Rural Health Strategy of EURIPA, with the aim of combining local needs and solutions with the global strategy.

All the members of the IAB will be invited to bring their own needs and solutions, as well as their proposals for improvement for the 4 areas that EURIPA has targeted for the Rural Health Strategy: Education, Quality, Research, and Policy-making. The first part of the workshop will consist of brief five-minute presentations from the IAB members of previously agreed questionnaires, followed by a general interactive discussion which will provide their national suggestions for a consensus at the global European Rural Health Strategy.

Disclosure: No conflict of interest declared

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**Presentation type: Workshop  
EURIPA**

**How do out-of-hours and emergency care affect recruitment and retaining of the workforce in Europe, 2013**

O.V. Kravtchenko, T. Pekez-Pavlisiko

*EURIPA, European Rural and Isolated Practitioners Association*

**Objective:** The research project is supported by WONCA Europe and deals with the evaluation and country-to-country comparison of the role of out-of-hours and emergency care in cross-section of different European rural locations as part of the human resources policy, strategy and workforce retention.

**Aims:** The workshop is a follow-up to the previous workshops during the WONCA Europe conferences in Warsaw, Sept. 2011, and in Vienna, July 2012. It was agreed upon then that there was a need to collect more data on different approaches to out-of-hours/on-calls and emergency care practices in rural locations across Europe.

The main question at the above mentioned workshops in Warsaw and Vienna was if there were significant differences in organizing and conducting out-of-hours/on-calls and emergency care practices in different European rural locations. The feedback during the interactive group work suggested that there were some differences in the organization and practical application of such activities from country to country.

We have planned the quantitative observational study in a range of rural locations across Europe (Norway, Switzerland, the Netherlands, Romania, the U.K., Poland, Sweden, Portugal, Spain and Croatia). There was prepared a questionnaire, which has been translated into different relevant European languages, adjusted in the way universal to all European cultural contexts and distributed among rural GPs in the above mentioned countries.

We expect to be able to present the initial outcome of the study during the EURIPA workshop in Prague and perhaps get some feedback from the audience during the interactive part of the workshop. We are also going to discuss the role of research in the everyday rural practice.

**Materials and methods:** The moderator will present the theoretical background and the preliminary results of the study. The participants then will be divided into 2-3 different groups to discuss the above mentioned data, to share their personal experiences and understanding of the topic and to develop the mutual European strategy.

**Results:** Both experience and literature surveys intend to recognize the out-of-hours and emergency care as a critical point in everyday medical practice in general practice and in hospitals. It also seems to be one of the most vulnerable areas both for doctors and their patients.

**Conclusions:** The creating of rural proved standards in out-of-hours and emergency care as well as rural research projects could play an important role in recruiting and retaining of the workforce in rural locations.

Disclosure: No conflict of interest declared

2016

**Presentation type: Workshop**  
**Wonca Working Party on Rural Practice**

**Developing a Rural Strategy for European Family Medicine/General Practice**

J. Wynn-Jones

*Keele University & Institute of Rural Health, UK ([Johnwj@irh.ac.uk](mailto:Johnwj@irh.ac.uk)), President EURIPA*

Rural practice provides doctors with the opportunities to practice holistic, family based health care. It is often the case that the rural setting leaves the GP as the sole provider of health care in sparsely populated and isolated communities.

Rural GPs need to develop an extended range of clinical, communication and social skills in order to provide safe and high quality care. They must also have an intimate knowledge of their families, the occupations of their patients, environmental hazards and an up to date knowledge of medical science and technology. Recruitment and retention is a growing threat across Europe to rural health care provision and we are faced with an aging medical workforce who are soon approaching retirement. Rural practice needs to be promoted as an attractive and positive career option in Europe. Europe has a strong heritage in General Practice/Family Medicine and many of the early models originated in European Countries. Europe has a significant rural population (approximately 30 to 40% of the European Community Citizens live in rural areas) with 45% of the land mass is used for agriculture and 35% forested.

Europe has lagged behind countries such as Australia, Canada and the USA in addressing the health needs of its rural populations. For those living in inaccessible locations on the periphery of care access to quality health care can be problematic and limited. EURIPA (European Rural and Isolated Practitioner's Association) was established in Palma Mallorca in 1997 to represent rural practitioners across Europe. EURIPA has grown over the years and is now one of the core network organisations of Wonca Europe.

While some countries in Europe have made significant strides in recognising rural health and rural practice as distinctive academic disciplines and health care challenges, others have done little to meet the needs of their often sizable rural populations. EURIPA believes that quality health care should be a basic right for all rural populations. In 2009, EURIPA launched its proposal to develop a rural health strategy for Europe. The 4 themes include:

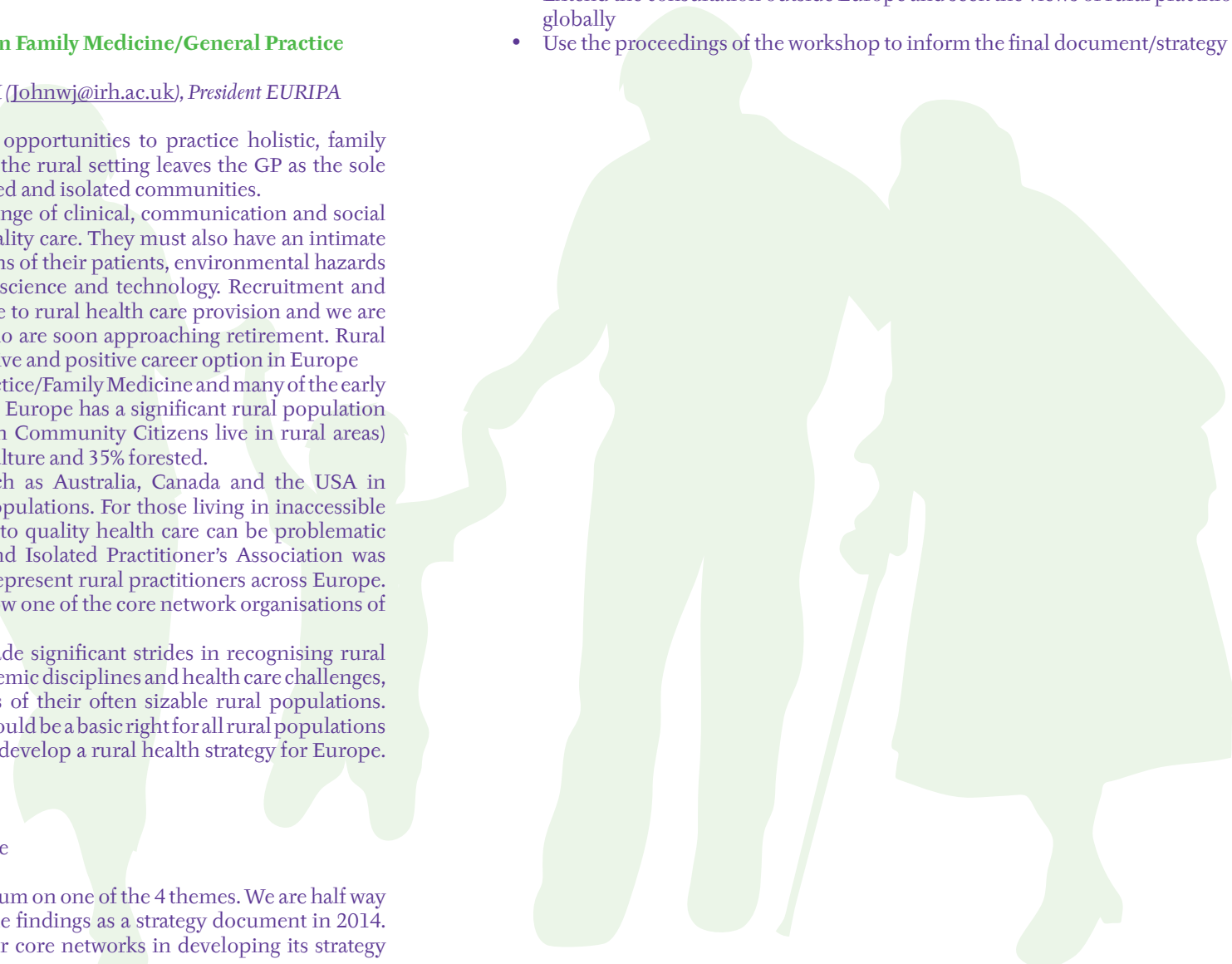
- Quality in rural practice
- Research
- Education and training for rural practice
- Engagement with policy makers

Each year EURIPA hosts a Rural Health Forum on one of the 4 themes. We are half way through the process and aim to publish the findings as a strategy document in 2014. EURIPA has worked closely with the other core networks in developing its strategy (EGPRN, EURACT & EQuIP)

The workshop will present the progress to date. Three presentations will be delivered on Quality, Research and Education. This will be followed by an open discussion.

The project aims include:

- Bring those attending up to date with this important project and its progress
- Extend the consultation outside Europe and seek the views of rural practitioners globally
- Use the proceedings of the workshop to inform the final document/strategy



**2021****Presentation type: Workshop**  
**Wonca Working Party on Rural Practice****Increasing Access to Health Workers in Remote and Rural Areas**

I. Couper

*University of the Witwatersrand, Johannesburg, South Africa (Ian.Couper@wits.ac.za)*

The Wonca Working Party on Rural Practice, formed in 1992, believes there is an urgent need to implement strategies to improve rural health services around the world. This will require sufficient numbers of skilled rural family doctors to provide the necessary services. In order to achieve this goal, there is a need to develop and implement strategies to ensure recruitment and retention of physicians and other health workers in rural areas.

In 2010, the World Health Organization (WHO) launched a new set of guidelines entitled Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention. This was the first time that the WHO had specifically addressed the issue of rural health services and the challenges they face. A number of members of the Wonca Working Party on Rural Practice were involved in the core guidelines group that developed this document, which will be up for review in 2013.

The guidelines provide an excellent, evidence-based set of strategies that should be considered by countries and bodies engaged in rural health workforce issues. The recommendations are structured into 4 categories, viz. educational, financial, regulatory and personal and professional support.

The purpose of the workshop is for participants to consider what recommendations could be implemented in their contexts, and how this might be done, as well as to identify gaps that should be addressed in any review of the recommendations.

This workshop will begin with a presentation of the WHO recommendations.

This will be followed by interactive discussions on each of the set of recommendations in smaller groups, which will then be shared in plenary. The workshop will conclude by seeking agreement on some proposals for Wonca affiliated groups going forward.

**2022****Presentation type: Workshop**  
**Wonca Working Party on Rural Practice****The importance of using Social Media in Rural Medicine**

R. Gomez Bravo, C. Lygidakis, S. Begg, E. McPhee, M. Sattler, R. Zoitanu, S. Rigon, N. Harris, S. Cherry, S. Maroto

**Objective:** To analyse the importance, impact and use of Social Media among rural professionals worldwide.

**Methods:** The confluence of social media (SM) and medicine has many benefits, but isolated and rural Family Physicians are still not taking advantage of the opportunity to create this virtual network and to reach their patients and colleagues on the online community that has formed around SM websites to take medical interests forward.

We will offer a basic workshop on SM tools through real examples developed by rural doctors, who are reducing isolation and making rural areas more attractive thanks to it. We will also discuss about the 3 social media obstacles that they face normally underlying the opportunities that each one present: risk, education and time, trying to find out the benefits outweigh the costs.

**Results:** SM and technology are providing a new way of Communication between professionals and patients, P2P. How to use it and how to design these strategies to improve communication, health outcomes, health quality and equity is possible but we are dealing with a lack of knowledge in our professional network on how to use these tools for communication, for developing skills, participation and engagement, what are the legal regulations, opportunities and benefits of using them.

**Conclusions:** SM has a huge potential in Primary Care and EURIPA-VdGM in collaboration with other Young Movements and rural SoMe experts will show how can be used by GPs to strengthen organizations, their practice or how to use it as a tool for patients.



2025

**Presentation type: Workshop**  
**Wonca Working Party on Rural Practice**

### Educating Rural Family Doctors for the Generations

R. Strasser

*Northern Ontario School of Medicine, Canada (strasser@nosm.ca)*

The Wonca Working Party on Rural Practice, formed in 1992, believes there is an urgent need to implement strategies to improve rural health services around the world. This will require sufficient numbers of skilled rural family doctors to provide the necessary services. In order to achieve this goal, the Working Party recommends: Increasing the number of medical students recruited from rural areas; Substantial exposure to rural practice in the medical undergraduate curriculum; Specific flexible, integrated and coordinated rural practice vocational training programs; Specific tailored continuing education and professional development programs which meet the identified needs of rural family physicians; Appropriate academic positions, professional development and financial support for rural doctor-teachers to encourage rural research and education.

During the 20th century, large urban-based teaching hospitals dominated medical education around the world. In this context, most medical graduates aspired to urban specialist medical careers.

When compared to their metropolitan counterparts, rural practitioners carry a heavier workload, provide a wider range of services and carry a higher level of clinical responsibility in relative professional isolation. These characteristics hold true for all rural practitioners whether they are doctors, nurses, pharmacists or other health workers. Also, as rural practitioners are members of the community that they serve, they have a significant public health role which may range from issues such as clean water and sanitation to community health education.

Initially, the development of rural clinical placements by medical schools was driven by the workforce imperative. The expectation was that experience in rural settings would encourage a future interest in rural practice. Subsequently, research evidence demonstrated that this expectation was justified. Studies have shown that the three factors most strongly associated with entering rural practice are: 1. a rural background; 2. positive clinical and educational experiences in rural settings as part of undergraduate medical education; 3. targeted training for rural practice at the postgraduate level. In addition, there is evidence that academic involvements (teaching and research) are both retention and recruitment factors.

Evaluation of rural clinical attachments has demonstrated that the rural setting provides a high-quality clinical learning environment which is of potential value to all medical students. Specifically, rural clinical education provides more „hands on“ experience for students such that they are exposed to a wide range of common health problems and develop a high level of clinical competence.

This workshop will begin with brief presentations of different models of rural based medical education at both the undergraduate and postgraduate levels. These presentations will provide a context for interactive discussions which explore the principles and practice of educating family doctors for rural practice. The workshop will conclude with a summary of the important enablers of success in educating rural family doctors.

2029

**Presentation type: Workshop**  
**Wonca Working Party on Rural Practice**

### Rural Medical Education: A Guide

B. Chater

*Theodore, Queensland, Australia (bruce.chater@theodoremedical.com.au)*

Rural Medical Education has become an established part of medical education. It has a sound philosophical and evidence basis which has, as its source, a meeting of rural medical educationalists and rural doctors at the World Organisation of Family Doctors (Wonca) Conference of 1992. This resulted in the launch of the Wonca Working Party on Rural Practice (WWPRP) and subsequent publication of the policies on Training for Rural General Practice[1] and Rural practice and Rural Health[2].

With the further development of Rural Medical Education, many rural doctors and academics have expressed the need to a “how to” guide to harness the 20 years of international experience in this field. The aim of the Rural Medicine Education Guide project is to provide this assistance.

The Wonca Working Party on Rural Practice initiated the guidebook project in 2008. An initial workshop was held in Crete in conjunction with the 9<sup>th</sup> Wonca World Rural Health Conference.

The overall project is being coordinated by editors Assoc Prof Bruce Chater and Prof James Rourke and will result in a published Guide to Rural Medical Education.

#### **The Guide has been arranged under the Themes of:**

- Setting the scene
- Undergraduate education
- Postgraduate education
- Support at all levels

The theme and subthemes encompass the work of a worldwide group of chapter contributors who will reflect on their experience in rural medical education and highlight their learnings.

The Guide project will provide a workshop which will allow contributors to present the key aspects of their work and allow discussion and interaction around the themes.

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**Presentation type: Oral Communication****Influence of community owned resources persons on malnutrition in children less than two years old in Mbarara and Bushenyi districts in Southwestern Uganda**M. Ntaro<sup>1</sup>, E. Turyakira<sup>1</sup>, J. Brenner<sup>2</sup><sup>1</sup> Community Health, Mbarara University of Science and Technology, Mbarara, Uganda; <sup>2</sup> Child Health, University of Calgary, Calgary, Canada

**Background:** The prevalence of underweight children has remained high in Uganda. According to UDHS 2006, the South-western region of Uganda is most affected with the highest levels of malnutrition estimated at 50% and 19% for stunting and underweight respectively. Community driven approaches to ensure prevention and promotion of proper nutritional practices at community and household level are needed. One such approach is the engagement of lay persons called Community Owned Resource persons (CORPS). The aim of this study is to assess the effect of Community Owned Resource Persons (CORPs) intervention in reducing underweight in children in South-western Uganda.

**Methods:** A quasi-experimental design with before and after comparisons using household surveys in intervention and control populations was used. Intervention communities received the CORPS programme while controls received usual government and non-governmental health services only. Primary outcomes were under weight and Vitamin A coverage. Logistic regression with robust standard errors was used to determine the effect of the intervention on underweight adjusted for child and household characteristics, controlling for baseline confounders.

**Results:** At baseline, the proportion of under-weight children was 13.8% (66/480) and 18.3% (117/638) in intervention and control villages respectively. In intervention villages, children who received vitamin A increased from 234/637 (36.7%) at baseline to 336/589 (55.6%) at end-line. After adjusting for baseline characteristics children in the intervention villages were less likely to be under-weight at the end of the implementation (OR = 0.631-95% CI: 0.463-0.862).

**Conclusion:** The CORPs intervention program reduced the prevalence of underweight children in intervention villages.

Disclosure: No conflict of interest declared

82

**Presentation type: Oral Communication****Recruitment and retention of International Medical Graduates: The experience of living and working in rural Tasmania**D. Terry<sup>1</sup>, Q. Le<sup>1</sup>, J. Woodroffe<sup>1</sup>, K. Ogden<sup>2</sup><sup>1</sup> University Department of Rural Health, University of Tasmania, Launceston, Australia;<sup>2</sup> Launceston Clinical School, University of Tasmania, Launceston, Australia

**Introduction:** Australia has experienced health workforce shortages that led to an increased reliance on International Medical Graduate (IMG) recruitment to fill this gap; particularly in rural and remote areas where shortages of doctors often exists. Some IMGs settle well in a new environment whilst others may find working in rural or remote Australia culturally and professionally challenging.

**Objective:** This study explores, from the perspective of IMGs and those who assist IMGs, the experiences and challenges of living and working in rural and remote Tasmania and how this informs the acculturation process.

**Methods:** An exploratory, descriptive design was used with data collected through surveys, and face-to-face interviews with Tasmanian IMGs. The study gathered 105 returned questionnaires (response rate 30%), while interviews were conducted with 45 participants recruited through purposive snowball sampling.

**Results:** The findings indicate three quarters of IMGs are satisfied with their current employment; however, encounter both professional and social challenges which impact on retention. This retention was related to: professional support systems, current employment and the friendliness of patients and local community. IMGs that had access to their cultural community; and were involved in local activities such as sports or other community events was also vital.

**Conclusion:** The study highlights key aspects which may improve the recruitment and retention of IMGs in rural and remote areas. It adds to existing knowledge and identifies that retention requires a greater focus on creating, promoting and improving the attractiveness of career pathways and the opportunity for improved lifestyles in rural contexts.

Disclosure: No conflict of interest declared

1419

**Presentation type: Oral Communication****A qualitative study of rural-track medical student attitudes towards eventual rural practice**

C. Roseamelia, J.L. Greenwald, C.P. Morley

*Department of Family Medicine, SUNY Upstate Medical University, Syracuse, United States*

**Objective:** Previous literature suggests recruitment of U.S. students from rural areas and/or who are interested in primary care are more likely to go into rural practice after training, and rural training tracks in the United States often focus targeted recruitment efforts on these applicants. However, eventual rural practice by graduates of rural training tracks is incomplete, with published rates between 26%-60% of graduates going into rural practice after training. Our objective was to identify and describe qualitative factors that may influence eventual rural practice decisions.

**Methods:** This qualitative phenomenological study used in-depth interviews of seven medical students who participated in a longitudinal, off-site medical training program in rural settings, as well as focus groups of sixteen students in a pre-clinical rural medicine elective. Data were analyzed using an iterative and interpretive immersion-crystallization process.

**Findings:** Best fit for the program was described in terms of an affinity for rural life, commitment to community service, and predilection towards spirituality (noted in clinical students). Particularly in pre-clinical students, an emergent theme was the fact that many were not determined to enter rural practice, but rather were determined not to enter large urban practice. Most students agreed that those in the rural training track were different in a number of ways from the general medical student population.

**Conclusion:** Students interested in rural practice may be more focused on avoiding an urban context of practice than upon a specifically rural career. Training tracks should take this into account when evaluating candidates.

Disclosure: No conflict of interest declared

1482

**Presentation type: Oral Communication****Role of nongovernmental organization and foundation in organization of palliative care in rural areas**

T. Pekez-Pavlisko, S. Fehlen, B. Stojic

*<sup>1</sup> Foundation Sandra Stojic, Private family medicine surgery, Kutina, Croatia; <sup>2</sup> Foundation Sandra Stojic, Kutina, Kutina, Croatia*

**Objectives:** To carry out palliative care in countries with underdeveloped health and social systems is very hard for patients and caregivers as well as for family physicians. These difficulties are becoming even more prominent in rural areas where most of the palliative patients are at their homes.

**Methods**

Retrospective results of Sandra Stojic Foundation activity with palliative patients, their caregivers and family physicians in the city of Kutina, Croatia.

**Results:** Kutina town is 45 km far away from the first county hospital and 20 km far away from the hospital with palliative beds. Available palliative beds cannot meet need of domicile population. Some palliative patients prefer to stay at their homes.

**Results:** During 2012 years palliative care nurse organized and performed 142 house visits, over 100 telephone conversations, 25 legal advises, helped in finding shelter for two patients, for three cases, social care center was contacted, three times pastoral help was called on demand of the patient or patient's family, twice the coroner was contacted and twice the funeral service. Volunteers have achieved 80 hours of instructions with two juvenile children whose mother is palliative patient, 50 hours of various workshops for preparations for public happenings and 20 hours of voluntary work at public events.

**Conclusion:** Non-government organizations and foundations can be of great help in better organization of palliative care, especially in rural areas. Family physicians often do not have available time, strength and knowledge to help in all aspects of life of a palliative patient and caregivers.

Disclosure: No conflict of interest declared

## 2.12. CROSS-CULTURAL MEDICINE

440

Presentation type: Workshop

### Family physician's skills and competencies in global settings

A. Ivanov<sup>1</sup>, P. Pugno<sup>2</sup>, I. Bardella<sup>3</sup>

<sup>1</sup> *International Activities, American Academy of Family Physicians, Leawood, United States;*

<sup>2</sup> *Medical Education, American Academy of Family Physicians, Leawood, United States;* <sup>3</sup> *Faculty Development and Global Health Initiatives, Chicago Medical School of Rosalind Franklin University of Medicine and Science, Chicago, United States*

With medical students and residents' interest in global health going increasingly up, awareness of and knowledge about what skills and competencies would be most useful for family physicians in global health settings are professionally important for those who are interested in pursuing global health. Based on the survey of students, residents, and faculty with global health experience and institutional respondents, including family medicine residency programs and non-governmental organizations founded or administered by members of the American Academy of Family Physicians and Society of Teacher of Family Medicine, this session will summarize universal skills and competencies identified and found by respondents as most useful. Respondents' specific experiences will be used to illustrate the difference and scope of application of those skills depending on the varying context of the medical needs and systems in various parts of the world. Using the experience of successful global health programs, the session will also consider different modalities, approaches and best practices for teaching global health in residency programs and medical schools.

Disclosure: No conflict of interest declared

728

Presentation type: Workshop

### End-of-life care for migrants – cultural, spiritual and social aspects. Workshop of the Special Interest Group on Migrant Care and International health and travel medicine

M.van den Muijsenbergh<sup>1,2,3</sup>, I.Kasim<sup>4</sup>, P.Topsever<sup>5</sup>, M.Achmed<sup>6</sup>, C. Lionis<sup>7</sup>, G.Busser<sup>2</sup>, R.Kahveci<sup>4</sup>, C. Dowrick<sup>8</sup>

<sup>1</sup> *Pharos, Dutch knowledge centre on migrants, refugees and health care, Utrecht, Netherlands;*

<sup>2</sup> *Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands;* <sup>3</sup> *general practitioner, University Medical Centre Heyendaal, Nijmegen, Netherlands;* <sup>4</sup> *Department of Family Medicine, Ondokuz Mayıs Üniversitesi, Samsun, Turkey;*

<sup>5</sup> *Family Medicine, Acibadem University, Istanbul, Turkey;* <sup>6</sup> *General Practitioner, General Practice, London, United Kingdom;* <sup>7</sup> *General Practice and Primary Health Care, University of Crete, Crete, Greece;* <sup>8</sup> *Primary Medical Care, University of Liverpool, Liverpool, United Kingdom*

**Aims:** In this era of globalization doctors all around the world are confronted with growing numbers of immigrant patients whose cultural and religious beliefs and expectations regarding healthcare often differ from those of the doctors in the host country. This poses a professional challenge to general practitioners in these countries, especially when dealing with a delicate subject as end-of-life care in which the spiritual and cultural issues are prominent. Sharing knowledge and experiences with colleagues from other countries, and in specific from countries where many immigrants originate from, can help us to shape cultural sensitive care in general practice.

**Methods:** The workshop will be organized by the Wonca Special Interest Group (SIG) on migrant care, international health and travel medicine: an international group of general practitioners experienced in migrant care and engaged in scientific research and (post graduate) medical education on this topic. After introductory presentations on the views on end-of-life care of Turkish patients in Turkey and of Turkish immigrants in the Netherlands, as well as on the different ways spiritual needs of migrants are attended to in London and in Crete, participants will discuss the role of general practice in relation to different spiritual and cultural needs in end-of-life care.

**Results and conclusion:** Participants will acquire knowledge about different views on spiritual and cultural aspects of end-of-life care in different countries and migrant groups, and discuss the possible role of general practice in this. The acquired knowledge can help GP's to improve their own end-of-life care for migrants.

Disclosure: No conflict of interest declared

1151

Presentation type: Workshop

**Embracing cultural competency to decrease health disparities**V. Martinez-Bianchi<sup>1</sup>, S. Minué Lorenzo<sup>2</sup><sup>1</sup> *Community and Family Medicine, Duke University, Durham, United States;* <sup>2</sup> *Area de Gestión sanitaria, Escuela Andaluza de Salud Pública, Granada, Spain*

Family physicians in every country will encounter communities and individuals with diverse cultural beliefs, and members of ethnic and racial minorities prone to discrimination and healthcare disparities. In order to provide the best patient-centered care for these communities, and hopefully decrease disparities, we will need to demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments; and be skilled in cross-cultural communication, assessment of patients beliefs and negotiation and problem-solving skills to support patient's adherence.

This interactive workshop aims at several aspects:

1. Understanding health care disparities suffered by ethnic and racial minorities.
2. Providing a framework for the importance of cultural competency in health care delivery that is Patient/Family and Community-Centered and not physician-centered.
3. Outlining the knowledge, skills and attitudes needed to be culturally competent in the delivery of health care.
4. Recognizing and appropriately addressing our own gender and cultural biases in health care delivery.
5. Differentiating stereotypes from generalizations. And understanding the impact of stereotyping in the clinical decisions we make.
6. Recognizing common challenges in cross-cultural communication.
7. Identifying reflection, and several self-assessment and patient question tools to address and bridge differences in our views of healthcare issues.
8. Identifying tools to assess the cultural competency level of the institutions we work for.

The interactive workshop will utilize video clips, lecture discussion, role-playing and participants' own experiences to illustrate different aspects of cultural competence, education, teaching and learning.

Disclosure: No conflict of interest declared

460

Presentation type: Oral Communication

**Mini-Hippokrates experience in Croatia**S. Belinchon Moyano<sup>1</sup>, V. Parent Mathias<sup>2</sup>, R. Gómez Bravo<sup>3</sup>, S. Maroto Martín<sup>4</sup>, S. Lardies Galindo<sup>3</sup>, S. Rigon<sup>5</sup>, K. Heleniak<sup>6</sup><sup>1</sup> *Family Medicine, Vasco de Gama Movement Exchange Group, Madrid, Spain;* <sup>2</sup> *Emergency Medicine, Carlos Haya Hospital, Malaga, Spain;* <sup>3</sup> *Family Medicine, Barrio del Pilar Health Center, Madrid, Spain;* <sup>4</sup> *Family Medicine, Castro Viejo Health Center, Madrid, Spain;* <sup>5</sup> *Medicina Generale, Vasco de Gama Movement Exchange Group Coordinator, Bologna, Italy;* <sup>6</sup> *Emergency Department, Vasco de Gama Movement Exchange Group, Dieppe, France*

**Objective:** We would like to share our experience in the Mini- Hippokrates Exchange program coinciding with the 2012 National GP Congress in Croatia, in the island of Brac.

**Method:** The Mini- Hippokrates program, is one of the activities promoted by Vasco da Gama Movement, who offers the possibility of a Congress attendance with activities and workshops in English made for the interest of international Junior GP and trainees, and as well as a 2 days stay in a National Family Doctor consultation, in order to achieve how GPs work in the host country, how is the Health System like, how are their local guidelines and learning social and cultural facts.

We participated on several activities during the congress like conferences and workshops, and all the participants in the mini hippokrates program gave a talk about Evidence Based Medicine in their countries.

**Results:** This experience has provided us a global idea of the Croatian Health System, how their Health Professionals work and to be able to compare it with our own National Health Systems and Family Medicine consultations.

The personal experience has been very rich, our host families treated us almost like a member of their family, and we made strong lazes.

**Coclusions:** We hope we can keep developing these experiences in our Countries in order to strengthen the lazes between European GP and perhaps to extend it worldwide so to keep building a common path in General Practice and to make the most of our careers and Medical consultations.

Disclosure: No conflict of interest declared

461

Presentation type: Oral Communication

**Mapping examples of guidelines and/ or training initiatives designed to enhance communication in cross-cultural primary care settings in Europe**

T. de Brún<sup>1</sup>, M. O'Reilly-de Brún<sup>1</sup>, M. Papadakaki<sup>2</sup>, M. Vlahadi<sup>2</sup>, A. Saridaki<sup>2</sup>, C. Princz<sup>3</sup>, E. Teunissen<sup>4</sup>, F. van den Driessen Mareeuw<sup>4</sup>, K. Gravenhorst<sup>5</sup>, N. Burns<sup>6</sup>, A. MacFarlane<sup>7</sup>, on behalf of the RESTORE project

<sup>1</sup> *Discipline of General Practice, National University of Ireland, Galway, Galway, Ireland;* <sup>2</sup> *Faculty of Medicine, University of Crete, Heraklion, Greece;* <sup>3</sup> *Department of General Practice, Medical University of Vienna, Vienna, Austria;* <sup>4</sup> *Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands;* <sup>5</sup> *Institute of Psychology, Health and Society, University of Liverpool, Liverpool, United Kingdom;* <sup>6</sup> *General Practice and Primary Care, University of Glasgow, Glasgow, United Kingdom;* <sup>7</sup> *Graduate Entry Medical School, University of Limerick, Limerick, Ireland*

**Objectives:** RESTORE is a 4-year EU project focusing on implementation of guidelines and training initiatives (G/Tis) to support communication between migrants and healthcare professionals in Ireland, the Netherlands, England, Greece, and Austria. We describe a systematic mapping process of such G/TIs in these settings. Our objectives were to identify G/TIs which had a focus on *migrants who experience language/cultural barriers*, where the aim of the G/TI was to *enhance communication in cross-cultural primary care consultations*, and was generated as a *guide or support for professional healthcare workers*.

**Methods:** Purposive, network and snowball sampling were used to identify statutory and non-statutory agencies to assist us in identifying G/TIs. The mapping process began in Ireland and the experience there was used to generate a comprehensive *Protocol Document* for other researchers in our consortium to use. We also conducted a search of peer reviewed literature in each country to identify examples of G/TIs.

**Results:** 371 agencies returned 230 GT/Is comprising: Guidelines (n=69), Training initiatives (n= 64), Articles (n=34), Reports (n=35), Books (n=6), Information Packs (n=13), Computer Applications (n=1), and 'Other' (n=8). Twenty G/Tis (n=20) were considered potentially relevant for RESTORE: Guidelines (n=8), Training initiatives (n=12).

**Conclusions:** A systematic approach to mapping grey literature across the consortium has resulted in a set of 20 G/TIs. The robustness of the mapping process was confirmed in that only one additional G/TI was identified through the peer reviewed literature searches. This is an important database which can be used to promote best practice in primary care settings.

648

Presentation type: Oral Communication

**Healthy communities in Slovakia**

P. Marko

*Ambulance of G.P., Slovak society of general practitioner for adults, Kežmarok, Slovakia*

The implementation of the program has a **direct positive impact on the improvement of the state of health of inhabitants in 32 Roma settlements in Slovakia (approximately 31 000 Roma inhabitants)**.

Within the program targeted human resource building takes place directly in the settlements themselves. There are 42 healthcare assistants and coordinators in the field, 32 Roma settlements, 102 general practitioners and paediatricians, the regional governing bodies from the participating regions and 26 schools. Specialist training takes place in cooperation with healthcare providers, emergency service facilities and ACEC lecturers who proceed according to the Slovak Ministry of Education accredited courses.

Among Roma in the locations where the program was implemented, **the number of preventive health check ups exceeded 36%**, whereas the national average does not even exceed 16% **and more than 4736 children and 2090 adults were vaccinated** for jaundice A and B. The program was presented at **European Commission conference in Brussels** (2008) and a Case Study on the project put together by ACEC was published in the **World Health Organisation 2010 almanac**.

Currently, there is no legislation in the Slovakia supporting public policies addressing the health issue of Roma settlements. Therefore, our current **main objective** is to achieve the **systematization of the program of health education in Roma communities** throughout Slovakia, as well as to **support the use of human resources from within the segregated communities, enable them to be employed and implement activities beneficial to the community**.

Disclosure: No conflict of interest declared

686

**Presentation type: Oral Communication****Emigration, acculturation and intercultural identity; the displaced person as a patient**

L.A. Berec

*Loxley Family Medical, Franklin PHC, Mobile, Alabama, United States*

In his lecture the author wants to summarize his clinical experience while working with immigrant patients in the USA. The author himself was born and raised in Slovakia. He was educated in the USA where he is currently working as a family physician. In addition to American-born patients, he also sees lots of immigrants, predominantly from Eastern and Central Europe, and also from Latin America.

In the post-modern world, foreign travel, international studies, foreign trade and employment, political, economical, religious or racial tensions, often resulting in wars and persecutions, bring about lots of immigrants and displaced persons. Their acculturation process in their new country is often a difficult, slow and very individual evolutionary process. However, it is definitely affected by a person's age, sex, profession, previous social and education level, marital status, and also by the availability of various support systems in their respective community. The reason for immigration also plays a role in the acculturation process. It makes a difference if the immigrant left his home country by or against his own will, e.g., ran away from prosecution or war. In addition, we often see in our offices various marginal individuals who try to run away from their criminal past, alimony, or from their own unresolved internal conflicts and who often have problems with their acculturation process. In conclusion, the author feels that the successful acculturation is a mutually enriching process, benefiting not only the individual himself but also his host country.

Disclosure: No conflict of interest declared

1130

**Presentation type: Oral Communication****Making the transition from overseas trained doctor to Australian medical practitioner – findings from an Australian bridging program**

L. Clearihan

*Clinical Education and Professional Development Unit, School of Primary Health Care, Faculty of Medicine Nursing and Health Sciences, Monash University, Melbourne, Australia*

**Objective:** This paper presentation discusses the cultural and clinical challenges faced by a cohort of overseas trained doctors, seeking to practice as general practitioners in Australia and the impact that a training program can have on their confidence and competence for undertaking the clinical component of the Australian Medical Council examinations.

**Methods:** Descriptive statistics will be used to present evaluation data from Monash University's Bridging program, which has been running for over 10 years. In addition to this, qualitative data will be presented from focus group findings that compare the issues facing a group of overseas trained doctors currently practicing in Australia with those seeking registration.

**Results:** Clinical skills in physical examination; communication differences and professional practice expectations are among the common problems faced by overseas trained doctors when making the transition to Australian medical practice.

**Conclusion:** Over the last decade or so the medical manpower in rural and remote Australia has been substantially supplemented by overseas trained doctors. However, many feel ill prepared and unsupported in making this transition. Whether they are working in the country or not, many still struggle with clinical and cultural differences and the limitations placed on their opportunities for practice in Australia. A bridging program that addresses the key deficit areas of knowledge and skill in overseas trained doctors has the potential to improve the transition to becoming a member of the Australian medical workforce.

Disclosure: No conflict of interest declared

1211

**Presentation type: Oral Communication****Retrospective evaluation of primary care admissions of Syrian refugees in Turkey**

P. Doner<sup>1</sup>, A. Tapsiz<sup>1</sup>, E. Arslan<sup>1</sup>, R. Kahveci, Co-director of Family Medicine Department<sup>2</sup>, M. Koc<sup>2</sup>, I. Sencan<sup>2</sup>, I. Kasim<sup>2</sup>, A. Ozkara, Assoc. Prof., Chair of Family Medicine Department<sup>3</sup>

<sup>1</sup> Family Medicine, Public Health Center, Kilis, Turkey; <sup>2</sup> Family Medicine, Ankara Numune Research and Training Hospital, Ankara, Turkey; <sup>3</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objective:** Unfortunate developments in Syria recently led to around 150,000 refugees moving to Turkey. Over 30,000 of this population have settled in Kilis province. Kilis immediately took action and established a city of prefabricated houses for her guests. For only serving this population, two primary care (PC) centers were established. These centers jointly worked for emergency care, preventive services and ambulatory care. The aim of this study was to evaluate recent 10 months of services in refugee PC centers in Kilis province and to determine current situation of services and further needs.

**Method:** The patient registries in PC centers of Kilis was retrospectively analyzed.

**Results:** It was identified that there were 14800 inhabitants in the city of refugees. During last 10 months there were 55,779 admissions to PC centers for any reason. The most common cause for admission was respiratory tract infections (n:10410, %18,6), followed by myalgia (n:1826, %3,2), dermatitis (n:1717, % 3,07), vaginitis (n:1385, % 2,48) and gastroenteritis (n: 1315, %2,35). All children from 1 year to 14 years of age (n:1991) were vaccinated for measles as a mop-up vaccination program. In 10 months period 615 babies were born. All newborns were screened for hypothyroidism, deficiency of biotinidase enzyme and phenylketonuria, similar to Turkish children.

**Conclusion:** The Syrian refugees in Kilis region are thought to be provided a comprehensive primary care service and this study has helped us identify current use of the services as well as further needs, and is believed to highlight future approach in service provision.

Disclosure: No conflict of interest declared

1709

**Presentation type: Oral Communication****Delivering refugee health care in the Australian primary health care setting**

M.P. Kay

*Discipline of General Practice, The University of Queensland, Brisbane, Australia*

**Objective:** This study provides a deeper understanding of the delivery of primary health care to refugees. A number of Australian studies have investigated specific aspects of providing refugee health care over recent years. This study presents an amalgamation of this knowledge to further develop a theoretical model of delivering refugee health care, emphasizing the practical issues associated with providing care to this vulnerable community group.

**Methods:** Focusing on the Australian experience, current studies describing the delivery of clinical care to refugees were identified using an electronic database search supplemented by citation searches and a search of the grey literature. Narrative analysis was used to investigate the data and key themes were identified. A theoretical model for delivering refugee health care was then used to provide a framework for the synthesis of these findings.

**Results:** Although these studies focused on a variety of clinical and health access issues, there were many common themes that emerged from these studies; including the difficulty associated with capturing demographic data to identify people from a refugee background, the variety and high prevalence of health issues experienced by refugees, the health care experiences described by members of the refugee community and the barriers experienced by the primary care providers delivering this care. These issues were incorporated to develop an improved model of refugee health care.

**Conclusions:** This study of refugee health care offers an innovative approach to incorporating the diverse knowledge base often required when delivering primary health care to people with complex health needs.

Disclosure: No conflict of interest declared



## 2.13. INTEGRATED CARE

899

Presentation type: Oral Communication

### Spiritual health – an overlooked component of primary care and palliative care

R.Charlton<sup>1,2</sup>, M.Xavier<sup>2</sup>, M.Wilkinson<sup>2</sup>, R.Prince<sup>2</sup>

<sup>1</sup> Division of Primary Care, University of Nottingham, Nottingham, United Kingdom; <sup>2</sup> West Midlands Postgraduate Medical Education Deanery, Local Education & Training Board, Birmingham, United Kingdom

**Objective:** To determine if there is a concept of spiritual health and to what extent this is understood and applied by family physicians in their daily practice and palliative care.

**Methods:** Using Helman's 1981 tenet to distinguish a difference between illness and disease the concept of spiritual health is introduced and the views of working practice of family physicians internationally sought as the basis for a lively workshop. Background for the workshop includes spiritual health as it impacts on all generations;

- In illness, distinguishing between the psychological, emotional, attitudes, personality, psychiatric and spiritual
- Understanding spirituality in terms of meaning in addition to religious faith
- Family medicine and existential challenges in terms of value based considerations and actions
- How spiritual health fluctuates with physical health
- Spirituality and its potential impact on caring and so 'caritas' as part of the UK RCGP motto; "Cum Scientia Caritas"
- Care at the end-of-life and provision of spiritual care by making a needs assessment
- Recognition of 'spiritual pain' as part of the 'total pain' defined by Saunders (1967)
- Consideration of how everyone's reality and truth is different; practitioners and patients

**Results:** A good workshop will have an output. Through small group interaction following a short ice-breaking exercise active participation will be encouraged. Case studies will be available to stimulate debate. During a plenary recurrent themes will be recorded for dissemination after the conference through email and the chance for further reflection.

**Conclusions:** This opportunity to share expertise will allow the facilitators to produce a consensus statement.

Disclosure: No conflict of interest declared

1299

Presentation type: Oral Communication

### Family doctors coordinating care in a high complexity hospital: Clinical outcomes and team integration

P. Gonzalez Blasco<sup>1</sup>, L. Alberto de Mello<sup>2</sup>, C.O. Guedes<sup>2</sup>, M.R. Levites<sup>1</sup>,

C.F. Monaco<sup>1</sup>, G. Moreto<sup>1</sup>, M. Aurelio Janaudis<sup>1</sup>, S.M. Lomelino<sup>2</sup>

<sup>1</sup> Scientific Department, SOBRAMFA- Medical Education and Humanism, São Paulo, Brazil;

<sup>2</sup> Clinical Division, Hospital 9 de Julho, São Paulo, Brazil

**Context:** Medical technical progress brings new therapeutic possibilities, usually set in high complexity hospitals. For elderly chronic patients, most of them with comorbidities, this scenario in which several specialist provide updated diagnosis and therapeutics, could be furthermore a threat: everyone deliver their best technology, but no one is in charge of the patient as a personal doctor. The consequence is a challenge also for the hospital's board in dealing with managing rationale costs, and patients' satisfaction. Well trained family doctors have in this context a new role in coordinating care for inpatients.

**Objective:** To describe how a team of Family Doctors from SOBRAMFA- Medical Education and Humanism, coordinate care in a high complexity hospital.

**Method:** The Hospital 9 de Julho, in São Paulo, Brazil, is a high complexity hospital equipped with modern technology, including a broad range of specialties. A specific population of 900 patients, related to this Hospital since the beginning (55 years ago), seek regular care and very often they become inpatients. Family doctors were appointed to take care of these patients aiming to overcome the difficulties described above.

**Results:** Family Doctors avoid unnecessary hospitalization through prevention in clinics. For inpatients they are focused in improving communication among other specialists to design a therapeutic planning and they lead the health professional team for integrating information and taking decisions.

**Conclusion:** Family Doctors at the hospital bring satisfaction for patients and families, foster a holistic approach for doctoring and leadership for coordinating teams, and get financial results keeping low costs.

Disclosure: No conflict of interest declared

1457

**Presentation type: Oral Communication****Adherence to pharmacological treatment and associated factors of hypertension and diabetic users in primary health care**L. Kopittke<sup>1</sup>, F. Nedel<sup>2</sup><sup>1</sup> community health service, GHC, Porto Alegre, Brazil; <sup>2</sup> Department of Development Empowerment of People, Federal University of Santa Catarina, Florianópolis, Brazil**Objective:** To estimate the prevalence of low adherence to drug treatment and associated factors in hypertensive and diabetic.**Method:** Random sample of 2482 single (25% loss) users of primary care services with hypertension or diabetes, interviewed at his home. Low adherence was defined as three to four affirmative answers to the Morisky-Green test. Independent variables: health problems (hypertension, diabetes or both), age, sex, education, marital status, health self-assessment time since diagnosis of hypertension or diabetes, the number of medical problems in the last 6 months, follow-up with the nurse, prior morbid event (hospitalization, heart attack, stroke). The final model was determined by the Akaike Information Criterion (AIC).**Results:** Of the sample, 196 users (7.9%) had poor adherence to pharmacological treatment. The best explanatory model (AIC = 1278) of poor adherence to treatment is one that includes an interaction between health problems and participation in groups ( $p = 0.02$ ), sex ( $p = 0.003$ ), age ( $p < 0.001$ ), self-assessment of health ( $p = 0.003$ ) and hospitalization in the last year ( $p = 0.14$ , but remains the model for stability). The odds of poor adherence to treatment is higher in hypertensive women, younger, in assessing their health as good, and if you have diabetes, among those not participating groups.**Conclusion:** We identified priority groups for actions aimed at increasing adherence to treatment. Actions should be taken to increase the effectiveness of medical, nursing and participation in groups for better treatment adherence.

Disclosure: No conflict of interest declared

1519

**Presentation type: Oral Communication****Treatment burden – what is it and why does it matter?**F.S. Mair<sup>1</sup>, K. Gallacher<sup>1</sup>, B. Jani<sup>1</sup>, S. Browne<sup>1</sup>, S. Macdonald<sup>1</sup>, D. Blane<sup>1</sup>, D. Morrison<sup>1</sup>, V.M. Montori<sup>2</sup>, C.R. May<sup>3</sup><sup>1</sup> General Practice and Primary Care, University of Glasgow, Glasgow, United Kingdom; <sup>2</sup> Knowledge and Evaluation Research Unit, Mayo Clinic, Rochester, United States; <sup>3</sup> Health Sciences, University of Southampton, Southampton, United Kingdom**Objective:** To examine patient experiences of treatment burden, that is the work undertaken by patients to manage long term conditions.**Methods:** Semi-structured interviews with multimorbid heart failure (HF) patients ( $n=110$ ); systematic reviews of the literature on patient experience of HF and stroke. 3665 papers screened for the HF review and 4364 for the stroke review. Data analysed using Normalisation Process Theory as the underpinning conceptual framework.**Results:** 56 papers included in analysis for HF review and 54 in stroke review. Analysis of primary qualitative interview data and the papers identified in our systematic reviews reveal that there are four components of treatment burden that are generic across conditions and contexts. These components are: sense making burdens (making sense of treatments or recovery processes); relational burdens (organising and managing illness through engagement with others); enacting burdens (executing management regimes by taking medications, making lifestyle changes etc.); and reflecting burdens (appraising progress, amending treatments). Polypharmacy and concomitant side effects; multiple appointments and investigations; poor communication between services, between patients and professionals and lack of continuity were major burdens and made it more difficult for patients to gain a good understanding of their condition, and its implications as well as viable goals.**Conclusion:** Our work in the spheres of multimorbid heart failure and stroke suggest that patients are unnecessarily burdened by health and social care systems, in which inadequate communication is commonplace, and that are poorly integrated providing fragmented care. Greater investment in generalist services and better communication and care coordination is essential.

Disclosure: No conflict of interest declared

1557

**Presentation type: Oral Communication****General Practice based extended care at home in New Zealand. 15 years experience from Pegasus Health**M. Seers<sup>1</sup>, L. Toop<sup>2</sup>, D. Mangin<sup>2</sup>, S. Brokenshire<sup>1</sup><sup>1</sup> Pegasus Health, Pegasus Health Charitable Ltd, Christchurch, New Zealand; <sup>2</sup> Pub Health and Gen Practice, U of O, Christchurch, New Zealand

Many health systems are under pressure with rising acute medical admission rates and emergency department attendances. In this workshop the experiences of the Pegasus Medical group in Christchurch New Zealand will be described and discussed. For fifteen years a range of community based initiatives have been developed to treat patients in their own homes who would previously have been hospitalised. These innovative services have been initiated and led by multidisciplinary General Practice teams. Christchurch now has much lower rates of ED attendances and acute medical admissions than the rest of New Zealand. The key to success has been the organisation of almost all of Christchurch general practice teams into a cohesive and innovative clinician led, management supported charitable collective.

Disclosure: No conflict of interest declared

1627

**Presentation type: Oral Communication****Grand-Aides: Innovative care delivery improving access and decreasing cost**A. Garson, Jr.<sup>1,2</sup>, D.M. Green<sup>2</sup><sup>1</sup> Center for Health Policy, University of Virginia, Charlottesville, United States; <sup>2</sup> International Department, Grand-Aides Foundation, Houston, United States

Grand-Aides® is an innovative health care delivery program with experienced, caring people connecting the patient and care team quickly and cost-effectively. Grand-Aides, regardless of age, have the temperaments and personalities of a good grandparent. Ideally Grand-Aides have had prior formal training in medical care, such as a nurse aide, and then take an added Grand-Aides curriculum. The Grand-Aides Foundation trains local supervisors who then train the Grand-Aides. Under close supervision by a nurse or physician, Grand-Aides use telephone protocols, and home visits with portable telemedicine (if Internet is available) to provide transitional – hospital discharge and chronic disease management, as well as primary and preventive care. Grand-Aides address the following issues in both adults and children: 1. Overcrowding in busy clinics and emergency departments (ED) (74% potential reduction in ED and 62% clinic – published Health Affairs 2012); 2. Improved management of chronic disease, to keep patients as healthy as possible and out of the hospital both readmissions and admissions (projected 35% reduction in readmissions for chronic diseases such as congestive heart failure, chronic obstructive pulmonary disease or diabetes, with Grand-Aides visiting the patient the day of discharge and daily for 5 days, decreasing over the first month); 3. Improved access to care in rural areas for those who have little or none.

In addition to the U.S., discussions are in planning stages with: Brazil, China, France, Italy, Jamaica, Malaysia, Myanmar, Singapore, South Africa, Spain, St. Kitts, UK.

Disclosure: No conflict of interest declared

## 2.14. INFORMATION AND TECHNOLOGY

302

**Presentation type: Workshop**

### The IHTSDO, Wonca Family, General Practice SNOMED CT RefSet and ICPC-2 mapping project

N. Booth<sup>1</sup>, G. Miller<sup>2</sup>, J. O'Halloran<sup>2</sup>

<sup>1</sup> *Clinical Data Standards, UK Ministry of Health, London, United Kingdom*; <sup>2</sup> *Family Medicine Research Centre, University of Sydney, Sydney, Australia*

**Objective:** To provide a report to the Wonca community about the development of the Family/ General Practice Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT) reference set (RefSet), and a map from the RefSet to the International Classification of Primary Care, Version 2 (ICPC-2). The workshop will include a demonstration of the RefSet and map.

**Method:** This workshop will provide a report on the collaborative approach being taken by the International Health Terminology Standards Development Organisation (IHTSDO) and the World Organization of Family Doctors (Wonca) to facilitate the uptake and implementation of SNOMED CT together with the International Classification of Primary Care, Version 2 (ICPC-2) in general/family practice electronic health records. The workshop will include a brief background to the project, including the collaboration agreement between the IHTSDO and Wonca.

The methods used and progress made in the development of the SNOMED CT international general/family practice RefSet will be discussed. The RefSet will be presented to attendees, and its content and structure described and demonstrated. Issues identified during RefSet development will be discussed, including details about how issues were resolved by the Project Group. The map from the general/family practice RefSet will be presented, and the mapping results demonstrated. Issues identified during map development, and their resolution, will be discussed with attendees. Phase 3 of the project, which involves field testing of both the RefSet and map to ICPC-2 will be outlined. Plans for implementing the RefSet and map will also be discussed.

Disclosure: No conflict of interest declared

613

**Presentation type: Workshop**

### Guidelines go mobile

J. Jousimaa, H. Alenius

*Duodecim Medical Publications, Finnish Medical Society Duodecim, Helsinki, Finland*

Internet-based guidelines have mainly replaced printed versions and textbooks over the recent years. Computer-based versions of Evidence-Based Medicine Guidelines (EBMG) by Finnish Medical Society Duodecim have been available since 1989. Internet-based EBMG has been a big national success as now close to 10 million searches are done yearly to this database by Finnish health care professionals.

The first EBMG mobile version was launched already in 2001. During the first 10 years, the mobile EBMG was based on memory card versions that could be installed in mobile phones. The development of Internet-browsing smartphones resulted in the development of a new mobile version that works in any smartphone over the Internet. This service was launched in January 2012. During the first year 165.000 mobile searches have been done and this has resulted in the opening of 60.000 articles (1% of the amount of usual computer-based Internet version).

In this presentation, the possibilities of mobile guidelines use are discussed in working groups from following points of view:

1. Advantages and disadvantages of mobile use. Mobile use is possible everywhere where Wi-Fi or 3G is available, but the interface is lacking computer-based workstation functions. What are the occasions, when mobile use would beat computer-based use?
2. Which would be the optimal mobile browser – a smartphone, mini-tablet (7 inch) or big tablet (10 inch).
3. Do guidelines have to be modified for mobile use – a smaller browsing window would perhaps require shorter guidelines or a layered presentation form.

Disclosure: Both authors are salaried physician editors in Duodecim Medical Publications Ltd.

**Introduction to ICPC – the International Classification of Primary Care**M. Klinkman<sup>1,2</sup>, H. Britt<sup>1,3</sup>, A. Grimsmo<sup>1</sup>, T. Kuehlein<sup>1</sup>, J. Soler<sup>1</sup>, D. Pinto<sup>1</sup><sup>1</sup> *Wonca International Classification Committee, Wonca, Bangkok, Thailand;* <sup>2</sup> *Family Medicine, University of Michigan Medical School, Ann Arbor, Michigan, United States;* <sup>3</sup> *Family Medicine Research Unit, University of Sydney, Sydney, Australia*

First introduced in 1987, ICPC has become a standard classification tool to support primary health care in several countries, whether used alone or embedded in electronic health records. Where used, ICPC has provided invaluable and previously unavailable data about the content and process of primary health care. ICPC has three major strengths. It includes components (reason for encounter, symptoms and complaints, social problems, and interventions) that reflect the core content of primary health care, it accommodates the episode of care data model, and its level of granularity is based on epidemiologic data from primary care practices worldwide and is optimal for data retrieval and analysis.

**This workshop, led by experienced members of the Wonca International Classification Committee, is intended for those with little or no experience with ICPC but an interest in learning how to use it.** It will be organized into 2 parts. The first part will provide an introduction to ICPC. It will begin with a brief review of its original development, then continue with a description of the version in current use (ICPC-2), its links to other classification tools, and its current clinical and research use worldwide.

In the second part, several WICC members will describe their current use of ICPC in diverse clinical and research settings around the world: Australia, Belgium, Denmark, Germany, Malta, Norway, and Portugal, among others. All presentations will focus on practical aspects of the use of ICPC, and we will leave ample time for questions and extended discussion among all participants.

Disclosure: No conflict of interest declared

**The Future of ICPC – the International Classification of Primary Care, version 3 (ICPC-3)**M. Klinkman<sup>1,2</sup>, H. Britt<sup>1,3</sup>, G. Miller<sup>1,3</sup>, T. Kuehlein<sup>1,4</sup>, D. Schrans<sup>1,5</sup>, N. Booth<sup>1,6</sup><sup>1</sup> *Wonca International Classification Committee, Wonca, Bangkok, Thailand;* <sup>2</sup> *Family Medicine, University of Michigan Medical School, Ann Arbor, Michigan, United States;* <sup>3</sup> *Family Medicine Research Unit, University of Sydney, Sydney, Australia;* <sup>4</sup> *General Practice and Health Services Research, University of Heidelberg, Heidelberg, Germany;* <sup>5</sup> *General Practice, Ghent University, Ghent, Belgium;* <sup>6</sup> *DH Informatics Directorate, UK National Health Service, London, United Kingdom*

In the 25 years since its introduction, ICPC has become a very important classification tool to support the work of family doctors worldwide. ICPC is now embedded in electronic health records (EHRs) around the world and is increasingly linked to other standard classification and terminology tools. We are now seeing that the content of primary health care is changing in many areas from acute care to chronic disease management, multimorbidity and management of risk factors for disease, and we need to update our tools to support this new work. In response to these issues, the Wonca International Classification Committee (WICC) has begun a major revision of ICPC, working closely with other standards organizations to ensure that our tools remain compatible and interoperable.

**This workshop is intended for all who have an interest in the future of health information standards.** Several WICC members will present the current state of work in several areas:

- **ICPC-3 core content:** making space for new conditions, addressing person-related information, patient goals and preferences, and expanding social and functional status content without making the classification too large for use.
- **Linking ICPC to other classification and terminology tools in EHRs** through use of thesaurii and maps: the Belgian 3BT thesaurus and other examples.
- **Current collaboration with WHO and IHTSDO** to harmonize the next generation of ICPC, ICD, and SNOMED-CT.

We will leave ample time for comment and extended discussion among all participants. Our goal is to engage the primary care community to help us carry out this work.

Disclosure: No conflict of interest declared

2031

**Presentation type: Workshop**  
**Wonca Informatics Working Party**

### **Electronic Data in Family Medicine: Its Creation, collection and uses**

P. Schattner

*Convenor, Wonca Informatics Working Party*

**Introduction:** As medical records in family medicine/general practice are now being recorded in electronic format, large datasets within practices, regions and nations are enabling new opportunities for research and quality improvement in clinical care.

**Discussion:** In this workshop, we will examine how different centres and countries manage the spectrum of electronic data, from establishing standards for the recording of data, how this data is extracted from computers and collated and analysed, and finally, how it is used for quality improvement. The workshop will therefore comprise a series of short presentations by several experts on these various aspects of electronic data, with opportunities for audience participation.

Specific examples provided in this workshop by members of the Wonca Informatics Working Party and EQuIP will include: coding and classification systems in family medicine, the development of electronic care plans to improve health care collaboration in chronic disease management, electronic decision support tools and other quality improvement strategies, and research based on routinely collected data in family medicine.

**Conclusion:** The intended outcome for this workshop is to increase audience knowledge on the uses of electronic data in family medicine.

2033

**Presentation type: Workshop**  
**Vasco da Gama Movement**

### **Social Media and mHealth Now! Applications in Primary Care**

R. Zoitanu<sup>1</sup>, S. Begg<sup>2</sup>, C. Lygidakis<sup>3</sup>, M. Sattler<sup>4</sup>, R. Gomez Bravo<sup>5</sup>, T. Villanueva<sup>6</sup>, S. Rigon<sup>3</sup>

*<sup>1</sup>GP practice, Bucharest, Romania, info@vdgm.eu, <sup>2</sup>St John's Hill Surgery – Begg Practice, Battersea, London, United Kingdom, <sup>3</sup>ASL Bologna, Bologna, Italy, <sup>4</sup>GP practice, 76, rue d'Eich, L-1460, Luxemburg, Luxembourg, <sup>5</sup>Emergency Department, University Hospital La Paz, Madrid, Spain, <sup>6</sup>Locum GP, Lisbon, Portugal.*

Social media is becoming part of everyday life for most individuals and companies. General practitioners/family doctors and their patients follow this trend as well, although at different pace in various countries around the world. For the past two years Vasco da Gama Movement, the Wonca Europe network for young and future GPs, showed in its workshops how Social Media can be used by GPs to strengthen organizations, their practice or how to use it as a tool to be easily and conveniently updated with medical and non medical information. Social Media refers to Facebook, Twitter, LinkedIn, WordPress, Youtube and many more tools which allow people to interact over the Internet – create, exchange, comment and share.

In this workshop we will focus more on how Social Media can be used in Primary Care for patient care. How can patients be empowered by using Social Media? What are the limits for both patients and professionals in using Social Media? Do we need a code of conduct?

This workshop will also focus on mHealth in Primary Care – the use of mobile devices and applications in providing care. With success stories from around the world about smoking cessation programs and tuberculosis treatment compliance gained through the use of mHealth, we will have a lot of topics of discussion on what apps for mobile devices can be used and developed to provide better patient care in primary care.

**Keywords:** Social Media, mHealth, applications, patient care, VdGM

767

**Presentation type: Oral Communication****Where have all the abstracts gone? They're in Europe!**

C. Steylaerts

*Honorary Treasurer, WONCA Europe, Diest, Belgium*

**Introduction:** Googling for a diagnosis (BMJ), looking into Pubmed (Medline), those are great ways to look for information. Yet, if you want to search for family practice related subjects, it is hard to find something from our colleagues: don't we publish? That was my question back in 2007, and today, most (WONCA Europe) abstracts since 1995 have been retrieved.

**Goals:** Is it possible to develop a WONCA KNOWLEDGE BASE consisting of the archives of our Conferences (to start with)? Is an abstract for a WONCA Conference a triviality or part of a milestone?

**Method:** The answer is yes, such an archive is possible and will be demonstrated. And yes, an abstract is part of a milestone. But when is such an archive an asset?

**Time frame:** We will tackle this workshop/oral with a search for articles related to Clinical Decision: what did other GP's write about it? We'll use Google, Pubmed, Scirus, UpToDate and ... our WONCA Europe website.

This will lead to: what are the requirements for an abstract to be relevant for future searches?

It will also lead to: how to centralise the abstracts?

After brainstorming these questions, how to implement them?

We will formulate a proposal for WONCA.

Disclosure: No conflict of interest declared

905

**Presentation type: Oral Communication****Patients reading their medical records online – implications for the doctor**T. Ålander<sup>1</sup>, G. Erlingsdottir<sup>2</sup>, R.-M. Åhlfeldt<sup>3</sup>*<sup>1</sup> Uppsala University, DOME project, Uppsala, Sweden; <sup>2</sup> Ergonomics and Aerosol Technology (EAT), Lunds University, Lund, Sweden; <sup>3</sup> DOME project, University of Skövde, Skövde, Sweden*

Internet and electronic medical records make it possible for patients to participate in their medical care. E-mailing, social media and web sites world wide provide direct health information. There has been a fast development in this field during the recent years. In Sweden, Uppsala county council has been developing a patient portal for online E-health services since year 1997. A single family practice started with the portal and the system has been expanded to all 340 000 citizens in November 2012. The patient portal now gives the patients opportunities to book an appointment time, choose a house physician, see prescriptions of medicines and high-cost protection. There is also a presentation from the patient records of appointments, doctor's notes, diagnoses, prescribed medicines, laboratory results, referrals, idiosyncrasies and personal data.

In this workshop we discuss how patients' access to their records can interfere with care. What are the pros and cons for the primary care physician? In the end we have a common discussion of the results.

The leaders of the workshop are researchers in the DOME project -Deployment of Online Medical records and E-health services, <http://www.it.uu.se/research/hci/dome/forskare.php>

Disclosure: No conflict of interest declared

944

**Presentation type: Oral Communication****Opportunities with social media for GP's**

L. Moran, J. Grewal, K. Modha

*General Practice, RCGP, London, United Kingdom*

There has been a dramatic uptake in the use of social media by medical professionals in the last few years, across many platforms. In the UK GP's have been avant garde with their social media use. There are dedicated GP networking websites, facebook groups, twitter feeds and blogging sites. Its use has allowed people to connect with peers online across the country, and indeed the globe, to discuss everything from ethical issues, clinical cases, medical news, local events and social events.

We, as a group of UK GP's, run a variety of both independent and RCGP social networking sites. As well as online sites we also organise GP networking events. The use of social media has allowed us to connect together thousands of GP's across the country. The advantages of this are knowledge sharing for personal and career development and for improved clinical care. There are also pitfalls including breeches to patient confidentiality which we have to consider. To support this RCGP launched a social media highway code and the Facebook TGG group produced a code of practice guideline.

Our aim in this workshop is to discuss the use of social media in the UK, to do live simulations of social media in action and to discuss how it is used elsewhere in the world. Social media is a new entity with exciting future prospects. We hope that our use will be of interest to others and we hope to gain ideas to further benefit our networks.

Disclosure: No conflict of interest declared

1001

**Presentation type: Oral Communication****eHealth technologies to support primary healthcare integration with community pharmacies**

J. Gregório, L. Lapão

*WHO Collaborating Centre for Health Workforce Policy and Planning, Instituto de Higiene e Medicina Tropical, Lisboa, Portugal*

**Objectives:** Primary Healthcare (PHC) reforms are intensely addressing chronic-disease management. It is of importance to science and society to understand how eHealth services could be developed and used to address the challenges of health systems bottlenecks, mostly regarding PHC services integration with community pharmacies. This research work aims at diagnosing the current use of Information Technologies (IT) in community pharmacy, to assess the potential of eHealth services in pharmaceutical services' provision and PHC integration.

**Methods:** Focusing on the two initial steps of Design Science Research Methodology (DSRM), a mixed methods approach was used with an online survey to collect data on pharmaceutical services and use of IT in community pharmacy, followed by an exploratory observational time and motion study, using the shadowing method.

**Results:** The average computer/pharmacy ratio is 5. All pharmacies use IT for medicine dispensing, but only 40% use it for cognitive pharmaceutical services provision. Pharmacists spend 50% of their time in patients' interactions, 38% on administrative tasks, while still having an average of 38.4 minutes of idle time.

**Conclusion:** The current state of IT usage in Portuguese community pharmacies is mainly focused on medicine dispensing. It seems there's a need for internal reorganization of pharmacies in order to enable eHealth pharmaceutical services provision. The next stages of DSRM will use the input of primary care physicians, other health professionals and citizens in order to develop an artefact to test and evaluate the clinical and economic value of eHealth pharmacy services for the health system.

Disclosure: No conflict of interest declared



1494

**Presentation type: Oral Communication****Enhancing care using ICPCs and the Johns Hopkins ACG System in the Chilean Primary Health Care System**M. Soto<sup>1</sup>, E. Arenas<sup>1</sup>, P. Muñiz<sup>2</sup><sup>1</sup> Family Medicine, Catholic University of Chile, Santiago, Chile; <sup>2</sup> Bloomberg School of Public Health, Johns Hopkins University, Baltimore, United States

Since publication over 25 years ago, the International Classification of Primary Care (ICPC) has gradually received increasing world recognition as an appropriate classification for general/family practice and primary care. While ICPC was originally designed for paper based data collection and analysis, since the advent of practice based electronic medical records (EMR) its use has rapidly spread to electronic clinical and research systems making the availability of diagnostic information. Currently the classification system is being used in over 22 countries. Although there is increasing availability of ICPC data, its role for enhancing patient care is not immediately apparent. The Johns Hopkins University ACG System's suite of tools has been used to support basic and complex applications in finance, administration, care delivery, and evaluative research for over two decades in 14 different countries.

Using the recently acquired functionality that the ACG system has to recognize ICPC data, we analyzed 2 years of EMR information for 3 Chilean public primary care centers that services a population of over 85,000.

The purpose of this presentation is to showcase the practical applications of how incorporating ICPC based case-mix information can enhance the delivery of care by increasing the ability to monitor health status of a population; by providing an instrument for allocating resources more equitably; by increasing the likelihood of appropriately identify patients for targeted intervention programs and by more accurately assessing clinician performance.

Disclosure: No conflict of interest declared

1518

**Presentation type: Oral Communication****Towards effective integration of medical and health information: Lessons from Alberta, Canada**

T.D. Kolotyluk, D. Moores, M. Chiodo

*Dept. of Family Medicine, University of Alberta, Edmonton, Canada*

**Objective:** The Electronic Medical Record (EMR) is an evolving concept defined as a systematic collection of information about individuals or populations. It is theoretically capable of being shared across different healthcare settings. This can occur through network-connected enterprise-wide information systems and other exchanges. The Canadian province of Alberta leads the country in terms of its integrated health and medical information systems. Through the initiatives of the **Physician Office System Program (POSP)** three EMR programs are approved for meeting stringent usability standards. The **Pharmacy Information Network (PIN)** identifies current dispensed medications, no matter the source. The **NetCare** portal provides laboratory, investigational and consultative data accessible to any practitioner in the province.

**Methods:** This workshop/seminar will focus on key issues for successful integration of health and medical information. Participants will identify their needs and issues with a focus on usability and functionality. Meaningful use is key to integrating medical and health information.

**Results:** Alberta has invested over 15 years in system organization and standards for EMRs and health information. Of Canada's 10 provinces and 3 territories it has developed the only integrated health and medical information. Due diligence has been paid to incorporation of security standards and information sharing protocols/frameworks. It provides monetary and organizational support to key professionals in health services delivery.

**Conclusions:** Collaboration and cooperation between the Government of Alberta, Professional Agencies and the Health Authority has led to a robust information exchange. Health professionals in training will bring the Alberta Experience to other parts of Canada and the world.

Disclosure: No conflict of interest declared

1774

**Presentation type: Oral Communication****Evaluation of the experience with teledermatology for early detection of skin cancer in a primary care service**

N. Garrido Torres, MR. Salvador Comino, I. Perea Cejudo, V. Regife, V. Del Yerro, M. Perez-Cerezal, M. Crespo  
*Family Medicine, San Luis Primary Care Center, Seville, Spain*

The **Teledermatology (TD)** project was created for early detection of skin cancer. High quality digital pictures and a brief case history were transmitted by (TD) to a consultant dermatologist. On receiving a response from the dermatologist, the family physician (FP) referred the patient to conventional dermatology consultation (15 days) or to a priority type admission visit (less than 7 days), in the case that a malignant skin lesion was suspected.

**Objective:** To determine the inter-observer agreement level between the initial diagnosis made by FP and the final diagnosis made by dermatologist and to evaluate the (TD) project effectiveness.

**Method:** A sample of 442 patients was obtained from an urban health center population. Then, initial diagnoses made by FP that included **Seborrheic Keratosis (SK)**, **Basal Cell Carcinoma (BCC)**, **Acquired Melanocytic Nevus (AMN)**, **Spinal Cell Carcinoma**, **Atypical Nevus** and others were compared with definitive diagnoses through kappa statistic. Moreover, predictive values, specificity and sensitivity were determined.

**Results: Ponderated Kappa inter-observer:**(0.71 CI:0.65-0.75); **BCC:**good agreement (kappa 0.78 CI: 0.70-0.85), (specificity 93.5% and sensitivity 93.2%, negative predictive value 98.7%); **SK:**good agreement (kappa 0.77 CI 0.69-0.8) (specificity 90.4%, positive predictive value 94%).

Most discordance was attributed to **AMN** over-diagnosis confounding with Atypical Nevus, both benign conditions.

**Conclusions:** FP demonstrated that they were sufficiently trained to discriminate between benign and malignant skin lesions. The analysis revealed a good inter-observer agreement between diagnosis determined by FP and dermatologist.

The implementation of teledermatology allows the detection of skin cancer cases and to start an early treatment (<7 days)

Disclosure: No conflict of interest declared

1801

**Presentation type: Oral Communication****Collaborative Workflows: Selecting the Right Device for the Right Task**

M. Blatt, P. Kubu  
*Intel*

The rising cost of HealthCare delivery threatens the ability of both Governments and private provider organizations to offer quality healthcare services to their citizens. There is mounting evidence that collaboration between provider organizations and patients can dramatically lower the cost of care delivery and improve outcomes. There is a growing body of evidence that shows that empowering patients with their data can produce “transformational results”.

For the last two centuries care has been centered on a model where patients come to a central healthcare mecca (the hospital or the clinic) to get “care”. Often that care is delivered piecemeal by various specialists and subspecialist with little thought given to empowering patients to care for themselves, or with sharing the data gathered with all the caregivers in the patients ecosystem.

For instance, with coordinated care, both readmission to the hospital and unnecessary trips to the ED can be lowered by >40% or more. Empowering patients directly with access to their EMR data can increase medication compliance by as much as 70%. Giving lab data directly to patients can decrease trips to the doctor’s office and potential communications errors can be diminished.

Come hear how right device selection can support right tasks in collaborative workflows and advanced secure ICT infrastructure can help transform your healthcare delivery organization.

Disclosure: No conflict of interest declared

## 2.15. ETHICS AND LAW

298

Presentation type: Workshop

### Quaternary prevention, addressing the limits of medical practice

M.Jamouille<sup>1</sup>, G.Tsoi<sup>2</sup>, I.Heath<sup>3</sup>, D.Mangin<sup>4</sup>, M. Z.Pezeshki<sup>5</sup>, M.Pizzanelli Báez<sup>6</sup>, A.L.Silva<sup>7</sup>, J.Bernstein<sup>8</sup>

<sup>1</sup> General Practitioner, Researcher in Primary care, Charleroi, Belgium; <sup>2</sup> Immediate Past President, Hong Kong College of Family Physicians, Hong Kong, China; <sup>3</sup> President, Royal College of General Practitioners, London, United Kingdom; <sup>4</sup> Director, General Practice Research Group, Associate Professor, Otago university, Dunedin, New Zealand; <sup>5</sup> Associate Professor, Department of Community Medicine, Tabriz Medical School, Tabriz, Iran; <sup>6</sup> General Practitioner, Head of the Primary care network, Florida, Uruguay; <sup>7</sup> General practitioner, University of Rio De Janeiro, Brazil; <sup>8</sup> Profesor de Medicina Familiar, Univ. Favaloro, Buenos Aires, Argentina

As stated in Wonca dictionary of family Medicine (Bentzen, 2003), quaternary prevention definition is “Action taken to identify a patient or a population at risk of overmedicalisation, to protect them from invasive medical interventions and provide for them care procedures which are scientifically and medically acceptable.”

Quaternary prevention, first launched at Wonca world Hong Kong 1995 by M. Jamouille & M.Roland, describes the protection of patients from diagnostic tests, interventions and treatments that offer no benefit for overall morbidity or mortality for the individual, and may cause physical or psychological harm.

The P4 concept pulls together all reflexive moves on the problems resulting from an excess of medical care, such as overscreening, overinvestigation, overprescription, and overtreatment.

Since the first workshop in Wonca Basel 2009, the P4 concept has spread throughout the world, and has provoked an intense exchange of ideas. The speakers gathered here from around the world intend to show how front line family physicians could analyze, understand, appropriate and use the P4 concept to examine, analyze and modify their practice.

The audience will be stimulated to share their concern about the limits of medicine and exchange critical comments on the concept of P4.

At the end of the workshop attendees will be able to use and apply Quaternary prevention to improve both the health of individual patients and public policy.

More on <http://www.ph3c.org> rubric Quaternary prevention

Disclosure: No conflict of interest declared

703

Presentation type: Workshop

### Preferred place of death: Ethical issues around wishes of patients

L. Koch

Implementation, Dutch College of General Practitioners, Utrecht, Netherlands

**Aim:** One of the most rewarding experiences in general practice is looking after a patient who is terminally ill. In the Netherlands, 65 % of severe ill people do not want to die in hospital.

In this workshop we will discuss the ethical aspects in considering a patient's wish regarding their preferred place of death. Also, issues around whether or not starting life-prolonging medical treatment will be considered. We will introduce a methodology for discussing these end-of-life decisions, the so-called “Moral Deliberation”. In a moral case deliberation physicians systematically reflect on an individual case history derived from their practice. This includes specific steps to support reflecting upon their intuition.

The aim of this workshop is to give insight how to deal with wishes of terminally sick patients regarding their death and how “Moral Deliberation” can help to reflect on ethical end-of-life decisions.

Organization of the workshop:

- Plenary introduction
- Small group work: case histories and personal experiences
- Presentation of the “moral deliberation” methodology
- Small group work: putting the method into practice
- Plenary Discussion
- Take home messages

**Impact for daily practice:** GPs are aware of ethical issues when guiding patients' in end of life decisions.

Disclosure: No conflict of interest declared

1423

Presentation type: Workshop

**Global health ethics: From ideas to implementation**J. Evert<sup>1</sup>, S. Loeliger<sup>2</sup><sup>1</sup> *Family and Community Medicine, UCSF/CFHI, San Francisco, United States;* <sup>2</sup> *Faculty/Board Certified Family Physician in OB-GYN Department, Contra Costa Family Medicine Residency, Contra Costa Regional Center, Martinez, United States*

Global Health and our Ethical Aspirations: Program Design, Partnership, and Global Leadership

Far too often ethics seems like an intangible, often esoteric, topic. Many of us struggle to align actions with our ethical ideals. When viewed through a more practical lens, ethics can not only guide, but strengthen, our program design, partnerships, and global health efforts. Development of personal and organizational ethics and ethos strengthens and unifies the efforts that family physicians and teams are making throughout the world to address global health challenges, encourage engagement, advocacy and action. This session will discuss how to develop the ethical code for yourself and your organization. It will include ethics case studies, interactive discussion, and resources for educating and practicing with ethical insight.

Disclosure: No conflict of interest declared

2012

Presentation type: Workshop  
Vienna and WONCA Working Party on Ethics**Challenges to our professional attitudes – the ethics of brain drain of health professionals in Africa and globally**

M. Maier

*Vienna and the Wonca Working Party on Ethical Issues*

**Background:** As stated in the “Melbourne manifesto” in 2002, “many countries in both the developing and developed world are experiencing shortages of skilled Health Care Professionals, particularly in rural and socially deprived areas. One of the responses of wealthier countries is to recruit Health Workers from poorer countries, rather than training sufficient numbers of their own. This leads to a flow of highly trained professionals away from the countries that can least afford to lose them. The effect is to impact negatively on already seriously under-resourced health systems and, therefore, on the health status of developing countries.” This brain drain is in particular true for Africa which contains only 11% of the global population, however it accounts for half the worlds maternal and child deaths and more than 90% of the worlds deaths from Malaria and HIV. However, brain drain occurs also in Eastern European countries. Since independence, more than 40% of health workers left the Moldovan Health System many of them having migrated to Romania, Italy or France. On the other hand, average life expectancy in the Republic of Moldova is low compared with other countries in Europe, particularly EU Member States; tuberculosis is a major cause of death. Similarly, approximately 100 doctors are leaving Hungary towards the west every month.

**Aim:** The reason for this one way migration of health professionals are multiple and relate to a combination of underproduction, internal maldistribution, inappropriate task allocation, inadequate working conditions, economic and political motives. The extent of the problem was made clear by the WHO World Health Report 2006; this symposium aims to readdress the ethical aspects which arise around the problem.

**Method:** 4 to 5 speakers from different countries with experience in brain drain or brain gain in health care will present their countries` situation by providing data and background. Finally, an interdisciplinary approach for tackling ethical and moral implications of brain drain and the human resource crisis globally will be presented.

**Outcome:** participants will have an opportunity to discuss the presentations and to add personal experiences from their countries as well. The symposium will conclude with a summary of the ethical considerations influencing or caused by brain drain of health professionals.

**Nigeria**

L. Modupe

**Facts and experience about brain drain in Slovak republic**

B. Blahová

*Krompoachy, Slovakia*

The Slovak Republic is a developing country in Eastern Europe. It was previously a socialist country and is now a member of the European Union. Many doctors from Slovakia decided to work abroad especially in the Western countries of Europe. We have lost both young graduates and highly trained doctors resulting in a shortage depending on the area. There are enough doctors in big hospitals in the large cities, but there is a shortage of professionals in rural areas or the eastern and northern areas of Slovakia. According to a survey which was conducted in 2007, eight graduates from ten asked said they wished to work abroad. The costs for the studies per student of medicine is around 7000 -8500 Euros per year in Slovakia. The exodus of so many doctors from Slovakia is thus a very expensive and wasteful process. There are companies hiring doctors with and without specialisation mainly from Germany, but the largest number of doctors is working in the Czech Republic.

The reasons for leaving for western countries are mainly economical; however, they also originate from dissatisfaction with the health care system here and from better career opportunities and perspectives abroad, opportunities to do research and better living and working conditions in other countries in Europe. Data and experiences of brain drain in health care and the mechanisms and consequences in the Slovak Republic will be presented.

**Medical brain drain in Switzerland : a big ethical problem**

F. Héritier

*President Swiss Society of GPs, CH*

Switzerland does not train enough MDs and must import every year more and more MDs already trained from all over Europe and further to let his health system work. Some data to show the extent of the problem. Understanding of the problem by the health politicians ? Solutions proposed.

**Apology and Exploitation**

I. Heath

*Royal College of General Practitioners, UK*

In the UK, the bicentenary of the 1807 Abolition of Slavery Act was marked by a number of formal apologies. These were more or less fulsome but must, at best, be considered hypocritical in the context of the world's richest countries' continuing and systematic exploitation of the poorest, particularly in Africa. Rich countries, with the UK prominent among them, are systematically recruiting trained health care professionals from among the poorest countries in the world.

**South Africa**

B. Sparks

**Ethical and moral implications of brain drain and the human resource crisis – individual versus societal perspectives**

R. Kutalek

*Unit Ethnomedicine and International Health, Department of General Practice and Family Medicine, Medical University of Vienna, AUT*

There are different approaches how ethical considerations regarding the migration of health workers can be dealt with meaningfully. In most contexts the issue is debated in broader policy frameworks, such as restricting the movement of health workers from poor to rich countries through codes of conduct or encouraging health workers to stay in their home-country by – more or less forceful – initiatives. These discussions rarely take into account the individual perspectives of health workers, nor do they address the dilemma of the health workers' rights to mobility and education vis-à-vis their responsibilities towards the society in the context of human rights. What is urgently needed is a multidimensional analysis of the problem that includes all stakeholders on the macro- and micro-level, considering the individual needs of health workers without neglecting larger political frameworks. In our EU-funded project HURAPRIM we aim to develop new recommendations and strategies that are relevant and viable concerning ethical challenges in brain drain.

2015

**Presentation type: Workshop****Ethical dilemmas in general practice / FM – a workshop**

M. Maier

*Medical University of Vienna, Austria*

**Introduction:** At the WONCA 2000 Conference in Vienna a symposium entitled “Challenges to our professional attitudes- past and present”, was held. As a result, a Special Interest Group of WONCA on ethical issues was founded and symposia and workshops on clinical situations of everyday practice involving ethical dilemmas are since then regularly presented at WONCA Conferences. Since 2010 the Special Interest Group became a Working Party of Wonca.

**Goals:** It is the aim of the workshop to present practical situations involving ethical dilemmas as they occur regularly in General Practice / Family Medicine and to discuss their background and possible consequences for the patient, his/her family and the physician.

**Method:** The group work will start with short presentations by the workshop-participants of situations demonstrating ethical dilemmas. The participants may then agree to select specific situations out of those presented, will split into small groups and will discuss the following issues:

1. The patient's history and other factors, which resulted in the development of the particular ethical problem presented
2. The possible consequences of the situation for the patient and the physician
3. Possible solutions
4. What are the basic ethical principles demonstrated and challenged by this situation?

**Expected outcome:** The goal of this workshop will be to increase the awareness for ethical standards and attitudes as applicable to future medical graduates and General Practitioners.

**Time Frame:** The workshop will last 60 to 90 minutes.

594

**Presentation type: Oral Communication****„GPs on the fringe“: Ethical conduct, professional discipline and integrative medicine in Australia**

W. Jammal

*Hills Family General Practice, Hills Family General Practice, Sydney, Australia*

The practice of „Integrative Medicine“ („IM“) by general practitioners („GPs“) has increasing, and continues to gain wider acceptance by both patients and practitioners alike. But when problems in treatment arise, the interplay between the practice of conventional western „evidence based medicine“ and complementary and alternative medicine („CAM“) undergoes close scrutiny. How ethical is CAM when used alongside, or „integrated“ with conventional western medicine? What models of care should be used? What effect will the fact that a GP practices integrative medicine have on how he/she is judged if things go wrong? Amongst various jurisdictions in Australia, disciplinary proceedings are increasingly used to examine the conduct, ethics of treatment and management of patients by GPs who practice CAM and integrative medicine. By highlighting some case law examples, this paper examines some of the ethics, models of care and principles of informed consent that are faced by integrative medicine practitioners. It questions the validity of CAM in the context of conventional general practice. As the use of CAM modalities by GPs increase, so too does the need to clearly define the models of care within which IM practitioners work, and the need for insight into the complexities of the patient-doctor relationship.

**Disclosure:** The author has been involved in giving expert evidence and by sitting on disciplinary bodies in some of the case law examples discussed. The views expressed are independent and do not represent the opinion of any official body or organisation.

1196

**Presentation type: Oral Communication****If I were “the Patient” in the Intensive Care Unit: A cross-sectional survey with health care professionals**T. Albayrak<sup>1</sup>, İ. Kasım<sup>1</sup>, Ö. Akca<sup>1</sup>, İ. Şencan<sup>1</sup>, M. Heybet<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Özkara<sup>2</sup><sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** There must be a good communication between the service areas for an effective functioning of the health system. One of the most important elements of this communication is empathy. The physician is usually the dominant factor in health care decisions. Critical care and end-of-life decisions are perhaps the most difficult decisions for both care-givers and the health care professionals (HCP). Although HCPs face several incidents where tough decisions are made regarding end of life treatments, their views on such decisionmaking have rarely been investigated. The aim of this study is to learn and understand the views and opinions of health care professionals on end-of-life decision-making, their personal preferences and the factors affecting these.

**Methods:** This cross-sectional study is designed by the family medicine department. A survey is conducted with health professionals in a training and research hospital. We included the staff who accepted to join the study, and excluded HCPs that are diagnosed with psychiatric disorders or serious conditions such as cancer. The survey included socio-demographic information, personal and family history, factors that influence the decision-making process for advanced life support in intensive care. Templer's Death Anxiety Scale (TDAS) was also applied.

**Results and conclusion:** The study is still running and the findings are expected to be presented during the conference. The findings would be expected to give us an idea about the views of HCPs on end-of-life decisions and related factors, and would be expected to draw attention of national and international scientific community.

Disclosure: No conflict of interest declared

1300

**Presentation type: Oral Communication****The causes of potential ethical conflicts between public health institutions, physicians and patients, regarding vaccination in Slovakia**

P. Bolaček

general practitioner, SSVLP SLS, Bratislava, Slovakia

**Objective:** The presentation evaluates current legal situation of patients (legal representatives), physicians and public health institutions in the process of vaccination in Slovakia. It also tries to discover causes of potential ethical conflicts between the parties involved, in the case of vaccination refusal, vaccine- application refusal and in the case of determination of legal responsibility for vaccination adverse events consequences.

**Methods:** The presentation is based on research and analysis of current regulations, medical and non-medical articles and publications, as well as personal interviews with patients and medical doctors.

**Results:** The current legal situation indicates obligation of same vaccination for patient and obligation of applying of vaccines for healthcare workers without alternative. Public health institutions as a state representative are posing obligations and sanctions, but do not take enough responsibility for potential adverse reaction consequences. For this are currently responsible health care providers. All this triggers some ethical conflicts and questions. What is more- public health protection or personal rights and individuality protection?

**Conclusion:** The obligation of some vaccinations for patients and obligation for applying vaccines for healthcare workers without alternatives in Slovakia poses bases for ethical conflict in the case of refusal. This status is causing creation of non-governmental organisations looking for freedom in vaccination and appropriate vaccine caused damage-compensation.

**Key words:** vaccination, vaccination refusal, ethical conflict

Disclosure: No conflict of interest declared

1565

**Presentation type: Oral Communication****Palliative care pathways from ethical perspective**B. Van den Eynden<sup>1</sup>, C. Leget<sup>2</sup>, F.Vosman<sup>2</sup><sup>1</sup> *Institute for Primary and Interdisciplinary Health Care-Centre for Palliative Care GZA, University of Antwerp, Antwerp, Belgium;* <sup>2</sup> *Department Care, Ethics and Management (Theology and Religion Sciences), University of Tilburg, Tilburg, Netherlands***Objective:** Care pathways for palliative patients (PCP) are considered as ideal instruments for PC: evidence-based, leading to standardisation, registration and control. But what about the ethical perspective?**Methods:** A systematic literature study formed the basis of qualitative research using face-to-face interviews with philosophers-ethicists and focus groups of caregivers for data collection.**Results:** The philosophers situated PCP within the context of modern society, searching for certainty. PCP are for them valuable means when properly used: they warned for an application just as a rigid checklist and argued to give them their place within the particular relation of the caregiver with the palliative patient.

The caregivers considered PCP as 'living' instruments helping to create and build a PC culture. PCP are not a rigid 'armour': they consider PCP as a 'house' with a number of practical and pragmatic advantages (registration, standardisation) but in which also an number of care-ethical values can enrich care. Nevertheless it will always be the caregivers who will have, together with patient and family, to 'furnish this house'. Caregivers are also not blind for barriers as the need for extra time and administration.

**Conclusions:** Using the metaphor of 'the care house' two layers could be considered: a superficial one with a lot of evidence-based principles and a deeper, bearing layer with care ethical values as having an eye for vulnerability, asymmetry, uniqueness and dependency in the relation. Both layers are essential; the opposition between principle and care ethics seems in the case of PCP a false one.

Disclosure: No conflict of interest declared

1592

**Presentation type: Oral Communication****The forensic assessment and medical care of adult and adolescent victims of sexual assault**R. Isaacs<sup>1,2,3</sup><sup>1</sup> *1 SAFE: Sexual Assault, Abuse and Forensic Examinations, Royal Prince Alfred Hospital, Sydney, Australia;* <sup>2</sup> *Department of Community Medicine, University of Sydney, Sydney, Australia* <sup>3</sup> *Special Interest Network Violence and Abuse, Royal Australian College of General Practitioners, Sydney, Australia*

Globally, where such statistics are available, most sexual assaults go unreported. In the Australian context the single professional a woman is most likely to be tell about a sexual assault is her General or Family Practitioner. Rape is a significant cause of morbidly worldwide.

For the smaller proportion of victims who do report the rape to the police, a forensic medical examination can be offered. In the Australian context, most doctors who carry out this work are Family Practitioners with some forensic training. While the legal and cultural situations will vary internationally, this work relies on a common body of knowledge and skills that will be of relevance to all conference delegates involved in forensic examination and also to Family Practitioners who wish to be more responsive to patients who may disclose a recent rape, or a rape that took place years or decades earlier and can still be affecting health and well-being.

1. A supportive response to the traumatised patient
2. Minimising risk of sexually transmitted infection and pregnancy
3. Forensic examination, documentation and injury interpretation
4. Specimen collection for DNA analysis
5. The varying and complex issues concerning the reporting of rape
6. Associations including domestic violence and youth at risk
7. The evidence in the literature concerning the common finding of no visible genital or anal injury in cases of proven sexual assault. Explaining this to the patient and/or to the court.

The workshop covers 1,5, 6 &amp; 7 and touches more briefly on 3 &amp; 4.

Disclosure: No conflict of interest declared



## 2.16. ADOLESCENT MEDICINE

359

Presentation type: Workshop

### Parallel Family Care in Adolescence: Building intergenerational bridges in the heart of a family

M. Svetaz,<sup>1</sup> Michele Allen<sup>2</sup>, R. Shlafer<sup>3</sup>, M. Landrieu<sup>4</sup>, M. Hurtado<sup>1</sup>

<sup>1</sup> Department of Family and Community Medicine, Hennepin County Medical Services, Minneapolis, United States; <sup>2</sup> Department of Family Medicine and Community Health, University of Minnesota, Minneapolis, United States; <sup>3</sup> Department of Pediatrics, University of Minnesota, Minneapolis, United States; <sup>4</sup> Extension, University of Minnesota, Minneapolis, United States

**Objective:** Adolescence is one of the most challenging intergenerational transitions for families, particularly those where both parents and youth have unmet health needs, or those that migrate to a new culture, as this usually widens the intergenerational gap. We describe key elements of a clinic-based positive youth development program that supports both high needs/risks youth and their immigrant families through this important developmental period.

**Methods:** Aqui Para Ti/Here For You (APT) is a comprehensive, healthy youth development program that provides medical care, coaching, and health education to US Latino youths (11-17 years old) and their families. The model uses a confidential, family-centered approach that protects youth privacy while supporting, treating, and training parents. This approach, parallel family care, leverages family strengths and skills and also addresses parent's mental health and parenting needs. The APT intervention functions as a "clinic within a family-medicine clinic" where intensive adolescent care is delivered by a multidisciplinary team.

**Results:** The program has been evaluated across multiple timeframes using pre-post survey, chart review, and qualitative approaches. Outcomes suggest that the program enhances overall health status among youth through increased birth control use, improved mental health, and improved parenting. The high level of depression found among parents highlights the appropriateness of the program's model. Parents show improved ability to interact with their children and improved ability to access resources.

**Conclusions:** APT is a model for inter-generational care using family parallel care to improve the health and well-being of both high need youth and parents, particularly when immigrants.

Disclosure: No conflict of interest declared

1488

Presentation type: Workshop

### Consultation adolescents

V. Carvalho<sup>1</sup>, L. Troni<sup>2</sup>, R. Monte Alto<sup>3</sup>

<sup>1</sup> Family Physician, USF Sobreda, Almada, Portugal; <sup>2</sup> Family Physician, USF Rodrigues Miguéis, Lisboa, Portugal; <sup>3</sup> Child and Adolescent Psychiatry, Centro Hospitalar Lisboa Central, Lisboa, Portugal

**Objective:** World Health Organization defines adolescence between 10 and 19 years. The body changes, the emergence of new cognitive abilities and their new role in society are determinants that make this a vulnerable group. The profile of morbidity and mortality has been changing, with increasing problems that could be avoided by measures of health promotion and disease prevention.

The learning objectives of this workshop is structure the query in order to address situations and peculiarities of the adolescent:

- Receipt and adequacy of physical space
- Particularities of history and dynamic query
- Establish good communication, giving an opportunity to express ideas and concerns
- Major health problems
- Health education, promoting the elimination of risk factors and adopting healthy lifestyles
- Physical and mental examination

**Methods:** The training will be organized in a theoretical and practical perspective, using audio-visual support and active participation of the learner.

Contact with assessment tools specifically used in clinical practice with adolescents. Conceptualization and discussion of clinical cases.

Issues to be addressed:

- The consultation teenager
- Health care in adolescence
- Puberty physiological and common problems
- Sexuality and body awareness
- Doctor-patient relationship
- Family problems
- School problems
- Adolescence and nutrition
- Psychiatric problems more common
- The approach for adolescents with chronic illness

**Results:** At the end of this module participants should be able to:

- Conduct surveillance of adolescent health
- Promoting healthy lifestyles
- Support the integration of the adolescent in family and society
- Conduct screening / diagnosis of pathological conditions and / or deviations from normality
- Forward the situations that required different specialties

**Conclusions:** It is intended that trainees can acquire:

- Theoretical-practical approach to adolescents
- Technical skills specifically clinical evaluation, diagnosis, differential diagnosis and intervention in the more common problems
- Developing critical reflective capacity

Disclosure: No conflict of interest declared

2028

**Presentation type: Workshop**  
**European Confederation of Primary Care Paediatricians**

**Workshop of clinical scenarios of urgencies and emergencies in primary care paediatrics: Interactive discussion**

L. Sánchez<sup>1</sup>, A. Rodríguez-Nuñez<sup>2</sup>, E. Civantos<sup>3</sup>, J.A. Iglesias-Vazquez<sup>1</sup>

<sup>1</sup> Public Foundation of Urgencies and Emergencies of Galicia; <sup>2</sup> Paediatrics Intensive Care Unit, University Clinical Hospital of Santiago; <sup>3</sup> Barranco Grande Health Center, Tenerife

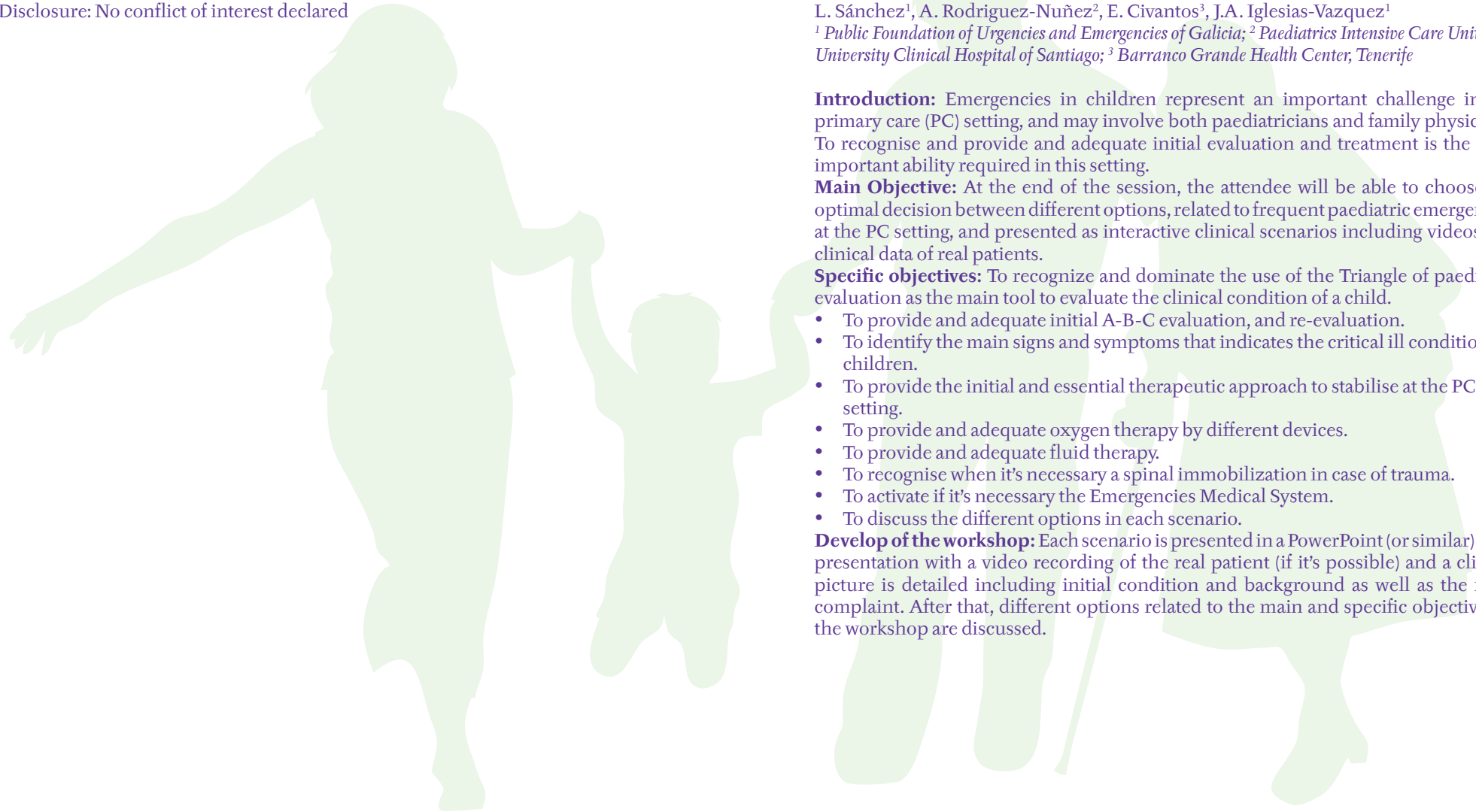
**Introduction:** Emergencies in children represent an important challenge in the primary care (PC) setting, and may involve both paediatricians and family physicians. To recognise and provide an adequate initial evaluation and treatment is the most important ability required in this setting.

**Main Objective:** At the end of the session, the attendee will be able to choose the optimal decision between different options, related to frequent paediatric emergencies at the PC setting, and presented as interactive clinical scenarios including videos and clinical data of real patients.

**Specific objectives:** To recognize and dominate the use of the Triangle of paediatric evaluation as the main tool to evaluate the clinical condition of a child.

- To provide an adequate initial A-B-C evaluation, and re-evaluation.
- To identify the main signs and symptoms that indicate the critical ill condition in children.
- To provide the initial and essential therapeutic approach to stabilise at the PC setting.
- To provide an adequate oxygen therapy by different devices.
- To provide an adequate fluid therapy.
- To recognise when it's necessary a spinal immobilization in case of trauma.
- To activate if it's necessary the Emergencies Medical System.
- To discuss the different options in each scenario.

**Develop of the workshop:** Each scenario is presented in a PowerPoint (or similar) slide presentation with a video recording of the real patient (if it's possible) and a clinical picture is detailed including initial condition and background as well as the main complaint. After that, different options related to the main and specific objectives of the workshop are discussed.



966

Presentation type: Oral Communication

**A survey about child abuse and neglect in Turkey: Retrospective study**

E.M. Koc<sup>1</sup>, F. Sahin<sup>2</sup>, R. Kahveci<sup>1</sup>, A. Ozkara<sup>3</sup>, I. Sencan<sup>1</sup>, I. Kasim<sup>1</sup>

<sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Pediatrics, Gazi University Medical Faculty, Ankara, Turkey; <sup>3</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Child abuse and neglect is a very important issue in Turkey because of the diagnosing difficulties, the lack of statistical data and epidemiologic factors. Prevention from abuse needs the organization of the efforts of health workers, especially the doctors and also many people from different occupations. It is an important point to improve the knowledge and skills of the health care personnel about the diagnosis, treatment and prevention of child abuse.

The aim of this study is to highlight the prevalence of childhood maltreatment in Turkey using ICAST-R and the association between perception of abuse experienced during childhood and recent psychological personal disorders. Also the social risk factors that can cause abuse in our country were determined by examining the relationship between sociodemographic factors and abuse.

**Methods:** In this study we used the ICAST-R (ISPCAN Child Abuse Screening Tool- Retrospective Version), Symptom Checklist 90 (SCL-90), the Turkey version of Beck Depression Inventory (T-BDI) and a questionnaire about socio-demographic factors. ICAST-R that is specifically designed for young people aged 18-24 years and The International Society for Prevention of Child Abuse and Neglect (ISPCAN) has created this research instrument with the help of UNICEF and the Oak Foundation for collecting data about all forms of violence against children. 141 18-24 aged university students from different faculties participated in the study.

**Results:** Results will be announced at WONCA 2013 World Conference.

**Conclusion:** Family physicians, as a member of the family, have important roles for diagnosis, treatment and rehabilitation of abuse and neglect.

Disclosure: No conflict of interest declared

1694

Presentation type: Oral Communication

**Prevalence risk of eating disorders in the student population from Universidad de la Sabana, Chía, Colombia**

A. Domínguez, A. Baena, M. Ulloa

PUBLIC HEALTH AND FAMILY MEDICINE, UNIVERSIDAD DE LA SABANA, CHIA, CUNDINAMARCA, Colombia

Eating disorders involve severe disturbances in the eating patterns, affecting the patient's behaviors, physical health, emotions and psico-social conditions.

**Objective:** The purpose of this study was to evaluate the prevalence risk of these disorders in the student population from Universidad de La Sabana, ages 18 to 22, in the first semester of their freshman year.

**Methods:** A *cross-sectional study* was performed using a questionnaire to record socio-demographical variables (sex, field of study (faculty), age and economic status) and the Eating Attitudes Test (EAT-26).

**Results:** Based on a sample of 392 students it was found that 13.8% of the population was at risk of having an eating disorder. The gender evaluation resulted on women to men ratio of 4:1 ( $p < 0.000$ ). The field of study showed that the Law faculty had the highest percentage of risk with 18.8% while Medicine, Nursing and Rehabilitation had a tie on second place with a rate of 18.2% each.

**Conclusion:** The results of this study leads to the conclusion that it is necessary to develop strategies oriented to the prevention and treatment of eating disorders and in the young adult population.

Disclosure: No conflict of interest declared

## 2.17. GERIATRICS

1223

Presentation type: Workshop

### Looking to the future: Different innovative approaches for elderly in primary care

H. Yaman<sup>1</sup>, S. Iliffe<sup>2</sup>, M. Inoue<sup>3</sup>, R. Kahveci<sup>4</sup>, A. Özkara<sup>4</sup>

<sup>1</sup> Family Medicine, Akdeniz University Department of Family Medicine, Antalya, Turkey; <sup>2</sup> Centre for Ageing Population Studies in the Department of Primary Care and Population Sciences, University College London, London, United Kingdom; <sup>3</sup> Department of Community Medicine, General Medical Education Center, Teikyo University School of Medicine, Tokyo, Japan; <sup>4</sup> Family Medicine, Ankara Numune Research and Training Hospital, Ankara, Turkey

The “greying” of the world is a widely recognized reality in developed and developing countries. The demographic shift is a challenge for family practice, which is serving at the frontier of the health system. Daily clinical tasks to manage co-morbid chronic conditions and the need for specific care services of elderly people call for innovative approaches in primary health care setting. The “age-friendly primary health care toolkit” which was developed by WHO for low-resourced primary health care settings is an innovative approach to address the increased needs of aging population in family practice. Besides the work in primary health care centers home visits, home care, advanced care planning, geriatric assessment at home, case management, integration of care, shared care are further topics, which need to be emphasized by the family doctor. Appropriate team building and an inter-professional work is expected during daily care and a close collaboration with specialties in hospitals is also elementary in family practice. WONCA SIG Elderly Care is forming a newly established network with the aim to address these subjects and challenges.

The learning objectives of this workshop include:

1. To discuss the “age-friendly primary health care” concept.
2. To learn new evidence on anticipatory care of older people.
3. To share experience and knowledge on health care issues in older people

Disclosure: No conflict of interest declared

48

Presentation type: Oral Communication

### Cardiac surgery among the very old – family physician perspective. Is there a role for a collaborate approach?

I. Heinrich

Family Medicine, Clalit Health Services, Haifa, Israel

Cardiac surgery (both open and closed approaches) has advanced significantly during the last 50 years.

Elderly longevity makes it trivial to perform pre interventional debate concerning issues of necessity/prognosis in perspectives of family physician/cardiologic/heart surgeon/patients’ perspectives in order to screen out improper candidates for interventions.

The primary care practitioner role in this regard focuses upon adjusting clinical and imaging data along with patients’ self perception of how to behave at medical life threatening situations at end of life era and present those to the medical professional collaborators and family members.

By extrapolating the aged person resources (socio economical pre and post operation and medical – co morbidities) and views (desire for curative versus palliative care) we should strive to design a tailored patient oriented treatment decision (that might sometimes contradict the evidence based attitude).

Our self experience in HARAV KOOK primary care facility in Israel demonstrates that collaboration with cardiologists and cardiac surgeons on a current work basis makes this alternative a fair practical reality.

Doing so, does not mean combating and confronting our fellow specialists but rather helps primary care medicine step forward for its very old clients assisting them in choosing wisely and willingly between alternatives in a constructive manner.

Disclosure: No conflict of interest declared

### Caregiver burden in spouse and adult children of patients with Alzheimer's disease – baseline results of the GERAS study

C. Reed<sup>1</sup>, G. Dell'Agnello<sup>2</sup>, A. Wimo<sup>3</sup>, J. Maria Argimon<sup>4</sup>, M. Belger<sup>5</sup>, G. Bruno<sup>6</sup>, R. Dodel<sup>7</sup>, J. Maria Haro<sup>8</sup>, R.W. Jones<sup>9</sup>, B. Vellas<sup>10</sup>

<sup>1</sup> Global Health Outcomes, Eli Lilly and Company Limited, Windlesham, United Kingdom;

<sup>2</sup> Medical Department, Lilly Italy, Florence, Italy; <sup>3</sup> Alzheimer Disease Research Centre, Karolinska Institute, Stockholm, Sweden; <sup>4</sup> Agency for Health Information, Assessment and Quality, Servei Català de la Salut, Barcelona, Spain; <sup>5</sup> European Statistics, Eli Lilly and Company Ltd, Windlesham, United Kingdom; <sup>6</sup> Dept of Neurological Sciences, University of Rome „Sapienza“, Rome, Italy; <sup>7</sup> Department of Neurology, Philipps-University, Marburg, Germany;

<sup>8</sup> Parc Santari Sant Joan de Déu, CIBERSAM, Universitat de Barcelona, Barcelona, Spain;

<sup>9</sup> RICE (The Research Institute for the Care of Older People), The RICE Centre, Bath, United Kingdom; <sup>10</sup> Gerontopole, Toulouse University Hospital, Toulouse, France

**Objectives:** To describe the characteristics of spouse and adult-child caregivers of patients with Alzheimer's disease (AD).

**Methods:** A prospective, multi-centre, non-interventional study in France, Germany and the UK, enrolment October 2010–October 2011. Patients presenting within the normal course of care who were >55 years, diagnosed with probable AD (NINCDS-ADRDA), not institutionalised and with an informal caregiver were categorised according to MMSE score as mild (26–21), moderate (20–15) or moderately severe/severe (14 or less) AD. Patient functional ability was collected using Alzheimer's Disease Co-operative Study Activities of Daily Living Inventory (ADCS-ADL), behavioural functioning with Neuropsychiatric Inventory (NPI) and caregiver burden using Zarit Burden Inventory (ZBI).

**Results:** The study cohort included 1497 AD patients, 66% (n=985) with spouse caregivers and 27% (n=405) with adult-child caregivers. Patients with adult-child caregivers were older (82 vs 76 years with spouse caregivers), 83% were female (vs 42% female patients with spouse caregivers), and had a shorter mean time since diagnosis (2.0 vs 2.3 years). More spouse caregivers cared for mild patients (41% vs 33% adult-child caregiver). Reported behavioural dysfunction was greater in patients with adult-child caregivers (mean NPI total 17.4 vs 14.0) although functional abilities were similar. There were more female adult-child caregivers (75% vs 59% female spouse caregivers). Adult-child caregivers had higher caregiver burden (mean ZBI total 31.8 vs 28.1; p<0.001).

**Conclusions:** Two-thirds of AD patients in the GERAS sample were cared for by their spouse. Differences between spouse and adult-child caregivers were found in both patient and caregiver characteristics. Adult-children caregivers report significantly higher caregiver burden.

Disclosure: This study is sponsored and funded by Eli Lilly and Company Limited. Catherine Reed and Mark Belger are all employees of Eli Lilly and Company Limited. Josep M Argimon, Giuseppe Bruno, Richard Dodel, Roy W Jones, Bruno Vellas, and Anders Wimo have received financial compensation from Eli Lilly for participation on the GERAS Advisory Board. Josep Maria Haro is a consultant for Eli Lilly.

### Pressure ulcers – who is at risk and who is responsible?

L. Kukuckova<sup>1</sup>, K. Dostalova<sup>2</sup>, S. Moricova<sup>2</sup>, L. Mahelova<sup>3</sup>, J. Luha<sup>4</sup>

<sup>1</sup> Department of long term ill, Derer 's Hospital, University Hospital, Slovak Society of General Practice, Bratislava, Slovakia; <sup>2</sup> Faculty of Public Health, Slovak Medical University, Bratislava, Slovakia; <sup>3</sup> Department of Occupational Medicine and Toxicology, Derer 's Hospital, University Hospital, Bratislava, Slovakia; <sup>4</sup> Institute of Medical Biology, Genetics and Clinical Genetics,, Comenius University School of Medicine, University Hospital, Bratislava, Slovakia

Despite of progress in medicine, pressure ulcers still remain a problem in hospitalized patients and outpatients too.

We analysed 237 consecutive patients at the Department of long term ill during one year. 88 (37,13%) had pressure ulcers (mean age 80,8 years, 59,1% were women). 8 of them (9,1%) developed pressure ulcers during hospitalisation at our department. Most of the patients were immobile (59,1%), with Barthel scale 0–40 (89,8%) – severe dependence. Women suffered in more serious decubitus (stage III and IV) and required a necrectomy more often. More women than men had a permanent urinary catheter (67,7% vs. 32,3%, p<0,05) and all of them had a urinary infection (p<0,05). More women than men (85,7% vs. 14,3%) needed nasogastric tube insertion and 66,7% of them suffered a cerebral stroke. More women than men had serum albumin level under 28g/l (64,3% vs. 35,7%). 22 patients (25%) died, more of them were admitted from internal clinic (45,5%) and more of them had severe pressure ulcers (40,9% with stage III). 74,2 % of patients with pressure ulcers were discharged from hospital (home – 33,3%, 40,9% to nursing home). They became outpatients and general practitioners became responsible for their health care and management of ulcer healing in cooperation with home nurses and relatives.

By analysis we would like to point out the characteristics of patients at high risk of pressure ulcers. General practitioners have to assess the risk and then focus on preventive measures in risk outpatients.

Disclosure: No conflict of interest declared

### Validation of "A Quick Test of Cognitive Speed" (AQT) as an instrument for diagnostic dementia evaluation in primary care

E. Salome<sup>1</sup>, E. Pirrotta<sup>1</sup>, F. Petrazzuoli<sup>1</sup>, N. Buono<sup>1</sup>, A. Cuffari<sup>1</sup>, M. Cambielli<sup>1</sup>, C. Farinaro<sup>1</sup>, R. Antonelli Incalzi<sup>2</sup>, C. Pedone<sup>2</sup>

<sup>1</sup> SNAMID, Italian Society of General Practice, Milan, Italy; <sup>2</sup> Department of General Medicine and Geriatrics, University "Campus Bio-Medico", Rome, Italy

**Background:** Traditional tests for dementia evaluations such as the Mini-Mental State Examination (MMSE) have several limitations. A Quick Test of Cognitive Speed (AQT), is a processing-speed test that uses sustained rapid naming of single-and dual-dimension visual stimuli to measure the amount of time required to complete relatively simple tasks with controlled input: criterion-referenced norms for AQT are available for English, Scandinavian, Greek and recently Italian speaking adults.

**Objective:** Validating AQT as an instrument in diagnostic dementia evaluations and compare AQT to MMSE and Clock Drawing Test (CDT) in primary care.

**Methods:** Primary health care cohort survey. Setting: Primary health care centres and a geriatric memory outpatients clinic (Department of General Medicine and Geriatrics, University "Campus Bio-Medico" Rome, Italy). 60 subjects older than 65 living at home who show memory problems confirmed by a short questionnaire. Patients will perform MMSE, CDT and AQT, at the primary health care clinic and referred for extensive neuropsychological evaluations at the geriatric outpatients clinic. AQT will be validated against final clinical diagnosis determined by a geriatric specialist and a neuropsychologist through application of DSMIV diagnostic criteria. Sensitivity, specificity, Positive Predictive Value (PPV), Negative Predictive Value (NPV), likelihood ratios and Receiver Operating Characteristic (ROC) will be measured.

**Conclusion:** This study will help us to establish if AQT is a reliable and effective test for dementia assessments in primary care. If this is the case AQT which is user-friendly and quickly administered, could be extensively used in the primary care settings.

Disclosure: No conflict of interest declared

### The prevalence of skin diseases in the elderly

A. Ozturk<sup>1</sup>, F.G. Cihan<sup>1</sup>, F.Gokgoz Durmaz<sup>1</sup>, C. Yavuz<sup>2</sup>, C. Kutlugün<sup>2</sup>

<sup>1</sup> Family Medicine, MoH Konya Training and Research Hospital, Konya, Turkey; <sup>2</sup> Dermatology, MoH Konya Training and Research Hospital, Konya, Turkey

**Objective:** According to current statistics, the Turkish population is getting older. In this study, the dermatological diagnoses of the patients aged 65 and over were investigated in order to attract the attention of family physicians in this regard.

**Methods:** This is a descriptive and retrospective study. The registry records of the geriatric patients, who were examined at dermatology department of a tertiary care hospital from January to December 2011, were analyzed by SPSS 18.0.

**Results:** 3868 patients were examined through 2011 and their mean age was 75.18. 47.6% (n = 1842) were male and 52.4% (n = 2026) were female. None of them was hospitalized. 66.6% (n = 2575) were 65-74 years old, 29.7% (n = 1150) were 75-84 years old and 3.7% (n = 143) were ≥85 years old. The diagnoses were dermatitis (15%), pruritus (14.1%), actinic keratosis (11.7%), xerosis cutis (11.4%), tinea infections (8.6%), lichen simplex chronicus and prurigo (3.8%), herpes virus infections (3.2%), urticaria (3.1%), cornification (2.5%) and viral warts (1.7%) respectively. Dermatitis (17.4%), pruritus (14.1%) and xerosis (12%) were the most common diseases in males. Pruritus (14.1%), actinic keratosis (13.2%), dermatitis (12.8%) were the most common diagnoses in women. There was no significant correlation between ages and diagnoses.

**Conclusions:** In this study, it was demonstrated that, the most common dermatologic diseases in geriatric population can be diagnosed by a careful physical examination. It also emphasizes the need for routine dermatological examination in geriatric population by their family physicians.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****How to keep the medications of your elderly patient under control?**

M. Ballieux, Z. Damen, J. Burgers, M. Verduyn

*Department of implementation, Dutch College of General Practitioners (NHG), Utrecht, Netherlands*

**Introduction:** Harmful effects of medication occur more often to the elderly because of their changed physiological reactions and because they tend to use many different drugs (polypharmacy).

An overall picture of the actual use of medications by the elderly is often lacking in general practice due to different reasons: the drugs are prescribed by several doctors, GP's and clinicians in hospitals, the registration is often insufficient and the elderly often have problems with drug compliance due to cognitive or physical restrictions.

This lack of control of drug use leads to adverse events because of interactions, overdoses and even to hospital admissions!

In order to address these problems the Dutch College of GPs initiated the development of a clinical practice guideline on this topic. An important part of the guideline is a structured approach to a 'medication review', involving GP's, pharmacists and patients. The aim of this workshop is to discuss and share ideas with GP's from several countries on how GP's can achieve that the medication of their elderly patients is rational and safe.

**Organisation of the workshop:**

- Introduction
- Working in small groups on a case history
- Presentation of the 'medication review'
- Working in small groups to exchange ideas.
- Plenary discussion

**Results:** The participating GPs are aware of and feel more prepared to deal with the problems of polypharmacy of the elderly in their practice.

Disclosure: No conflict of interest declared

813

**Presentation type: Oral Communication****Dementia module for family physicians: A biopsychosocial approach**

E.I. Maglonzo

*Family Medicine, Philippine Academy of Family Physicians, Manila, Philippines*

Dementia cases have increased rapidly and caused impact on the patients and family members. The family physician is often the key to determining whether patients and families will receive information, guidance, and appropriate interventions. Objective: To evaluate the effectiveness of the dementia module among Family Physicians in terms of their knowledge and skills. Methods: The Philippine Academy of Family Physicians and Dementia Society of the Philippines implemented a module targeting the different PAFP chapters in the Philippines. Module content used the biopsychosocial approach. This includes medical aspect such as the myths on dementia, signs and symptoms, diagnosis, management; psychological aspect such as cognitive, behavioral and psychological problems and the corresponding interventions and the social aspect such as the patient and the environment as well as issues of the caregivers. Participants also had skills training on MMSE-P using an instructional, teaching and reliability video. Module was evaluated using a post test for the cognitive aspect and checklist for the skills. Results: Mean passing level of for both the written exam and the skills evaluation is 75%. Results showed that 29-90% of the family physicians in each chapter passed the module and received a certificate of competence. Module evaluation by physician trainees revealed that the module is relevant to their practice and the learning objectives were attained. They also commended the content, presentation and the speakers. Conclusion: The PAFP-DSP module is relevant and helpful for family physicians.

Disclosure: No conflict of interest declared

817

Presentation type: Oral Communication

### Evaluation of the quality of prescription in elderly people in a Health Center

I. Galindo, P. Claver, C. Burgasé, M. Sanz, P. Sanz, A. González, C. Quintana, S. Arnal, R. Escriche, I. Diez

Perpetuo Socorro Health Center; Servicio Aragonés de Salud, Huesca, Spain

**Objective:** To evaluate the problems of polypharmacy and inappropriate medication in elderly patients in Primary Care. The geriatric patients are a vulnerable population because of their great morbidity, pathophysiology and psychosocial conditions which make them more susceptible to suffer polypharmacy and adverse drugs reactions.

**Method:** Design: A descriptive study reviewing the long-term prescriptions from elderly patients with 75 years or more who takes 6 or more drugs (n=174), analyzing age, sex, name and drugs number, drugs interactions and Beer's Criteria drugs.

Location: Health Center "Perpetuo Socorro" (Huesca-Spain)

Period: from 11<sup>th</sup> to 15<sup>th</sup> January 2010

Data Base sources: computer record of the OMI-AP program of the health Centre, the pharmacology data base from Aragón Primary Care System (BotSalud) and the updated Beer's Criteria list 2003.

**Results:** Polypharmacy was found in 37'3% from our elderly practice population.

The average number of drugs is 9'39 and from active principles is 10'32.

The 83'3% (145) presents interactions (mean 3.44), classified in four groups: theoretical (27%), unimportant (5'7%), potentially important (35'6%) and more important (74'7%).

Beer's Criteria drugs appear in the 12'6% of patients, the most frequent is amiodarone.

**Conclusions:** In our health center there is a high prevalence of polypharmacy and an elevated number of drugs prescribed compared to the national average. The high rate of important interactions increments the risk of adverse drugs events. However, there is a low prevalence of Beer's drugs. The attention using polypharmacotherapy maximize the safety of prescribing and improve the quality of life of these patients.

Disclosure: No conflict of interest declared

919

Presentation type: Oral Communication

### Nonagenarians tell us how they understand their ageing long and ageing well

I.M. Rea<sup>1</sup>, J. Rea<sup>2</sup>, A. Murphy<sup>1</sup>

<sup>1</sup> Geriatric Medicine, Queens University, Belfast, United Kingdom; <sup>2</sup> GP training scheme, Royal Free Hospital, London, United Kingdom

**Objective:** Most of us know mothers, grand-mothers or aunts who are 90 years over and nonagenarians are the fastest growing population group. We also recognise family clustering of nonagenarians. Scientists search for genes influencing longevity, clinicians wonder why some nonagenarians live without major illness but sociologists ponder if behaviours/cultures are the answer. We asked nonagenarians what they understood about their longevity.

**Methods:** Self-reported life-narratives of sibling nonagenarian pairs were collected from volunteer, consented participants of the EU-funded Genetics of Healthy Ageing (GeHA), in 4 European countries, within the ACUME2-EU Socrates project. Nonagenarians answered structured questions about survivor-hood, family and if living siblings >90 years enhanced coping abilities. Interviewing and photography occurred concurrently, audiotapes were transcribed and themes identified using 'grounded theory' methodology.

**Results:** Nonagenarians considered that genes and good life-style were factors in their longevity as in 'my mother and my aunts on my father's side lived long', with life-style being important as in 'stay active, eat properly'. In analysing sibling relationships, 'intimate'supportive dyads were uncommon with most sibling pairs demonstrating independent but 'congenial' relationships.

**Conclusions:** Nonagenarians identified family history, a need to keep mentally and physically active and good sensible food as important factors in their longevity. All nonagenarians emphasised social networks as essential to their good quality ageing. European nonagenarians showed common personality characteristics of positivity and optimism, feisty independence, adaptability and a self-deprecating sense of humour. The nonagenarians identified factors influencing their longevity which today public health recognises as the building blocks of life-long health.

Disclosure: No conflict of interest declared



1040

Presentation type: Oral Communication

**The prevalence of mild cognitive impairment and incidence of dementia in family practice**

M. Hanževački, S. Blažeković Milaković, S. Stojanović Špehar  
*Family Practice, School of public Health Andrija Štampar, Zagreb, Croatia*

**Objective:** To establish the prevalence of mild cognitive impairment and incidence of dementia in selected group of elderly people during 12 months in daily work of family practitioner.

**Methods:** Prospective cross-sectional research divided in three waves: initial, after six and after 12 months. Inclusion criteria: People >65 years. Exclusion criteria: already diagnosed dementia, psychosis, depression episode during last six months, medication with substances known to influence cognitive functioning. Patients were tested with Mini Mental State Examination Test (MMSE) and Montreal Cognitive Assessment test (MoCA). General demographic and comorbidity data were collected. The total of 602 people (273 men and 329 women) completed the study.

**Results:** None of the patients did not mention cognitive problem as the reason for consulting the physician. We recorded result worse than expected on MMSE in 512 subjects (85,05%) and in 558 (92,7%) on MoCA test. The average time needed for MMSE was 6,7±1,4 min and for MoCA 8,3±1,5 min. Among 115 patients results on both, MMSE and MoCA deteriorated during the study period. Among them, the prevalence of hypertension was significantly higher than in the rest of population ( $\chi^2=11,83$ ;  $p<0,001$ ).

After six months, dementia was suspected based on MMSE result in 10 patients and after 12 months in 21 person. All of those patients were directed to regular neurology work-up and the diagnosis of dementia has been confirmed.

**Conclusion:** Family physician can evaluate the cognitive function among his elderly patients with MMSE and MoCA during his daily routine.

Disclosure: No conflict of interest declared

1261

Presentation type: Oral Communication

**Interaction of medical students with institutionalized elderly: An experience report**

J.S. Almeida, T.E.D. Santos, M.D. Ascensão, G.C.F. Cantarelli  
*Departamento de Medicina, Pontifícia Universidade Católica de Goiás, Goiânia, Brazil*

**Objectives:** Demonstrate how the interaction of medical students with institutionalized elderly contributes to student's learning and to the quality of life and health of the elderly.

**Method:** Experience report of medical students from Pontifical Catholic University of Goiás (PUC-Goiás).

**Results:** The medical students from PUC-Goiás have early participation in the community, where there's an institution for elderly. The place is one of the points of action of students and contributes to the student's holistic formation. The academics act in health promotion, listening, and in the identification of risk factors. Besides, they conduct measurement of blood pressure and glucose for optimal control of comorbidities. By the institutionalized elderly, they are very receptive to the activities of students, since most of the elderly don't have contact with family and refer feeling lonely and welcomed by the presence of students interested in promoting the establishment of health in their biopsychosocial aspects.

**Conclusion:** It's observed that the inclusion of medical students in geriatric institutions is enriching for academics, who are able to intervene in determining elderly's health. Furthermore, it allows the student to develop knowledge, skills and attitudes from the contact, health promotion and sharing experiences with others. On the other hand, the elderly not only feel taken care by students, but also have improved their health due to surveillance of risk factors and control of underlying chronic-degenerative diseases.

Disclosure: No conflict of interest declared

1403

Presentation type: Oral Communication

**Reduction of polypharmacy in the elderly**I. Kunnamo<sup>1</sup>, A. Sönnichsen<sup>2</sup>, A. Altiner<sup>3</sup>, A. Engl<sup>4</sup>, A. Esmail<sup>5</sup>, J. Schuler<sup>6</sup>

<sup>1</sup> EBMeDS, Duodecim Medical Publications Ltd., Helsinki, Finland; <sup>2</sup> Institute of General Practice and Family Medicine, University of Witten/Herdecke, Witten, Germany; <sup>3</sup> Institute of General Practice, Rostock University, Rostock, Germany; <sup>4</sup> SAGP Foundation, South Tyrolean Academy of General Practice, Bolzano, Italy; <sup>5</sup> Primary Care Research Group, University of Manchester, Manchester, United Kingdom; <sup>6</sup> Institute of General Practice, Family Medicine, and Preventive Medicine, Primary Care Research Group, Salzburg, Austria

**Objective:** Chronic multimorbidity is common in the elderly population. Depending on definitions and setting between 25 and 50% of all patients > 75 years are exposed to five or more drugs. This workshop aims at obtaining collective advice from practicing family physicians for the conduction of a large European randomized controlled trial commencing in 2014: *Polypharmacy in chronic diseases: Reduction of Inappropriate Medication and Adverse drug events in elderly populations by electronic Decision Support (PRIMA-eDS)*.

**Methods:** Brief introductory presentations describe the current state of knowledge on polypharmacy, available decision support tools, and the need for further research. Case scenarios and structured assessment forms are given to the participants to facilitate discussion in small groups on practical and ethical issues of polypharmacy reduction. The work of the PRIMA-eDS Consortium has received funding from the European Union Seventh Framework Programme (FP7-Health-2012-Innovation-1-2.2.2.-2) under grant agreement n° 305388-2.

**Results:** The workshop participants will present their views on the case scenarios, commenting on the evidence needed, best clinical approaches, balance of benefits and harms, estimation of remaining life expectancy, patient participation in decision-making, and features of optimized decision support tools for performing a comprehensive medication review.

**Conclusions:** Family physicians have a key role in coordinating the care of multimorbid elderly patients, and in controlling polypharmacy. Collaborative research by European family physicians will bring new insight to practical methodology, efficacy, and safety of comprehensive medication review and care of patients with multimorbidity.

Disclosure: Ilkka Kunnamo is a salaried employee of Duodecim Medical Publications Ltd., a company that develops clinical decision support tools.

1489

Presentation type: Oral Communication

**The role of General Practitioner in Long Term Care of older adults.**

I. Holmerova, H. Vankova, D. Hradcova

Faculty of Humanities, Charles University in Prague, Praha, Czech Republic

**Objective:** According to OECD definition, Long Term Care (LTC) is a „range of services for persons who are dependent on help with basic activities of daily living (ADLs) over an extended period of time“. General practitioners have important role in providing health care for patient needing long term care in community, and in the Czech health care system also for older adults in LTC institutions.

The project NT11325 „Long-term care for seniors: quality of care in institution“ is focused on indicators of quality of care. Real availability of health care is considered a very important indicator of quality.

**Methods:** In „Homes with specialised regimen“ („DZR“) all residents are people with disability needing long term care, the most of them suffering from dementia. analysis of written documentation.

**Results:** Among other research questions, the project is collecting data referring to these questions: What is real frequency of physical examination by general practitioner in residents in LTC? Are there any LTC residents who have no physical examination by general practitioner per year? Preliminary data on real frequency of general practitioner consultation rate in residents from two Czech „homes with specialized regimen“ (so called „DZR“) will be presented.

**Conclusions:** Quantitative analysis of documentation and qualitative analyses of usual patterns of cooperation of general practitioner with interprofessional team of LTC institutions in 16 homes with specialised regimen in Southern Moravia Region help us understand the role of GP in Long Term Care.

Supported by the grant NT11325 of the Ministry of Health of the Czech Republic.

Disclosure: No conflict of interest declared

### 3.1. PREVENTION AND SCREENING

1511

**Presentation type: Workshop**  
**European Network for Prevention and Health Promotion in Family Medicine and General Practice**

#### **Prevention of CVD in general practice in Europe: A EUROPREV workshop**

T. Drenthen<sup>1</sup>, M. Bulc<sup>2</sup>, S. Keinänen Kiukaanniemi<sup>3</sup>

<sup>1</sup> *Prevention and Patient Education, Dutch College of GPs, Utrecht, Netherlands;* <sup>2</sup> *Prevention, Society of Slovene family physicians, Ljubljana, Slovenia;* <sup>3</sup> *Institute of Health Sciences, University of Oulu, Finland*

**Objective:** exchange experiences with the implementation of cardiovascular prevention and health promotion programmes in EUROPREV countries.

**Methods:** the Dutch prevention programme, New Ministry of Health program in Slovenia, and the Finnish experience with web-based cardiovascular risk assessment will be presented.

**Results:** In 2011 the Dutch College of GPs published a preventive health-check on cardiometabolic disease, including lifestyle advice and treatment: Preventive Consultation. National implementation started with the dissemination of educational materials for GPs and a web-based screening questionnaire for the public. The content of the health-check and the implementation experiences will be presented.

From 2001-2011 Slovenian risk assessment and interventions in GP/FM were focused on patients' age and gender (men 35-65, women 45-70 years) and personal or family history of CVD. From 1.4.2011 Slovene family medicine introduced model («referential») practices, with special attention to adult patients over 30 years. Tasks: screening, interventions (risk factors modification, lifestyle changes) and follow up of well regulated chronic conditions.

Prevention of T2D and reduction of prevalence of CVD risk factor levels by lifestyle counseling were the main aims of the FIN-D2D programme in five hospital districts in Finland. Eligible individuals were those who scored  $\geq 15$  points from the modified FINDRISC test, or had history of cardiovascular events, diabetes, IFG or IGT. Activities started with health check-up by local nurses and brief counseling for lifestyle changes. The results and predictors for success are presented.

**Conclusion:** The workshop will provide new approaches to CVD prevention in FM/GP, enabling the audience to discuss experiences and views.

1713

**Presentation type: Oral Communication**

#### **The ethical implications of excessive prevention – part of workshop #298**

I. Heath

*Royal College of General Practitioners, London, United Kingdom*

This abstract is submitted as part of Workshop # 298. Throughout human history, unscrupulous people have sought to make money out of human illness. One contemporary manifestation of this is the global screening industry which sets out to identify an ever-greater proportion of the population as being at risk of premature death or disabling illness, and then to sell a preventive intervention. The thresholds for intervention have become totally out of proportion to the degree of risk involved and this is clearly working in the interests of the medico-industrial complex. I will present three of the possible ethical implications and seek suggestions of others from the participants. The first is the extent of harm to individuals caused by being labelled as being at risk and the unnecessary fear that this can engender, which itself can undermine health and well-being. The second concerns the potential of excessive prevention to render healthcare systems based on social solidarity unviable because of the escalating costs involved. The third is the way in which biotechnical preventive activity marginalises and obscures the socioeconomic causes of ill-health.

Disclosure: No conflict of interest declared

## References:

1. Segnan N, Patnick J, Von Karsa L, European guidelines for quality assurance in colorectal cancer screening and diagnosis – First edition. European Commission. Luxembourg: Publications Office of the European Union, 2010, ISBN 978-92-79-16435-4, doi:10.2772/15379 (Electronic version)
2. Zavoral M, Suchanek S, Zavada F, Dusek L, Muzik J, Seifert B, Fric P, Colorectal Cancer Screening in Europe, World Journal of Gastroenterology 2009; 15/47:5907-5915
3. Seifert B, Zavoral M, Fric P, Bencko V. The role of primary care in colorectal cancer screening: experience from Czech Republic. Neoplasma. 2008; 55:74–80.

## 2001

**Presentation type: Workshop**  
**European Society for Primary Care Gastroenterology****Early detection of GI cancers**L. Forsell<sup>1</sup>, L. Agréus<sup>1</sup>, C. Lionis<sup>2</sup>, M. Rasmussen<sup>3</sup><sup>1</sup> Sweden, <sup>2</sup> Crete, <sup>3</sup> Finland

One of the main tasks a GP performs is estimating the risk of a serious illness a patient with distinct or diffuse symptoms, or aberrant laboratory test runs. Also, when a disease has high prevalence and a robust screening tool is available as well as when health socioeconomic considerations allows, GP can get involved in screening programs.

As far as cancers of the gastrointestinal tract are concerned, the prerequisites vary across the world. Adenocarcinoma in the lower esophagus is the most increasing cancer form in the western world, but from a low level. This cancer is supposed to be caused gastroesophageal reflux, which however is very common. Stomach cancer, still the number one GI cancer killer in the world, is mostly symptom-free when curable, and thus fatal. Liver cancer occurs frequently in parts of the world where hepatitis is common. Colon cancer is often symptom-free, common but detectable. The symposium will focus on the pros and cons with different screening programs or possible early detection strategies for these four cancer types in different parts of the world.

**The esophagus**

L. Forsell

**The stomach**

L. Agréus

**The liver**

C. Lionis

**The colon**

M. Rasmussen

2009

**Presentation type: Workshop**  
**European Society for Primary Care Gastroenterology**

### Trends in Colorectal Cancer Screening and general practitioners

B. Seifert<sup>1</sup>, P. Fracasso<sup>2</sup>, M. Palka<sup>3</sup>, J. Muris<sup>4</sup>, R. Stockbrugger<sup>5</sup>

<sup>1</sup> Department of General Practice, First Faculty of Medicine, Charles University, Prague, Czech Republic; <sup>2</sup> Gastroenterology Department Roma, Italy; <sup>3</sup> Dpt. of General Practice, Jagellonian University, Krakow, Poland; <sup>4</sup> Dpt. of Primary Care, University of Maastricht, The Netherlands; <sup>5</sup> chairman of Public Affair Committee, United European Gastroenterology, Ferrara, Italy

**Keywords:** Colorectal cancer screening, faecal occult blood testing,

**Background:** CRC screening belongs, besides breast and cervical cancer screening, among three screening programs, that are fulfilling WHO requirements, and whose implementation was recommended by the Council of the European Union (2003/878/EC). In Europe and in the world is increasing the number of countries that are introducing national CRC screening programmes with varying involvement of GPs. The quality aspects are the top agenda of screening.

**Aims and Methods:** The aim of this session is to review trends in screening strategies for CRC from the primary care perspective. Primary care experts from Italy, Poland, Netherlands, UK and the Czech Republic will highlight crucial aspects of national CRC screening programmes; design of screening, target population, address invitation systems, screening methods and cut-off used, etc.

**Results:** The involvement of GPs in CRC screening varies according to the chosen strategy of the programme. In some countries (the Czech Republic, Germany) GPs are actually doing FOBT in their offices, in others recruit patients for colonoscopic screening (Poland) and in recently introduced programmes GPs are not directly involved in the screening (UK, the Netherlands). In FOBT based programmes the immunochemical tests replace guajak tests. The crucial discussion is on cut-off value, patient safety, capacities and costs.

**Conclusion:** GPs should play a substantial role in CRC screening either by assessing the risk of their patients, explaining the screening options, performing FOBT or by deciding on the most individually- appropriate tactic that is feasible within the organization of their local health care system. GP representatives should be involved in strategic planning for CRC screening at national level.

#### Speakers:

*CRC screening in Europe: Actual performance and perspectives*

R. Stockbrugger

*GPs-principals of CRC screening in the Czech Republic*

B. Seifert

*Is there a national CRC screening programme in Italy?*

P. Fracasso

*Role of GPs in colonoscopy based CRC screening programme in Poland*

M. Palka

*Evidence based CRC Screening in the Netherlands*

J. Muris

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**Presentation type: Oral Communication**

### Health problems of Nepalese women attending general healthcheck up in Tribhuvan University Teaching Hospital

Y.L. Shakya

General practice and Emergency, Tribhuvan university Teaching Hospital, Kathmandu, Nepal

**Objective:** The purpose of a periodic General Health Checkup (GHC) is mainly to serve as preventive healthcare and alert healthcare providers to chronic diseases. If the health is timely evaluated, ongoing major complications and even sudden unexplained death can be prevented.

**Methods:** A cross sectional study was carried out among women attending GHC at Tribhuvan University Teaching Hospital (TUTH) for a period of 6 months (January to June 2012). Diagnostic test for the study were also carried out in TUTH.

**Results:** Among the 144 randomly selected women, 77.8% were non-vegetarian, 21.6% with alcohol drinking habits, 6.3% with smoking habit, and more than 50% aged more than 45 years. Regarding menstrual history, 44.4% were menopausal, 50.7% were menstruating and 4.9% had already undergone hysterectomy. Majority of women had obese BMI (61.1%). The radiological findings revealed that 24.3% had some lungs disease and cardiomegaly. The ECG was abnormal among 11.8% of women. The laboratory parameters of blood revealed that 23.6% were anaemic, 15.2% had raised fasting blood sugar, 3.4% had raised blood urea, and 14.5% had raised SGPT. The impressions after GHC were hypertension (27.8%), anaemia (13.9%), raised triglycerides (13.2%), urinary tract infection (10.4%), cardiomegaly (9.0%), diabetes (7.6%) and fatty liver (7.6%). It was found that diabetes, hypertension, raised triglycerides, cardiomegaly had more prevalence in age group 46-60 years of age.

**Conclusion:** Non-communicablediseasesare common problems among women and these should be taken into account for general health check up of women.

**Key words:** Women, General Health Check Up, Health problems

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Impact of the Buddy Intervention Programme on Suicidal Behaviour in a resource constrained country**

S.S. Naidoo

*Department of Family Medicine, University of KwaZulu-Natal, Durban, South Africa*

**Introduction:** Suicidal behaviour is a major public health burden in many countries particularly in low-middle income and resource constrained countries. WHO has predicted that this burden will double by 2020. This study intended to compare and assess the impact of a brief buddy intervention programme on suicidal behaviour in a South African community.

**Methods:** This randomised control clinical intervention study was conducted on 688 suicide attempters admitted to two community-based public hospitals during 2007-2010. Following informed consent, completion of a WHO-validated questionnaire at baseline, and implementation of the two interventions (WHO SUPRE-MISS (control) and Buddy (Experimental), all participants were contacted at specific time points over the 18 month study period. Specific outcomes were recorded and analysed for statistical significance using SPSS® and logistic regression models.

**Results:** Three deaths by suicide occurred in the control arm in week 1 and one in the buddy group in week 11. In total, 171 further suicide attempts were recorded in both groups over the 18 month period, with 103 in the control group and 68 in the buddy group. Differences between the control and buddy interventions were found to be statistically significant. The buddy intervention was also found to be protective for further attempts but not over time.

**Conclusions:** The brief intervention programme, specifically the buddy programme, was effective in reducing suicidal behaviour in this study, and has potential for integration in future suicide prevention programmes particularly in low-middle income and resource constrained countries.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Chronic abdominal wall pain misdiagnosed as functional abdominal pain in primary care**

T. van Assen, M. Scheltinga, R. Roumen

*Surgery, Máxima Medical Center, Veldhoven, Netherlands*

**Objective:** The abdominal wall is often neglected as a cause of chronic abdominal pain. Aim of this study was to identify chronic abdominal wall pain syndromes such as the anterior cutaneous nerve entrapment syndrome (ACNES) in a patient population diagnosed with functional abdominal pain including the irritable bowel syndrome (IBS) using a validated 18-item questionnaire as identification tool.

**Methods:** In this prospective cohort study, 4 Dutch primary care practices employing physicians unaware of the existence of ACNES were selected. In these practices, 535 patients >18 years registered with functional abdominal pain were approached to complete, when symptomatic, the questionnaire (maximum 18 points). Responders that scored above the 10 points cut off value (sensitivity 0.94, specificity 0.92) underwent diagnostic evaluation to establish their final diagnosis. Main outcome was the presence and prevalence of ACNES in symptomatic patients diagnosed with functional abdominal pain.

**Results:** 304 of 535 (57%) patients responded and 167 (31%) subjects recently reporting symptoms completed the questionnaire. Eighteen of 23 patients that scored above the cut off value were available for a diagnostic evaluation. In half of these subjects (9/18) functional abdominal pain including IBS was confirmed. The other 9 patients were suffering from an abdominal wall pain syndrome. Six subjects were diagnosed with ACNES (prevalence 3.6%; 95%CI 1.7-7.6) whereas remaining three harboured a painful lipoma, abdominal herniation and a painful scar.

**Conclusion:** A clinically relevant portion of patients previously diagnosed with a functional abdominal pain syndrome suffers from an abdominal wall pain syndrome such as ACNES.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Health promotion using an interaction platform**G. Gusso<sup>1</sup>, C. Bassi<sup>2</sup>, C. Gomes<sup>2</sup>, M. Baptista<sup>2</sup>, M. Cacalis<sup>2</sup>, E. Quevedo<sup>2</sup><sup>1</sup> *General Practice, University of São Paulo, São Paulo, Brazil;* <sup>2</sup> *Development Strategy, VitalBox, São Paulo, Brazil*

**Introduction:** Health promotion is a difficult issue. Often is a health professional rather than patients issue who usually care about themselves just when they have symptoms. On the other hand, most information reaches the patients in a not organized way or not individualized. With the revolution of technology, the use of Internet and smartphones can change this perspective.

**Design:** Development of a platform to help patients get information in an individualized and enjoyable way. The epistemological ground was Geoffrey Rose ideas that teach there are individual and population based interventions. The statistical approach is based on US Preventive Task Force, Framingham and other classical and reliable source of information.

**Results:** After the user fill with basic personal information as sex, age, weight, height, tobacco use, blood pressure, cholesterol level, family history, etc. The personal risk for stroke, myocardial infarction, colorectal cancer, breast cancer, and other non-communicable chronic diseases, are calculated. The software shows the most probable root causes of these risks and suggests behavior changes to reduce them. The user can also choose to receive alerts with “daily challenges” with proposes of activities linked to individual risk, as well as recommendations that follows scientific based guidelines, according to his condition.

**Conclusion:** Geoffrey Rose stated that it is important to change the Gauss curve (population intervention) and it is a challenge for governments and health professionals. The use of technology that individualizes risks can be one smart and cost effective path.

Disclosure: It is a comercial software and the first author is a consultant

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**Presentation type: Oral Communication****Correlation of ankle-brachial index and peripheral vascular disease in diabetic patients in primary health setting**E. Linardoutsou<sup>1</sup>, G. Fioretos<sup>1,2</sup>, G. Lyrakos<sup>3</sup>, G. Ghaitartzakis<sup>1</sup>, G. Stratiotis<sup>1</sup>, S. Sakellaropoulou<sup>1</sup>, C. Verras<sup>1</sup>, D. Michalis<sup>2</sup>, E. Chelioti<sup>1,4</sup><sup>1</sup> *Family Medicine, Tzaneio, General Hospital of Piraeus, Piraeus, Greece;* <sup>2</sup> *Family Medicine, Health Center of Aliartos, Thiva, Greece;* <sup>3</sup> *Anesthesiology, Medical School, National and Capodistrian University, Athens, Greece;* <sup>4</sup> *Nephrology, Tzaneio, General Hospital of Piraeus, Piraeus, Greece*

**Purpose:** We compared the findings among ankle-brachial index (ABI) and vascular triplex of limbs in diabetic patients.

**Material-method:** We studied 147 diabetic patients (85 men/62 women, age 66.8+/-6.2 years). Every patient has undergone an ABI measurement and vascular triplex of limbs. The following parameters were evaluated: hypertension, dyslipidaemia, cardiovascular disease, intermittent claudication, smoking and Body Mass Index (BMI).

We applied Pearson r statistical trial using SPSS 16

**Results:** We found 75.5% of our patients with hypertension, 40.1% with dyslipidaemia, 15% with cardiovascular disease and 2% with intermittent claudication. A strong statistical correlation among the findings of ABI and vascular triplex of limbs was found ( $r=0.781$ ,  $p=0.001$ ). A significant statistical correlation among BMI, ABI and findings of vascular triplex of limbs was also examined ( $r=0.257$ ,  $p=0.001$ ). We finally measured a high statistical correlation among peripheral vascular disease (PVD) and time onset of diabetes mellitus ( $r=0.640$ ,  $p=0.001$ )

**Conclusion:** Calculatin ABI is a reliable, easy and cost-effective method of diagnosis and assesment of PVD in diabetic patients in primary health setting.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Risk factors related to the seriousness of peripheral vascular disease in diabetic patients**G. Fioretos<sup>1</sup>, G. Lyrakos<sup>2</sup>, E. Linardoutsou<sup>1</sup>, G. Stratiotis<sup>1</sup>, G. Gkaitartzakis<sup>1</sup>, S. Sakellaropoulou<sup>1</sup>, D. Michalis<sup>3</sup>, E. Chelioti<sup>1</sup><sup>1</sup> Family Medicine, «Tzaneio» General Hospital, Piraeus, Greece; <sup>2</sup> Anesthesiology, Medical School, National and Capodistrian University, Athens, Greece; <sup>3</sup> Family Medicine, Health Center of Aliartos, Thiva, Greece**Purpose:** To assess the statistical correlation between peripheral vascular disease (PVD) and diabetic patients.**Material-method:** We studied 147 patients of mean age 66.8±/6.2 years. The methods for evaluating PVD were used: ankle-brachial index (ABI) and vascular triplex of limbs. The following risk factors for manifestation of PVD were studied: time onset of diabetes mellitus, coronary disease, BMI, smoking and age. Statistical analysis was made with multiple regression study and  $\chi^2$ .**Results:** Using  $\chi^2$  we found no statistical correlation between sex and PVD. ( $\chi^2=3.110$ ,  $p=0.07$ ). Using multiple regression analysis we found a significant statistical correlation between time onset of diabetes mellitus ( $\beta=0.27$ ,  $t=4.055$ ,  $p<0.000$ ), smoking ( $\beta=0.227$ ,  $t=4.817$ ,  $p<0.000$ ), dyslipidaemia ( $\beta=0.263$ ,  $t=4.817$ ,  $p<0.000$ ), coronary disease ( $\beta=0.279$ ,  $t=4.997$ ,  $p=0.000$ ), hypertension ( $\beta=0.104$ ,  $t=1.979$ ,  $p<0.05$ ), BMI ( $\beta=0.125$ ,  $t=2.442$ ,  $p<0.01$ ).**Conclusion:** We found that all the above mentioned risk factors are strongly associated with seriousness of PVD in diabetic patients, so early diagnosis of PVD in those patients is crucial.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Evolution of cardiovascular lifestyle behaviours and lipid parameters occurring concomitantly to the intake of phytosterol-supplemented yoghurt in hypercholesterolemic patients treated with cholesterol-lowering drugs**E. Bruckert<sup>1</sup>, L. Massama<sup>2</sup>, O. Descamps<sup>3</sup>, E. Bosi<sup>4</sup>, MJ Chapman<sup>1</sup>, FA Allaert<sup>5</sup><sup>1</sup> Dpt cardiology, Hôpital Pitié Salpêtrière AP-HP, Paris, France; <sup>2</sup> Dpt cardiology, Saint Joan University, Reus, Spain; <sup>3</sup> Centre de Recherche Médicale, Jolimont, Haine-Saint-Paul, Belgium<sup>4</sup> Cardiology dpt, Ospedale San Raffaele, Milano, Italy; <sup>5</sup> Chaire evaluation medicale, ESC et DIM CHU du Bocage, Dijon, France**Objective:** To assess changes in cardiovascular-related lifestyle behaviours associated with regular intake of a phytosterol-supplemented yogurt (Phyto-SY) in hypercholesterolemic patients already treated with cholesterol-lowering drugs.**Methods:** Two nationwide prospective observational studies involving 460 general practitioners in Spain and France have been pooled. Each GP recruited the 5 consecutive hypercholesterolemic patients (taking or not cholesterol-lowering drugs) for whom they consider that lifestyle modifications and Phyto-SY was indicated. Study design included an inclusion visit, a patient's self-monitoring assessment after 1 month and after 4 months. The main evaluation criterion was the change in the standardized Nutritional Lifestyle (NL) Score. Secondary criteria were changes in: Total, LDL and HDL cholesterol, waist circumference, and daily walking time. Results obtained in patients Currently Treated with cholesterol-lowering drugs (CTP) are presented in this abstract.**Results:** The study included 1329 hypercholesterolemic patients treated with cholesterol-lowering drugs (CTP), 58.6 years old  $\pm$  11.2 (women 53.9%). NL score decreased from 15.5 to 8.9 ( $p<0,0001$ ) in CTP, indicating an improvement of NL. The main lipid parameters improved significantly at follow up visit ( $p<0.0001$ ), total cholesterol decreased by 11.2%, HDL-C increased by 8,8%, and LDL-C decreased by 12.7%. Walking frequency (>30 min) increased also significantly ( $p<0.0001$ ) whereas overweight frequency, waist circumference and percentage of patients with abnormal waist circumference significantly decreased ( $p<0.0001$ ).**Conclusion:** Even in CTP, implementing consumption of Phyto-SY as part of a global healthy lifestyle advice leads to a nutritional improvement along with an improvement in lipid profile, anthropometry and physical activity.

Disclosure: No conflict of interest declared



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**Presentation type: Oral Communication****Detection of people with high risk on cardiometabolic disease and COPD: the Preventive Health Check in Dutch general practice**

T. Drenthen, K. van Haaren

*Prevention and Patient Education, Dutch College of GPs, Utrecht, Netherlands*

**Objective:** After a successful pilot in 16 practices, the Dutch College of GPs published an evidence based practice guideline for stepwise screening of cardiometabolic diseases (CVD, diabetes and kidney failure), followed by lifestyle advice and treatment: the Preventive Health Check. The national implementation started with the dissemination of educational materials for GPs (protocol, e-learning programme) and the public (website, questionnaire). In 2012 a new module on COPD, based upon the validated COPD risk assessment, was developed, including educational materials.

**Methods:** In a survey we evaluated the use of the materials, the experiences with the implementation in daily practice, and the reasons for not using yet the Preventive Consultation.

**Results:** 250 GPs ordered the educational materials on cardiometabolic diseases in 2011. 60% of the respondents (n=69) started with the preparation and execution of the preventive consultation on cardiometabolic diseases in their practice. The most important reasons for GPs who did not start with the implementation were: time constraints (40%) and lack of reimbursement (40%).

Within one month after the introduction, 220 GPs ordered the implementation materials on COPD. In 2013 we will carry out a survey among these GPs about the feasibility in practice. Data will be available at the congress.

**Conclusions:** GPs are very positive about the guideline on Preventive Consultation and the educational materials. The implementation is still limited, mainly because of lack of time and lack of reimbursement by health insurers for screening activities.

**Disclosure:** No conflict of interest declared

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**Presentation type: Oral Communication****Quaternary prevention concept quick spread throughout South America (workshop #298)**M. Pizzanelli<sup>1,1</sup>, A. Silva<sup>2</sup>, J. Bernstein<sup>3</sup><sup>1</sup> *Sociedad Uruguaya de Medicina Familiar y Comunitaria, SUMEFAC, Montevideo, Uruguay;*<sup>2</sup> *Sociedad Brasileira de Medicina de Familia e Comunidade, SBMFC, Porto Alegre, Brazil;*<sup>3</sup> *Federación Argentina de Medicina Familiar y General, FAMFyG, Buenos Aires, Argentina*

*Miguel Pizzanelli Báez, head of the Primary care network.Florida, Faculty in Family Medicine Unit, Florida, Uruguay*

*André L. Silva, General Practitioner, Quaternary Prevention Coordinator SBMFC, Brazil*

*Jorge Bernstein, Quaternary Prevention and Medicalization Seminar Coordinator, (Buenos Aires Octubre 2012), FAMFyG Quaternary Prevention Comision coordinator, Argentina.*

Although Quaternary Prevention concept was launched early in the nineties, in Latin American countries the concept was accessible from the literature (Jamouille M, Gervas J) since 2000 up to date.

A movement oriented to spread the concept and how to apply quaternary prevention in the practice has begun during the past years in in many countries in the region: Brazil, Argentina and Uruguay.

A very active Virtual group in Brazil with international participation leads the information exchange and cooperation.

First Quaternary Prevention communication in Uruguay was in November 2011 in Medicine Faculty (UDELAR). From this moment several workshops were done mainly with Family and Community residents. To dissemination strategy is used a web blog (<http://estancambiandolostiempos.blogspot.com/2012/01/prevencion-cuaternariaseminarios-de-la.html>).

During October 2012 an important event occurred in the region. A Seminar was developed in Argentina: Medicalization and Quaternary Prevention. The virtual stage took one month with 40 hours of on-line workshop. The final meeting was in Buenos Aires, October 29, with participants from six countries. (<http://www.prevencion4.com.ar/index.php/metodologia>)

This activity gave the support to configure a regional platform to cooperate in the dissemination of Quaternary Prevention concept and its practical application requiring the commitment of generalists to protect their patients against medicalization and prevention activities with not confirmed benefit.

**Disclosure:** No conflict of interest declared

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Presentation type: Oral Communication

**Early identification of medically unexplained physical symptoms (MUPS) with data mining techniques in routine primary care data**M.C. Aanen<sup>1</sup>, M. den Boeft<sup>1</sup>, M. Hoogendoorn<sup>2</sup>, ME Numans<sup>1</sup><sup>1</sup> EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands; <sup>2</sup> Department of Computer Science, VU University Amsterdam, Amsterdam, Netherlands

**Objective:** Patients with medically unexplained physical symptoms (MUPS) cause inappropriate and high medical consumption. Identification is difficult because no specific diagnosis exists and behaviour might be due to primary care management or is a MUPS core-characteristic. We analysed global MUPS patterns in primary care patients with data mining techniques.

**Methods:** We used data from patients enlisted with GPs who are members of the Academic Network of the VU medical center Amsterdam. We investigated anonymously extracted complete Dutch GP routine medical care records of 40.000 patients aged 18-65 over the years 2010-2012. SPSS "Data Modeler Premium", a software toolkit consisting of a wide range of data mining techniques was used for analysis.

**Results:** Specific data such as consultation frequency, blood test orders, physical therapy, specialist referral, prescribed medication and MUPS related ICPC codes (such as IBS and fibromyalgia) were first cluster analysed to determine general characteristic of MUPS. Next step was a decision tree analysis to find MUPS in early stages. We were able to classify primary care patients with a high, low or no risk of MUPS.

**Conclusions:** We assessed ten per cent of our patient population as potentially having MUPS with increasing risk-steps. This is a result that might be used for risk adjustment and for proactive population approach with panel management in primary care. Data mining is a new technique in this particular field and very usable to determine global patterns in large database especially for patient groups who show very heterogenic characteristics.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Chronic disease, older age and a higher socio-economic status predict participating in preventive health check-ups**T. Ernst Dorner<sup>1</sup>, K. Viktoria Stein<sup>1</sup>, R. Koppensteiner<sup>2</sup>, K. Hoffmann<sup>3</sup>, A. Rieder<sup>1</sup>, S. Brunner-Ziegler<sup>2</sup><sup>1</sup> Institute of Social Medicine, Center for Public Health, Medical University Vienna, Vienna, Austria; <sup>2</sup> Department for Internal Medicine II, Division of Angiology, Medical University Vienna, Vienna, Austria; <sup>3</sup> Department of General Practice and Family Medicine, Center of Public Health, Medical University Vienna, Vienna, Austria

**Background:** Performing preventive health check-ups is a major pillar in primary care. In Austria preventive health check-ups are offered free of charge and are intended for healthy people and focused on early detection diseases like cancer or cardio-vascular risk factors, as well health counseling.

**Methods:** Source of data for analyses was the Austrian Health Interview Survey 2006/07 which includes 15,747 subjects. In the multivariate logistic regression analyses the dependent variable was participation in at least one check-up during the three years preceding the survey and independent variables were socio-demographic and health-related characteristics.

**Results:** 39.7% of subjects of both sexes had attended a preventive health check-up. Multi-variate analyses revealed that subjects aged 40 years and older, subjects with higher education, higher income, and who were born in Austria participated significantly more often in health check-ups. Furthermore, presence of a chronic disease was associated with a higher attendance at health check-ups with odds ratios of 1.23 (95% CI = 1.09–1.38) in men and 1.19 (95% CI = 1.06–1.33) in women. Differences in prevalence rates of chronic diseases between those who attended vs. those who did not attend health check-ups were significant regarding diabetes mellitus, hypertension and osteoarthritis, and especially pronounced regarding chronic back pain.

**Conclusions:** Attendance rates for health check-ups in the Austrian general population are high and even higher in sub-populations like subjects with chronic diseases. A "healthy screening effect", which means that subjects attending health check-ups have lower disease prevalence rates than non-attendees, could not be reinforced through our analysis.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Near-home targeted screening of frail elderly with dyspnoea: often unrecognised heart failure and COPD detected**Y. van Mourik<sup>1</sup>, L.C.M. Bertens<sup>1</sup>, M.J.M. Cramer<sup>2</sup>, J.W.J. Lammers<sup>3</sup>, J.B. Reitsma<sup>1</sup>, K.G.M. Moons<sup>1</sup>, A.W. Hoes<sup>1</sup>, F.H. Rutten<sup>1</sup><sup>1</sup> Julius Center, University Medical Center Utrecht, Utrecht, Netherlands; <sup>2</sup> Cardiology, University Medical Center Utrecht, Utrecht, Netherlands; <sup>3</sup> Pulmonary, University Medical Center Utrecht, Utrecht, Netherlands**Objective:** To determine whether unrecognized heart failure (HF), chronic obstructive pulmonary disease (COPD), and other chronic diseases are common in frail elderly with dyspnoea or reduced exercise tolerance.**Methods:** Community-dwelling frail elderly aged 65 years and older, with dyspnoea or reduced exercise tolerance underwent a screening strategy, including spirometry, and echocardiography. The final diagnosis in every patient was determined by a panel consisting of 3 physicians.**Results:** In 389 participants, newly diagnosed HF was detected in 33.5%, mainly HF with a preserved ejection fraction. In 16.8% previously unrecognized COPD was detected, mainly GOLD I and II (50.0% and 45.2%, respectively).

Other new diagnoses were atrial fibrillation (1.8%), valvular disease (21.4%), asthma (3.1%), anaemia (12.7%), thyroid disease (0.6%), and renal dysfunction (22.2%).

In 47 (12.2%) patients no clear explanation for the patient's complaints was found with our screening strategy.

**Conclusion:** Unrecognized HF and COPD, but also some relevant other chronic disease are often detected in community-dwelling frail elderly with dyspnoea or reduced exercise tolerance with a simple to apply near-home screening strategy. It remains, however, to be proven whether optimizing treatment of the newly detected diagnoses in this fragile population with multimorbidity and polypharmacy will indeed reduce morbidity and mortality, and improve quality of life.

Disclosure: No conflict of interest declared

1213

**Presentation type: Oral Communication****Predicting and preventing high risk cases? Managing multimorbidity and helping identify patients at risk; how risk stratification can help primary care clinicians best tailor case management programmes**

L. Pettigrew, S. Sutch, K. Kinder

Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health, Baltimore, United States

**Objective:** This presentation will explore how risk stratification tools can help primary care clinicians best target and tailor case management programmes.**Methods:** Although the common belief is that clinicians are able to recognise those patients most at risk, research has demonstrated doctors were not aware of up to 17% of patients identified by such tools. The presentation will provide a brief introduction to what risk stratification is and its numerous applications, before focusing on its use for identifying patients at risk who would benefit from tailored case management programmes. Evidence from the use of the Adjusted Clinical Groups® (ACG) system will be used, exploring some of the challenges faced in the introduction of such mechanisms. Examples will reference the published literature, focusing on the experience in the UK and touching on evidence from other countries worldwide.**Results:** Attendees will have an understanding of how risk stratification can help identify patients at risk of high future utilisation and of hospitalisation, as well as be able to recognise some of the challenges that may be encountered in such a process.**Conclusions:** There is growing evidence that risk stratification can help improve the provision of healthcare. However the success of such mechanisms is subject to a number of factors which clinicians can help address in order to improve the care of their patients.

Disclosure: Authors are engaged by Johns Hopkins Bloomberg School of Public Health who have developed and manage the Adjusted Clinical Groups® (ACG) system. The Johns Hopkins Bloomberg School of Public Health receives license fees for the use of the ACG System which are used to support users in its application, conduct research, and to further develop the tool.

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**Presentation type: Oral Communication****Advances in predictive modelling: Informing the decision making process**

S. Sutch, C. Abrams, K. Kinder

*Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health, Baltimore, United States*

**Objective:** The advantages that predictive modelling offers to more efficient management of patient care are not restricted to predicting costs. As has been demonstrated in both public and private healthcare systems worldwide, predictive modeling contributes to improved clinical, financial, and organizational management. These include the ability to:

- Predict high-risk individuals for inclusion in intervention programs
- Identify individuals at risk of hospitalization and re-hospitalization
- Identify patients whose pharmacy expenditures are greater than what is predicted based upon their morbidity profile
- Estimate future resource use
- Establish equitable budgeting and payment systems

The objective of this workshop is to provide an insight into advances in predictive modelling in the population health care sector, from integrated care networks to primary care clinics and, finally at the individual clinician level.

**Methods:** The Workshop will open with an introductory presentation on the numerous applications of predictive modelling within the health care sector. The workshop will then focus three applications:

- Pharmacy Management
- Case Management
- Disease Management

Each session will be comprised of scenarios illustrating real world case-mix applications. The workshop would conclude with a plenary session which would summarize the take home messages of the three sessions. The Workshop duration is anticipated to be 3 hours which includes a break. If necessary this can be shortened to accommodate the scientific committee's needs.

**Results:** Applicable results will be presented demonstrating examples from several countries,

**Conclusions:** The participants will experience first-hand how to apply predictive models to clinical, financial, and managerial decisions.

**Disclosure:** Authors are engaged by Johns Hopkins Bloomberg School of Public Health who have developed and manage the Adjusted Clinical Groups® (ACG) System. The Johns Hopkins Bloomberg School of Public Health receives license fees for the use of the ACG System which are used to support users in its application, conduct research, and to further develop the tool.

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**Presentation type: Oral Communication (workshop #298)****Clinical epidemiology and Quaternary prevention**

M. Pezeshki

*Community Medicine, Tabriz University of Medical Sciences, Tabriz, Iran*

**Objective:** Clinical epidemiology produces evidence for effectiveness, safety and efficiency of preventive, diagnostic and therapeutic interventions in outpatient and inpatient settings. Quaternary prevention (QP) is action of preventing unnecessary preventive, diagnostic and therapeutic interventions. How a family physician may apply clinical epidemiological skills for finding and using the evidence regarding unnecessary medical interventions is the main goal of this presentation.

**Methods:** The application of epidemiological measures including pretest probability, likelihood ratio, posttest probability, Number Needed To Treat (NNT), Number Needed To Harm ( NNT) for doing QP will be explained. Also the online resources using these measures for reporting the evidence for medical interventions will be introduced.

**Results:** The workshop may remind the participants of the following topics: When history taking and physical examination shows that the probability for having a disease is very low, ordering a diagnostic or screening test may be unnecessary. When the probability of a patient's improvement is not related significantly to receiving or not receiving a treatment and the probability for developing the harms of the treatment is high, prescribing of the treatment may be unnecessary.

**Conclusion:** This workshop may help family doctors to prevent unnecessary harms to patients and save unnecessary costs.

**Disclosure:** No conflict of interest declared

1220

Presentation type: Oral Communication

**Audit of antipsychotic use in dementia in primary care in the Borough of Bromley**

K. Tully

*Sidcup GP Vocational Training Scheme, London Deanery, London, United Kingdom***Objectives:**

1. To find out the number of patients with a documented diagnosis of dementia on antipsychotics.
2. Of this subgroup to establish how many
  - a) Are in a care home
  - b) Have cardiovascular risk factors
3. To find out if antipsychotics are being prescribed in line with NICE guidance

**Methods:** An audit pack was distributed to all Bromley GP practices. There was a 100% response rate. Data was analysed using SPSS version 18.0 for windows.

**Results:** The total number of documented cases of dementia on the practice registers was 1621. The total number of patients with dementia who were prescribed an antipsychotic was 160 (9.87%). Of the 160 patients with dementia on an antipsychotic 97 (60.6%) were in a care home, 109 (68%) had documented cerebrovascular risk factors, 130 (81.3%) were prescribed an antipsychotic for indications in accordance with NICE recommendations, 108 (69%) have had the antipsychotic reviewed in the last 3 months.

**Conclusion:** Rates of antipsychotic use in dementia are relatively low but could be lower. Antipsychotics are for the most part being prescribed in line with NICE guidance. The rate of cardiovascular risk factors amongst dementia patients being prescribed antipsychotics is very high and needs to be looked at further. The rate of patients with dementia living in care homes in Bromley is very high and staff need to be well trained and supported.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

**Profile of hypertensive and diabetic patients in a metropolitan area in southern Brazil**M. Diercks<sup>1</sup>, L. Kopittke<sup>1</sup>, L. Lima<sup>1</sup>, J. Baldisserotto<sup>1</sup>, S. Sirena<sup>1</sup>, S. Takeda<sup>1</sup>, F. Nedel<sup>1,2</sup>*<sup>1</sup> Serviço de Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil; <sup>2</sup> Saúde Coletiva, Universidade Federal de Santa Catarina, Florianópolis, Brazil*

**Introduction:** Results of the first step of the “Evaluation of the quality of care in systemic hypertension and diabetes mellitus in primary health care” research, funded by the Ministry of Health of Brazil, identifying strategies to improve the quality of care of chronic diseases. The research analyzes a Brazilian primary care service comprising 12 teams, with a population of 108,560 people, being estimated that 20,120 are hypertensive and 6,190 are diabetic.

**Objectives:** To evaluate the socioeconomic and health characteristics of hypertensive and diabetic patients, the working process of interprofessional health care teams, and the service actions. Description of patients' initial outcomes.

**Methodology:** Longitudinal study (baseline and six annual data collection), random sample of patients. Data collection was accomplished at home, using structured questionnaires.

**Results:** 2,672 hypertensive and diabetic patients were interviewed. 68% are women, half of whom is 64-years-old or less. 50% attended school for less than six years. 29% of the hypertensive patients have associated diabetes. Half of them know about their hypertension for over 9 years. Half of the hypertensive people live with another hypertensive person. Less than 10% participate in collective health education activities. 56% visited a doctor in the last 6 months, and ~20% are followed-up by nurses.

**Conclusions:** The research shows descriptive data of the hypertensive and diabetic population, identifies possible flaws to be revised by the primary care services, allows a proper planning for health care teams' permanent education activities, and guides managers along the infrastructure suiting and formation of integrated health services networks.

Disclosure: No conflict of interest declared

1242

Presentation type: Oral Communication

**Association between aspirin and prostate cancer in symptomatic benign prostatic hyperplasia population**S.C. Hung<sup>1,2</sup>, C.H. Muo<sup>2,3</sup>, S.W. Lai<sup>4</sup>, F.C. Sung<sup>2,3</sup>, W.H. Lin<sup>5</sup>

<sup>1</sup> Department of Emergency Medicine, Nantou Hospital, Nantou, Taiwan; <sup>2</sup> Department of Public Health, China Medical University, Taichung, Taiwan; <sup>3</sup> Management Office for Health Data, China Medical University, Taichung, Taiwan; <sup>4</sup> School of Medicine and Department of Family Medicine, China Medical University, Taichung, Taiwan; <sup>5</sup> Department of Urology, Nantou Hospital, Nantou, Taiwan

**Objective:** Whether taking aspirin have preventive effect on prostate cancer has attracted great attention. This retrospective cohort study investigated whether aspirin reduces prostate cancer risk in men with symptomatic benign prostatic hyperplasia (BPH).

**Methods:** From the claims data of the National Health Insurance of Taiwan, men aged 50 and older with BPH newly diagnosed from 1997-2008 were identified. They were stratified into aspirin users and non-users based on the medication history of aspirin and followed up to the end of 2010 to compare the incidence and risk of prostate cancer.

**Results:** Compared with non-users, the mean aspirin users were older. The incidence of prostate cancer increased with age, but lower in the aspirin users than in the non-users in each age stratum. The aspirin users to non-users overall incidence rate ratio was 0.70 (95% confidence interval (CI) 0.60-0.83), with the incidence rates of 2.50 vs. 3.56 per 1,000 person-years. The Cox proportional hazards regression analysis showed that the hazard ratio (HR) of prostate cancer associated with taking aspirin was 0.27 (95% CI 0.18-0.40) in the year 1 follow-up, 0.50 (95% CI 0.36-0.68) in the year 1-2 follow-up, 0.54 (95% CI 0.38-0.78) in the year 3-4 follow-up, and 0.79 (95% CI 0.62-1.03) in years 5 and after.

**Conclusion:** Aspirin could decrease the risk of prostate cancer in men with symptomatic BPH in Taiwan.

Disclosure: No conflict of interest declared

1252

Presentation type: Oral Communication

**Update on preventive primary care health promotion and prevention services in Europe**L Pas<sup>1</sup>, M Bulc<sup>2</sup>

<sup>1</sup> Department of Public health and primary Care, Catholic University of Leuven, Leuven, Belgium; <sup>2</sup> EUROPREV WONCA NETWORK, Society of Slovene family physicians. Ljubljana, Slovenia, Ljubljana, Belgium

**Objectives:** to share the Europrev update of primary health care prevention and health promotion in EUROPEAN primary health care.

**Methods:** An inventory on health promotion and preventive policies in primary health care is organised by the Europrev network involving colleges and academies of general practice and family medicine in Europe to support comparative studies and updating healthy policies.

Interested participants and researchers on preventive care as well as college representatives willing to contribute actively to this work can access preparative work on <http://fs8.formsite.com/RESEARCHNET/europrev/index.html>

**Results:** The actual state of the inventory will be presented and the situation compared between groups of countries with different health services organisation background. A debate will be held to discuss potential use of structured updates for setting research priorities, quality assurance programmes and effective policy targets.

**Conclusion:** The inventory allows to improve our understanding of country differences, set research priorities and enhance exchange between effective policies; it may be enhanced by collaboration between different Wonca networks.

Disclosure: No conflict of interest declared

1325

Presentation type: Oral Communication

**Effect of xylitol intake in preventing acute otitis media in children**A. Miranda<sup>1</sup>, M. Moreira<sup>2</sup>, M. Silva<sup>2</sup>, F. Costa<sup>2</sup><sup>1</sup> ACES Póvoa de Varzim/Vila do Conde, USF do Mar, Póvoa de Varzim, Portugal; <sup>2</sup> ACES

Póvoa de Varzim/Vila do Conde, USF das Ondas, Aguçadoura, Portugal

**Objective:** Acute otitis media (AOM) is a common pathology in children and accounts for a significant proportion of antibiotics prescriptions. However, its use is controversial since the disease may recur during childhood, leading to increased bacterial resistance. Xylitol, a natural sugar substitute that can be added to chewing gums, is of possible interest in preventing AOM.

We intend to update the evidence about the effectiveness of xylitol in preventing AOM in children.

**Methods:** A search was performed in the databases: National Guideline Clearinghouse, NHS Evidence, Canadian Medical Association, Scottish Intercollegiate Guidelines, Evidence Based Medicine, InfoPOEMs, TRIP, The Cochrane library, DARE, Bandolier and Pubmed, between January 2000 and May 2012, in Portuguese, English and Spanish, using *Otitis Media* and *Xylitol* as MeSH terms. The SORT scale of the AAEP was used to assess level of evidence and strength of recommendation.

**Results:** Of the 106 found articles, 3 met the inclusion criteria set. Two meta-analyses showed the efficacy of the administration of xylitol in reducing the occurrence of AOM in children (Level of Evidence 1). A systematic review concluded that there was evidence of poor quality for the prophylactic use of xylitol in AOM (Level of Evidence 2).

**Conclusion:** The current available evidence supports the efficacy of xylitol in preventing AOM in children (SORT A).

However, few questions remain namely regarding the most appropriate dose of xylitol, its long-term benefits and the duration of intervention and target population. Moreover, other routes of administration providing better adhesion in all age groups are needed.

Disclosure: No conflict of interest declared

1467

Presentation type: Oral Communication

**Using overnight pulse oximetry in screening of obstructive sleep apnea for at risk adult patients in primary care setting**

L.K. Chiang, L.V. Ng, C.W. Kam

Family Medicine and General Outpatient Department, Kwong Wah Hospital, Hong Kong

**Introduction:** Obstructive sleep apnea (OSA) is common and associates with serious comorbidities. The gold standard diagnostic test is overnight polysomnography (PSG), while overnight pulse oximetry is commonly implemented as screening test.

**Objectives:** To investigate the prevalence of OSA among at risk patients in the primary care setting.

To test the usefulness of using overnight pulse oximetry for OSA screening in primary care setting.

**Methodology:** A case series study involving adult patients at risk for OSA in the primary care. After focus assessment, overnight pulse oximetry was done for all patients while at home polysomnography were offered for selected patients. The prevalence and severity of OSA were established. The correlation and agreement between oximetry and PSG were assessed by correlation coefficient, r-value and Bland Altman plot.

**Results:** There are 180 male and 119 female patients, with mean (SD) age 52 (11) and 48 (12) years old respectively. 193 patients (65%) were screened positive to have OSA. The mild, moderate and severe OSA were 54%, 29% and 17% respectively.

PSG were done for 86 patients. PSG derived apnea hypopnea index (AHI) has mean 29 events/h and SD 23.4 events/h. Overnight pulse oximetry derived oxygen desaturation index (ODI) and AHI had good correlation,  $r = 0.82$  ( $P < 0.001$ ). The mean and 2 SD of the difference between ODI and AHI was 5.83/h and 21.08/h.

**Conclusion:** There is high prevalence of OSA (65%) among at risk patients in the primary care. Overnight pulse oximetry is a useful screening test for obstructive sleep apnea.

Disclosure: No conflict of interest declared

1490

**Presentation type: Oral Communication****Presence of risk factors and the importance of prevention in patients with ischemic heart disease in Health center Bijeljina**

Z. Dakic, G. Savin, S. Pantic, Z. Maksimovic

*Family medicine, Health center Bijeljina, Bijeljina, Bosnia-Herzegovina*

**Objective:** to determine the prevalence of risk factors and the importance of prevention of ischemic heart disease in patients of Health Centre Bijeljina (Bosnia-Herzegovina).

**Methods:** prevalence study was carried out in September 2012. During the survey conducted at the Health Centre Bijeljina 300 patients with coronary artery disease in six family ambulances were examined. They were asked about smoking, high blood pressure, diabetes mellitus type II, diet, stress, physical inactivity, BMI, total cholesterol, HDL, LDL-cholesterol and triglycerides by proper questionnaire, anthropometric measurements and laboratory analyzes.

**Results:** examined group n = 300 was consisted of 171 males (57%), aged 65+/-20 and 129 women (43%) age 65+/-20 (age: p>0.05). Smoking in the patients were represented in 126 patients: 87 men (29%) and 39 women (13%) (men, p<0.05). Alcohol consumed 60 patients, 57 males (95%) and 3 female (5%) (p<0.05). Statistically significant differences based on gender in body weight (males 82.07+/-13.44; women 73.0+/-12.86), BMI (men 27.04+/-4.03; women 27.89+/-4.33) was not observed. The same statistically significant differences were in laboratory values (total cholesterol 5.07 male +/- 1.3; women 5.64 +/- 1.1 p> 0.5, HDL 0.97 male +/- 0.23, women 1.11 +/-0.23 p> 0.5, LDL men 2.83 +/- 1.0; women 3.08 +/-1.28(p> 0.5), triglycerides 1.9 men +/- 1.26; women 2.1+/-1.55 p>0.5).

**Conclusions:** In both groups of patients with ischemic heart disease exists the association of significant number of risk factors. In group of women there are more risk factors that can be corrected by measures of primary and secondary prevention.

Disclosure: No conflict of interest declared

1509

**Presentation type: Oral Communication****Smoke: preventive interventions on primary care**

R. Joao Caiado, P. Figueiredo, A. Rodrigues

*USF Sao Julião, USF Sao Julião, Figueira da Foz, Portugal*

**Introduction:** Smoking constitutes the main avoidable cause of morbidity and mortality in developed countries. Nowadays, youngsters start smoking earlier (mostly before fourteen years old), becoming more easily dependent and at a time of higher vulnerability to its undesirable effects. Youth-directed Primary Care Prevention is one of the leading strategies employed to control smoking, aiming at avoiding the initial contact. Schools represent a privileged forum to convey the information to all the student population. This can be achieved through academic curricula as well as Health-oriented Education initiatives, integrating the academic community and health-care professionals.

**Objectives:** The aim of this work is to explore and share tools that can be useful in future Health Education actions. Therefore, we intend to present some simple strategies that can be used from childhood to adulthood, to prevent or reduce smoking. These type of interventions only make sense as a continuous process throughout the lifespan of an individual.

Disclosure: No conflict of interest declared



1575

**Presentation type: Oral Communication****Health IT for young women: The Gabby Preconception Care System**B. Jack<sup>1</sup>, M.B. Hempstead<sup>1</sup>, L. Yinusa-Nyahkoon<sup>1</sup>, D. Schulman<sup>2</sup>, L. Ring<sup>2</sup>, T. Bickmore<sup>2</sup>, L. Culpepper<sup>1</sup>, J. Markuns<sup>1</sup><sup>1</sup> Family Medicine, Boston University School of Medicine, Boston, Massachusetts, United States;<sup>2</sup> College of Computer and Information Science, Northeastern University, Boston, Massachusetts, United States

**Objective:** The concept of preconception care (PCC) has been identified as an approach to reduce poor birth outcomes. We present a new tool to promote PCC, particularly to target high-risk populations.

**Methods:** We developed and tested a health information technology system with an online interactive character (Gabby), to identify and counsel on PCC risks and assist in creating a reproductive life plan, or "My Health To-Do List." Subjects were recruited from the community for focus groups (n=31) and usability testing (n=15); we recruited from the Preconception Peer Educators program for a 2-month pilot test (n=9). Focus group and usability interviews were audio-recorded, transcribed verbatim, and coded using NVIVO. Usability and pilot data were collected through: an online risk assessment, system server data, self-administered satisfaction surveys, and 2-month phone calls to pilot test subjects.

**Results:** Focus group and interview transcripts guided decisions for system design. Subjects reported 23 risks on average; pilot subjects who logged in at least once (n=6) discussed an average of 11 risks with Gabby. 83% of those added to the "My Health To-Do List" were addressed in some way at 2 months. Differences were noted at follow up based on initial stage of change.

**Conclusions:** The Gabby system could be effective in delivering PCC and influencing positive behavior change. Subsequent work involves programming to add stage of change-specific content to support behavior change.

Disclosure: No conflict of interest declared

1599

**Presentation type: Oral Communication****Breast cancer ; screening or overdiagnosis? Questioning of a family doctor**I. Lassoued<sup>1</sup>, M. Jamouille<sup>2</sup><sup>1</sup> Department of general practice, Free university of Brussels (ULB), Charleroi, Belgium;<sup>2</sup> General practitioner, Researcher in Primary Care, Charleroi, Belgium

The authors have tried to update the knowledge of breast cancer screening by a review of the scientific literature, the recommendations made by various national health institutions as well as expert advices. It attempts to identify the limitations of screening and the potential adverse effects of the overdiagnosis and overtreatment.

The current literature has been reviewed, as well as books on the issues of screening, the work of some experts aim to clarify the following points :

- The potential benefit of routine screening of women aged 50 to 69 years
- The risks and potential side effects of breast cancer screening by mammography.
- Informing women invited to screening

State institutions (KCE, HAS, Canadian Task Forces, U.S. Task Forces) recommend maintaining the screening of women aged 50 to 69 years and consider the benefit is higher than adverse events (false positives, false negatives and treatment of tumors growing very slow). Nevertheless, the findings of the Cochrane and Prescrire are reserved. For them, even if there is a benefit, it is minimal and insufficient as to have a definite opinion on the matter. Indeed, the NNS (Need Number to Screen) for 10 years is 2000. At the same time 10 healthy women will be treated unnecessarily for a cancer and 200 women will be falsely alerted by screening. Biased information given to patients rises false beliefs. All these beliefs conveyed can lead to a breakdown in the relationship between doctor and patient

Biblio

<http://www.mendeley.com/groups/1698591/breast-cancer-screening-update/papers/>

Disclosure: No conflict of interest declared

1624

**Presentation type: Oral Communication****Frequency of chronic venous diseases in general practitioners' daily practice**J. Stojakovic<sup>1</sup>, M. Stojakovic<sup>2</sup>, V. Tesanovic<sup>1</sup><sup>1</sup> General practice, Health center Zvezdara, Belgrade, Serbia; <sup>2</sup> General practice, Health center Zemun, Belgrade, Serbia

Diseases of the veins include two broad categories: blockage from a blood clot (thrombosis) and inadequate venous drainage (insufficiency). They are common, relatively easy to treat, and with treatment, rarely life-threatening.

**Objective:** The aim of this study was carried out to evaluate the frequency and characteristics of chronic venous diseases (CVD) in patients who visited their GP in daily practice for various reasons.

**Methods:** Descriptive cross-sectional study included 465 patients, 256 women and 209 men; aged 20-65 years, (mean age 49±2 years), who had visited their GP (n=3) first two weeks of October 2012, but without previously established CVD. All patients were questioned by their doctors about symptoms of CVD regardless that they came for another reason. Diagnosis of CVD has been set by anamnesis and physical examination. Clinical, etiological, anatomical, pathophysiological (CEAP) classification was used for estimated degree of CVD (C0-C6).

**Results:** CVD was established in 224 patients (48.2%), in 136 women (29.3%) and 88 men (18.9%), and in 146 (31.4%) of them were found C3 stage. C4-C6 stages weren't found.

**Conclusions:** Chronic Venous diseases are very common in general practitioners' daily practice. Almost half of participants had CVD and the third of them had functional annoyances. Addressing the problems of CVD should improve physical functioning and quality of life. In the absence of appropriate medical care, patients risk marked disability and life-threatening complications, such as pulmonary embolism. Understanding the nature of these disorders will facilitate therapeutic communication between patient and physician, improving the proper use of appropriate therapies.

Disclosure: No conflict of interest declared

1626

**Presentation type: Oral Communication****Prevention of oral cancer in Sao Paulo from 2005 to 2012**

R.A.A. Marques, M.C. Soares

Atencao Básica Area Técnica de Saúde Bucal, Secretaria Municipal da Saúde, Sao Paulo, Brazil

**Objective:** The neoplasms are one of the leading causes of death in developed and developing populations, submitted to the phenomena of epidemiological and demographic transition. In Brazil, the major urban centers coexist with both phenomena imposing the need for the establishment of public policies for prevention and control of this condition.

**Methods:** With the implementation of the Family Health Strategy and universal access to oral health inspection was implemented in all soft tissue oral health services in order to achieve early identification of malignant or potentially malignant For seniors 60 years and over who do not routinely seek oral health services is held annually, during the influenza imunization campaign, health education activities to highlight the influences for alcohol and tobacco on the oral tissues, self examination to identify changes in the mouth and cervical nodes or submandibular, and self care. The participants are invited to inspect the oral tissues. We examined not coded as normal are reassessed by a specialist. When it is necessary realized biopsy and referred to tertiary care.

**Results:** From 2006 to 2012 examined coverage grew 63%. It has been possible to diagnose an average of 30 cases of cancer each year in the population of 60 years and older examined during the campaign.

**Conclusions:** Reiterate the need to campaign in search of people who routinely does not seek oral health services especially smokers and drinkers.

Disclosure: No conflict of interest declared

1629

Presentation type: Oral Communication

**Educational needs assessment on suicide and deliberate self harm to shape a course for GPs and primary care staff**P. Finegan<sup>1</sup>, C. Collins<sup>2</sup>, P. McSharry<sup>2</sup>, N. Fenlon<sup>2</sup>, A. Lavelle<sup>2</sup>, D. McLean<sup>2</sup><sup>1</sup> *Mental Health, Irish College of General Practitioners, Dublin, Ireland;* <sup>2</sup> *Education, ICGP, Dublin, Ireland*

**Background and rationale:** Suicide is a major problem in Ireland (population 4.5 million) with 525 suicides in 2012 and over 12,000 cases of deliberate self harm (DSH) seen in emergency departments annually. The psychological impact on the family, friends and broader community of the deceased is immense. With many presenting to primary care in the months prior to the event, it is an obvious area for intervention as part of an overall multimodal approach to suicide prevention. International evidence suggests that physician education in depression recognition and treatment has been shown to reduce suicide.

**Objectives of project:** The aim of this project was to conduct an educational needs assessment with regard to Irish GPs and other primary care service providers in respect of dealing with patients who present with suicidal ideation and deliberate self harm. And, if a need is evident / indicated, to use the knowledge obtained to inform the training content and delivery of a course for primary care staff.

The needs assessment consisted of:

- (a) a brainstorming group-decision discussion with representatives from relevant stakeholder groups.
- (b) a two-round Delphi process.
- (a) an extensive review of the literature and of courses available.
- (b) the engagement of course content writers.

**Implementation:** There is overwhelming support for participating in a blended course on suicide risk assessment and management of up to four hours in the format of evening CME or on-site in practice/service workshops together with e-learning modules which we have now introduced.

Disclosure: No conflict of interest declared

**3.2. CARDIOVASCULAR DISEASE**

1614

Presentation type: Workshop

**Cardiovascular health from an international perspective**S. van de Vijver<sup>1,2,3</sup>, G.J. Geersing<sup>4</sup>, L.L. Yan<sup>5</sup><sup>1</sup> *Health Program, African Population and Health Research Center, Nairobi, Kenya;* <sup>2</sup> *Global Health, Academic Medical Center, Amsterdam, Netherlands;* <sup>3</sup> *Urban Health, Amsterdam Institute for Global Health and Development, Amsterdam, Netherlands;* <sup>4</sup> *Julius Center Primary Health, Utrecht Medical Center, Utrecht, Netherlands;* <sup>5</sup> *China International Center for Chronic Disease Prevention, Beijing, China*

**Objective:** Due to globalization and urbanization cardiovascular diseases (CVD) have become the main cause of death in high-income, as well as middle-income and low-income settings. As high income countries have decades of experience in successful management and prevention of CVD their focus is currently on morbidity and interaction with other chronic diseases, whereas middle- and low-income countries are still struggling to respond to this new epidemic as their primary care systems are weak and still burdened by uncontrolled infectious diseases. The aim of this workshop is to give an overview and share experiences from the different settings in order to create more understanding and synergy in the global response to CVD.

**Methods:** Primary care models for prevention and treatment of CVD have been selected from low-, middle- and high-income settings, respectively Kenya, China and The Netherlands. The programs will be individually presented based on their health impact and the cultural and economic background. Depending on the phase of the epidemiological transition where the country is, related challenges will be highlighted.

**Results:** The similarities and differences among the three models will be discussed and best practices will be shared. Possible adaptations in different settings will be explored.

**Conclusions:** CVD prevention and management needs a multiple approach that constantly should be critically evaluated and adapted to the local situation. The potential of successful and innovative aspects from other settings should be integrated in this process.

Disclosure: No conflict of interest declared

110

**Presentation type: Oral Communication****To determine psychosocial risk factors for acute myocardial infarction: case-control study in a teaching hospital at Karachi**

K.S. Sattar

*Family Medicine, Aga Khan University Hospital, Karachi, Pakistan*

**Objectives:** To determine psychosocial risk factors (stress at work and home, financial stress, major life events and history of depression in past year) for Acute MI at a teaching hospital in Karachi.

**Subjects and methods:** 153 cases were recruited since cardiology clinics and 153 controls were recruited from internal medicine and family medicine clinics of the same hospital, through non-probability sampling using a structured questionnaire. Cases were those who were diagnosed with AMI for the first time in past one month. Data has been analyzed in SPSS 19. Descriptive, univariate and multivariate analyses was performed.

**Results:** Psychosocial risk factors associated with acute MI in logistic regression model were, irritability at home (AOR: 4.86, 95% CI: 3.24-7.53), illness in the past (AOR: 3.3, 95% CI: 2.86-5.23), illness in family (AOR: 8.44, 95% CI: 6.21-10.1) and death in family (AOR: 17.24, 95% CI: 3.98-25.1).

**CONCLUSIONS:** Psychosocial risk factors are associated with Acute MI so effective prevention programs can be implemented to reduce these risk factors.

**Key words:** Acute myocardial infarction, stress, depression

Disclosure: No conflict of interest declared

363

**Presentation type: Oral Communication****Chest pain in primary care: Is the localisation of pain diagnostically helpful in the critical evaluation of patients?**N. Donner-Banzhoff<sup>1</sup>, K. Bönisch<sup>1</sup>, H. Haasenritter<sup>1</sup>, P. Schlegel<sup>2</sup>, E. Hüllermeier<sup>2</sup>, S. Bösner<sup>1</sup>*<sup>1</sup> Department of Family Medicine, University of Marburg, Marburg, Germany; <sup>2</sup> Department of Mathematics and Computer Science, University of Marburg, Marburg, Germany*

**Objective:** Chest pain is a common complaint and reason for consultation in primary care. Traditional textbooks still assign pain localisation a certain discriminative role in the differential diagnosis of chest pain. We put this assumption to a test by synthesising pain drawings from a large sample of chest pain patients and examining whether pain localisations differ for different underlying aetiologies.

**Methods:** A prospective study with 1212 consecutive chest pain patients was conducted in 74 primary care offices in Germany from October 2005 to July 2006. General Practitioners (GPs) marked pain localisation and radiation of each patient on a pictogram. After 6 months, an independent interdisciplinary reference panel reviewed clinical data of every patient deciding about the aetiology of chest pain at the time of patient recruitment. GP drawings were entered in a specially designed computer program to produce merged pain charts for different aetiologies. Dissimilarities between individual pain localizations and differences on the level of diagnostic groups were analysed using the Hausdorff distance and the C-index.

**Results:** Pain location in patients with coronary heart disease (CHD) did not differ from the combined group of all other patients, including patients with chest wall syndrome (CWS), gastro-esophageal reflux disease (GERD) or psychogenic chest pain. There was also no difference in chest pain location between male and female CHD patients.

**Conclusions:** Pain localization is not helpful in discriminating CHD from other common chest pain etiologies.

Disclosure: No conflict of interest declared

555

**Presentation type: Oral Communication****Usefulness of handheld ultrasound performed by a general practitioner in systemic arterial hypertension population. A study in primary care**L. Evangelista<sup>1</sup>, V. Gómez<sup>1</sup>, A. Pareja<sup>1</sup>, P. Trujillo<sup>1</sup>, S.E. Riesgo<sup>1</sup>, B. Riesgo<sup>1</sup>,M.J. Mejido<sup>1</sup>, S. Copetti<sup>1</sup>, E. Juncadella<sup>1</sup>, A. Evangelista<sup>2</sup><sup>1</sup> Primary Care Center, Institut Català de la Salut, Barcelona, Spain; <sup>2</sup> Hospital de la Vall d'Hebron, Institut Català de la Salut, Barcelona, Spain

Conventional echocardiography is the technique of choice for assessing cardiac abnormalities in patients with systemic arterial hypertension (SAH); however, its availability in primary care centers is limited.

**Objective:** To assess the usefulness of handheld ultrasound (HU) performed by a General Practitioner (GP) in the early detection of heart abnormalities secondary to SAH in primary care.

**Methods:** In 393 consecutive patients with SAH, GP performed an echocardiographic study by HU. After the evaluation of the studies an expert echocardiographer (EE) blind reviewed all the studies. Findings and diagnosis of the studies were compared. GP was trained performing 50 studies under tutorial supervision of EE.

**Results:** The study lasted <5 min and the quality was acceptable to good in 98% of cases. The agreement between GP and EE was: very good ( $\kappa > 0.83$ ) for left ventricular hypertrophy, left atrium and ascending aorta enlargement, aortic valve sclerosis and aortic regurgitation severity; and good ( $\kappa > 0.71$ ) for mitral annular calcification and mitral regurgitation severity. All significant lesions were diagnosed by GP, except 6 (2.6%). Significant cardiovascular abnormalities with therapeutic or prognostic implications were found in 43% of the studies.

**Conclusions:** Handheld ultrasound performed by General Practitioner as an extension of conventional clinical assessment in systemic arterial hypertension is useful for early diagnosis of cardiac abnormalities and may facilitate better patient management.

Disclosure: No conflict of interest declared

855

**Presentation type: Oral Communication****Young adult with tachycardia**

P. Rodríguez-Casal, C. Rial, S. Garcia-Álvarez, A. Caamaño

Primary Care, SERGAS, Pontevedra, Spain

A 28-year-old male went to the out-of-hospital emergency services at 4 am. He had a feeling of heart-beating for 3 hours while he was working. He did not present symptoms associated with the parasympathetic nervous system or other symptomatology. He had had a similar episode 5 years before for which he had been admitted in Cardiology service and he has had treatment until one year ago. The physical examination revealed he had a high heart rate (180 lpm), the rest is unremarkable. We made an EKG, where a wide-complex tachycardia (WCT) was appreciated. He was monitored and we give an injection of amiodarone. He was referred to hospital.

At the emergency room they made him vagal maneuvers but it did not interrupt the tachycardia. It was interrupted it with an adenosine injection. The patient was stable and asymptomatic during his stay. A treatment with diuretic and oxygen was initiated. The patient was admitted to the Cardiology service with the diagnosis of Wide-complex tachycardia, recurrent, and adenosine-sensitive to carry out a new study.

**Conclusions:** WCT represents a unique clinical challenge for two reasons. Diagnosing the arrhythmia is difficult. Although most WCTs are due to ventricular tachycardia, the differential diagnosis includes a variety of supraventricular tachycardias. Diagnostic algorithms are complex and imperfect and an urgent therapy is often required. Patients may be unstable at the onset of the arrhythmia or deteriorate rapidly at any time. Therapeutic decisions are further complicated by the risks associated.

Disclosure: No conflict of interest declared

910

**Presentation type: Oral Communication****Clinical decision rules for detecting heart failure in frail elderly. validation of two existing rules**

Y. van Mourik, A.W. Hoes, F.H. Rutten

*Julius Center, University Medical Center Utrecht, Utrecht, Netherlands*

**Aims:** Detection of heart failure (HF) is difficult without echocardiography, as is common in primary care. We wanted to investigate whether two existing clinical prediction rules are useful in frail elderly.

**Methods:** 361 frail elderly, defined as having  $\geq 3$  co-morbidities and/or using  $\geq 5$  drugs chronically, and aged  $\geq 65$  years who had dyspnoea or reduced exercise tolerance underwent a standardized diagnostic work-up at their GP's surgery. An expert panel determined the presence of HF based on all diagnostic information.

We applied (validated) two models. First, the model of Rutten, derived from elderly patients with COPD from primary care. This model included a history of ischaemic heart disease, body mass index (BMI), a laterally displaced apex beat, heart rate, NT-proBNP, and an abnormal ECG. Second, the model of Oudejans, derived from an elderly geriatric population suspected of HF. This model included gender, age, nocturnal dyspnoea, wheezing, loss of appetite, BMI and NT-proBNP.

**Results:** HF was newly detected in 127 (35.1%) patients. The clinical decision rule (scores 0-14) of Rutten had a c-statistic of 0.75 (95%CI 0.70-0.80). The positive predictive value (PPV) was 82.1%, and the negative predictive value (NPV) 71.9% for identifying high risk patients (score  $\geq 10$ ). For the rule of Oudejans (scores -3 to 32), the c-statistic was 0.69 (95%CI 0.63-0.75), the PPV was 76.9%, and NPV 68.5% for identifying high risk patients ( $\geq 32$ ).

**Conclusion:** Especially the clinical decision rule of Rutten is useful for diagnosing HF in frail elderly. It helps to decide which patients needs further echocardiography.

Disclosure: No conflict of interest declared

1233

**Presentation type: Oral Communication****The outcome of ambulatory electrocardiography (AECG or Holter) performed in the primary care setting: a case series study**

L.K. Chiang, L.V. Ng

*Family Medicine and General Outpatient Department, Kwong Wah Hospital, Hong Kong*

**Introduction:** Using Holter in primary care is for early detection of possible life-threatening cardiac arrhythmia as a cause of symptoms. It can minimize the patient risk by shortening the time to diagnosis and initiate appropriate early referring to specialist care.

**Objectives:**

1. To examine the presenting symptoms of patients for the Holter monitoring in the primary care.
2. To review the outcomes of Holters monitoring.
3. To investigate the predicting patient characteristics for significant Holter outcomes.

**Methodology:** Case serials study involving all Holter done in a regional primary care clinic of Hong Kong from Jan 2010 to Oct 2012. The presenting symptoms of patients for Holter monitoring were stratified. Outcomes of Holters and clinical management were analyzed.

**Results:** There were 61 male and 147 female patients, with mean (SD) age 65.3 (15) and 57.9 (14.4) years old respectively. 62.5% of them were newly onset symptom. 36.5% of them had no associated chronic disease. 171 (82%), 11 (5%), 4 (2%), 5 (3%) and 17 (8%) cases were indicated for palpitation, dizziness, syncope (presyncope), combined symptoms and others respectively.

82 cases (40%) of Holter had significant cardiac arrhythmia and all of them were referred to Medical Department for further management. The five leading findings were frequent supraventricular/ventricular ectopics (26.8%), prolong QT (14.6%), supraventricular/ventricular ectopics in bigeminy or trigeminy (12.2%), paroxysmal atrial fibrillation (12.2%) and paroxysmal supraventricular tachycardia (11%) respectively.

**Conclusion:** 40% of Holter monitoring for patients in the primary care had significant cardiac arrhythmia, which needed referral to specialist for further management.

Disclosure: No conflict of interest declared

1246

Presentation type: Oral Communication

**Treatment of dyslipidemia in Central and Eastern Europe. Self-reported practice of primary care physicians**T. Tomasik<sup>1</sup>, A. Windak<sup>1</sup>, B. Seifert<sup>2</sup>, J. Kersnik<sup>3</sup>, V. Kijowska<sup>4</sup>, K. Dubas<sup>5</sup><sup>1</sup> Department of Family Medicine, Jagiellonian University Medical College, Krakow, Poland;<sup>2</sup> Department of General Practice, First Faculty of Medicine, Charles University, Prague, Czech Republic;<sup>3</sup> Department of Family Medicine, University Ljubljana, Ljubljana, Slovenia; <sup>4</sup> LdeV Project, The College of Family Physicians in Poland, Warsaw, Poland; <sup>5</sup> Department of Health Economics and Social Science, Institute of Public Health, Jagiellonian University Medical College, Krakow, Poland**Objectives:** To describe: (1) self-reported dyslipidemia treatment among primary care physicians in Central and Eastern Europe; (2) inter-country differences in treatment patterns.**Methods:** A cross-sectional survey was performed in primary health care in 9 European countries. An anonymous questionnaire with questions devoted to dyslipidemia treatment, was distributed. Three thousand doctors were randomly chosen from the national registers.**Results:** 867 doctors responded (the overall response rate: 28,9%). The mean percentage of physicians in all countries who reported regular statins use in primary prevention of cardiovascular diseases was 86.4. In secondary prevention the mean percentage was only a little higher: 89.9. Statistically significant differences were found between countries ( $p < 0.01$ ). The use of fibrates for primary and secondary prevention was reported by 20% and 19% of respondents, respectively. There were also significant differences between countries ( $p < 0.05$ ). Atorvastatin and simvastatin were the most prescribed medicines to lower cholesterol level in everyday practice (the mean percentage of physicians in all countries: 72.5% and 68.0% respectively). Of the 4 respondents, 3 reported prescribing life-long treatment with statins.**Conclusions:** There are significant variations in the use of lipid-lowering medicines in Central and Eastern European countries, though statin monotherapy dominates. Some physicians' decisions are made without supporting recommendations from clinical guidelines. There is still room to improve preventive care of cardiovascular diseases.

Disclosure: No conflict of interest declared

1354

Presentation type: Oral Communication

**Do patients with a general practitioners label of heart failure really have heart failure?**M. Valk<sup>1</sup>, F. Rutten<sup>1</sup>, A. Mosterd<sup>2</sup>, B. Broekhuizen<sup>1</sup>, A. Hoes<sup>1</sup><sup>1</sup> University Medical Center Utrecht, Julius Center for sciences and primary care, Utrecht, Netherlands; <sup>2</sup> Meander Medisch Centrum, Cardiology, Amersfoort, Netherlands**Objective:** In primary, the diagnosis of heart failure (HF) is often based on symptoms and signs only and echocardiography is infrequently performed. A half-hearted diagnostic assessment could lead to inadequate treatment of patients. Purpose: to assess how many patients labeled by their general practitioners (GP) as having heart failure, really do have HF and compare a GP diagnosis of HF with a consensus panel.**Method:** In a cross sectional study in 30 Dutch general practices, 683 patients had a GP's diagnosis of HF. All available medical information was gathered. The GPs were asked to consider echocardiography in those who did not have had that investigation. After six months presence or absence of HF was determined by a panel of two cardiologists and an experienced GP using all information.**Results:** In total, 683 patients had a GP's diagnosis of HF (mean 3.0 years). Mean age was 77.9 (SD 11.4) and 42.2% were male. According to the expert panel, 63.5% had 'definitive' HF, 19.2% possibly HF, and 17.3% no HF. In 39% BNP or NTproBNP was measured, and of 35.4% echocardiographic data was available at baseline. After the follow-up visit, in total 68.7% of the 683 patients had BNP or NTproBNP measurements, and 73.5% echocardiography.**Conclusions:** Two-third of the patients with HF according to the GP has really HF. Echocardiography is still underused. Six months after the baseline assessment, 73.5% of the patients had echocardiography. In patients suspected of HF echocardiography is mandatory because a definite diagnosis is necessary for optimal treatment.

Disclosure: No conflict of interest declared

1678

**Presentation type: Oral Communication****Cardiovascular risk management in primary care; towards an integrated approach**M. Hollander<sup>1</sup>, B. Hart<sup>1</sup>, K. van den Brekel-Dijkstra<sup>1</sup>, N.J. de Wit<sup>1,2</sup>, F.H. Rutten<sup>2</sup><sup>1</sup> *General Practice, Julius Health Centers, Utrecht, Netherlands;* <sup>2</sup> *Department of General Practice, Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht., Utrecht, Netherlands*

**Objective:** The Dutch guidelines 'cardiovascular risk management', and 'prevention consultation' defined characteristics of patients who may benefit from prevention in primary care. We plan to implement an integrated CVD prevention strategy, combining both approaches, and assessed the number of patients that are eligible for the prevention programs

**Methods:** We selected all persons eligible for cardiovascular risk management or prevention consultation in our academic primary care practice of the Julius Health Centers (n=33,000). Patients with hypertension, hypercholesterolaemia or a history of ischemic cardiovascular disease are included in the cardiovascular risk assessment and management program. All persons aged 40 to 70 years of age, who are unknown with CVD or diabetes will be invited to fill out an online cardiovascular risk assessment tool (NIPED). This will be followed by a visit of to the surgery in case of an increased risk according to the risk tool.

**Results:** From the total population of 33,000, 947 are treated by the GP for diabetes and 2,783 are eligible for cardiovascular risk management (1,856 (67%) because of hypertension or hypercholesterolaemia and 927 (33%) because of a history of CVD). In total 3,090 persons without cardiovascular disease or diabetes will be invited to fill in the online risk questionnaire.

**Conclusions:** Combined implementation of prevention consultation and cardiovascular risk management, offers opportunities for an integrated CVD prevention program in primary care, benefitting both patients with documented CVD and those with known or unknown riskfactors. ICT back-up is needed to perform such a large scale preventive intervention.

Disclosure: No conflict of interest declared

1771

**Presentation type: Oral Communication****Exercise duration and heart rate recovery: Important considerations during exercise stress testing**

V. Ted Leon

*Cardiac Non-Invasive Lab, Queens Medical Center, Honolulu, Hawaii, United States*

**Objective:** To gain understanding about the diagnostic and prognostic value of exercise duration and heart rate recovery, as part of a standard exercise stress testing protocol

**Methods:** Over 25,000 exercise stress tests have been performed over the past 10 years in the Cardiac Non-Invasive Lab at the Queens Medical Center, a 500 bed hospital in Honolulu, Hawaii. Patients undergo stress testing on a treadmill, using a standard Bruce Protocol. Data will be presented for 10 recent patients who tested positive for ischemia, based on ECG criteria. These cases will be compared, in terms of exercise duration and 1 minute heart rate recovery, to 10 cases that tested negative for ischemia. The Duke score, which uses ST segment changes and the presence of exercise-induced chest pain to categorize patients into low, moderate or hi risk for ischemic heart disease, will be discussed. A modified Duke score, which accounts for heart rate recovery and the presence of ventricular ectopy during recovery, will also be discussed

**Results:** Patients who are positive for ischemia on exercise stress testing also have a shorter exercise duration, and a decreased heart rate recovery, as compared to patients who are negative for ischemia on exercise stress testing

**Conclusion:** Patients who undergo exercise stress testing, for diagnostic or prognostic purposes, should also be evaluated for exercise duration and heart rate recovery

Disclosure: No conflict of interest declared



### 3.3. RESPIRATORY PROBLEMS

2010

**Presentation type: Workshop**  
**International Primary Care Respiratory Group**

**WORKSHOP FROM THE IPCRG, SIG OF WONCA EUROPE. Investigation and treatment of common allergic respiratory conditions that should be managed in general practice**

Moderator: J. Reid

Presenters: M. Roman Rodriguez, S. Høegh Henriksen, J.C. de Sousa, I. Tsiligianni  
*International Primary Care Respiratory Group. [www.theipcr.org](http://www.theipcr.org)*

Allergic rhinitis is a very common disease with over 600 million people worldwide suffering from it. The majority of patients who seek medical advice are seen in primary care. Although these conditions are often not to be considered to be severe diseases by physicians, they cause considerable morbidity. Prevalence is on the rise and they represent huge costs in terms of indirect resources as days out of work or school. Accurate diagnosis is not frequently done in primary care and sometimes the availability of diagnosis tests such as skin prick tests or specific IgE is not very commonly undertaken. The big variation in local circumstances and population characteristics, including the healthcare system regulations under which primary care has to operate make the diagnosis and treatment of allergic diseases a big challenge. The evidence of the link between uncontrolled asthma and under-treatment of other allergic respiratory conditions is getting stronger and although there is a selection of guidelines focused on the management of these conditions, there is a paucity of guidance on how best to identify patients who would most benefit from treatment including allergen avoidance strategies and specific immunotherapy.

The IPCRG presents an interactive workshop; after a short presentation, open discussion among participants will be led by a team of practising family physicians with experience of different health care systems and with a special interest in respiratory disease. The session will be applicable to General Practice, be pragmatic and concise. The main issues to be covered at the workshop will be:

- **The importance of accurate diagnosis of allergic respiratory conditions in primary care. Should we perform allergy tests?**
- **Management of allergic respiratory conditions in primary care. From guidelines to practice**
- **Is it a place for specific immunotherapy in day to day primary care practices?**

2011

**Presentation type: Workshop**  
**European General Practice Research Network**

**EGPRN WORKSHOP “EVIDENCE BASED NEW WONCA DEFINITION”  
 & EGPRN RESEARCH AGENDA**

**Evidence base of the European definition**

M. Ungan

*EGPRN Acting Chair*

EGPRN’s “European Research Agenda” Intends to complement the EURACT Educational Teaching Agenda, which addresses academic and vocational training. The starting point for developing the RA was the domain of general practice in Europe, as described in the six core competencies (the eleven characteristics comprised therein) of the WONCA definition. A second framework was the core domains of GP/FM research, summarised including also:

- Research on education and research on teaching in general practice
- Sources in RA on Educational research
- Teaching & Learning effects in Research Agenda

Developing methods of education and training for components of the different GP/FM competencies, and evaluating their effectiveness, including the impact on health care and health outcomes, **in the short and long term** (sustainability) must be in the research agenda for all those three WONCA-EU Networks and also member institutes. Aim of the workshop is to search for the published evidences to be used in new definition.

Use your expertise in EGPRN’s workshop, ACCEPT IT as our RESEARCH DISCUSSION MEDIUM on the way for the new WONCA Definition. Please bring an evidence based on “good research” to discuss more than an expert’s opinion so that we may built the definition with good quality bricks in a firm way to make it live longer, until when a new evidence replaces.

“On the heart of any knowledge lies a good research” – Gro-Harlem.

2017

**Presentation type: Workshop**  
**International Primary Care Respiratory Group**

**WORKSHOP FROM THE IPCRG, SIG OF WONCA EUROPE. Asthma control and severity. What should the doctor do to support patients with difficult to control asthma.**

Moderator: I. Tsiligianni

Presenters: M. Roman Rodriguez, J. Reid, S. Høegh Henriksen, J. C de Sousa, I. Tsiligianni

International Primary Care Respiratory Group. [www.theipcr.org](http://www.theipcr.org)

Globally, asthma morbidity remains unacceptably high. If outcomes are to be improved, it is crucial that routine review consultations in primary care are performed to a high standard. Key components of a review include assessment of control using specific questions and questionnaires to elucidate the presence of symptoms, in conjunction with the frequency of use of short-acting bronchodilators and any recent history of acute attacks. Identification of poor control should only result in a step-up of treatment after consideration of the diagnosis, and an assessment of compliance, inhaler technique, smoking status, triggers and other allergic conditions as rhinitis, in accordance with evidence-based guideline recommendations. Severe asthma is not very common nowadays and it's difficult to understand the differences between lack of control and severity based also on future risks and poor response to available treatments. Once severe asthma is diagnosed, many approaches are of value in primary care, including an accurate referral to specialized settings and offering personalized care and treatment.

The IPCRG presents an interactive workshop; after a short presentation, open discussion among participants will be led by a team of practising family physicians with experience of different health care systems and with a special interest in respiratory disease. The session will be applicable to General Practice, be pragmatic and concise. The main issues to be covered at the workshop will be:

- **A definition of poorly controlled asthma: How do we differentiate between poor control and severity**
- **Poorly controlled asthma: What should we do?**
- **Is there a place for primary care in the management of severe asthmatic patients?**

2030

**Presentation type: Workshop**  
**International Primary Care Respiratory Group**

**WORKSHOP FROM THE IPCRG, SIG OF WONCA EUROPE. COPD: Early detection and management of stable disease and exacerbations**

Moderator: S. Høegh Henriksen

Presenters: M. Roman Rodriguez, J. Reid, S. Høegh Henriksen, J.C. de Sousa, I. Tsiligianni

International Primary Care Respiratory Group. [www.theipcr.org](http://www.theipcr.org)

COPD is an increasingly common condition resulting in considerable morbidity and mortality. Annual costs of COPD are high. These include direct costs, mostly from hospitalization and other healthcare interventions as well as indirect costs. New GOLD guidelines have been developed and present a new classification of COPD patients. Most patients remain undiagnosed and usually occurs at a stage where significant lung function has already been lost. The IPCRG currently recommends that all patients over 35 years old should be evaluated for their risk of developing COPD. Proper spirometry can be performed in primary care offices, with appropriate training and interest. Practices that have introduced spirometry into their routine have made significant changes in COPD diagnoses and treatment. We will discuss some strategies to encourage earlier diagnosis in primary care. A growing body of evidence suggests that early detection of airflow limitation and early pharmacological and non pharmacological interventions can delay lung function decline, reduce the burden of COPD symptoms, and improve patients' quality of life. Early identification allows lifestyle change such as exercise and pulmonary rehabilitation. Early provision of self-management education will also be of value. Exacerbations are the main negative prognostic factor on COPD. Every purulent COPD exacerbation decreases quality of life, longevity and lung function. Early and aggressive management of exacerbations protect the patient from COPD progression.

The IPCRG presents an interactive workshop; after a short presentation, open discussion among participants will be led by a team of practising family physicians with experience of different health care systems and with a special interest in respiratory disease. The session will be applicable to General Practice, be pragmatic and concise. The main issues to be covered at the workshop will be:

- **Strategies to encourage earlier diagnosis in primary care:**
- **Management of COPD in primary care. Pharmacological and not pharmacological treatment. The importance of rehabilitation**
- **Exacerbations in COPD, the main factor for progression and increased risk. How to prevent, detect and treat them.**

**COPD prevalence in a Spanish Primary Care Area**

S. Perez Cachafeiro<sup>1,2</sup>, M. Castro Pazos<sup>3</sup>, A. Ogando Canabal<sup>4</sup>, V. Lueiro Lores<sup>5</sup>, A. Diaz Martinez<sup>6</sup>, L. Fransi Galiana<sup>7</sup>, J. Filgueira Vazquez<sup>8</sup>, A. Rodriguez Pomares<sup>9</sup>, J. Senin Bello<sup>10</sup>, E. Sineiro Galiñanes<sup>11</sup>

<sup>1</sup> Cambados Health Center, Xerencia Integrada Pontevedra-Salnés, Cambados, Spain; <sup>2</sup> Research Unit, Fundación IDI-CHOP, Pontevedra, Spain; <sup>3</sup> Dirección de Procesos Asistenciales, Xerencia Integrada Pontevedra-Salnés, Pontevedra, Spain; <sup>4</sup> Subdirección Asistencial. Área Médica, Xerencia Integrada Pontevedra-Salnés, Pontevedra, Spain; <sup>5</sup> A Parda Health Center, Xerencia Integrada Pontevedra-Salnés, Pontevedra, Spain; <sup>6</sup> Meaño Health Center, Xerencia Integrada Pontevedra-Salnés, Meaño, Spain; <sup>7</sup> Monteporreiro Health Center, Xerencia Integrada Pontevedra-Salnés, Pontevedra, Spain; <sup>8</sup> O Grove Health Center, Xerencia Integrada Pontevedra-Salnés, O Grove, Spain; <sup>9</sup> Marin Health Center, Xerencia Integrada Pontevedra-Salnés, Marin, Spain; <sup>10</sup> Caldas de Reis Health Center, Xerencia Integrada Pontevedra-Salnés, Caldas de Reis, Spain; <sup>11</sup> San Roque-Vilagarcia Health Center, Xerencia Integrada Pontevedra-Salnés, Vilagarcia de Arousa, Spain

**Objective:** To assess the prevalence of people living with COPD aged over 40 in our area.

**Methods:** Transversal study in Pontevedra Health Area (January-June 2012). Inclusion criteria: people aged 40 to 80 legally and physically able to participate. We performed a cluster randomization and simulated a screening programme: we sent a letter inviting patients to do a spirometry and to undergo a clinical examination at their nearest Health Centre. The result of the spirometry classified our patients as COPD or not-COPD according to GOLD criteria. We carried out descriptive and univariate analyses using Stata 11\*.

**Results:** 293 patients (66.59%) out of 440 sent letters were eligible and agreed to participate. Median age was 56.23 years. 56.66% were women, 51.53% were overweight, 57.00% non-smokers and 15.02% showed known occupational exposures. Mean FVC was 3.52l; mean FEV1, 2.72l; and mean FEV1/FVC ratio, 0.77.

Overall COPD prevalence was 15.36% (IC95: 11,2-19,5). Increased figures were observed in males (22.05%, OR 2.48, p=0.0056), aged over 70 (27.59%, OR: 6.35, p=0.0010), smokers (23.53%, OR: 2.55, p=0.0452) and occupational exposure not disclosed (26.66%, OR: 2.21, p=0.1776).

**Conclusions:** Our study found a higher COPD prevalence (15.36%) than that declared by our Ministry of Health (5.00%). We consider our low response rate equivalent to the rate a mass screening programme would achieve in our area. Our results could be justified by two explanations: (i) non-participants have lower prevalence; or, (ii) GOLD criteria overestimate COPD in the conditions of daily practice in our area.

Disclosure: We thank all investigators and participants. ALMIRALL S.A. funded this study in its entirety.

**The goals of asthma treatment in primary care: a cluster randomized trial of strategies aimed at strict asthma control with or without control of airways inflammation compared to partial asthma control**

P.J. Honkoop<sup>1,2</sup>, R.J.B. Loijmans<sup>3</sup>, E.H. Termeer<sup>4</sup>, J.B. Snoeck-Stroband<sup>1</sup>, W.J.J. Assendelft<sup>2</sup>, P.J. Sterk<sup>3</sup>, G. ter Riet<sup>3</sup>, T.R.J. Schermer<sup>4</sup>, J.K. Sont<sup>1</sup>

<sup>1</sup> Medical Decision Making, Leiden University Medical Center, Leiden, Netherlands; <sup>2</sup> Public health and Primary care, Leiden University Medical Center, Leiden, Netherlands; <sup>3</sup> Primary Care, Academic Medical Center, Amsterdam, Netherlands; <sup>4</sup> Primary Care, University Medical Center St Radboud, Nijmegen, Netherlands

**Objective:** The aim of asthma management is strict control on symptoms and reduction of future risk. It is unknown whether patients experience sufficient benefit of strict control to accept potential side-effects of more intense treatment. Furthermore, nitric oxide (FeNO), may be helpful in achieving strict control at the lowest possible inhaled corticosteroid (ICS) dose. Therefore we assessed the effect of three treatment strategies aimed at: 1) Partial control (Asthma Control Questionnaire (ACQ) <1.50), 2) Strict control (ACQ <0.75) and 3) FeNO-guided strict control (ACQ <0.75 and FeNO <25ppb) on quality of life and severe asthma exacerbations.

**Methods:** We performed a cluster-randomized trial with 12 months follow-up in patients 18-50 yr, prescribed ICS in the previous year. We assessed the asthma-related quality of life (AQLQ), the occurrence of severe exacerbations and the level of asthma control (ACQ, spirometry, FeNO) 3-monthly and therapy was adjusted accordingly.

**Results:** 611 Patients were randomized in 132 clusters, median age 43 yr, 68% female. There were no significant differences in AQLQ-results (Strict: 5.9(95% CI 5.8-6.0), Partial: 6.0(5.9-6.2), FeNO: 6.0(5.8-6.1)). Total exacerbation count was for Strict 43, Partial 50, and FeNO 19, with odds ratios for Strict vs Partial = 1.14(0.47-2.7), FeNO vs Partial = 0.45(0.16-1.28), FeNO vs Strict = 0.40(0.14-1.12).

**Conclusions:** A treatment strategy aimed at strict asthma control, with or without FeNO guidance, does not result in an improved quality of life when compared with a strategy aimed at partial control. Additional guidance by FeNO shows a tendency towards reducing future risk of severe exacerbations.

Disclosure: No conflict of interest declared

567

Presentation type: Oral Communication

**Using Critical Appraisal to Promote Respiratory Health in Primary Care: A focus on the management of asthma and COPD**

A. D'Urzo

*Family and Community Medicine, University of Toronto, Toronto, Canada*

COPD-36001-profile-of-glycopyrronium-for-the-once-daily-treatment-of-mo  
Distinguishing between asthma and chronic obstructive pulmonary disease (COPD) is critical since first line therapy for COPD is contra-indicated as monotherapy in asthma management. International Asthma and COPD guidelines will be presented using critical appraisal strategies. Cases will be used to provide participants with a comprehensive and practical clinical perspective relating to distinguishing between asthma and COPD. Using critical appraisal strategies, participants will use Touch Pad Technology to promote interaction around identifying and bridging care gaps relating to asthma and COPD management. The most current and evolving therapies in asthma and COPD management will be reviewed critically with a view to provide participants with pragmatic strategies which can be adopted in primary care. Participants will also have the opportunity to critically review principles related simple spirometry as a means of appreciating the spirometric overlap which exists between asthma and COPD, and the clinical challenges this may present in every day practice. Participants will discuss the clinical implications of decision making as influenced by clinical and objective data. Strategies to minimize disease misclassification will be reviewed.

**Workshop Learning Objectives:**

1. Become familiar with conventional critical appraisal strategies.
2. Use critical appraisal strategies to identify and bridge care gaps relating to asthma and COPD management.
3. Become familiar with the day-to-day management of asthma and COPD, including reducing the risk of disease misclassification.

Disclosure: Dr D'Urzo has received research, consulting and lecturing fees from GlaxoSmithkline, Sepracor, Schering Plough, Altana, Methapharma, AstraZeneca, ONO pharma, Merck Canada, Forest Laboratories, Novartis Canada/USA, Boehringer Ingelheim (Canada) Ltd, Pfizer Canada, SkyePharma,, and KOS Pharmaceuticals.

660

Presentation type: Oral Communication

**Tai Chi incorporated in Pulmonary rehabilitation for COPD – does it make a difference?**

L. Ng, L. Kin Chiang, R. Tang, C. Siu, L. Fung

*General Out-Patient and Family Medicine Department, Kwong Wah Hospital, Hong Kong*

**Objectives:**To compare the self-efficacy and quality of life parameters of Chronic Obstructive Pulmonary Disease COPD patients who underwent pulmonary rehabilitation with or without Tai Chi elements incorporated in the exercise component in primary care setting.

**Methods:** A single-blind, randomized controlled trial including 6-month post-intervention follow-up. 192 COPD patients were recruited from primary care clinics. Subjects were randomized to either pulmonary rehabilitation program group (PRP) or the group with Tai Chi elements added to PRP (TC). Both groups received rehabilitation consisting of 2 sessions per week for 6 weeks with totally identical content except that Tai Chi exercises were added to TC group. Validated instruments and Chinese version scales measuring health status, self-efficacy, exercise capacity and lung functions were used to assess the effectiveness of this program at 2 and 6-month post-intervention.

**Results:**Intention-to-treat analysis was performed for these 192 subjects who had participated. Patients in both groups did not differ with regard to demographical characteristics and baseline variables except for mean FEV<sub>1</sub>, FEV<sub>1</sub>%Pred, Saint George Respiratory Questionnaire SGRQ activity score and COPD-CSES self-efficacy score. In both groups, statistically significant improvements were seen in physical, exercise capacity, health status and self-efficacy within groups at 6-month post-intervention and no adverse events were reported. Although more favorable improvements in physiological outcomes and health status were demonstrated in Tai Chi group, only the exercise capacity showed statistical improvement between groups at 6 months post-intervention.

**Conclusion:**The adjuvant effect of incorporating Tai Chi in pulmonary rehabilitation showed a modest complementary benefit in exercise capacity.

Disclosure: No conflict of interest declared

1010

Presentation type: Oral Communication

**Use of mucolytic agents in acute respiratory infections in children – what's the evidence?**A. Alves<sup>1</sup>, R. Pires<sup>2</sup>, S. Santos<sup>3</sup><sup>1</sup> Family Medicine, USF Espaço Saúde, Porto, Portugal; <sup>2</sup> Family Medicine, USF Nova Era, Paredes, Portugal; <sup>3</sup> Family Medicine, USF Nordeste, Oliveira de Azemeis, Portugal

**Objective:** Acute respiratory infections (ARI) account for the most frequent cause of disease and mortality in children under age 5. Generally, it's a viral infection, self-limited, only needing symptomatic treatment. Lots of treatments are pointed as beneficial for acute respiratory infections including mucolytic agents, however, their efficacy on the course of the disease is controversial. The aim of this study is to evaluate the evidence on the use of mucolytic agents in children.

**Methods:** A search of guidelines, metanalysis, systematic reviews and clinical trial was made in Evidence Based Medicine sites and MEDLINE using as MeSH words Mucolytic Agents and Children. To evaluate the quality of the studies and the strength of recommendation, we used the scale of Strength of Recommendation Taxonomy of American Academy Family Physician.

**Results:** Of the 38 identified articles, only four fulfilled the totality of criteria: two randomized control trials (RCT) and two metanalysis. The metanalysis and one of the RCT concluded on the weak evidence in the use of mucolytic in children as for the other RCT concluded that the use of mucolytic is associated with a faster clinical improvement.

**Conclusion:** The results are controversial and the risk-benefit of the use of mucolytic agents in ARI is not clear, considering that we are talking about recommending a symptomatic treatment of a self-limited disease in a susceptible group.

Therefore, we concluded that the use of mucolytic agents in ARI in children is not recommended (strength of recommendation B).

Disclosure: No conflict of interest declared

1654

Presentation type: Oral Communication

**Results of a Cochrane systematic review: The effectiveness of integrated disease management programmes for COPD patients**A.L. Kruis<sup>1</sup>, N. Smidt<sup>2</sup>, W.J.J. Assendelft<sup>3</sup>, J. Gussekloo<sup>1</sup>, M.R.S. Boland<sup>4</sup>, M. Rutten-van Mölken<sup>4</sup>, N.H. Chavannes<sup>1</sup><sup>1</sup> Department of Public Health and Primary Care, Leiden University Medical Centre, Leiden, Netherlands; <sup>2</sup> Department of Epidemiology, University Medical Center Groningen, Groningen, Netherlands; <sup>3</sup> Department of Primary and Community Care, Radboud University Nijmegen Medical Center, Nijmegen, Netherlands; <sup>4</sup> Institute of Health Care Policy and Management/ Institute of Medical Technology Assessment, Erasmus University Rotterdam, Rotterdam, Netherlands

**Objective:** The aim of this Cochrane systematic review was to evaluate the effectiveness of integrated disease management programmes (IDM) for chronic obstructive pulmonary disease (COPD) patients.

**Methods:** We included RCTs comparing IDM to usual care in COPD patients. Interventions had to include  $\geq 2$  different components of integrated care (eg selfmanagement, education, exercise), active involvement of  $\geq 2$  different health care providers (eg nurse, GP) and minimum duration of 3 months. Outcomes of most interest were disease specific quality of life (QoL), exercise capacity and exacerbation management.

**Results**

By comprehensive search, we found 4776 abstracts, which were checked by three reviewers. We included 26 RCTs, involving 2997 patients. Disease specific QoL was statistically and clinically improved on all domains of the Chronic Respiratory Questionnaire: dyspnea (MD 1.02, 95% CI 0.67 to 1.36); fatigue (0.82; 95% CI 0.46 to 1.17); emotional (0.61; 95% CI 0.26 to 0.95), mastery (0.75; 95% CI 1.12). The St George Respiratory Questionnaire reached the clinical relevant difference of 4 units only for the Impact domain. Second, pooled data showed a statistical, not clinical improvement on functional exercise capacity of 44 meters (95% CI 21.83 to 65.89). Thirdly, the number of patients with at least one hospital admission decreased from 27 to 20 per 100 patients ( $p = 0.001$ ). Hospitalisation days decreased with on average 3 days (95% CI -5.30 to -0.89;  $p < 0.001$ ).

**Conclusions:** Integrated disease management programmes in COPD patients improved disease specific QoL, exercise capacity, and reduced the number of hospital admissions and hospitalisation days.

Disclosure: No conflict of interest declared

### 3.4. DIGESTIVE PROBLEMS

822

**Presentation type: Workshop**  
**European Society for Primary Care Gastroenterology**

#### **Functional GI problems: prevalence, patterns, challenges and solutions**

A. Pali S Hungin<sup>1</sup>, N.J. deWit<sup>2</sup>

<sup>1</sup> *European Society for Primary Care Gastroenterology (ESPCG), Durham University, UK, Stockton on Tees, United Kingdom;* <sup>2</sup> *European Society for Primary Care Gastroenterology ESPCG, University of Utrecht, Utrecht, Netherlands*

Functional problems constitute a huge proportion of gastrointestinal workload, often defying easy definitions and leading to challenges in management. The ROME Foundation, the overarching world body for functional GI problems has identified several dozen different problems affecting the GI tract alone, ranging from functional dyspepsia to Irritable Bowel Syndrome (IBS). These problems form a pattern of interlinked symptoms involving different body systems. This is not uncommon to be dealing with say, multiple musculoskeletal symptoms (sometimes identified as fibromyalgia), non-cardiac chest pain as well as a GI disorder, often against a psychological background. A common factor in such problems is hypersensitivity, either at visceral level or externally.

IBS, the commonest of the GI functional disorders has been recognised in different guises for centuries and occurs all over the world. Sufferers are not necessarily formally diagnosed by clinicians as having IBS – frequently their problems are identified as symptomatic entities alone, such as bloating or constipation. The overall European and US prevalence of both diagnosed and undiagnosed IBS is around 10-15% of whom less than half will have received a medical diagnosis.

Patients with functional GI problems, especially females, are vulnerable to much unneeded investigation and regrettably, surgical interventions which can prove disastrous. There is a clear gap between patients' needs and the approaches of doctors, which tend to be reductionist and interventionist. Considering that functional problems constitute up to half of all GI consultations this leaves a real challenge about how best to handle people with these symptoms.

The workshop will present data on the prevalence and patterns of presentation of functional problems and the challenges associated in dealing with them safely and more effectively.

Disclosure: No conflict of interest declared

1581

**Presentation type: Workshop**  
**European Society for Primary Care Gastroenterology**

#### **Common clinical issues on liver and GI diseases relevant to primary care in the tropics**

C. Lionis, I. Tsiligianni

*University of Crete, Heraklion, Greece*

#### **On behalf of the ESPCG network**

**Objectives:** The subjects of tropical hepatology and gastroenterology have received limited attention in primary care especially in Europe. Experts from clinical and laboratory disciplines representing the ESPCG will discuss clinical issues with the aim to form practical recommendations in assisting evidence-based decisions of primary care practitioners.

**Methods:** Specific attention will focus on tropical malabsorption, infections of small bowel, parasitic diseases (hydatid liver cyst, schistosomiasis, and intestinal amebiasis), and liver virology (hepatitis A, B, C and D).

**Results:** The ESPCG experts along with the participants at the end of the workshop will form practical recommendations on the liver and GI diseases discussed.

**Conclusions:** This workshop can share some clinical information on prevention and management of common diseases that can affect travellers or people living in the tropics with a focus on diseases of liver and intestinal.

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Presentation type: Oral Communication

**New insight on contemporary chronic pancreatitis treatment – using lactic markers**I.Rankovic<sup>1</sup>, M.Lj.Stojkovic<sup>1</sup>, D.Tomic<sup>1</sup>, D.Miletic<sup>1</sup>, A.Pavlovic-Markovic<sup>1</sup>, Z.Rajic<sup>2</sup>, T. Dragasic<sup>3</sup>, D. Culafic<sup>1</sup>, V. Milivojevic<sup>4</sup>, T. Milosavjevic<sup>1</sup><sup>1</sup> Clinical Center of Serbia, Clinic for Gastroenterology, Belgrade, Serbia; <sup>2</sup> Clinical Center of Serbia, Clinic for Hematology, Belgrade, Serbia; <sup>3</sup> Clinic for Internal Medicine, Emergency Center, Belgrade, Serbia; <sup>4</sup> Special Hospital for Endemic Nephropathy, Lazarevac, Lazarevac, Serbia

**Introduction:** Lactic products are final detrimental results of tissue hypoperfusion which can be utilized to modify current chronic pancreatic treatment. Chronic pancreatitis is an hyperinflammation state of pancreatic acinar cells. We are advocating correlation of lactic blood measurement and its influence on chronic pancreatitis treatment in family physicians everyday practice. The levels of lactates can be of use during the chronic pancreatitis long-term treatment. With this diagnostic tool we are able to change current concepts and strategies providing better care for patients who are treated in family medicine centers. Current use of pancreatic enzymes, bicarbonates and proton pump inhibitors can be recomined when calculating venous lactates.

**Aim:** To demonstrate that patients with higher levels of lactic products 1.5-2.0 mmol/l from venous blood are better treated with bicarbonate buffers and pancreatic enzymes then with pancreatic enzymes alone.

**Methods and results:** Anamnestic cross-sectional study which evaluated the response of general well being of chronic pancreatitis patients with Karnofsky score. Patients were divided through statistical dichotomy into two groups. The group with combination therapy of bicarbonates and pancreatic enzymes was with better Karnofsky score resulting in 90% as comparison to the monotherapy group which had Karnofsky score of 70%

**Conclusion:** We are advocating the regular measurement of lactates which can directs us towards chronic pancreatitis optimization therapy. Lactates are markers of acid induced pancreatic damage perpetuating inflammation. Since, lactates can be used as markers we are showing that their measurement can influence better therapeutical options using bicarbonate buffers.

Disclosure: No conflict of interest declared

433

Presentation type: Oral Communication

**A practical guide to the use of probiotics in the management of lower gastrointestinal symptoms: an international consensus**A. P. Hungin<sup>1,2</sup>, B. Pot<sup>3,4</sup>, C. Mulligan<sup>5</sup>, N. De Wit<sup>6</sup>, P. Whorwell<sup>7</sup><sup>1</sup> School of Medicine, Pharmacy and Health, Durham University, Stockton-on-Tees, United Kingdom; <sup>2</sup> on behalf of the Probiotics Consensus Group, European Society for Primary Care Gastroenterology, Stockton-on-Tees, United Kingdom; <sup>3</sup> Center for Infection and Immunity of Lille, Institut Pasteur de Lille, Lille, France; <sup>4</sup> Center for Infection and Immunity of Lille, Université Lille Nord de France, Lille, France; <sup>5</sup> Research Evaluation Unit, Oxford PharmaGenesis™ Ltd, Oxford, United Kingdom; <sup>6</sup> Julius Center, UMC Utrecht, Utrecht, Netherlands; <sup>7</sup> Department of Medicine, University of Manchester, Manchester, United Kingdom

**Objective:** This international consensus is intended to give primary care physicians practical guidance on the role of probiotics in lower gastrointestinal symptom management in adults.

**Methods:** Systematic literature searching identified randomized, placebo-controlled probiotic trials in adults with lower gastrointestinal symptoms/problems. The evidence level for each symptom/problem was assessed (GRADE system). Statements were developed, and a ten-member consensus panel provided feedback over two voting rounds (modified Delphi process).

**Results:** The 37 identified studies focused mainly on irritable bowel syndrome (IBS; 19 studies) and antibiotic-associated diarrhoea (AAD; 10 studies). Fifteen statements reached consensus (≥67% agreement). Items with 100% agreement and 'high' evidence levels were: (1) specific probiotics help to relieve overall symptom burden and reduce abdominal pain in some patients with IBS; (2) in patients receiving antibiotics, including *Helicobacter pylori* eradication therapy, specific probiotics are helpful as adjuvant therapy to prevent or reduce the duration/intensity of AAD; (3) probiotics have a favourable safety profile in patients with a range of lower gastrointestinal symptoms typically managed in primary care. Items with 70–100% agreement and 'moderate' evidence were: (1) specific probiotics help to relieve overall symptom burden in some patients with diarrhoea-predominant IBS, and reduce bloating/distension and improve bowel movement frequency and/or consistency in some patients with IBS; (2) with specific probiotics, improved symptoms have led to improvement in some aspects of health-related quality of life.

**Conclusion:** This primary care probiotics consensus highlights that specific probiotics can provide benefit in IBS and AAD, and possibly in other indications requiring further research.

Disclosure: PH has received an unrestricted educational research grant and payment for delivering lectures and presentations from Danone and has also been paid for developing educational presentations by Almirall. BP has received financial support for meeting travel, review activities and developing educational (e-learning) presentations from Danone. He acted as a consultant for Merck, Lallemand, Danone and GAP, has received payment for delivering lectures and presentations from

Metagenics and Yakult, and has received meetings expenses from PRI. BP's institution has received research grants/service contracts from BioProx, Danisco, Danone, Kemin, Lesaffre, Roquette and Vesale Pharma. CM is an employee of Oxford PharmaGenesis, which has received project funding from Danone. NdW has received payment for development of clinical practice guidelines for the European Primary Care Society for Gastroenterology, for developing E learning modules for UEGF and also book royalties from Elsevier and Bohn Stafleu. His institution holds several research grants from ZON MW, the Dutch research Institute. PW has received payment for consultancy from Norgine, Danone, Shire and Almirall and for delivering lectures from Abbott, Danone and Shire; his institution has received a research grant from Danone.

1030

**Presentation type: Oral Communication****The quality of life, depression and anxiety of Inflammatory Bowel Disease patients**

M. Tanrisever

*Family Medicine, Konya Training and Research Hospital, Konya, Turkey*

**Objective:** The aim of this study was to contribute to the body of knowledge about the quality of life, depression and anxiety of Inflammatory Bowel Disease patients.

**Methods:** This cross-sectional analytical study was conducted with 50 (24M, 26F) Ulcerative Colit and 40 (22M, 18F) Crohn's disease patients who applied to Haseki Training and Research Hospital. All patients filled out Short Form 36 health survey and the Hospital Anxiety and Depression Scale.

**Results:** The results were investigated via descriptive and difference statistics, correlation, variance and regression analyses using SPSS 13 software. The comparison between UC and Crohn's disease patients showed that CD patients smoked more, had fewer collocated illnesses, more surgeries and hospitalizations in the last two years. Demographics revealed that singles, males, more educated patients and those in remission had higher quality of life. Another result was that female patients and married patients were more susceptible to depression. It was also found that smoking was more common in males, married patients and those with depression and less education. Moreover, depression was more prevalent in smokers, females and those with high-anxiety and higher illness activity index. Anxiety was found to be higher in less educated, female, depressed patients and those with higher number of illness activations in the last six months.

**Conclusions:** When family physicians interview patients, they should encourage them to express not only their physical problems, but also their psychological status (how they feel). In this way undiagnosed anxiety and depression can be treated in coordination/collaboration with psychiatrists.

Disclosure: No conflict of interest declared



1606

Presentation type: Oral Communication

**Non variceal upper gastrointestinal bleeding**

S. Hamshari, Y. Abusafye, S. Najar

*Medical Department, Al Najah University, Nablus, Palestina*

**Background:** Upper gastrointestinal bleeding (UGIB) remains a commonly encountered medical emergency with significant morbidity and mortality despite the availability of advanced endoscopic techniques for management.

**Aim & Objectives:** To determine the mortality and morbidity among patients presented with acute NVUGIB in North West Bank in order to compare it with the universal standard values. And to analyze the effect of PPIs and NSAIDs on other measured clinical outcomes.

**Methods:** We conducted a prospective cohort study on all patients presented with acute NVUGIB to the Hospital in Nablus, Palestine. The medical history for each patient was collected. Additional information was taken from the patients' endoscopic report. During the follow-up of our patients, we determined the 30 day mortality. Data were grouped and analyzed. Chi square test was used to test the significance of relationships. A P value of < 0.05 was considered statistically significant.

**Results:** There were 50 cases included in our study, The overall mortality was 4%. The most common diagnosis found in endoscopy was peptic ulcer disease in 58% of the patients. Recent intake of NSAIDs or Aspirin was reported in 78% of the cases. In 38% a high dose of IV PPIs was given before endoscopic intervention.

**Conclusion:** The mortality rate of NVUGIB in this study is slightly lower than that found in most previous studies. Peptic ulcer is the most common cause of NVUGIB. NSAIDs and Aspirin intake are highly associated UGIB. High dose IV PPIs before EGD decreases the proportion of patients with stigmata of recent hemorrhage.

Disclosure: No conflict of interest declared

**3.5. DIABETES AND METABOLIC PROBLEMS**

1043

Presentation type: Workshop

**The new diabetic associations' patient-centered position-statement on hyperglycaemia management: What's new for primary care?**

D. Janjic, A. Rieder

*Department of Community Medicine, Geneva Medical School, Geneva University, Geneva, Switzerland*

**Background:** Academic diabetes specialists have published endless recommendations over the last years to optimize diabetes management. Continuously changing complex algorithms and treatments strategies are difficult to apply by general practitioners who have to deal with real-life patients. In April 2012, the American and European diabetes associations proposed the first "patient-centered" guidelines on diabetes management. How can they be applied in general practice?

**Aims:**

1) How a patient-centered view from academic diabetologists could be tailored to patients individual needs in primary care.

2) Discussion about new developments in diabetes care according to this new paradigm.

**Method:** The workshop will be led by a diabetes specialist and a family doctor. In the first part, participants will reflect on their own practice and on what elements are essential to guide decision-making with diabetes patients. These elements will be confronted with the proposals made in the position-statement document: patient attitudes, representations, risks of hypoglycemia, other adverse events, disease duration, life expectancy, comorbidities, vascular complications, resources, support system. In the second part the facilitators will provide an overview of recent developments in the field of diabetes management (new treatments, recent trials), which will be put into the perspective of the putative new paradigm.

**Results:** At the end of the workshop, the participants will have an update on new treatment strategies in diabetes management and will have defined whether a innovative decision-making guide can be applied to their practice.

Disclosure: No conflict of interest declared

239

**Presentation type: Oral Communication****Screening and evaluation of cardiovascular risks among patients with type 2 diabetes in Primary health care**

A. Alkhier Ahmed, A. Alsharief, E. Alsharief

*Primary Health Care, National Guard Health Affairs, Jeddah, Saudi Arabia*

**Background:** Cardiovascular disease is the primary cause of morbidity and mortality in patients with diabetes. For each risk factor present, the risk of cardiovascular death is about three times greater in people with diabetes as compared to people without diabetes. Early screen of these factors will improve the future outcome of the disease.

**Objectives:** To screen and evaluate the risk factors for cardiovascular disease among patients with type 2 diabetes attending Waha medical center.

**Subjects and method:** Cross sectional study was designed. One hundred and eighteen patients (118) with type 2 diabetes were randomly selected. Degree of control of blood glucose, systolic blood pressure, lipid profile, obesity and smoking status were screened. Risk stratification was calculated using the chart designed by the British Hyperlipidaemia Association for detecting the 10 years predicted coronary risk.

**Result:** Uncontrolled diabetes mellitus was the commonest risk factor (74%) followed by dyslipidaemia (60.75%), obesity (43%), high systolic blood pressure (21%) and smoking (16%). Calculation of the Risk stratification showed that 7% of the male group are at high risk while no female was at high risk to develop coronary heart disease in the coming 10 years. Sixty two percent (62%) of the male group at moderate risk while 9% of the female at moderate risk. Thirty one percent (31%) of the male group is at low risk while 91% of the female group is at low risk.

**Conclusion:** Uncontrolled DM and dyslipidaemia are the real challenge faced the diabetic team at our center and they need aggressive management.

Disclosure: No conflict of interest declared

245

**Presentation type: Oral Communication****Intensive versus conventional glycemic control: What is best for patients with type 2 diabetes?**

A. Alkhier Ahmed, E. Alsharief, A. Alsharief

*Primary health care, National Guard Health Affairs, Jeddah, Saudi Arabia*

**Background:** Recently a hot debate was raised to answer if intensive glycemic control aimed to reduce HbA1c to less than 6.5% is better than conventional therapy in terms of future outcomes. A lot of studies were conducted to explore that but few mega trials were conducted.

**Objective:** To evaluate the effect and safety of both intensive and conventional insulin therapy in patients with type 2 diabetes.

**Methodology:** Traditional systematic review was conducted; criteria for studies selection were formatted. Studies selected were criticized.

**Results:** Three mega trials (3) randomized 23182 participants with type 2 diabetes (11591 to intensive glycemic control and 11591 to conventional glycemic control) were included. Only diabetic nephropathy was noted to be delayed in onset or progression by intensive insulin therapy.

**Conclusion:** There are no benefits from intensive glycemic therapy (target HbA1c < 6.4%) vs conventional glycemic therapy (target HbA1c >6.4%) except for decrease the rate of new onset or progression of nephropathy

**Key words:** Diabetes, intensive therapy, conventional therapy, microvascular complications, macrovascular complications

Disclosure: No conflict of interest declared

434

Presentation type: Oral Communication

### Middle aged Diabetes Mellitus patients „Reasoning non adherence to statin medications“

I. Heinrich

*Family Medicine, Clalit Health Services, Haifa, Israel*

**Objectives:** A major issue in diabetes management focuses upon supervising patients' behavior with regard to drug treatment. Analysis of middle aged diabetic patients' (whose predicted life expectancy is three to four decades) statin compliance might be beneficial in order to identify disabling reasons for co operation.

**Methods+Results:** Survey questionnaire among 159 patients aged 44-65 (average LDL 115 mg%, 7.5 mean diabetes years, mostly with high school education and average Israeli income), revealed main reasons for this problem: conceptions that statin therapy is not really crucial to combat diabetes complications, side effects concerns and self preference of to obtain health using more natural and life style oriented (less pharmaceutical) alternatives.

Significant (17%) difference was demonstrated between patients' own declarations to the extent of weekly drug omission to data collected from actual medication purchase at the pharmacy.

Patients were split evenly with regard to self belief concerning necessity to use lipid lowering drugs for hyperlipidemia, even though 92% admitted hyperlipidemia should be dealt with in diabetes.

Polypharmacy, insufficient information given by family physicians and costs weren't found to impose a negative impact on collaboration. Clients did not conceive generic statins supplied as inferior or found any indications of false marketing intentions by the pharmaceutical companies or health care provider.

**Conclusions:** The primary care physician shouldn't take for granted clients assuring him full commitment to given instructions, and instead be on constant guard to observe inconsistency, loss of motivation concerning adherence that most likely will have their impact on achieving desired target goals.

Disclosure: No conflict of interest declared

527

Presentation type: Oral Communication

### Approaching the metabolic syndrome patient in primary health care in the Czech Republic

R. Cervený

*general practitioner, the Czech Society of General Practice, Plzen, Czech Republic*

**Objective:** In recommended guidelines Diabetes mellitus and Obesity, published by the Czech Society of General Practice, state the characteristics of the illness, as well as epidemiological data and aetiology of this illness according to the latest know-how in contemporary science.

**Methods:** They recommend comprehensive therapeutic procedures in the outpatient's practice and what the aim of treatment. This comprehensive treatment of metabolic syndrome is founded on 3 main pillars, namely on dietary measures, changes in physical activity and the use of targeted pharmacotherapy. Metabolic syndrome should be understood as being an illness and, at the same time, as an important risk factor participating in the rise of a range of further illnesses, such as insulin-resistance, type 2 diabetes mellitus, obesity, ischemic heart condition, ictus, dyslipidemia, hyperuricemia and others. The following can also be classified as further comorbidities in which excessive body weight plays a role: locomotive disorders, an increased risk in the rise of some cancers, cholelithiasis, gynaecological problems in women and other.

**Results:** We can carry out the best obesity-related examinations of our patients mainly during our preventative checkups once every two years, in registered patients. This is where we could best resolve this problem. Thereafter, it is only up to us if, in the ensuing dispensarisation – whether due to metabolic syndrome or due to another comorbidity diagnoses – we will continue to take care of our patient.

**Conclusions:** In conclusion, a clear recommended algorithm for the diagnosis and treatment of type 2 diabetes mellitus and obesity for general practitioners is provided.

Disclosure: No conflict of interest declared

702

Presentation type: Oral Communication

**Awareness, agreement, adoption and adherence of physicians to type 2 diabetes guideline in Indonesia**I.S. Widyahening<sup>1</sup>, G.J.M.G. van der Heijden<sup>2</sup>, P. Soewondo<sup>3</sup>, Y. van der Graaf<sup>2</sup><sup>1</sup> Community Medicine, Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia; <sup>2</sup> Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, Netherlands; <sup>3</sup> Internal Medicine, Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia**Background:** Diabetes has been recognized as an emerging health problem in Indonesia. While guideline on the management of type 2 diabetes mellitus (T2DM) was available for almost two decades, 68% of the patients were in poor control.**Aim:** To study the awareness, agreement and adherence of physicians to T2DM guideline in Indonesia.**Methods:** Questionnaire survey of General Practices (GPs) regarding recommendations in the Indonesian T2DM guideline based on the 'awareness-to-adherence' model of behavioral change.**Results:** 399 GPs participated; 89% were aware of the Indonesian T2DM guideline. Recommendation on the use of random blood glucose test to diagnose patients with classic DM symptoms was the least known by the responders (70%). It was also the recommendation that the responders least agreed of (42%). The largest gap between awareness and agreement was also found on the diagnosis recommendation (28% difference). However, recommendation about screening shows the largest gap between agreement and adoption (25% difference) as well as between adoption and adherence (62% difference). Recommendation to perform screening of T2DM for patients with any of the risk factor listed in the guidelines was also least adhered to by the responders (2%). No characteristic factors of the responders were found to be significantly related ( $p < 0.05$ ) to each of the adherence.**Conclusion:** Despite high awareness GPs may not adopt recommendations let alone adhere to it. The development and updating process of the guideline should also consider some effective means to disseminate it and include a system to ensure its adherence.

Disclosure: No conflict of interest declared

826

Presentation type: Oral Communication

**Assessment of underactive thyroid patients from a general practice surgery of a health care centre**

D.F. Pruteanu, M.C. Blanco Villar, N. Pastor Gradoli

23rd Health Care Area Valencia, Quart de Poblet Health Care Centre, Sanitas, Valencia, Spain

**Objective:** Assessment of underactive thyroid patients from a general practice surgery (GPS) of a health care centre (HCC)**Methodology:** We assessed the patients diagnosed with hypothyroidism from a GPS (N=160). Evaluated period: 2011-2012. Data were extracted from the Electronic Medical Records (EMR) and were analysed using SPSS 15.0 software. Exclusion criteria: patients diagnosed in 2012, patients that did not attend the GPS in the last 18 months, death, GP change.**Results:** Mean age 56.2 years old (SD 17.4). 18.8% males. Body Mass Index (BMI) (65) 31.07 (SD=5.55). 8.1% diagnosed with subclinical hypothyroidism. 2011/2012 mean values: TSH - 3.83(SD=2.76)/4.09 (SD=8.4); T4: 3.04(SD=0.27)/1.27(SD=0.24); total cholesterol: 207.18(SD=41.05)/203.44(SD=35.21); LDL cholesterol: 121.62(SD=36)/119.16(SD=30.03). 41.2% presented depression and/or anxiety. 53.8% (7) of the patients having subclinical hypothyroidism (13) were referred to the endocrinologist, only two of them associating another endocrinopathy. We identified 3 patients at very high cardiovascular risk (CVR) (high BP, DM and a cardiovascular event (CVE)) with mean LDL cholesterol 2011/2012: 93/103 mg/dl. 19 patients at high CVR, 2 of them with poor thyroid and lipid control. In 48.1% of clinical hypothyroidism patients with high TSH values (27) there were no treatment changes in the last two years.**Conclusions:** There is a high percentage of well-controlled underactive thyroid patients (83.1%). More than 40% of the subjects associate depression and/or anxiety. Poor BMI records in the EMR. Periodical assessment would help to reduce therapeutic inertia, to improve control of high and very high CVR patients and to avoid unnecessary specialist referrals in subclinical underactive thyroid patients.

Disclosure: No conflict of interest declared

875

**Presentation type: Oral Communication****The attitude and behavior of obese patients with chronic illness towards weight reduction in the primary care sector in Hong Kong**

F. Yu, K. Kung, Y. Cheung

*Department of Family Medicine, New Territories East Cluster, Hospital Authority, Hong Kong, Hong Kong*

**Objective:** This study aim to explore the current support received by obesity patients with chronic illness from primary care physician in regards to weight management. It also examines the perception of body weight, attitude and behavior of these patients towards weight reduction.

**Methods:** The study was conducted as a cross-sectional questionnaire survey on obese patients with chronic illness having regular follow up in community primary care clinics. The patients were given self-administered questionnaires on their perception of weight status as well as their knowledge, attitude, behavior and barriers towards weight reduction.

**Results:** The preliminary data from the pilot study demonstrated that only 30% of these patients were aware of their obesity while about 50% considered themselves as overweight only. 40% of patients did not received any weight counseling from their doctor and only 27% of them have received medical advice on obesity in the recent 1yr. Most patients recognized the risk of obesity and its association with multiple chronic illnesses, and a majority has tried weight reduction with exercise, but only 40% has been on diet. Further data processing and analysis of the full study will be conducted.

**Conclusions:** Only a minority of obese patients with obesity associated chronic illnesses was aware of their weight problem and had dietary interventions. The majority of them have not received any weight management counseling during medical follow up within the recent 1 year. Primary care physicians can help in promoting healthy weight reduction by taking a more proactive role.

Disclosure: No conflict of interest declared

914

**Presentation type: Oral Communication****Remission of type 2 diabetes through lifestyle modifications**

C.S. Wang, P. Chou

*Community Medicine Research Center and Institute of Public Health, National Yang Ming University, Taipei, Taiwan*

**Background/Purpose:** Remission of type 2 diabetes is possible via bariatric surgery but whether it could be accomplished via lifestyle modifications was unknown. Our purpose is to evaluate the feasibility and factors of diabetes remission.

**Methods:** In this cohort study from January 1997 to December 2007, we consecutively recruited 254 patients in southern Taiwan with newly diagnosed type 2 diabetes within previous 6 months and recommended lifestyle modifications at each primary-care visit. From June 2009 to May 2010, we resurveyed these patients to evaluate the factors for diabetes remission: discontinuing all hypoglycemic medications >1 year, fasting plasma glucose <110 mg/dl, and glycated hemoglobin <6.5%.

**Results:** After a mean follow-up of 6.3 years, 44 (17.3%) of the 254 participants showed diabetes remission. There were no significant differences in baseline characteristics at diagnosis. Those in remission had a significantly shorter duration of hypoglycemic therapy (3.9 *vs.* 6.6 years), a lower HbA1C level (6.0% *vs.* 7.8%), lower maximal doses of hypoglycemic medications, a greater percentage of weight loss (11.6% *vs.* 5.4%), and more intense exercise (22.6 *vs.* 16.1 MET-h/week) (all *p* <0.05). Multiple Cox regression analysis showed that older age [HR (hazard ratio) = 1.05, 95% confidence interval (CI) (1.01-1.08)], nonsmoking [7.12 (1.57-32.17)], greater weight loss percentage [1.05 (1.02-1.07)], and more intense weekly exercise [1.02 (1.00-1.03)] were all significant predictors of remission.

**Conclusions:** Remission of type 2 diabetes is feasible and highly associated with greater weight loss and higher weekly intensity of leisure exercise, especially for older and nonsmoking patients.

Disclosure: No conflict of interest declared

957

**Presentation type: Oral Communication****Frequency and factors associated with the concomitant usage of complementary and alternative medicines among diabetic patients presenting to family physicians**

T. Ashfaq, F. Riaz, W. Qidwai

*Family Medicine, Aga Khan University, Karachi, Pakistan*

Diabetes Mellitus is a chronic debilitating illness with a global rising trend. It causes substantial morbidity, mortality and accounts for the major health burdens in Pakistan. Complementary and Alternative Medicine (CAM) is rapidly expanding field and not considered to be a part of conventional medicine which offer broader way of treating Diabetes Mellitus.

**Objectives:** To determine the frequency and factors associated with concomitant usage of Complementary and Alternative Medicine among diabetic patients.

**Methodology:** This was a cross sectional survey conducted among patients suffering from Diabetes presenting to family medicine clinics of Aga Khan University hospital. A structured questionnaire was used to collect data. Data analysis was done in Spss version 19.

**Results:** A total of 421 Patients were interviewed. Among them 127 were found to be using CAM including 44% males and 56% females. Regarding different types of alternative medicines Hakimi therapy was found to be used by majority (66%) followed by Homeopathic 22% and Chinese medicine 1.5%. Advice from friends and relatives was the most common reason 64% for using CAM followed by fear of side effects of conventional medicine by 29%. Majority of 69% thought that CAM is good for diabetes control.

**Conclusion:** Knowledge regarding diabetes and its treatment is deficient in patients suffering from diabetes leading them to increase use of alternative medicine instead of hypoglycemic agents. This has resulted in poor control of their symptoms further increasing the chance of complications. This situation requires dire need of awareness sessions to improve their knowledge and disease control.

Disclosure: No conflict of interest declared

1005

**Presentation type: Oral Communication****The role of PRL and PRL-V in diabetic retinopathy- if they open the door to new therapeutic possibilities?**

K. Dębicka, M. Matyjaszczyk, P. Kardas

*First Department of Family Medicine, Medical University of Lodz, Łódź, Poland*

**Background:** Since diabetes is a civilization disease, family doctors often encounter patients with diabetic retinopathy (DR). The laser retina photocoagulation and the vitrectomy constitute basic therapeutic options in the advanced form of DR. However, they both have great destructive potential to neural tissue and eye receptor cells. Therefore, the searches for non-invasive treatment methods for decreasing of retinal vasopermeability and inhibiting the process of angiogenesis is continuously conducted.

**Objective:** To review the results of the latest research on the role of prolactin (PRL) and vasoinhibins obtained from PRL (PRL-V) in the treatment of DR.

**Methods:** This systematic review covered EMBASE, PubMed, and ScienceDirect databases. The search included publications on the concentration of PRL and PRL-V in patients with diabetes and its effect on neovascularization and increased vascular permeability form the last 20 years.

**Results:** We identified 10 articles fulfilling inclusion criteria. Six studies presented results confirming the anti-angiogenic properties of PRL-V and their impact on reducing retinal vascular permeability. Two studies have shown a higher PRL level in patients with DM. The UNAM study demonstrated that patients with DR presented lower levels of PRL in comparison to patients without DR, and another study showed lower levels of PRL-V in patients with DR compared to the healthy control group.

**Conclusions:** This systematic review confirms the anti-angiogenic properties of PRL and PRL-V, and their impact on reducing vascular permeability, pointing at them in the context of the therapeutic strategy of DR which can be used by family doctors in their daily practice.

Disclosure: No conflict of interest declared

1275

**Presentation type: Oral Communication****Correlations between obesity and asthma control in children**

G. Iski, H. Márton, I. Rurik

*Department of Family and Occupational Medicine, University of Debrecen, Medical and Health Science Center, Debrecen, Hungary*

**Objective:** The two most common chronic children diseases are the asthma bronchiale and the obesity. Both show an increasing tendency worldwide. The level of the inflamed cytokins is increased in obesity and can also deteriorate the treatability of asthma bronchiale.

This study aimed to find associations between asthma controls, different levels of physical activity, obesity, and diabetes-related laboratory values.

**Methods:** Physical activity were compared between 117 normal and overweight children between 6-18y treated for asthma.

Asthma control was evaluated in two groups (controlled *vs* non or partially controlled). Fasting and 120 minutes plasma sugar, insulin level and HOMA index were measured.

**Results:** Asthmatic status was generally controlled in 81 % by the normal weighted vs 72% of overweight (obese) group.

Overweight was more common among girls than boys (43.2% vs 30.3%).

The rates of physical activity among the surveyed patients were lower than recommended.

Lightened workload in the physical education lessons at school doubled the risk of obesity (P=0.25), while full exemption increased it by six times (P=0.06).

Among overweight children the ratio of non-controlled asthmatic status was higher, especially by girls.

After performing oral glucose tolerance test, higher insulin and plasma sugar values, higher HOMA index were detected after 120 minutes among children with obesity and non-controlled asthmatic status.

**Conclusion:** Obesity means a pre-diabetic condition already in the childhood. Overweight and physical inactivity worsened the chances of effective asthma treatment, while sport improved it.

Disclosure: No conflict of interest declared

1539

**Presentation type: Oral Communication****Metabolic control of a group of elderly patients with diabetes type 2 in the Health Center Chimbacalle Quito Ecuador.**

C. Elena Cabezas Escobar, J. Francisco Barrera Guarderas

*Medicine School, Pontificia Universidad Catolica del Ecuador; Quito, Ecuador*

**Objective:** To determine metabolic characteristics and their evolution over the course of 2 years for patients with DM2 in older adults attended the Health Centre by forming a club and its relation to the level of HbA1c.

**Materials and Methods:** A descriptive case series were evaluated in 90 patients with DM2 older adults during ambulatory monitoring: Lipid profile, urea, creatinine and HbA1c. Period: 2010-2012.

**Results:** Patient population studied had a mean age of 74.98 + / - 6.28 years. In the course of the study 6 patients died (4 macrovascular, injury, 1 Cancer and 1 IRCT) and 6 patients did not attend the subsequent tests, 67 patients were women (74.4%). Disease duration was 12.1 years + / - 8.33. When performing trace the analysis found that when comparing from base line of 2 years later obtained the following metabolic results: Total cholesterol from 203.07 to 180.82 mg / dl (p <0.023), HDL-C 47, 84 to 65.03 mg / dl (p <0.000), LDL-C from 126.72 to 83.8 mg / dl (p <0.001), triglycerides from 140.54 to 175.79 mg / dl (p <0.001); HbA1c from 7.71 to 6.38% (p <0.001) urea 43.94 to 37.9 mg / dl (p <0.305) and creatinine from 1.11 to 1.07 mg / dl (p <0.897). (Mann-Whitney U)

**Conclusions:** Elderly patients with DM2 that contact the Health Center showed a better metabolic control, except triglycerides and renal function. The creation of social support networks as clubs of patients may facilitate better metabolic control of older patients.

Disclosure: No conflict of interest declared

1677

Presentation type: Oral Communication

**Disease management program for diabetes in primary care in the Netherlands**

H.E. Hart, K.J. Gorter, N.J. de Wit

*Julius Health Centers Leidsche Rijn, Julius Center for Health Sciences and Primary Care, Utrecht, Netherlands*

**Objective:** Diabetes mellitus type 2 (DM2) is a chronic disease resulting in comorbidity and polypharmacy. Implementation of multidisciplinary disease management programs is expected to improve the quality of care for chronic diseases. In the Netherlands diabetes care has been organized in **Diabetes Care Groups (DCG's)**. In a **bundled payment approach** the health insurance providers facilitate the DCG's to implement a DM management program coordinated by the general practitioner (GP). The DCG's deliver **indicators to monitor quality of care**. This **transparency** gives the DCG's the possibility to **benchmark** the results and to define points of improvement for the quality of diabetes care.

**Methods:** In Utrecht, the Netherlands, four academic Julius Health Centers (JHC) deliver integrated primary health care for 33.587 inhabitants. A DM disease management program was implemented from 2010.

**Results:** Of the practice population 2.8% (n=924) have DM2. Of them 52.3% is male, mean age is 61.2 years and mean duration of diabetes is 7.1 years. In 2012, two years after implementation 82.3% of the diabetes care is delivered by the GP.

Regarding quality of diabetes care, HbA1c, LDL, MDRD and albumin kreatin ratio are registered in 94.9%, 93.1%, 94.7% and 87.7% of the patients respectively. Vital parameters such as body mass index, blood pressure and foot examination are annually performed in 99.6%, 99.9% and 89.3% of the patients.

**Conclusions:** Diabetes disease management program can be adequately implemented in primary care, managing almost all DM2 patients. Although the program is adequately implemented, the outcome of diabetes care needs further evaluation.

Disclosure: No conflict of interest declared

1755

Presentation type: Oral Communication

**Characterization of our diabetic patients**

C. Pires, I. Coeho, M. Correia

*USE, Grão Vasco, Viseu, Portugal*

**Objective:** Characterization of the patients in our Portuguese Family Health Unit (FHU) who have the diagnosis of type 2 diabetes (T2DM) and attend our diabetic appointment.

**Methods:** Observational, descriptive, cross-sectional study.

Population: all the patients in our FHU

Sample: all the T2DM (coded with T90 by the ICPC-2) that attend diabetic appointment in our FHU

Study variables: age, gender, body mass index (BMI), blood pressure (BP), abdominal perimeter (AP), total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides, creatinine, microalbuminuria. Hemoglobin A1c (HbA1c).

Statistical analysis: descriptive and inferential, using SPSS v.18.0 software.

**Results:** The prevalence of T2DM in FHU is 4.71% (n=678) evenly distributed between both genders (50.15% males), mean age 67 years.

Obesity is present in 55.46% of our T2DM patients, and only 24.63% have a normal BMI.

The AP was greater than 94cm in 63.24% of the males and greater than 80cm in 92.89% of the females.

10.47% of our T2DM patients have BP values higher than (>130/80mmHg), 72.25% have increased LDL-cholesterol values (>70mg/dl), 19.23% of the females and 20.59% males have low HDL-Cholesterol (<45mg/dl, <40mg/dl respectively).

HbA1c values are increased (>6.5%) in 26.11% of our T2DM patients.

**Discussion:** Obesity, AP and LDL-cholesterol were the worse variables. Roughly 1/3 of our T2DM patients do not have their diabetes controlled.

These results reinforce the importance of the implementation of healthy lifestyles of T2DM patients. Family physicians play an essential role in treating but above all preventing certain medical conditions, by controlling health risks factors, making patients aware of them.

Disclosure: No conflict of interest declared



1802

Presentation type: Oral Communication

### The Ecology of Medical Care in Austria – disease burden and the health seeking behaviour across levels of care in Austria

O. Pichlhöfer, R. Kutalek, W. Spiegel, M. Maier

**Background:** Within Europe there exist a variety of different health care systems. Free and unrestricted access to care is held universally as a central pillar of health care policy. Individual countries manifest very different strategies of putting this aspiration into practice. We describe the Austrian system within the framework of a more global initiative for universal and equitable health care.

**Methods:** A CATI supported telephone survey of a sample (n=3500) of the Austrian population conducted in 5 languages aimed to measure the one month prevalence of any health complaint and the subsequent help seeking behaviour with respect to underserved minority groups, migrant populations, elderly people and women.

**Results:** In a one month period 65% of the population reported any health complaint. 46% attended medical care. 37% attended a primary care physician. 21% attended a specialist in private practice. 8% attended a specialist in an ambulatory care setting. 3.5% received care in a stationary care setting. 3% received care in a tertiary care hospital.

**Conclusion:** The prevalence of health complaints in the community is comparable to other countries in Europe and North America. Because the access to health care in general and also to the levels of care in Austria is unrestricted, the utilization of health care services exceeds that of other comparable countries. We discuss the reasons, implications and possible remedies for that situation.

## 3.6. GENITO-URINARY PROBLEMS

76

Presentation type: Oral Communication

### The association of simple renal cysts with estimated glomerular filtration rate and proteinuria in a Taiwanese population

Z.J. Sun<sup>1,2</sup>, Y.C. Yang<sup>3</sup>, J.S. Wu<sup>3</sup>, F.H. Lu<sup>3,2</sup>, C.J. Chang<sup>3</sup>

<sup>1</sup> Department of Family Medicine, National Cheng Kung University College of Medicine and Hospital, Dou-Liou Branch, Douliou, Taiwan; <sup>2</sup> Institute of Gerontology, National Cheng Kung University Medical College, Tainan, Taiwan; <sup>3</sup> Department of Family Medicine, National Cheng Kung University Hospital, Tainan, Taiwan

**Objective:** Simple renal cysts (SRC) are the most common form of renal cystic diseases, which are usually asymptomatic and have been considered benign. We examined the association of SRC with estimated glomerular filtration rate (eGFR) and proteinuria in a Taiwanese population.

**Methods:** We enrolled 7,453 eligible subjects undergoing health check-up in National Cheng Kung University Hospital between January 2001 and October 2007. eGFR was calculated by abbreviated MDRD equation and proteinuria was determined by dipstick urinalysis. SRC were identified on the basis of standard sonographic parameters: fluid filled with internal echoes, smooth spherical outline with thin wall, and acoustic enhancement. Renal cyst characteristics, including cyst distribution, number, and size, were further investigated.

**Results:** Overall, 693 subjects (9.4%) had at least one simple renal cyst. Subjects with SRC had lower eGFR compared to those without SRC. Multiple cysts, not solitary cyst, were associated with lower eGFR when compared to no cyst. Comparing to subjects with bilateral cysts, subjects with unilateral cyst(s) and no cyst had higher eGFR. Subjects with cyst size  $\geq 2$ cm, not  $< 2$ cm, had lower eGFR compared to those without SRC. Subjects with multiple cysts, not solitary cyst, had a higher risk of proteinuria compared to those without; while bilateral, not unilateral cyst(s), increased the risk of proteinuria.

**Conclusions:** SRC with multiple, bilateral and large-sized ( $\geq 2$ cm) characteristics were associated with decreased eGFR; while the risk of proteinuria increased only in multiple and bilateral cysts. Subjects with SRC also should be assessed the possibility of renal dysfunction.

1000

Presentation type: Oral Communication

**Role and importance of diagnosing asymptomatic bacteriuria during pregnancy**

G. Bojaj, Z. Tahiri

*Family Medicine, Family Haupt Medicine Center, Klina, Albania*

**Background:** The aim of this study was to analyze the role and consequence of the asymptomatic bacteriuria during fetomaternal complications, frequency of complications and asymptomatic bacteriuria during pregnancy, including bacteriuria types.

**Methods:** Our study included 110 pregnant women, who have been examined from beginning of 2010 until June 2012. The material used for microbiological analysis has been sterilized after disinfecting ostium of vagina and urethra, whereas urine was taken with catheter. Pregnant women have been examined and monitored during pregnancy and childbirth. We have continually monitored the condition of mothers and neonates, and noticed fetomaternal complications during pregnancy and childbirth.

**Results:** We found out that significant bacteriuria have affected 25.45% of the examined pregnant women, wherein escherichia coli has affected 45.45% percentage of them. Spontaneous abortions oftentimes occur due to asymptomatic bacteriuria.

Premature delivery, improper development of fetus and intrauterine death happen twice more often due to significant asymptomatic bacteriuria.

**Conclusions:** Based on details provided herein, we conclude that asymptomatic bacteriuria is accompanied by fetomaternal complications, which occur twice more compared to pregnant women who had a sterile urine culture. Therefore in order to avoid such complications, we must do timely diagnosing and adequate treatment of asymptomatic bacteriuria.

Disclosure: No conflict of interest declared

**3.7. WOMEN'S HEALTH**

1587

Presentation type: Workshop

**Gender Violence: A new approachal**

R. Gomez Bravo<sup>1</sup>, Tanja Pekez-Pavlisko<sup>2</sup>, Jane Frances Namatovu<sup>3</sup>, Liliana Laranjo<sup>4</sup>, Aileen T. Riel-Espina<sup>5</sup>, Emily Farrell<sup>6</sup>, B. Tarazona Chocano<sup>7</sup>, A. Nunes Barata<sup>8</sup>, S. Rigon<sup>9</sup>, D. Ramic Severinac<sup>10</sup>

<sup>1</sup> *Vasco da Gama Movement, Vasco da Gama Movement, Spain, Spain;* <sup>2</sup> *EURIPA, EURIPA, Croatia, Croatia;* <sup>3</sup> *WWPWFM, Makerere College of Health Sciences, Uganda, Uganda;*

<sup>4</sup> *Portuguese School of Public Health, Portuguese School of Public Health, Lisboa, Portugal;*

<sup>5</sup> *Eastern Visayas Regional Medical Center, WWPWFEM, Philippines, Philippines;* <sup>6</sup> *WWPWFM, WWPWFEM, Queensland, Australia;* <sup>7</sup> *semFYC, VDGM, Spain;* <sup>8</sup> *VDGM, Portugal;* <sup>9</sup> *VDGM, Italy;* <sup>10</sup> *VDGM, Croatia*

**Objective:** Gender violence (GV) is a serious problem in our society and each country has different policies and strategies to address it.

**Methods:** The idea of this workshop is not only to share the different strategies to prevent, recognize and treat GV and domestic violence (DV) in your practice, but also to analyse the current education provided about this subject during University, GP training and after the specialisation.

**Results:** Despite international recommendations, the availability and quality of protection services vary greatly by country, region and city and there is a terrible lack of education in GV during pre-graduate and postgraduate training. New ideas in how to improve this knowledge will be offered from this network created by Vasco da Gama Movement, EURIPA and WWPWFEM.

**Conclusions:** There is the need for additional strategies to improve data collection, to conduct and encourage more research on GV, to integrate education about this subject into graduate and post-graduate programmes, and to strengthen advocacy for victims of GV in all countries. Vasco da Gama Movement, EURIPA and WWPWFEM, in conjunction with other UN Partners and NGOs have the potential to foster improvements in how the matter of GV is addressed. Social Media tools can be used as a means to spread the knowledge.

Disclosure: No conflict of interest declared

2008

Presentation type: Workshop

**Women's Health in the Developing World**

Leads/moderators – A. Omoruto, K. Anteyi

A. Omoruto<sup>1,2</sup>, K. Anteyi<sup>3</sup>, T. Myo Han<sup>4,5</sup>, T. Ilori<sup>6</sup>, A.T. Riel-Espina<sup>7</sup><sup>1</sup> Chair Community Health Department, Mulago National Referral Hospital, Uganda;<sup>2</sup> Consultant (Public Health) Makerere University, Uganda; <sup>3</sup> Chief Consultant Family Physician,

Director of Family Medicine, Residency Training, Federal Capital Territory Health &amp; Human

Services, Abuja, Nigeria; <sup>4</sup> Secretary of International Relations, Myanmar Medical Association,General Practitioner's Society, Myanmar; <sup>5</sup> Assistant Professor, Medical Statistics Unit, Facultyof Dentistry, International Islamic University, Malaysia; <sup>6</sup> Chairperson, Osun State Agency for

Control of HIV/AIDS (O-SACA), Commissioner for Health, State Government of Osun, Nigeria;

<sup>7</sup> Chief, Medical Professional Staff, Consultant, Department of Family & Community Medicine,

Eastern Visayas Regional Medical Centre, Philippines, Philippines

The health of women and girls in the developing world is a major challenge for family doctors. How do we, as individuals, respond to these challenges? What approaches can we take in working with our communities to improve the health of women and girls?

Led by Drs Atai Omoruto and Kate Anteyi, this interactive workshop will present perspectives from WWPWFM doctors working in Africa and Asia. It will focus on how family doctors work at a population level to improve women's health.

Participants will have the opportunity to reflect on their own work, and discuss successful approaches that individual doctors can use to enhance their effectiveness.

*Panel speakers:*A. Omoruto (Uganda) – *What can I do as one family physician in Africa?*K. Anteyi (Nigeria) – *Priorities and strategies in working to improve women's health*T. Myo Han (Myanmar) – *The contribution of General Practitioners to improve Women's Health status in Myanmar*T. Ilori (Nigeria) – *HIV/AIDS a template for family doctors working at a population level*A. Riel-Espina (Philippines) – *Using public – private partnerships to improve maternal and neonatal outcomes in rural Philippines*

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Presentation type: Oral Communication

**Socioeconomic and demographic factors affecting contraceptive use among women accompanying children to clinics at an urban academic hospital**

S. Bhombal

Family Medicine, Aga Khan University Hospital, Karachi, Pakistan

**Background:** With a population size of 187 million and a fertility rate of 4.1, Pakistan is one of the world's most populous nations. High maternal and infant mortality rates are directly related to high fertility levels. This study was designed to determine the important socioeconomic and demographic factors affecting the contraception use.

**Methodology:***Study design:* Case-control*Setting:* Women bringing their children at the Pediatric clinics of The Aga Khan University Hospital Karachi, Pakistan.*Participants:* Cases: Currently married women in the reproductive age (15-49years) with at least one live child, using any method of contraception for at least three months and living with their husbands. Controls: Currently married women in the reproductive age (15-49years) with at least one live child, not using any method of contraception for at least three months and living with their husbands.**Results:** Discussions between husband and wife regarding family planning, respondent's belief that family planning is allowed in their religion, approval of family planning by respondent's husband, mother-in-law and herself, multiple media exposure, health care provider counseling, husband and wife's desire for not having more children, knowledge of contraceptive methods and their past use, women employment, middle socioeconomic class, increasing age of respondent and husband's age > 39 years were strongly associated with contraceptive use.**Conclusion:** This study highlighted interesting associations of demographic and socioeconomic factors associated with contraception use among women.**Key words:** contraceptive methods, family planning, socioeconomic, demographic.

Disclosure: No conflict of interest declared

199

**Presentation type: Oral Communication****A simple diagnosis that frequently goes unnoticed**

D. Bottaro Parra, C. Reyes, R. Monteserin, A. Casasa Planas, G. Vázquez Pirillo  
EAP Sardenya, UDACEBA, Barcelona, Spain

**Case presentation:** A 33-year-old woman with a 9-months history of episodic abdominal pain comes to visit at the primary care centre for follow-up. She had been treated several times at the emergency departments of the primary care centre and at the hospital for intense abdominal pain.

The diagnosis of endometriosis was made after surgical excision, the basis of the patient's history and histologic findings.

**Discussion/Conclusion:** In this case, we revised her medical records and we found that she had been attended many times for abdominal pain at the emergency department in the last nine months and she was given different diagnoses, like gastroenteritis, nonspecific abdominal pain or lumbar pain. We noted also that in none of these occasions the patient was interrogated for her gynaecologist history.

Patients with endometriosis do not frequently have any physical findings beyond tenderness related to the site of the growth of abnormal endometrial tissue. The most common finding is nonspecific pelvic tenderness. (2, 3, 4)

Although endometriosis was an unlikely diagnosis based only on her medical history, we want to emphasize that a gynaecological detailed anamnesi in a fertile women is essential for compiling a differential diagnosis, avoiding the delay in diagnosis and Even though the definitive diagnosis of endometriosis is by laparoscopy, clinical suspicion after adequate history and physical examination remains essential. After that, who else but the Family physician is the indicated for noticing when the patient with that kind of clinical manifestation is consulting frequently?.

Disclosure: No conflict of interest declared

561

**Presentation type: Oral Communication****The frequency of violence in divorced and married women and the related factors**

M. Kaya<sup>1</sup>, S. Cebeci<sup>2</sup>, E. Avci<sup>3</sup>, R. Gunay<sup>3</sup>, I. Yılmaz<sup>3</sup>, E. Oncel<sup>3</sup>, K. Turkmen<sup>3</sup>

<sup>1</sup> Public Health, Turgut Ozal University, Ankara, Turkey; <sup>2</sup> Family Medicine, Turgut Ozal University, Ankara, Turkey; <sup>3</sup> Kutahya Health Province, Kutahya Health Province, Kutahya, Turkey

**Objective:** Partner violence is a threat to women's health and a common concern worldwide. This study was designed on one hand to determine the effect of violence in married and divorced women in the city of Kütahya, located in the Middle Western region of Turkey, and on the other hand to determine the factors affecting the violence status.

**Methods:** This was a descriptive study performed among 152 married and 150 divorced women. A questionnaire was conducted for the women who were included in the study. This included the demographic properties, which are thought to have an effect on violence.

**Results:** Divorced women reported higher ratios of violence than married women (7.5 times verbal violence, 7.5 times physical violence, 41 times sexual violence, 12 times economic violence). These ratios were statistically meaningful ( $p=0,000$ ). Lower educated women had higher ratios of violence than higher educated women. Divorced women subjected to verbal and economic violence resorted to the psychiatry clinics more than the divorced women who were not subjected to violence. Married women subjected to violence did not resort to the psychiatry clinics.

**Conclusions:** The frequency of violence in divorced women living in Kütahya is higher than the married women. The information and services that the local women can receive for the prevention of violence are inadequate. Not only specific educational programs about violence, but also general programs for improvement of life skills and health literacy should be provided in several settings, such as school/university and community.

Disclosure: No conflict of interest declared

1152

**Presentation type: Oral Communication****Vaginal and cesarean delivery: Turkish findings on the mother's perspective**

Y. Cayir, T. Set, M. Isik, U. Avsar, Z. Akturk

*Ataturk University Faculty of Medicine, Department of Family Medicine, Erzurum, Turkey*

**Aim:** The aim of this study is to assess the knowledge and attitude of the mothers about vaginal birth and caesarean sections among women.

**Methods:** This study included 147 mothers whose new born babies hospitalizes in newborn intensive care unit. A questionnaire including the sociodemographic features, the knowledge and attitudes about normal vaginal birth and caesarean sections was applied to them. The data were analyzed with SPSS 18.0.0.

**Results:** Mean age of the mothers was 27±5.3 years. 15.6% of them were uneducated. The level of education of the mothers; 61.2% was primary school, 15% high school, 8.2% was university. The average number of pregnancy and births was 3±2.8, and 2.5±1.2 respectively. 28.6% of them had at least once caesarean sections; 91.8% thought that caesarean sections are harmful for both themselves and their babies. The education level doesn't have an effect on attitude of the mothers about the mode of delivery ( $p>0.05$ ). The proportion of vaginal birth in the first delivery was 79.6% ( $n=117$ ), and caesarean sections were 20.4% ( $n=30$ ).

**Conclusion:** In this study, a large proportion of the mothers reported positive opinion about the vaginal birth; even so, 1/3<sup>rd</sup> of the mothers had caesarean sections. Even though performing caesarean section with the will of the mothers is an important health problem in Turkey, having favorable opinions from the mothers about vaginal birth is gratifying. To performing deterrent health policies, encouragement for mothers who give vaginal birth may be effective to decrease the proportion of having caesarean sections.

Disclosure: No conflict of interest declared

1368

**Presentation type: Oral Communication****Hormone replacement therapy: When to start and stop – what's new?**M. Moreira<sup>1</sup>, C. Miranda<sup>2</sup>, M. Afonso<sup>3</sup>

<sup>1</sup> *USF das Ondas, ACES Grande Porto IV – Póvoa de Varzim/Vila do Conde, Póvoa de Varzim, Portugal;* <sup>2</sup> *USF do Mar, ACES Grande Porto IV – Póvoa de Varzim/Vila do Conde, Póvoa de Varzim, Portugal;* <sup>3</sup> *USF Corino de Andrade, ACES Grande Porto IV – Póvoa de Varzim/Vila do Conde, Póvoa de Varzim, Portugal*

**Objective:** Vasomotor symptoms, a hallmark of menopause, may negatively influence a woman's quality of life, motivating the use of hormone replacement therapy (HRT). About a decade ago, the publication of „Women's Health Initiative“ results changed the medical community's perception of HRT, undermining its recommendation and use. We intend to briefly review the most recent data on the risks and benefits of HRT.

**Methods:** Medline was searched for recent publications (from 2008 to 2012) using the Mesh terms “Hormone replacement therapy” AND “Menopause” OR “Climateric”, written in English or Portuguese.

**Results:** HRT may reduce the risk of osteoporosis, colorectal cancer, diabetes and all-cause mortality. However, its risk for thromboembolic events, breast cancer, cardiovascular and gallbladder disease should be considered and weighed, especially in women with other risk factors for such pathologies. It must also be noted that the existing therapeutic agents may differ in its effects, depending on the substance (estrogen, combined estrogen-progestagen or tibolone), administration route (oral or transdermal) and treatment duration.

The risk-benefit evaluation does not favor starting HRT above the age of 60, and its continuation past this age, if started earlier, is controversial.

**Conclusions:** It is now generally accepted that HRT can be used in healthy symptomatic peri- and postmenopausal women, and also in premature ovarian failure, as long as it is initiated shortly after symptoms begin, and its use is limited to the lowest effective dosage and the shortest duration possible. It is not recommended for the primary prevention or treatment of chronic conditions.

Disclosure: No conflict of interest declared

1584

**Presentation type: Oral Communication****Decision making on conducting the unsafe abortion: Thai context**

S. Chunuan, W. Sripotchanart, J. Lawantrakul, U. Pattrapakdikul, J. Somporn  
*Obs-Gyn and Midwifery, Faculty of Nursing, Prince of Songkla University, Hat Yai, Thailand*

**Objective:** This qualitative study aimed to explore perception of women who have experienced of unsafe abortion regarding to decision making on undergoing unsafe abortion.

**Methods:** Twenty participants were recruited from a regional hospital in the southern part of Thailand. The inclusion criteria were Thai female of any age, who were able to speak Thai, and had experienced unsafe abortion. In depth semi-structured interview was used for data collection.

**Results:** Most of participants were adolescent or youth (n = 15, 75%). The women were aged 13-43 years with average age 23.86 years (SD = 8.03). Most of them are students. Participants reported having unsafe abortion due to: being student, having enough children, a financial and family problem. The women were asked to express their feeling after having unsafe abortion. The following categories were found: 1) ethical and moral, 2) relaxation or released, 3) sorry/making a wrong decision, and 4) suffering from abdominal pain. All women would like to terminate their pregnancy as soon as possible. The process of making decision included: 1) planning, 2) undergoing abortion, and 3) planning to prevent unplanned pregnancy and having repeated abortion.

**Conclusions:** The study findings indicated that most of participants were confronted with physical, psychological and economical problems. Therefore, health care providers should offer counseling program to prevent unplanned pregnancy. Such services and program could help women make informed decision regarding their health and quality of life.

Disclosure: No conflict of interest declared

1727

**Presentation type: Oral Communication****My practice and the impact of ALSO course**

Y. Adeniyi  
*Bisi Clinic & Maternity, Minna, Nigeria*

**Objective:** The aim of this study is to know the impact of ALSO course on my practice and to share my challenges as a solo Christian practitioner in an Islamic community.

**Methods:** Records of delivery from October 2001 to September 2007 were taken i.e.3 years before and 3 years after the also course. The following parameters were used; time of arrival at the hospital, cervical dilatation at time of arrival, time of delivery, parity,apgar score, pitocin use for augmentation, ergot use, complications and referrals.

**Results:** 763 deliveries occurred within the period under review. 314 deliveries occurred between October 2001 and September 2004 and were grouped into A while the deliveries that occurred between October 2004 and September 2007 were grouped into Group B. 95% of those in Group A came in first stage of labour as compared to 97.5% of those in Group B. Time of delivery was shorter by 15% in Group B when compared to A. There was significant increase in pitocin use i.e. 45% of those in Group A had augmentation as compared to 68% of those in Group B. Complications noted were haemorrhage, pregnancy induced hypertension,eclampsia and obstructed labour. There was increased incidence of hemorrhage in Group B Referrals decreased to zero level. There was one maternal death in Group A while no maternal death was recorded in Group B.

**Conclusion:** Despite the challenges of increased incidence of PPH, it is evident that also course has a significant positive impact on pregnancy outcome.

Disclosure: No conflict of interest declared

### 3.8. MATERNAL AND CHILD HEALTH

131

Presentation type: Oral Communication

#### Social welfare and health care in vulnerable children

E. Arcos<sup>1</sup>, LA Muñoz<sup>1</sup>, X Sanchez<sup>2</sup>, A. Vollrath<sup>1</sup>, P. Gazmuri<sup>1</sup>, M. Baeza<sup>1</sup>

<sup>1</sup> Facultad de Enfermería, Universidad Andrés Bello, Santiago, Chile; <sup>2</sup> Facultad de Ciencias Sociales, Universidad de Playa Ancha, Valparaíso, Chile

Nurses increase the possibilities of integral health and social welfare in early childhood by means contextualized social practices.

**Objective:** The study assessed the effectiveness of public supply of benefits in dyads with social vulnerability.

**Method:** By means of a co-relational study with a sample of 132 vulnerable women and 133 vulnerable children who are beneficiaries of *Chile Crece Contigo* welfare program. The information was collected resorting to interviews conducted with the participant mothers. Descriptive and association statistics were calculated with a p value less than 0.05. The research project was approved by the Faculty of Nursing's Ethics Committee.

**Results:** The effectiveness of provided universal and specific benefits was low with children obtaining better results than mothers. A significant finding was the deficient effectiveness of transfers in children with psychosocial risks.

**Conclusion:** It is imperative strengthening the competences of nursing professionals on integrated care provision and networking in order to optimize the health care of vulnerable children.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

#### Sore throat consultation records prior to tonsillectomy among children in general practice in the United Kingdom

E. Koshy<sup>1</sup>, V. Curcin<sup>2</sup>, A. Bottle<sup>3</sup>, M. Sharland<sup>4</sup>, S. Saxena<sup>1</sup>

<sup>1</sup> Primary Care and Public Health, Imperial College London, London, United Kingdom;

<sup>2</sup> Computing, Imperial College London, London, United Kingdom; <sup>3</sup> Dr Foster Unit, Imperial College London, London, United Kingdom; <sup>4</sup> Paediatric Infectious Diseases, St George's Hospital, London, United Kingdom

**Objective:** to identify the percentage of children who underwent tonsillectomy and fulfilled the Scottish Intercollegiate Guidelines Network (SIGN) criteria for sore throat frequency prior to tonsillectomy. The SIGN guidelines on the indications for tonsillectomy for sore throats were first published in 1999, and these guidelines are widely accepted and applied by Ear, Nose and Throat surgeons in the United Kingdom. We aimed to determine if these guidelines have also been adopted by general practitioners.

**Method:** a retrospective analysis of data from the General Practice Research Database from UK general practices. We calculated the percentage of children who fulfilled the SIGN guidelines criteria for the frequency of sore throat episodes prior to tonsillectomy

**Results:** 1134 and 904 children aged 4-15 years with a record of tonsillectomy in the electronic medical records in 2002 and 2008, respectively. The percentage of children aged 4-15 years who fulfilled the SIGN criteria for the documentation of the minimum number of sore throat episodes for tonsillectomy declined from 2.7% in 2002 to 0.2% in 2008.

**Conclusions:** The majority of children who undergo tonsillectomy do not appear to have optimal documentation of their prior sore throat consultations in general practice. This may represent diagnostic coding issues or that these children may not fulfil the SIGN criteria for frequency of recurrent sore throats.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****The prevalence of anemia in reproductive age women and its determinant factors at Sausapor Primary Health Care, West Papua, Indonesia**I.U. Surya<sup>1</sup>, R.A. Werdhani<sup>2</sup>, A. Adriani<sup>2</sup>, F. Moegni<sup>3</sup><sup>1</sup> Sausapor Primary Health Care, Health Department of Tambrauw, West Papua, Tambrauw, Indonesia; <sup>2</sup> Community Medicine, Faculty Of Medicine University of Indonesia, Jakarta, Indonesia; <sup>3</sup> Obstetric & Gynecology, Faculty Of Medicine University of Indonesia, Jakarta, Indonesia

**Introduction:** Maternal mortality rate in Indonesia is still high among ASEAN countries. There is still no national program to decrease anemia in reproductive age women group, except only during pregnancy. This leads to the needs of studying anemia problem in reproductive age women and its determinant factors in Indonesia.

**Method:** A cross sectional study was conducted on January-February 2012 in Sausapor Health Care West Papua. 111 un-pregnant women in 15-45 years old were participated. Participants were recruited using consecutive sampling and agreed to participate this study. Baseline form consisting of demographic data and nutritional status were distributed to participants prior to hemoglobin test.

**Result:** The prevalence of anemia was 47.7% (hemoglobin level <12 g/dl). In this study factors such ethnic, education, occupation, nutritional status, calorie intake, and iron supplementations were associated with anemia.

**Conclusion:** Anemia in this district is one of the public health problems. Anemia prevention program has been purposed for pregnant women by giving iron supplementation so far. This program should also be given to non-pregnant women such as teenager and women who want to conceive. Improving program such as education about anemia, counseling about food choice, and iron supplementation to non-pregnant woman are needed.

Disclosure: No conflict of interest declared

1458

**Presentation type: Oral Communication****Attention-deficit/hyperactivity disorder in primary care – prelude of DSM5**P. Teixeira<sup>1</sup>, C. Prior<sup>2</sup><sup>1</sup> USF Renascer, ACeS Gondomar, Gondomar, Portugal; <sup>2</sup> Department of Paediatrics, Centro Hospitalar do Porto, Porto, Portugal

**Introduction:** Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most common neurobehavioral disorders, affecting between 3-7% of school-age children. ADHD is one of the main reasons for referral to the secondary care in paediatric age. It is oftener in males and children belonging to low socioeconomic status. Classically, it is defined as having 3 main components: inattention, hyperactivity and impulsivity. To make the diagnosis is necessary to fill in the *Diagnostic and Statistical Manual of Mental Disorders – 4th edition (DSM-IV)* criteria.

**Methods:** It is made a review of the main guidelines published about the diagnosis, evaluation and treatment of ADHD, since 2000, in English and Portuguese, using Medline and the MeSH term “Attention Deficit Disorder with Hyperactivity”.

**Results:** Different studies quantify the number of referrals by ADHD, demonstrating the importance of this pathology at the primary care level. There are several published guidelines since 2000, but the ones that are more oriented to primary care (family doctor and community paediatrician) are certainly those created by the American Academy of Pediatrics (AAP). The most updated was published in 2011 and has 6 main recommendations, which describe who must be evaluated, how to make diagnosis and the importance to look for comorbidities and to recognize ADHD as a chronic pathology. It is also made a reference to the most commonly used evaluation scales and to the changes DSM5 will bring to ADHD's diagnosis.

**Conclusions:** In spite of existing different guidelines, remains the difficulty in the implementation of these recommendations in primary care.

Disclosure: No conflict of interest declared



1800

**Presentation type: Oral Communication****Competencies for better children healthcare: A multiprofessional team based model**Sánchez L<sup>1</sup>, Rodríguez-Nuñez A<sup>2</sup>, Civantos E<sup>3</sup>, Iglesias-Vazquez JA<sup>1</sup><sup>1</sup> Public Foundation of Urgencies and Emergencies of Galicia; <sup>2</sup> Paediatrics Intensive Care Unit, University Clinical Hospital of Santiago; <sup>3</sup> Barranco Grande Health Center, Tenerife.**Introduction:** Emergencies in children represent an important challenge in the primary care (PC) setting, and may involve both paediatricians and family physicians.**Objective:** To design a specific competence-based training plan supported by means of advanced medical simulation and multimedia technologies. Trainees included paediatricians, family physicians, and PC nurses.**Methods:** A multimedia online course of 60 hours was designed; main topics were related to frequent and serious emergencies at PC.

Participants were divided in groups (50% nurses, 50% paediatricians or family physicians) of 16 people, and enrolled to an advanced medical simulation session including: stridor, asthma crisis, anaphylaxis, trauma, and loss of consciousness. The team and professionals performance was recorded, displayed and used to support and reinforce the debriefing. An anonymous survey, focused on motivation, pertinence and methodology was done.

**Results:** A five years study period was analysed: sixty courses and 982 professionals (280 family physicians, 245 PC paediatricians, 457 nurses). Of them, 92,7% answered to the survey. All items scored over 9 points. Mean±SD scores were: organization (9,20±0,51), objectives related to prior expectation (9,30±0,44), usefulness for work (9,39±0,45), scenarios resemble reality (9,14±0,43) and good instructors-participants relationship (9,67±0,21).**Conclusions:** Paediatric emergencies represent at the PC setting, a transversal challenge for the professionals.

Specifically designed team training programs allow a significant improvement in individual as well as in team competence.

Advanced medical simulation is an adequate tool to integrate the training of different professionals in through teamwork. The designed course was feasible, well accepted and adapted to the needs of the trainees.

**3.10. INFECTIOUS DISEASES**

1026

**Presentation type: Workshop****Organised by Wonca Europe Special Interest Group GRIN (General Practice Infectious diseases Network)****New insights in diagnosis and treatment of common infectious diseases**C. Butler<sup>1</sup>, P. Little<sup>2</sup>, J. Teepe<sup>3</sup><sup>1</sup> Institute of Primary Care and Public Health, Cardiff University, School of Medicine, Cardiff, United Kingdom; <sup>2</sup> Primary Care Medical Group, University of Southampton, Medical School, Southampton, United Kingdom; <sup>3</sup> Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, Netherlands

In the last 12 months important new study results both on respiratory and urinary tract infections have become available. Five important recent studies will be discussed during this workshop, with sufficient room for interaction between presenters and the audience. The researchers will not only present their latest results but also question the audience about the relevance and implementation of their study results in daily practice.

The following studies will be discussed:

1. Antibiotic prescribing, antibiotic associated diarrhoea and clostridium difficile in care homes for the elderly: a prospective observational study. (n=279) Chris Butler et al, Cardiff University
2. The Diagnosis of Urinary Tract infection in Young Children (DUTY) study. (n=5257) Chris Butler et al, Cardiff University
3. The effect of internet based training in communication skills and the use of CRP in respiratory tract infection (LRTI): an RCT in 8 primary care GRACE Networks from 6 countries in Europe. (n=4360) Paul Little et al, University of Southampton.
4. PRIMary care Streptococcal Management (PRISM) trial. (n=1760) Paul Little et al, University of Southampton
5. Detecting bacterial infection in adults with acute cough; a diagnostic study in primary care GRACE networks in 12 European countries. (n=3106) Jolien Teepe et al, University Medical Center Utrecht.

These five studies will be presented in a transparent way and discussed with the audience. It will be a unique opportunity to get a concise and high quality update on recent advances in common infectious diseases.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****Variation and effect of prescribing style: A cross-sectional study of patients with a sore throat across six countries**G.C. Cordoba<sup>1</sup>, V. Siersma<sup>1</sup>, B. Lopez-Valcarcel<sup>2</sup>, M. Makela<sup>1</sup>, C. Llor<sup>3</sup>, R. Aabenhus<sup>1</sup>, L. Bjerrum<sup>1</sup><sup>1</sup> *The Research Unit for General Practice, Department of Public Health, University of Copenhagen, Copenhagen, Denmark;* <sup>2</sup> *Quantitative methods in economics and management, University of Las Palmas de Gran Canaria, Campus Universitario de Tafira, Las Palmas de GC, Spain;* <sup>3</sup> *Primary Healthcare Centre Jaume I, Spanish Society of Family Medicine, Tarragona, Spain***Objective:** to analyze the effect of the variation in general practitioners' (GPs') prescribing style on the probability of being prescribed antibiotics for a sore throat across six countries with a differing rate of antibiotic consumption. We also investigate whether GP characteristics determine the variation in the prescribing, besides the clinical characteristics of the patients.**Methods:** Cross-sectional study carried out at primary care level in Argentina, Denmark, Lithuania, Russia (Kaliningrad), Spain and Sweden. A multilevel logistic regression model was used to estimate the probability of being prescribed antibiotics, while accounting for the multilevel structure of the data (patients nested within GPs). The effect of GPs' prescribing style is reported as Median Odds Ratios (MOR), showing the median value of the odds of two patients being prescribed antibiotics from two randomly chosen GPs with the same characteristics.**Results:** A total of 6776 patients were recruited by 615 GPs. Overall, the median percentage of patients being prescribed antibiotics was 50% (interquartile range 25-80). In Argentina, Russia and Spain patient requests for antibiotics were associated with antibiotic prescribing. After adjusting for GP and patient characteristics, variation in prescribing style remained large, (Median Odds Ratio 3 to 5).**Conclusions:** The observed variations in antibiotic prescribing are only marginally explained by differing patient populations and the organizational characteristics of the GPs. The remaining considerable variation is attributed to the GPs' prescribing style. Innovative interventions focused on rendering the diagnostic and treatment criteria uniform should be a priority strategy to decrease variation, thus preventing antibiotic misuse.

Disclosure: No conflict of interest declared

844

**Presentation type: Oral Communication****Woman with strange behavior**A. Caamaño, P. Rodriguez-Casal, C. Rial, S. García-Álvarez  
*Primary Care, SERGAS, Pontevedra, Spain*

73-year-old female with history of Diabetes Mellitus type 2, obesity hypoventilation syndrome, Crohn's disease, arthrosis and hypertensive heart disease. She went to the doctor's with her sister, who said the patient had presented disorientation for 24 hours. The patient showed no faecal remains in her body or clothing, who until then had been a caring person with personal hygiene. Furthermore, the sister said the patient responded to everything saying „no“ or raising her shoulders. On physical examination, she had a temperature of 38 °C, BP 175/80, O2 Sat 93% and was conscious, oriented in space and person. Light bradypsychia. Pupils and cranial nerves were normal. Muscle tone, strength and sensitivity were normal. No neck stiffness. CSF: 20 red cells, 230 nucleated cells, polynuclear 5, mononuclear 95, protein 2.55, glucose 76 and 13.8 ADA. Emergency Microbiology: Gram germs are not observed directly. With the suspicion of viral encephalitis, she entered neurology where she was treated with acyclovir and ad integrum recovery in the following 48h. Diagnosis was confirmed after the result of the cultivation of herpes encephalitis. Viral infections of the central nervous system result in the clinical syndromes of aseptic meningitis or encephalitis. A common cause of sporadic encephalitis is herpes simplex virus type 1. Patients with encephalitis have an altered mental status ranging from subtle deficits to complete unresponsiveness symptoms and signs of meningeal irritation. Empiric treatment for HSV-1 infection with acyclovir should be initiated as soon as possible. Early therapy is vital because it is associated with a significant decrease in mortality and morbidity.

Disclosure: No conflict of interest declared

1037

**Presentation type: Oral Communication****PFAPA syndrome: A case report**

E. Yurdakul, E. Yilmaz, C. Isik Sonmez, I. Karatas Eray  
*Family Medicine, Ankara Ataturk Training and Research Hospital, Ankara, Turkey*

**Objective:** With this case report we wanted to emphasize the importance of considering PFAPA in the differential diagnosis of periodic fever in children.

**Case report:** A 3-year-old boy admitted to clinic with fever and swelling at his neck. His fever didn't respond to treatment during 3 days time. In his medical history there were episodes of fever up to 39.5°C for 3 to 5 days that recurred every month, congestive tonsils, large bilateral submaxillary and cervical adenopathies at last year. In each episode he had taken antipyretic and antibiotic treatment but his fever didn't break and lasted 5 days. At his physical examination the boy was febrile and had tachycardia. His oropharynx was erythematous and there were oral aphthous ulcers. His neck examination was significant for 1x0.5 cm soft mobile posterior cervical lymph node. At the 2<sup>nd</sup> day of his admission his fever reduced spontaneously. Patient considered to be PFAPA syndrome and was followed up.

After 1.5 months the he admitted our clinic again with similar symptoms. The complaints resolved after a single dose of prednisone (1mg/kg) and completely disappeared during 5 hours. With these findings, the patient was diagnosed as PFAPA and 1 mg/kg of prednisone treatment was planned for future attacks.

**Conclusion:** PFAPA syndrome was first reported by Marshall in 1987. Periodic fever, aphthous stomatitis, pharyngitis and cervical adenitis syndrome (PFAPA) is one of the most frequent causes of periodic fever. The fever is main characteristic sign (97%) and is resistant to antipyretics. The etiology still remains unknown.

Disclosure: No conflict of interest declared

1596

**Presentation type: Oral Communication****Incidental Enterobius Vermicularis infestation in surgically removed appendices of children**

Y. Erdogan<sup>1</sup>, N. Yildirim Erdogan<sup>2</sup>, B. Bahadir<sup>3</sup>, I. Aydogdu<sup>4</sup>, O. Tanriover<sup>5</sup>, S. Bektas<sup>3</sup>  
*<sup>1</sup> Family Medicine, Bozok University, Medical Faculty, Yozgat, Turkey; <sup>2</sup> Pathology, Canakkale Onsekiz Mart University, Medical Faculty, Canakkale, Turkey; <sup>3</sup> Pathology, Bulent Ecevit University, Medical Faculty, Zonguldak, Turkey; <sup>4</sup> Pediatric Surgery, Okmeydani Research and Training Hospital, Istanbul, Turkey; <sup>5</sup> Family Medicine, Yeditepe University, Medical Faculty, Istanbul, Turkey*

**Objective:** In this study, our aim was to determine the prevalence of Enterobius vermicularis in surgically removed appendices of children, and to clarify its possible role in the pathogenesis of appendicitis in correlation with clinical and laboratory findings.

**Methods:** We retrospectively reviewed a total of 3 years prevalence of enterobius vermicularis infection of the appendix in surgically removed 415 specimens. Eskelinen diagnostic score was also calculated to investigate the correlation with clinical and laboratory findings.

**Results:** The ages of the patients with appendiceal E. vermicularis ranged from 39 to 172 months (Mean ±SD: 104.03 ± 35.65). 17 cases were (53%) male and 15 (47%) were females with a slight male predominance (M/F=1.13). 28 of 32 patients were less than 12 years old and only four were younger than 5. All patients with parasitic infection of the appendix presented clinical manifestations of acute appendicitis. A total of 415 surgical specimens removed from patients with clinical appendicitis were evaluated. Enterobius vermicularis was found in thirty-two specimens (7.71%) with clinical symptoms of appendicitis.

**Conclusion:** It seems that that appendiceal lumen obstruction by E. vermicularis causes appendiceal colic with or without inflammation. The possibility of presence of E. vermicularis in the appendix should be kept in mind while evaluating patients in age groups at risk, especially in children and early teenagers. Appendectomy alone is not curative for such patients; therefore subsequent to incidental detection of appendiceal E. vermicularis by microscopic examination antihelminthic treatment should be given to eradicate the basic pathology.

Disclosure: No conflict of interest declared

### 3.11. VACCINATION

97

**Presentation type: Oral Communication**

#### Use of human papillomavirus vaccine in men

A. Barros Oliveira, C. Ferreira, J. Campos, R. Freitas  
USF Delta, Centro de Saúde de Oeiras, Oeiras, Portugal

**Introduction:** Asymptomatic Infection by human papillomavirus is prevalent in males, though the vaccine was included in the vaccination program for females only.

**Objectives:** To review the available evidence on the use of the vaccine against human papillomavirus in men.

**Data Sources:** MEDLINE Database and other evidence-based medicine resources recommended by the American Academy of Family Physicians.

**Review methods:** A search for clinical practice guidelines, meta-analyses, systematic reviews, evidence-based reviews and original articles published before September 2012, in the last 5 years, in English, Portuguese and Spanish was performed using the MeSH terms: “papillomavirus vaccines” and “male”. The Strength of Recommendation Taxonomy scale (SORT) of the American Family Physician was used to assess the quality of the studies and the strength of the recommendation.

**Results:** We identified 110 articles, but only 11 met our inclusion criteria. These consisted of 2 clinical practice guidelines (Advisory Committee on Immunization Practices), a systematic review (level of evidence 3), 7 original articles (1 level of evidence 2 and 6 level of evidence 3) and 1 non-systematic review (level of evidence 3). It was found that the human papillomavirus vaccine is highly immunogenic in men. The increase in coverage of women seems to be more cost-effective than the inclusion of men in the vaccination program.

**Conclusions:** „The current evidence does not recognize the advantage of widespread vaccination to males, and that it may be considered in specific situations such as at-risk groups or in situations where the coverage of women is low and cannot be increased.“

**Keywords:** Human Papillomavirus Vaccine, Male.

Disclosure: No conflict of interest declared

### 3.13. TRAVEL AND TROPICAL MEDICINE

1305

**Presentation type: Oral Communication**

#### Travellers with health problems abroad – three months multicentre retrospective study

R. Madar

Vaccination Centers, Avenier, Brno, Czech Republic

**Objective:** Expanding travel industry brings new challenges also to primary care physicians (PCP). More and more of their patients visit exotic places including remote areas in developing countries. Range of health impairments in travellers is wide, however, the official statistics of imported diseases do not reflect the real situation as many travel related medical problems are not reported.

**Methods:** Retrospective multicentre study in 456 patients and their families in a form of direct telephone call 14 days after their return from abroad enquiring details of their journey and health problems while travelling.

**Results:** The average age of travellers was 37,5 years of age (range 15-71). Health problems were reported by 39 % of all travellers, out of which 70 % were suffering from gastrointestinal symptoms, mostly in India, Nepal, Thailand and Peru. Health problems occurred most typically at 7th day after their arrival. Travellers at risk of health problems are especially those on excursion tours (compared to hotel based ) not organized by travel agencies and frequently changing places where they buy their food and drinks.

**Conclusion:** PCP are in first line in dealing with imported problems. Delay of the proper diagnostic procedure and treatment may not only prolong duration of illness leading to multiple complications but may also present a public health problem in traveller’s home country. The knowledge of the risk factors, most common health problems and other relevant details may also help to better preparation of traveller before his/her departure in order to avoid unnecessary health problems.

Disclosure: No conflict of interest declared

1374

**Presentation type: Oral Communication****Travel-related Shigellosis in Quebec (Canada) travellers between 2004 and 2008**S. Trépanier<sup>1</sup>, Y.G. Bui<sup>2</sup>, M. Blackburn<sup>3</sup>, F. Milord<sup>3</sup>, É. Levac<sup>2</sup>, S. Gagnon<sup>4,2</sup><sup>1</sup> *Direction de santé publique, CSSS Manicouagan, Baie-Comeau, Canada;* <sup>2</sup> *Risques biologiques et santé au travail, Institut national de santé publique du Québec, Quebec, Canada;* <sup>3</sup> *Direction desanté publique, CSSS Champlain-Charles-Lemoyne, Longueuil ET université de Sherbrooke, Québec, Canada;* <sup>4</sup> *Family Medicine Department, Université Laval, Quebec city, Canada***Intro:** Shigellosis is the most important cause of bloody diarrhea in the world and the cause of more than 1 million deaths all over the world every year. The number of travellers is always increasing and we wanted to know if travellers were very affected by this health problem**Method:** We did a transversal descriptive study on shigellosis cases declared on travellers of the province of Quebec (Canada) between 2004 and 2007. After we did a randomized choice of 335 cases among the 760 declared cases in the provincial file at the Public Health directions. Epidemiological interviews were done by the professionals of these directions for every case.**Results:** Every year of the study, between 40 and 51 % of the shigellosis cases were related to travel abroad whatever the purpose of the trip. Two groups of Shigellosis were found more frequently: *S. sonnei* (49%) and *S. flexneri* (45%). Cases of *S. dysenteriae* who are more severe seem to be very rare upon travellers. Central America, Mexico and the Caribbeans are the destinations with the largest numbers of cases (64%). But Africa and South America had a larger risk ratio. Few cases from Asia countries and India. The short stays (7 days and less) and young adults (20 to 44 years old) counted for the largest part of the cases. 15% of them have been hospitalized.**Conclusion:** Shigellosis is frequent in Quebec travellers taking short trips to a „sunshine destination“. Since no vaccine is available, copunselling is very important

Disclosure: No conflict of interest declared

1744

**Presentation type: Oral Communication****Health risk behavior of Portuguese in Africa**

C. Osorio, M. Cardoso, L. Quaresma

*Family Medicine, UCSP Figueira da Foz, Figueira da Foz, Portugal***Objectives:** Recently many Portuguese have migrated to Africa in search of job opportunities. Despite widely available information, the practice of risky behaviors is a reality, regardless of age or educational level. In the near future, the approach to the patient returned from Africa will be a frequent reality. The practice of risk behaviors should be evaluated in these patients. The objective is to assess the health risk perception of Portuguese citizens in Africa and which preventive measures do these migrants take before and during the stay?**Method:** Anonymous and confidential survey online with dissemination via facebook, email and medical consultation.**Preliminary results:** Preventive measures: 98% reported to have made health safety inquiries (94% medical advice, 26% internet, 13% literature, 88% attended the consultation of Tropical Medicine, 96% took traveler vaccines, 92% took drugs to urgent situations, 57% makes anti malaria prophylaxis, 83% prevention against insect bites, 88% adopt measures to prevent accidents, 80% protection measures to the sun. Risk Behavior: 32% have had direct contact with blood or other body fluids, 54% attend public closed spaces, 24% bathed in rivers and lakes, 20% consumed water without being bottled and sealed, 76% consumed beverages with ice and 54% consumed ice cream. 72% consumed raw salads, 35% consumed undercooked meat, 18% consumed raw fish or shellfish, 13% consumed undercooked eggs.**Conclusions:** Portuguese emigrants residing or visiting African countries in this sample have a good perception of the risks and diseases. Most adopted preventive measures before the trip and during the stay.

Disclosure: No conflict of interest declared

### 3.14. MENTAL HEALTH

273

Presentation type: Workshop

#### Use of Global Mental Health Assessment Tool (GMHAT\PC) in Primary Care around the world

V. Kumar Sharma<sup>1</sup>, P. Andrea Tejada<sup>1</sup>, B. Quinn<sup>2</sup>, J. Copeland<sup>3</sup>, M. Bowen<sup>1</sup>

<sup>1</sup> Health and Social Care, University of Chester, Chester, United Kingdom; <sup>2</sup> Primary Care, Black Heath Medical Centre, Wirral, United Kingdom; <sup>3</sup> Psychiatry, Liverpool University, Liverpool, United Kingdom

**Background:** Sharma and Copeland developed computer assisted clinical interview, the Global Mental Health Assessment Tool GMHAT/PC to assist general practitioners and front line health professionals to make a quick, convenient, and comprehensive, standardised mental health assessment. A health professional by using GMHAT/PC, in about fifteen minutes, covers worries; anxiety and panic attacks; concentration; depressed mood, including suicidal risk; sleep; appetite; eating disorders; hypochondriasis; obsessions and compulsions; phobia; mania/hypomania; psychotic symptoms; disorientation; memory impairment; alcohol misuse; drug misuse; personality problems and stressors. It gives computer assisted diagnosis, symptom ratings a summary letter as well as treatment guidelines. Its use by health professionals may help in detecting and managing mental disorders in primary care and general health settings more effectively. So far, this has been translated in to Spanish, Netherlands, German, Chinese, Arabic and Hindi. The results of cross cultural studies are very encouraging and will be presented in the symposium. The GMHAT/PC has also been used in the general health setting including in elderly population, cardiac patients (UK), respiratory and epilepsy patients (India) with promising findings.

**Methods:** The training workshop intended to train the trainers so that they can support and train health professionals for its routine use in their clinical practice. The work shop will be interactive with practical demonstration of the use of GMHAT.

**Results:** Findings of the validity studies done in the UK, Netherlands, Abou Dhabi, India, and of Spanish version in Colombia will be presented. GMHAT/PC has a sensitivity and specificity of over 0.85 in all studies.

Disclosure: No conflict of interest declared

773

Presentation type: Workshop

#### Integrating mental health and primary care: Lessons learned in different countries

L. A. Green<sup>1</sup>, F. Goodyear-Smith<sup>2</sup>, J. Lankova<sup>3</sup>, A. Lee<sup>4</sup>, J.P. Sturmberg<sup>5</sup>, C. van Weel<sup>6</sup>, E.M. van Weel-Baumgarten<sup>6</sup>

<sup>1</sup> Department of Family Medicine, University of Colorado Denver School of Medicine, Denver, Colorado, United States; <sup>2</sup> Department of General Practice and Primary Health Care, University of Auckland, Auckland, New Zealand; <sup>3</sup> Department of Primary Care, Charles University, Praha, Czech Republic; <sup>4</sup> Jockey Club School of Public Health and Primary Care, Chinese University of Hong Kong, Hong Kong, China; <sup>5</sup> Faculty of Medicine, Monash University, Melbourne, Australia; <sup>6</sup> Department of Primary and Community Care, Radboud University, Nijmegen, Netherlands

**Objective:** Because it is not possible to separate people's health problems into discreet mental and physical categories, this workshop will share what attendees know about HOW family doctors are redesigning their practices to actually organize proper care for people with behavioral problems that produce and sustain disease, substance misuse, and other mental health conditions.

**Methods:** Three slides presented in five minutes from each of six countries, reporting some insights from experience to date in actually implementing the care people with emotional and behavioral problems need from family doctors and their practices. Slide one will identify some recent, pertinent efforts to integrate care within practice settings. Slide two will highlight what happened or is happening with such work. Slide three will offer some insights about lessons learned. These brief presentations will be followed by conversation and discussion by attendees focused on additional experience and reactions of attendees.

**Results:** Shared experience of progress and active developments underway among WONCA countries to improve the health of individuals and populations by integrating care for people with emotional and behavioral problems; and appreciation of common and differing strategies, challenges, and lessons learned so far.

**Conclusion:** A brief summary of the workshop will be prepared and made available for use by WONCA and attendees.

Disclosure: No conflict of interest declared

13

**Presentation type: Oral Communication****Doctors and dentists with mental ill health and addictions: Outcomes of treatment from the Practitioner Health Programme**

C. Gerada

*General Practice, Practitioner Health Programme, London, United Kingdom*

Health profession. Depression, alcoholism and drug addictions are particularly common in practitioners. Mental ill health reduces a doctor's capacity to work. It is important that such problems are treated as quickly as possible, not only for the benefit of the practitioners themselves but to minimise any risk to the patients they care for.

Despite the importance of unwell practitioners receiving proper care, they frequently experience significant barriers to help-seeking such as fears about confidentiality and professional implications; worry about the stigma attached to mental ill health; and feelings of shame and embarrassment. Many practitioners are reluctant both to seek help and take time off work. As a result, it is common for them to self-medicate without seeking treatment.

It is therefore important for practitioners to have access to a service which ensures confidentiality, and which can address unique issues which arise from practitioners becoming patients. The Practitioner Health Programme (PHP) ([www.php.nhs.uk](http://www.php.nhs.uk)) is a service developed to provide support for health professionals (specifically doctors and dentists) with mental health problems and addictions. The service is run by a general practitioner and uses an integrated model of service delivery.

As well as discussing the demographics of service attendees the presentation will also examine treatment outcomes and effectiveness of the service.

Disclosure: No conflict of interest declared

14

**Presentation type: Oral Communication****Good addicts, bad patients: The effect of medical training on a doctor's sense of self. An medical-anthropological exploration**

C. Gerada, A. Wessely

*General Practice, Practitioner Health Programme, London, United Kingdom*

Using experience drawn from running one of the largest practitioner-health services ([www.php.nhs.uk](http://www.php.nhs.uk)) the authors will explore the paradox of why doctors (care givers) are unwilling or unaware of admitting that they are suffering and need help.

The very aspects that allow doctors' to do their job well are also what makes them vulnerable when suffering from addiction problems, as the ability to mask impairment, work when suffering and rely on the safety-net of well-rehearsed performance at work leads to loss of insight into their own situation.

We will explore the theory, that by becoming a patient this undermines what is core to a doctors' constitution and reverses embodied techniques of self that they have been trained in throughout their careers.

We propose the view that by adopting the role of the patient ('patienthood') this ruptures a doctors cognitive identity: Foucaults 'schema' or Sinclairs dispositions (cooperation, status, knowledge, responsibility, experience) which are accumulated during medical school and used to construct a doctors' place in their society.

The notion that these are undermined is a common theme when examining how doctors' struggle with patienthood and we will use case studies and evidence from the medical, psychiatric and anthropological literature to illustrate this.

We will discuss how doctors' obscure their suffering behind the 'mask' of the medical self and that this is particularly prevalent in those doctors suffering from addiction, helping to perpetuate their problem till it is firmly entrenched – which is why doctors make bad patient and good addicts.

Disclosure: No conflict of interest declared

58

**Presentation type: Oral Communication****Transgenerational determinants of individual psychotherapy**

P. Tabouring

*Médecine Générale, Université du Luxembourg, Luxembourg, Luxembourg*

This workshop comes to the scope of the previous presentation of C.I.R.K. (Cercle International Robert Kraus), concerning psychotherapy in general practice at WONCA – Warsaw & Vienna.

The results of the prior developments will be presented first. This in turn will be used as the starting point for further deliberations in a group workshop setting.

Based on a specific model of the psychotherapeutic approach used in primary care, the challenges of psychotherapy in general practice as it relates to the patient's transgenerational history, is discussed.

Workshop's participants will gather in groups to discuss and present their finding on the topic. The workshop presenter will compare the aggregate of the groups' reports to the model developed and practiced.

**The aim of this workshop is:**

- To understand better the impact of the transgenerational determinants on the history of the suffering patient.
  - To propose an integration model of transgenerational intricacies in the course of the patient's life.
- and by these means,
- To deepen the psychotherapeutic care.

Disclosure: No conflict of interest declared

59

**Presentation type: Oral Communication****Family history and trajectory of the migrant**

P. Tabouring

*Médecine Générale, Université du Luxembourg, Luxembourg, Luxembourg*

No matter the reasons for migrants to leave their homeland, they will always have their culture as companion.

Attached to his origin by his mother tongue, the migrant will be accompanied, not only by his childhood family memories, but also by the transgenerational traces of his family history.

The international and multicultural nature of the WONCA conference provides the ideal setting for exchanging the various experiences concerning migration stories.

Participating physicians will be asked to present the experience of the migration of one of their foreign patients and to retell the patient's family history.

Based on the theoretical material that will be presented by the presenter, the participants will try to illustrate, to qualify, even to correct the derived messages of the theoretical lecture, in order to sharpen our insights and our medical understanding of the migrant patient's problems and the psychotherapeutic means that might be used to alleviate his sufferings.

Disclosure: No conflict of interest declared



79

**Presentation type: Oral Communication****Treatment of depression in primary care**

E. Murphy

*General Practitioner Training Scheme, Health Service Executive, Dublin, Ireland*

With the downturn of the world's economy, problems with mental health in particular depression are recognized as the leading health issue facing people today.

As with the Irish experience, successful treatment of depression depends on a holistic combination of Lifestyle Changes, Pharmacotherapy and Psychotherapy.

In order to have relevance for patients, these treatment principles must be translated into each country's cultural ideology in order for prejudices to be overcome and for 'best practice' guidelines to be accepted.

This presentation will look at how National Institute of Clinical Excellence (NICE) treatment strategies can be successfully and easily translated into different Cultural settings leading to very positive outcomes.

Participants are also invited to bring along case histories for discussion regarding diagnosis and treatment with the author both at and after the workshop.

Disclosure: No conflict of interest declared

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**Presentation type: Oral Communication****The practical application of cognitive behaviour therapy**

E. Murphy

*GP Training Scheme, Health Service Executive, Dublin, Ireland*

The National Institute for Clinical Excellence (NICE) has stated that, for the common mental health problems that present to General Practitioners, Cognitive Behavioural Therapy (CBT) is the main evidence-based psychological treatment recommended.

Studies have shown that Depression and Anxiety account for 93% of the mental health issues seen by General Practitioners/Primary Care physicians. Unfortunately, GPs have medication as their only resource.

Evidence shows that a simple CBT model can be as effective as the full CBT package and NICE recommends training for GPs in brief CBT techniques which can be used within the constraints encountered in a busy Primary Care Setting

This workshop will focus on providing participants with an insight into HOW CBT works in practice along with giving some practical skills which can be used by GP/Primary Care Physicians in the treatment of Panic Attacks, Anxiety and Depression

Disclosure: No conflict of interest declared

127

**Presentation type: Oral Communication****Sensitivity and specificity of symptoms in the diagnosis of a major depressive episode**

O. García-Sanz<sup>1</sup>, E. Rubio-Aranda<sup>2,1</sup>, B. Oliván-Blázquez<sup>3,1</sup>, R. Magallon-Botaya<sup>2,1</sup>, M<sup>a</sup> C. Pérez-Yus<sup>1</sup>, A. Asensio-Martinez<sup>1</sup>, Y. López-Del-Hoyo<sup>3,1</sup>, J. García-Campayo<sup>2,1</sup>  
<sup>1</sup> Primary Care Research, Aragon Health Science Institute, Zaragoza, Spain; <sup>2</sup> Medicine Department, University of Zaragoza, Zaragoza, Spain; <sup>3</sup> Psychology Department, University of Zaragoza, Zaragoza, Spain

In order to diagnose a major depressive episode according to DSM-IV criteria, the subject must present with 5 out of a possible 9 symptoms, including a depressed mood and loss of interest.

**Aims:** To analyse the higher or lower weighting of symptoms in the diagnosis of depression according to the DSM-IV.

**Methodology:** Descriptive longitudinal study administering the The Composite International Diagnostic Interview (CIDI) to 750 subjects, obtaining 90 subjects with a diagnosis for depression according to DSM-IV criteria. Study was made of sensitivity, specificity, Youden's Index and the odds ratio.

Symptom sensitivity can be defined as the likelihood that the symptom is present in a positive diagnosis. Specificity can be defined as the likelihood that the symptom is not present in a negative diagnosis.

**Results:**

- Symptom with greatest sensitivity was "depressed mood" and the one with the greatest specificity was "loss of interest".
- Symptom with the least sensitivity was "recurrent thoughts of death-suicide" and the one with the least specificity was "diminished ability to think or concentrate".
- Symptom with the highest Youden's Index was "depressed mood" and the one with the lowest was "diminished ability to think or concentrate".
- Symptom with the highest odds ratio was "loss of interest" and the one with the lowest was "recurrent thoughts of death-suicide".

**Conclusions:** It is important to be familiar with the symptoms with the greatest and least relevance in the diagnosis of depression in order to recognize false positives and false negatives more easily in primary health care.

Disclosure: No conflict of interest declared

395

**Presentation type: Oral Communication****Psychosocial profile of female users of psychotropic medication attended by Family Health Strategy**

C. Ragoni de Moraes Correia, C. de Souza Lopes, S. Fortes, M. Campos  
 Social Medicine Institute and Laboratory of Interdisciplinary Research in Primary Health Care, State University of Rio de Janeiro, Rio De Janeiro, Brazil

**Objectives:** Estimate the prevalence and describe the use of psychotropic drugs in accordance with the psychosocial profile of women attended by the Family Health Strategy.

**Methodology:***Sample and study design*

Cross-sectional study with 3530 women aged 18-65, attending consultations in units of the Family Health Strategy during a one month period.

*Instruments*

An objective questionnaire was used to collect demographic information and psychotropic medication use. Common Mental Disorders were evaluated through GHQ-12). A social network score (SNI) was created based on Loucks et al. (2006),

*Statistical Analyses*

The association between social network, common mental disorders and consumption of psychotropic medication were examined by cross-sectional multivariate logistic regression, adjusting for socio-demographic variables and city.

**Results:** After adjustments, in the presence of common mental disorder, the association between social network and benzodiazepine increased as social network index skipped from 3 (moderate social integration) OR = 2.10 (90% CI 1.48 -6.05) to 4 (social integration) OR=4.01 (90% CI 2.00- 8.36). On the other hand, the association between social integration and antidepressant consumption decreased as social network index went from 1 (severe isolation) OR=3.80 (90% CI 1.61-8.99) to 3 (moderate social integration) OR= 2.42 (90% CI 1.23 – 4.78), after the same adjustment.

**Conclusions:** In the presence of Common Mental Disorders, greater scores at SNI were associated with lower rates of antidepressant consumption. On the other hand, greater scores were associated with higher rates of benzodiazepine consumption. Psychosocial interventions and education possible strategies to combat indiscriminate use of psychotropics.

Disclosure: No conflict of interest declared

439

**Presentation type: Oral Communication****Mindfulness-based stress reduction (MBSR), perceived stress and quality of life in a Brazilian healthy sample**M. Demarzo<sup>1</sup>, S. Andreoni<sup>1</sup>, N. Sanches<sup>1</sup>, S. Fortes<sup>2</sup>, J. Garcia-Campayo<sup>3</sup><sup>1</sup> Preventive Medicine, Universidade Federal de São Paulo – UNIFESP, São Paulo, Brazil;<sup>2</sup> Medical Psychology and Mental Health, Universidade do Estado do Rio de Janeiro – UERJ, Rio de Janeiro, Brazil; <sup>3</sup> Psychiatry, Universidad de Zaragoza, Zaragoza, Spain**Background:** Evidences on mindfulness are growing fast but there is a lack of studies in Brazilian population.**Aim:** To explore the impact of MBSR on perceived stress (PS) and quality of life (QoL) in a healthy sample in Brazil.**Methods:** A one-group pre-/post-test design was used to measure the impact of MBSR (8-week; 2.5 h/wk) using the Perceived Stress Scale (PSS) and the WHOQOL-BREF questionnaire. Subjects (n = 23) were students at a major university center and completed tests prior to and at the end of the program. Paired t-test analysis of the changes from baseline was conducted.**Results:** 100% of the students completed at least 6 weeks of the course. A decrease in PS ( $p < 0.002$ ) and increase in all dimensions of WHOQOL-BREF ( $p < 0.004$ ) were observed.**Discussion:** High levels of adherence was observed, reducing PS and improving QoL among participants, demonstrating that the program is suitable for Brazilian population, in spite of the limitation brought by the sample's size and lack of control group.**Conclusions:** It is the first study to demonstrate an overall improvement in PS and QoL in a Brazilian healthy sample. Future studies are needed, involving attitudes towards mindfulness, long-term outcomes, and impacts on clinical and non-clinical population, including primary care patients.

Disclosure: No conflict of interest declared

456

**Presentation type: Oral Communication****The guideline ADHD in children and adolescents for general practitioners by the Dutch College of General Practitioners.**

M. van Avendonk, L. de Vries

Guideline Development, Dutch College of general Practitioners, Utrecht, Netherlands

**Objective:** The increasing prevalence of attention deficit hyperactivity disorder (ADHD) leads to an escalating debate between those who state that ADHD is too easily diagnosed, and others who state that the diagnosis is still often missed. General practitioners (GPs) are increasingly questioned about potential ADHD by patients and secondary care physicians often ask them to take over the surveillance of ADHD medication. Because there is large practice variation between the GPs' performance regarding ADHD and in their collaboration with secondary care, an evidence-based guideline for primary care is needed.**Methods:** After identifying clinical questions of ADHD care in primary care a systematic literature search was performed. A working group, consisting of six GPs, a child psychiatrist, a paediatrician and a public health physician, developed recommendations based on the available evidence and, in case of lack of evidence, on consensus. The guideline development process was supported by staff members from the College.**Results:** A draft guideline was produced within 14 months. It includes recommendations on detection, diagnosis, treatment, patient education, and follow-up of ADHD in children and adolescents in primary care. In addition, agreements on care coordination among professionals involved were made. The guideline will be externally reviewed and published in June 2014.**Conclusions:** We drafted the first, worldwide evidence-based guideline on ADHD in primary care. The guideline provides standards of care, which might reduce undesired practice variation. In addition, the guideline could raise the cost-effectiveness of ADHD care by reducing unnecessary referrals to secondary care.

Disclosure: No conflict of interest declared

904

**Presentation type: Oral Communication****A transcultural approach of mental health promotion for children by local authorities: A border province, Southern Thailand**

O. Nukaew, W. Sae-Sia, W. Wiroonpanich

*Faculty of Nursing, Prince of Songkla University, HatYai, Songkhla Province, Thailand*

**Objective:** To describe strategies and process for promoting survival, protection, and safety environment for children living in rural area at Ranong province, a border province to Myanmar.

**Methods:** Qualitative design was applied. Ten key informants working on children's issues at the local authority office and three children, who were community-leaders, were invited to participate in this study. The data were collected using in-depth interview and focus group. It was analyzed using content analysis.

**Results:** The strategies used to promote survival, protection, and safety environment were: 1) community participations using respectfulness partnership; 2) tactic knowledge distributed by volunteers' scholars using these following channels: local history narrative, and traditional rituals; 3) values and beliefs in relation to traditional community's rituals, and preserving community national resources distributed by local authority officers. The process of the transcultural approach refers to: 1) assess situations of children using database and information provided by community leaders; 2) implement projects by integrating traditional rituals, tactic knowledge provided by voluntary scholars; and 3) evaluate outcomes of the projects determined by children's satisfaction, knowledge related to traditional rituals gained, and increase of values and beliefs to preserve traditional ritual and national resources. In addition, the traditional rituals' knowledge gained from this study was collected in the community learning resource center.

**Conclusions:** This transcultural approach is effectively to protect and provide safety environment for children to prohibit risks of mental health problems. Therefore, children would have good mental health. These strategies are recommended to apply to other rural areas of border provinces in Thailand.

Disclosure: No conflict of interest declared

1036

**Presentation type: Oral Communication****Complicated Grief Treatment: Applications in primary care and collaborative care**

A. Stern

*Departments of Social and Family Medicine and of Psychiatry, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, New York, United States*

**Objective:** Patients in the primary care setting suffering from Complicated Grief (CG) need to be identified more consistently and treated more effectively.

**Methods:** This oral presentation will outline a two minute evidence-based questionnaire for determining the presence of CG as well as an overview of the condition; it will then introduce the evidence-based treatments for CG as well as recommendations for how to adapt these treatments in primary care and collaborative care.

**Results:** Three session and six session repeatable modules of treatment are proposed as a stepwise way for family doctors and co-located therapists to help patients with CG. Specific tools like grief monitoring, writing exercises, imaginal revisiting, and imaginal conversation can be learned and offered to patients as needed.

**Conclusions:** (1) Complicated Grief overlaps with both Major Depressive Disorder and Post-Traumatic Stress Disorder, but the usual treatments for these problems do not often suffice with CG. (2) The assessment and stepwise treatment of CG are practical and valuable additions to mental health care in the primary care setting.

Disclosure: No conflict of interest declared

1107

**Presentation type: Oral Communication****Challenges and implications of routine depression screening for depression in chronic disease and multimorbidity**B. Jani<sup>1</sup>, D. Purves<sup>2</sup>, S. Barry<sup>2</sup>, J. Cavanagh<sup>3</sup>, G. McLean<sup>1</sup>, F. Mair<sup>1</sup><sup>1</sup> *General Practice and Primary Care, University of Glasgow, Glasgow, United Kingdom;*<sup>2</sup> *Robertson Centre for Biostatistics, University of Glasgow, Glasgow, United Kingdom;* <sup>3</sup> *Mental health and Well being, University of Glasgow, Glasgow, United Kingdom***Objective:** Depression screening in chronic disease is advocated but its impact in routine practice is uncertain. We examine the effects of a programme of incentivised depression screening in chronic disease within UK primary care.**Methods/Results:** Cross sectional analysis of anonymised, routinely collected data (for 2008-9) from general practices in one area of Scotland with population of 1.9 million. Patients registered with one of three chronic diseases, coronary heart disease, diabetes and stroke in primary care, were expected to be screened using the depression subscale of Hospital Anxiety and Depression Score (HADS).

125143 patients had at least one of the chronic diseases. 15658(12.5%) were under treatment for depression and exempt from screening. Of the remaining, HADS scores were recorded for 35536(32.5%) patients. 7080(19.9% of screened) new cases were identified as a result of depression screening; the majority had mild depression based on their HADS score. 572(8.1%) with raised HADS score on screening were started on new anti-depressant prescriptions. Of those with multimorbidity who were screened, 26.5% had a raised HADS score. Females, younger(18-44) and socio-economically deprived were more likely to have a raised HADS score on screening.

**Conclusions:** Despite incentivisation, only a minority of patients underwent depression screening, suggesting that blanket depression screening in chronic disease may be difficult to achieve in routine practice. Targeting those at greatest risk may be a more effective approach. Raised HADS scores led to larger number of new anti-depressants prescriptions with major resource implications. Therefore clinical benefits of such screening need to be investigated.

Disclosure: No conflict of interest declared

1338

**Presentation type: Oral Communication****Perception of emotional and behavioral problems among refugee children living in Canada**S. Gagnon<sup>1</sup>, M.-C. Duquette<sup>2</sup>, C. Rousseau<sup>3</sup>, P.G.Tremblay<sup>2</sup><sup>1</sup> *Family Medicine Department, universit  Laval, Quebec city, Canada;* <sup>2</sup> *Pediatrics, centre**hospitalier universitaire de Qu bec, Quebec city, Canada;* <sup>3</sup> *psychiatry, Montrealo sick children, Montreal, Canada***Intro:** Having found fewer psychological distress and behavioral problems than we expected among refugee children at their arrival in Canada we have conducted a study to verify if it was still the case later on.**Objective:** To compare the perception of the children, their parents and their teachers among emotional and behavioral problems among refugees of 6 years old and older who have been living in Qu bec city less than 3 years and who attended the healthcare Refugee Clinic in Quebec city from June 2007 to June 2008.**Method:** 35 children participated in this study. Emotional and behavioral problems were assessed using the Child Behavior Checklist (CBCL), the Youth Self-report (YSR) and the Teacher's Report Form (TRF), as well as a sociodemographic test. Proportions for each detected problem were compared to standard population rates and their association with sociodemographic variables was analyzed.**Results:** Refugee children reported internalizing problems at a higher level than children from the standard population. Teachers witnessed more conduct problems among refugees. Parents reported more emotional or behavioral problems in children who experienced a traumatic event or a parent death. Moreover, a difference between informants has been detected for the perception of internalizing and behavioral problems.**Conclusion:** This study emphasizes the importance for clinicians to pay close attention to the psychological components of the life of refugee children, not only upon arrival but also during the following months and to ask the parents and the teachers observations.

Disclosure: No conflict of interest declared

1574

**Presentation type: Oral Communication****Facebook: Social gain at a social loss**

C. Murphy

*General Practice, University College Cork, Cork, Ireland*

Social Capital refers to the resources accumulated through relationships among people. It has been linked to a variety of positive outcomes such as better social cohesion and public health. Facebook has been identified as a form of social capital. With many other forms of social capital in decline, such as community groups and clubs, Facebook use has the benefit of a global network with resultant positive sequelae of social capital. However, Facebook use has been shown to be addictive.

**Objectives:**

1. To examine the prevalence of use of social media in a cohort of University Students
2. To investigate socio-demographic factors associated with high Facebook use
3. To investigate the prevalence of addiction to Facebook.
4. To identify if Facebook as a form of Social Capital is associated with Facebook addiction.

**Methods:** A cross-sectional study will be performed to examine the use of Facebook in university students. 100 students each from two separate were asked to complete a composite questionnaire. The questionnaire was made up from two validated questionnaires. Ethical Approval was granted from Clinical Research Committee of the Cork Teaching Hospital.

**Results:** The prevalence of Facebook addiction amongst University Students was high. Facebook use was deemed to a form of social capital amongst students in a University cohort. There was an association with Facebook Addiction.

**Conclusion:** There is high use of social media amongst University students. Facebook is a form of social capital amongst University students. However high use is associated with Facebook addiction.

Disclosure: No conflict of interest declared

1644

**Presentation type: Oral Communication****Pain, mental health and GP recognition**M. Gerrits<sup>1</sup>, H. van Marwijk<sup>1</sup>, P. van Oppen<sup>2</sup>, H. van der Horst<sup>1</sup>, B. Penninx<sup>2</sup><sup>1</sup> *General Practice and Elderly Care Medicine, VU Medical Center, Amsterdam, Netherlands;*<sup>2</sup> *Mental Health, VU Medical Center, Amsterdam, Netherlands*

**Background:** In general practice the combination of pain with depression or anxiety is commonly seen. There is a lack of evidence on how pain impacts on the development of depression and anxiety. Also, previous studies but do not provide information on whether pain influences GP recognition of depression and anxiety.

**Objective:** To examine the impact of pain on the development and GP recognition of depression and anxiety.

**Methods:** Data from the Netherlands Study of Depression and Anxiety were used. 2402 participants (18-65 years) with or without depression or anxiety, as assessed by DSM IV criteria, were followed for four years. Pain was analyzed by location, number of locations, duration, use of pain medication and severity (Chronic Pain Grade). We used logistic regression and Cox survival analyses.

**Results:** In patients without depression or anxiety at baseline, 6 different pain locations, increasing number of locations, more severe pain and daily use pain medication (HR=1.29-4.02, p<.05) were associated with increased hazard of first onset and recurrence of depression and first onset of anxiety. GPs recognized 60% of patients with depression and anxiety. Chest pain (OR=1.61, p=.008) and higher severity of pain (OR=1.19, p=.017) were associated with GP recognition.

**Conclusions:** Patients with pain, particularly in multiple locations and of higher severity, are more prone towards onset and recurrence of depression and anxiety. Fortunately, having pain increases the odds for patients to be recognized as depressed or anxious by their GP. This study stresses the importance of pain in depression and anxiety management.

Disclosure: No conflict of interest declared

1681

Presentation type: Oral Communication

**Identifying patients at high risk for depression in routine primary care data: from research to clinical practice**R.Q. van Dieren<sup>1</sup>, L. Wind<sup>1</sup>, N.J. de Wit<sup>1</sup>, M.F. Aukes<sup>2</sup><sup>1</sup> Julius Health Centers, Leidsche Rijn, University Medical Center Utrecht, Utrecht, Netherlands;<sup>2</sup> Psychiatry, University Medical Center Utrecht, Utrecht, Netherlands

**Objective:** Structured early detection of high-risk patients for depression followed by indicated prevention is an important strategy to reduce the burden of depression. We conducted a randomized trial (RT) aimed at identifying the optimal way to approach those at high risk of depression, while not yet in treatment.

**Methods:** In academic primary practices of Julius Health Centers (33.000 patients) in the Netherlands, patients at high risk of depression were identified using a prediction model adapted from a large prognostic study (PREDICT) using patients' electronic medical records (EMR). We compared two interventions during one year: 1) an active strategy in which those at risk are contacted by a mental health nurse to assess mental health complaints and needs and 2) a passive strategy in which high-risk patients received a label in their EMR.

**Results:** High-risk patients were randomly assigned to passive strategy (n=187) and active strategy (n=177). Assessment of EMR showed that 6% of the patients was excluded because of comorbidity, 4% was not registered anymore, 16% was or had recently been in treatment for depression and 4% was not eligible according to their GP. In the active strategy nearly 60% of the eligible patients was successfully contacted for assessment of their mental health status.

**Conclusions:** Many high-risk patients for depression as identified by the model were already in treatment or had been in contact with a health care professional about their mental problems. More adequate registration may improve the identification of patients who may benefit from directed care.

Disclosure: No conflict of interest declared

**3.15. MUSCULOSCELETAL PROBLEMS**

312

Presentation type: Oral Communication

**The impact of psychological discomfort on the utilisation of the health care system for low back pain in a country without gatekeeping system**K. Hoffmann<sup>1</sup>, K.V. Stein<sup>2</sup>, T.E. Dorner<sup>2</sup><sup>1</sup> Department of General Practice, Medical University of Vienna, Vienna, Austria; <sup>2</sup> Institute for Social Medicine, Medical University of Vienna, Vienna, Austria

**Background:** Psychological discomfort is associated with an increased prevalence of low back pain (LBP). However, little is known on the impact of psychological discomfort on the health care service utilisation of persons with LBP. It was the aim of this analysis to assess the impact of psychosocial discomfort on LBP and the utilisation of the health care system.

**Method:** The database used for this analysis was the Austrian Health Interview Survey 2006-07, with data from 15,474 people. Statistical analyses included descriptive statistics as well as multivariate logistic regression models.

**Results:** 2,766 women and 2,269 men reported LBP (34.5% vs. 30.5%; p<0.001), of whom 53.1% of the female and 46.2% of the male subjects experienced psychological discomfort (p<0.001). In adjusted logistic regression models, persons with psychological discomfort had an increased probability of LBP (f: OR 1.32, m: OR 1.33). In women with LBP, psychological discomfort was associated with a higher chance of hospital stays (OR 1.69) or GP visits (OR 1.33). For male subjects psychological discomfort increased the chance of specialist consultations (OR 1.59). No impact could be observed for the utilisation rate of GPs in men.

**Conclusion:** The existence of psychological discomfort increased the probability of having been to a specialist for men and having had a hospital stay or GP visit for women with LBP. These findings highlight the importance of addressing psychological discomfort in the primary care setting, to better direct patients towards the health services they need, avoid indiscriminate self-referral and increase the quality of care.

Disclosure: No conflict of interest declared

**Muscle and skin in equation, case report.**

M.R.R.Galhardo

USF Dunas, ULS Matosinhos, Matosinhos, Portugal

**Objective:** Dermatomyositis is an idiopathic inflammatory myopathy with characteristic skin manifestations. Our aim presenting this case is to enhance the role of the family physician in recognizing dermatomyositis and supporting the patient in this process of facing disease and sickness.

**Methods:** We describe the case of MTG, female, 51 years old, caucasian, personal history of subclinical hypothyroidism that presented to her family physician complaining of fatigue mainly climbing stairs, walking and combing hair. She also reported the onset of a red macular rash involving the face and the upper trunk 1 month earlier.

**Results:** On physical examination in upper and lower limbs sensation is normal and tendon reflexes are preserved. In the areas of the skin: there are multiple erythematous flat papules on the dorsum of the metacarpophalangeal and interphalangeal joints; violaceous discoloration of the eyelids and periorbital edema; macular erythema in the V-area of the neck and upper chest. Initial tests were urgently performed: serum aldolase, LDH, ALT, AST, CBC with differential, CK, chest radiograph, urinalysis, TSH, T4. The use of sunscreen and topical corticosteroid were recommended. Tests showed a 10 times elevation of AST, ALT and CK. A presumptive diagnosis of dermatomyositis was made. MTG was started on oral corticosteroids and maintained regular contact with her family physician searching for support facing sickness.

**Conclusions:** Although dermatomyositis is a rare disorder early recognition and treatment are important ways to decrease the morbidity of systemic complications. Family physician's role is more than putting muscle and skin in equation.

Disclosure: No conflict of interest declared

**The discriminative and predictive ability of FRAX® tool to predict osteoporotic fractures: further results of the Spanish FRIDEX cohort.**M. Zwart<sup>1,2</sup>, R. Azagra<sup>3,2,4</sup>, A. Aguyé<sup>3,2</sup>, C. Soler<sup>3</sup>, MC. Penacho<sup>5</sup>, J. Ferre<sup>5</sup>, J. Balsells<sup>5</sup>, R. Almazan<sup>1</sup>, P. Font<sup>1</sup>, A. Casademont<sup>1</sup>

<sup>1</sup> Primary Care Center, Institut Català de la Salut, Girona, Spain; <sup>2</sup> USR, Idiap Jordi Gol, Barcelona, Spain; <sup>3</sup> Primary Care Center, Institut Català de la Salut, Barcelona, Spain;

<sup>4</sup> Medicine, Universitat Autònoma de Barcelona, Barcelona, Spain; <sup>5</sup> Primary Care Center, Institut Català de la Salut, Tarragona, Spain

**Objective:** To know the predictability of fracture FRAX® tool in Spanish female population.

**Methods:** Women 40-90 years old from the update FRIDEX cohort with baseline DXA, without osteoporosis prescriptions. Ten years follow up knowing the risk factors of fracture (RFs) included in FRAX® tool and falls in the last year.

There were registered major osteoporotic fracture (hip, clinical vertebral, humerus, wrist) expected by FRAX® (ExFr) and observed fractures (ObFr) in 10 years confirmed by electronic records.

**Results:** Analysis of 1308 women with 153 major fractures in 108 women (8.3%). Among women with incident fracture vs. no fracture we found significant differences ( $p < 0.05$ ) in age, BMI  $< 20$ , previous fracture,  $> 1$  fall in the previous year, osteoporotic criteria by DXA and FRAX® value with or without BMD. Between cases with baseline osteoporosis, 15.4% suffered a major fracture and 4.6% a hip fracture in 10 years. The ratio ExFr / ObFr expressed as  $[\text{ExFr} = \sum \text{values FRAX}/100] / [\text{ObFr}]$  was 43.6% (47/108) with BMD and 49.6% (54/108) without. The area under the curve (AUC) ROC (95%) for major fracture without / with BMD was 0.686 (CI 95%; 0.630-0.742) and 0.714 (CI 95%; 0.661-0.767) and for hip fracture 0.883 (CI 95%; 0.827-0.938) and 0.857 (CI 95%; 0.773-0.941) respectively. All values with significant differences ( $p < 0.001$ ).

**Conclusions:** At the present time discriminative and predictive ability of FRAX tool is moderate to low for major fracture and moderate to high for hip fracture. Adjustments are necessary and FRAX tool calibrations in Spanish female population

Disclosure: No conflict of interest declared



698

Presentation type: Oral Communication

### 10 years fragility fracture incidence in a general population Spanish women: FROCAT cohort first results.

M. Zwart<sup>1,2</sup>, R. Azagra<sup>3,2,3</sup>, A. Aguyé<sup>3,2</sup>, E. López-Valdueza<sup>3</sup>, C. Savone<sup>3</sup>, MC. Yuste<sup>3</sup>, F. Solé-Sancho<sup>3</sup>, F. Julià<sup>3</sup>, F. Doz<sup>3</sup>, M. Teixidó<sup>3</sup>

<sup>1</sup> Primary Care Center, Institut Català de la Salut, Girona, Spain; <sup>2</sup> Unitat Suport Recerca, Idiap Jordi Gol i Gurina, Barcelona, Spain; <sup>3</sup> Primary Care Center, Institut Català de la Salut, Barcelona, Spain

**Objective:** To analyze the 10 years incidence of osteoporotic fractures in the general population and discriminative capacity of Frax<sup>®</sup> tool to determine the absolute risk of fracture.

**Methods:** A retrospective multicentre cohort study using randomized data (interview and electronics records) from the general population of Catalonia between 50-90 years old. Excluding criteria were transfers, deaths and active bone drugs intake. We analyze the area under the ROC curve (AUC-ROC) from Frax<sup>®</sup> results.

**Results:** 517 women fulfilled the inclusion criteria (78.8% of total) with a mean age of 59.1 ± 12.7 years and a BMI of 28.1 ± 5.3. 13% had previous fractures, 11.6% family history of hip fracture and 27.5% had accidental falls in previous year.

14.5% (75) had an osteoporotic fracture, of which 8.9% (46) were major fractures [ 2.1 % (11) hips, 0.4 % (2) vertebral, 1.2 % (6) humerus and 5.2 % (27) forearm]. Between fractured and non-fractured women were significant differences in age, previous fracture and falls. Only 12.6% (65) had DXA performed. The AUC-ROC of Frax<sup>®</sup> main fracture without BMD was of 0.697 and 0.898 for hip fracture.

**Conclusions:** FROCAT cohort of unselected population to greater risk of fracture shows some statistically significant differences in risk factors like older age, fracture history and falls in the previous year. The tool Frax<sup>®</sup> shows moderate discriminative capacity in main fracture and best for hip fracture in its Spanish population interpretation.

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856

Presentation type: Oral Communication

### Newly developed chronic diseases after the onset of inflammatory arthritis in general practice

M. Nielen, J. Ursum, J. Korevaar

General Practice, NIVEL (Netherlands Institute for Health Services Research), Utrecht, Netherlands

**Objective:** Inflammatory arthritis (IA) patients often have multiple comorbid conditions resulting in reduced quality of life, more disability and increased mortality. Therefore, it is important to know which conditions manifest after IA for potential (preventive) treatment strategies. The aim of this study was to ascertain the risk of newly developed chronic diseases after the onset of inflammatory arthritis in general practice.

**Methods:** Data from 3,354 newly diagnosed IA-patients were selected from the Netherlands Information Network of General Practice (LINH). Patients were matched on age and sex with two non-IA patients from the same general practice. The development of 121 chronic comorbid disorders was compared between groups using Cox regression analyses and adjusted for age, sex, and number of chronic diseases at disease onset.

**Results:** After a median follow-up duration of 2.8 years, 56% of the IA patients developed at least one chronic comorbid disorder after the onset of IA compared to 46% of the controls (p<0.05). The most common comorbid disorders after IA diagnosis were from cardiovascular (50%), musculoskeletal (40%) and neurological origin (33%). The highest, statistically significant, hazard rates (HRs) in IA patients were found for anaemia, osteoporosis and COPD (HR=1.8, HR=1.9 and HR=1.8, respectively).

**Conclusions:** Patients with IA develop more chronic diseases after diagnosis of IA than one might expect based on their age and gender. Prevention of comorbidity should be one of the main targets in the treatment of IA patients and should obtain more attention in daily care of IA patients.

Disclosure: No conflict of interest declared

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Presentation type: Oral Communication

### Pain reduction effect of the local steroids injections in articular and periarticular Primary Care patients

S. Masuet Aumatell, A. Estafanell Celma, A. Ruiz Rubio, M. Berrocal Guevara, J Gonzalez Farres

Primary Care, Institut Catala de la Salut, Granollers, Spain

**Objective:** describe the effect on perceived pain the usage of local steroids injections causes in patients with different articular pathologies. Diseases affecting the locomotive system estimated to be 10-35% of the medical primary care consultations. Local steroids injections into articular, periarticular or soft tissue structures relieve pain, reduce inflammation and improve mobility. They are mainly used by traumatologist and rheumatologist (not often in Primary Care). Secondary effects are rare.

**Method:** intervention study without control group. Semi urban primary care practices. Patients elder than 18 years old with articular and periarticular pathology. Intervention: VAS (Visual Analogical Scale) pre/post local steroids injections. Main measurements: sociodemographical factors, diagnostic, number of local steroids injections per patient, VAS pre/post treatment and secondary effects.

**Results:** N147 (women 99; men 48), visited by 2 general practitioners from Jan'11 to Dec'12. Average age 54 (SD 14,5). Rotary joint tendinitis 35,4%; elbow tendinitis (epicondylitis/epitrochleytis) 21,8%; wrist pathology (carpal tunnel syndrome/Quervain's tendinitis) 8,8%; hand (rhizarthrosis/palm nodule) 4,1%; hip (trochanteric's bursitis) 8,2%; knee (gonarthrosis/anserine bursitis) 4,7%; foot (plantar fasciitis/Morton's neurinoma) 17,0%. 127 over the 147 started with high level of pain; after treatment, 91 moved to low level of pain, 17 moved to moderate while 18 remain in high pain (6 did not perceive any improvement). 124 patients were injected once while 23 required twice (4 over these 23 perceived no pain diminution, currently waiting for traumatologist's surgery). 3,4% of the patients presented secondary effects (1 local allergic and 4 skin hypopigmentation).

**Conclusions:** 1, Treatment with local steroid injections is effective in dealing with pain. 2, Technique is feasible in Primary Care. 3, Further investigate local steroid injection comparing with oral treatment (patients' reaction and cost impact).

Disclosure: No conflict of interest declared

1222

Presentation type: Oral Communication

### Low back pain management in our daily practice. Can we improve it?

J.M. Bueno-Ortiz<sup>1,2</sup>, J. Basora-Gallisa<sup>1</sup>, D Orozco-Beltran<sup>1</sup>, J.M. Vilaseca<sup>1</sup>, R. Luquin-Martinez<sup>2</sup>, M.J. Alonso-Saenz de Miera<sup>2</sup>, MA Moreno-Valero<sup>2</sup>, M.C. Santiago-García<sup>2</sup>

<sup>1</sup> GRUPO ACTIVIDAD FÍSICA Y SALUD, SPANISH SOCIETY OF FAMILY AND COMMUNITY MEDICINE, BARCELONA, Spain; <sup>2</sup> GERENCIA DE CARTAGENA, SERVICIO MURCIANO DE SALUD, CARTAGENA, Spain

**Introduction:** Patients (P) who have back pain (LBP), the second most frequent cause of consultation in primary health care, are usually heart-sinking P. Since computerisation of our surgeries BP is also very common among Family Doctors (FD) In Spain we have many LBP guidelines but our results are not good. Prevention and treatment of chronic LBP should be multidisciplinary and include exercise and health education focusing on active management. Active FD prescribe more exercise. Since 1995 we have run more than 65 Back-School Workshops in National and Regional Conferences. They are focused not only on treating patients but on treating ourselves and on improving our doctor-P interviewing skills. We will show you our results and how we have changed our methodology.

#### Goals:

1. FD should acquaint with the current LBP guidelines.
2. FD should learn the possibilities of prescribing therapeutic exercises (TE) and postural hygiene (PH) to their patients with LBP.
3. FD should acquaint with the abilities to help P to learn and carry out TE and PH as part of his treatment
4. Change the attitudes of FD about the possibilities of TE and PH prescription in their daily work
5. FD should learn a series of easy exercises (for their own benefit) to be carried out during their surgery and at home

**Methodology:** Interactive. Each FD will have a facilitator. Role-playing followed by group discussion of LBP tackling in daily practice. All TE and PH recommended to P will be performed by FDs supervised by their facilitator. Wearing sport clothes is advisable.

Disclosure: No conflict of interest declared

1451

**Presentation type: Oral Communication****Myofascial pain syndrome: Diagnosis and management**L. Rumor<sup>1</sup>, V. Estríbio<sup>2</sup><sup>1</sup> USF Pinhal de Frades, ACES Almada-Seixal, Seixal, Portugal; <sup>2</sup> USF Servir Saúde, ACES Almada-Seixal, Seixal, Portugal

About 85 percent of general population or 95 percent of people suffering from chronic pain, has an acute or chronic musculoskeletal disorder. Myofascial pain syndrome is a common and disabling painful muscle disorder caused by myofascial trigger points. Patients who have trigger points often report regional, persistent pain that usually results in a decreased range of motion of the muscle in question. Often, the muscles used to maintain body posture are affected, namely the muscles in the neck, shoulders, and pelvic girdle.

These trigger points can be easily identified and treatable by family physicians. We propose a series of 3 workshops focused in its diagnosis and management.

**Workshop 1**

**Objective:** Familiarization with trigger points pathogenesis, clinical presentation, evaluation and management.

**Methods:** Theoretical approach to the theme followed by practice exercises, as trigger points palpation or injection techniques. Participants (maximum of 15) will serve as anatomical models. We suggest comfortable and malleable clothing.

**Results:** We expect to sensitize family physicians to improve medical diagnostic hypothesis and guarantee an accurate and early treatment of myofascial pain.

**Conclusions:** We are sure that this workshop will improve medical act and improve population health and health care, seen as better health outcomes and hospital references, when applicable.

Disclosure: No conflict of interest declared

1474

**Presentation type: Oral Communication****Osteoarticular pathology in primary health care**V. Carvalho<sup>1</sup>, J. Pereira<sup>2</sup>, L. Gaiteiro<sup>3</sup>, V. Alves<sup>4</sup><sup>1</sup> Family Physician, USF Sobreda, Almada, Portugal; <sup>2</sup> Family Physician, USFS. João do Pragal, Almada, Portugal; <sup>3</sup> Family Physician, USF Cuidar Saúde, Seixal, Portugal; <sup>4</sup> Family Physician, USF Amora Saudável, Seixal, Portugal

**Objective:** The learning objectives is to review the diagnosis and treatment of musculoskeletal pathology more common in primary care. By joining this workshop, participants will be prepared to guide the history and physical examination, know which are the main differential diagnoses and diagnostic maneuvers, and which imaging tests that may bring additional information. While fulfilling the practical part we want the participants to practice the techniques recapitulated in theory.

**Methods:** The workshop consists of two distinct sessions. The first part consists of theoretical review of osteoarticular pathology most often seen in primary care, including lesion of the shoulder, wrist / hand / foot, spine, hip and knee. The second part will allow the practice of the main technical objective examination of these pathologies, in four different spaces dedicated to each of the areas mentioned above.

**Results:** The expected impact of this workshop is to be a facilitator of daily clinical practice of the family doctor, directing the reasoning and mechanizing some gestures useful in the diagnosis of osteoarticular main pathologies seen in primary care. Ultimately, we aim to minimize the use of additional tests that have little to add to a careful physical examination.

**Conclusion:** The osteoarticular pathology is the leading cause of absenteeism and is the one of the most common reason for seeking health care. Owing to its prevalence and incidence, adjusted approach this disease in terms of clinical history and physical examination, allows proper differential diagnosis, orientation of additional tests and possible referral to secondary care.

Disclosure: No conflict of interest declared

1493

Presentation type: Oral Communication

**A surprising cause for diplopia**S. Barros Cardoso<sup>1</sup>, R. Pires<sup>2</sup>, C. Novais<sup>3</sup><sup>1</sup> Family Medicine, USF Salvador Lordelo, Lordelo, Portugal; <sup>2</sup> Family Medicine, USF Nova Era, Recarei, Portugal; <sup>3</sup> Family Medicine, USF S. Martinho, Penafiel, Portugal

**Introduction:** Though the most common of the neuromuscular transmission disorders, myasthenia gravis is a rare disease affecting three cases in 100, 000 inhabitants per year. It is an auto-immune condition characterized by fatigue and fluctuating muscle weakness. The diagnosis is established by clinical suspicion and electromyographic confirmation.

**Clinical Report:** Female patient, 30 yo, divorced, inserted into a nuclear family (phase II). No relevant family history. In a routine appointment with the GP stated occasional and periodic episodes of diplopia during previous year, dysphagia and hypophonia. Aggravation of the symptomatology (with recurring floating ocular paresis and ptosis) justified a referral to Neurologist. In that context, a mediastinum CT revealed absence of thymic hyperplasia and the EMG was normal. A high clinical suspicion led to a therapeutic trial with pyridostigmine and realisation of single fiber EMG and specific antibodies (anti-rach and anti-musk). A positive EMG and anti-musk confirmed the diagnosis. The patient is now asymptomatic with prednisolone, azathioprine, and pyridostigmine. Further appointments revealed iatrogenic effects such as osteoporosis and hypertension.

**Discussion:** Although a rare disease, myasthenia gravis appears in a particular way, which leads to clinical suspicion. It can be suggested by otherwise unexplained diplopia and fatigue and a thorough physical examination and follow up is crucial. The role of the family doctor is not only be aware of this condition but also of his patient, managing his complaints and referral. He will, as well, follow these patients in various stages of their life and manage possible iatrogenic effects of treatment.

Disclosure: No conflict of interest declared

1590

Presentation type: Oral Communication

**Ultrasound guided percutaneous needle lavage in calcific tendinitis of the shoulder**F.J. Panadero<sup>1</sup>, E. Cerezo<sup>2</sup>, F.J. Minaya<sup>3</sup>, C. Cortes<sup>3</sup>, E. Ortega<sup>1</sup>, J.K. Sagardui<sup>1</sup>, P. Gómez<sup>1</sup>, G. Santiago<sup>1</sup>, L. Panadero del Olmo<sup>4</sup>, E. Sabio<sup>1</sup><sup>1</sup> Centro de Salud de Villanueva de la Cañada, SERMAS. Area Noroeste. Madrid, Madrid, Spain <sup>2</sup> Ecografías América, Unidad de Ecografías, Madrid, Spain; <sup>3</sup> Servicio de Radiodiagnostico. Hospital Universitario «Puerta de Hierro», SERMAS. Area Noroeste. Madrid, Madrid, Spain; <sup>4</sup> Unidad de Cuidados Intensivos, Hospital de Gatafe, SERMAS, Madrid, Spain

**Objective:** Ultrasound-Guided Percutaneous Needle Lavage in Calcific Tendinitis of the Shoulder. Evaluation and assesment in Primary Care

**Methods:** percutaneous treatment under sonographic guidance in 6 outpatients with diagnostic of calcific tendinitis of the shoulder was realized in our Health Center. We registered previous treatments (NSAID, injection of corticosteroids, physiotherapy and others) grade of pain (AVS). previous months with symptoms and ultrasound examination of the length of the calcific tendinitis; before and after treatment with percutaneous needle lavage. All the patients were examined 1,3, and 6 months after the procedure. This was realized completely in Primary Care, in our consulting room with a Mindray DCM3 and a 10-12MHz probe

**Results:** 6 months after de proceeding, 85% were very satisfied an asymptomatic, 15% (1 of 6) had the same value in VAS scale than before the proceeding. we obtained «calcic milk» in 3 of 6 (50%) and the calcification was reduced or disappeared in 85%. Only in one case we observed a vagal reaction. no infections were described after the punctation conclusions.- even in this paper we offer a small number of patients, our initial conclusions is that this proceed can be perfectly done in Primary Care with few risks, and with very good results

Disclosure: No conflict of interest declared

1619

Presentation type: Oral Communication

**Procedures implemented by the general practitioners for patients consulting them for low back pain**C. Raber<sup>1</sup>, A. Ramond-Roquin<sup>1</sup>, C. Bouton<sup>1</sup>, E. Pernollet<sup>1</sup>, L. Letrilliart<sup>2</sup>, A. Mercier<sup>3</sup>, JF. Huez<sup>1</sup><sup>1</sup> Department of general practice, Faculty of medicine of Angers, ANGERS, France; <sup>2</sup> Department of general practice, Faculty of medicine of Lyon, LYON, France; <sup>3</sup> Department of general practice, Faculty of medicine of Rouen, ROUEN, France

Low back pain (LBP) is a major public health problem, and one the most frequent reasons for encounter in general practice. In France, we are lacking data on management of LBP by the general practitioners (GP).

The aim of this ongoing study is to describe the management of patients from 18 to 65 consulting their GP for LBP.

Ecogen is a French national descriptive study, undertaken in 128 different offices of general practice in 2012. One day by week, for all the consultations, all the reasons for encounter, the diagnosis and the procedures implemented by the GPs were recorded according to the International Classification of Primary Care (ICPC-2). All the consultations of patients from 18 to 65 seeking care for LBP were selected. Then the population and all the diagnostic, therapeutic, preventive and administrative procedures related to these consultations were described. Finally, some typical associations of procedures were looked for, and compared according to the characteristics of the patients and of the GPs.

About 650 consultations will probably be selected. As suggested by international literature, prescriptions of radiological exams, drugs, physiotherapy, sick leave and occupational disease certifications may represent the main part of the procedures implemented by the GP.

This study will provide a more accurate assessment of the use of these procedures in general practice in France, and might lead to more original results, as the use of prevention and health education or the rate of referrals of patients to specialists or other health care providers.

Disclosure: No conflict of interest declared

**3.16. EMERGENCIES AND TRAUMA**

1063

Presentation type: Oral Communication

**Subarachnoid hemorrhage secondary to vasculitis after the use of iodinated contrast.**I. Rodríguez, V. M. García, J.C. López, M. Casanova  
Emergency Department, Hospital Madrid Torreldones, Torreldones, Spain

**Introduction:** Subarachnoid hemorrhage (SAH) is a potentially life threatening illness. It is most commonly preceded by trauma, there are a lot more possible etiologies. This case report illustrates that it is important to make a proper differential diagnosis even taking into account rare situations like the one in this case. Vasculitis of the central nervous system (CNS) should be part of the differential diagnosis of SAH. Vasculitis of the CNS can be both primary (known as primary angiitis of the central nervous system) or secondary to an inflammatory process affecting the CNS as part of a systemic process.

**Case description:** A 39-year-old patient without any remarkable medical history but inguinal hernia surgery. He presented to the hospital for a abdomen CT scan appointment. At the beginning of the infusion with iodinated contrast the patient suffers an allergic reaction so he is referred to A&E department immediately. He denied dyspnoea. He had an important headache and was very agitated so he was treated with: adrenalin, prednisone, diazepam, midazolam, fentanyl and pain killers. The blood test arrive normal so he was discharge. He presented back to the hospital in 5 days time because the occipital headache had not disappeared with non-steroidal anti-inflammatory treatment. However physical examination was reported normal a emergency CT scan without contrast was performed. It showed hyperdense lesion parietal fissure compatible with blood occupying the surrounding subarachnoid space. The patient was admitted again to the hospital for a complete study and treatment with corticosteroids. The MRI angiography showed vasculitis.

Disclosure: No conflict of interest declared

1331

**Presentation type: Oral Communication****Number of contacts and distance to primary care out-of-hours services**

K. Hek, M. Zwaanswijk, B. Elffers, R.A. Verheij  
*Primary Care, NIVEL, Utrecht, Netherlands*

**Objective:** It is sometimes suggested that people use primary care out-of-hours services as extended day care service and often present non-urgent health problems. To test this hypothesis, we related the number of consultations to distance from the service. We hypothesized to find more consultations when distance to the service was shorter, but we expected no relation between distance to the service and number of consultations for highly urgent contacts.

**Methods:** Data (postcode of patient and consulted location and contact urgency labels) for the year 2011 were extracted from electronic medical records kept by 3 out-of-hours services (5 locations) in the Netherlands, servicing a population of 700.000 inhabitants. Distance in kilometers (km) between postal code of the patient and consulted location was calculated.

**Results:** Preliminary analyses showed that the mean distance of patients to the consulted service location decreased with the number of consultations (mean distance 1 consultation: 7.2 km, 2 consultations: 6.8 km, >2 consultations: 6.4 km). No difference in distance was observed for urgent contacts (1 consultation: 7.9 km, 2 consultations: 7.8 km, >2 consultations: 7.9 km).

**Conclusions:** Patients who lived closer to the out-of-hours service location had more consultations than those who lived further away, there was no such relation for urgent contacts. This suggests that out-of-hours services are excessively used for non-urgent problems. We will further explore the relation between distance and number of contacts by adjusting for e.g. patient age and gender and exploring the variation between out-of-hours services.

Disclosure: No conflict of interest declared

**3.17. SKIN AND SOFT TISSUE PROBLEMS**

362

**Presentation type: Oral Communication****Dermatology in Primary Care – physicians' and patients' perspectives**

S. Bösner, M. Rüksam, M. Esch, E. Baum  
*Family Medicine, University of Marburg, Marburg, Germany*

**Objective:** GPs encounter patients with dermatological diseases on a regular basis. Chronic skin diseases are causing a high level of suffering for patients, both physically and mentally. Many of these patients are treated by the GP while others, mainly suffering from chronic disorders, will be referred to a dermatologist. Although a highly relevant topic, there is virtually no research on dermatology in primary care. Consequently, little is known about GPs diagnostic approaches in these patients. We aimed to analyse how GPs approach patients presenting skin disease, how they cooperate with dermatologists and what areas GPs would identify for further research and training.

In addition, we aimed to analyse how patients with chronic skin diseases approach the official health care system, how personal concepts of their illness are constructed and expressed and what they think about the cooperation between their GP and their dermatologist.

**Methods:** We conducted semi-structured interviews with 15 GPs and 17 patients with chronic skin diseases. Interviews were taped, transcribed and analysed qualitatively by two independent raters.

For an additional quantitative data collection we developed a questionnaire including 7 items which was distributed to 300 patients in the waiting rooms of 3 GP offices.

**Results and conclusions:** Data collection not yet finished; results and conclusions will be presented at the WONCA congress. We would like to share and discuss our experiences with other countries in order to develop new strategies for research and teaching.

Disclosure: No conflict of interest declared

1636

Presentation type: Oral Communication

**Do single dose prophylactic antibiotics reduce the incidence of wound infection in below knee excisions?**

C. Heal, S. Smith

*Rural Clinical School Mackay, James Cook University, Mackay, Australia*

**Objectives:** Australia has the highest incidence of skin cancers in the world, the majority of which are treated with excision by general practitioners (GPs). Superficial surgical site infection following such procedures contributes to patient morbidity and impairs cosmetic outcome. Usually, infection occurs in 1-3%. Studies have however highlighted factors associated with significantly elevated risk of infection including excisions from the lower limb. Several guidelines advocate the use of a single oral dose of prophylactic antibiotic prior to such excisions to reduce the risk of infection. While there is evidence for this intervention in other surgeries, no trials have been conducted examining the efficacy in minor dermatological surgery.

The aim of this trial was to determine if a 2g dose of cephalexin prior to skin lesion excisions from the lower limb reduces the incidence of wound infection

**Method:** A prospective multi-centre double-blind randomised placebo controlled trial was conducted in primary care in North Queensland. Participants were randomised to take either a single 2g dose of cephalexin or an identical placebo 30-60 minutes prior to skin lesion excision. 56 patients were assessed for infection at suture removal.

**Results:** The incidence of infection was significantly lower in the intervention group (6.9%) compared to the control (33.5%) (p-value 0.018). The absolute reduction was 26.6%, relative reduction 76.9%, and NNT 3.7.

**Conclusion:** The results support the consideration of single dose oral prophylaxis for skin lesion excision from the lower limb, particularly in humid climates, such as North Queensland, where baseline infection rates are very high.

Disclosure: No conflict of interest declared

**3.18. OCCUPATIONAL HEALTH**

231

Presentation type: Oral Communication

**Assessment of Medical Condition for the Purposes of Social Services based on 10 basic needs**

L. Čeledová, R. Čevela

*Assessment Service, Ministry of Labour and Social Affairs, Prague, Czech Republic*

**Objectives:** Reporting on the development of an ICF core set for functional assessment in disability claims in Czech Social Services System.

**Methods:** From 1<sup>st</sup> January 2012, for the purposes of the Act on Social Services, the long-term unfavourable state of health is newly defined as the state of health which, according to medical science knowledge, persists or is to persist for longer than one year, and which limits the functioning required for managing the basic needs. The assessment of the degree of dependence will include the evaluation of the functional impact of the long-term unfavourable state of health on the ability to manage the 10 basic needs. The basic needs are considered to include: mobility, orientation, communication, self-feeding, putting on clothes and footwear, washing oneself, toileting, looking after one's health, personal activities, and household tasks.

**Results:** The new medical assessment criteria are based on a system on the Activities of Daily Living and they are a reduced form of the ICF, chapter d (activities and participation). The ADL correspond to the ten activities of the ICF which encompasses all components of human health and certain forms of well-being. Some category from environmental factors was also included.

**Conclusion:** The new assessment according 10 basic needs aims at using the functional diagnosis and salutogenic approach to health.

Disclosure: No conflict of interest declared

### 3.19. ONCOLOGY AND PALLIATIVE CARE

759

Presentation type: Workshop

#### Promoting palliative care in primary care: Producing an advocacy document for use in different countries

S.A. Murray<sup>1</sup>, G. Mitchell<sup>2</sup>, A. Barnard<sup>3</sup>, B. Van den Eynden<sup>4</sup>, D. Weller<sup>1</sup>, F. Burge<sup>5</sup>, A. Berendsen<sup>6</sup>, C. Campbell<sup>1</sup>

<sup>1</sup> Community Health Sciences, University of Edinburgh, Edinburgh, United Kingdom; <sup>2</sup> General Practice, University of Brisbane, Brisbane, Australia; <sup>3</sup> General Practice, University of Capetown, Capetown, South Africa; <sup>4</sup> Department of Primary and Interdisciplinary Health Care, University of Antwerp, Antwerp, Belgium; <sup>5</sup> Primary Care, University of Halifax, Halifax, Canada;

<sup>6</sup> Nijmegen Medical Centre, The Radboud University, Nijmegen, Netherlands

Members of the **WONCA Special Interest Group in Cancer and Palliative Care** will start this workshop with brief presentations of survey findings from different continents

**Objective:** To increase the practice of palliative care in primary care, so that all people in need of end-of-life care internationally may have access to a general practitioner who can provide quality palliative care. The purpose of the workshop will be to discuss and refine a draft document which will be used by national primary care and palliative care organizations to promote palliative care in the community.

**Methods:** Production of national guidelines document that can be used by palliative care champions in each country to advocate for, and guide the development of and training in palliative care in economically developed and resource poor nations.

**Results:** Over 20 countries have been surveyed and many barriers and facilitating factors have been identified. These issues have been analysed under 1) Appropriate policies 2) Education/training 3) Availability of medicines/opioids 4) Health service factors. Internationally there are many examples of successful innovations to make palliative care work well in primary care. These include national strategies, educational initiatives for GPs and community nurses, integrated care frameworks, and making opioid prescribing more available.

**Conclusions:** These success and barriers will be discussed, and a document produced and in due course distributed through WONCA and the International Hospice and Palliative Care Association so that national primary care and palliative care organizations can together improve end-of-life care in the community.

Disclosure: No conflict of interest declared

410

Presentation type: Oral Communication

#### Partners of cancer patients have increased primary care use for somatic and psychosocial problems

M. Heins<sup>1</sup>, F. Schellevis<sup>1</sup>, M. Rijken<sup>2</sup>, G. Donker<sup>1</sup>, L. van der Hoek<sup>1</sup>, J. Korevaar<sup>1</sup>

<sup>1</sup> Dept. Primary Care, Netherlands Institute for health services research (NIVEL), Utrecht, Netherlands; <sup>2</sup> Chronic Disease, Netherlands Institute for health services research (NIVEL), Utrecht, Netherlands

**Purpose:** Partners of cancer patients experience psychological distress and impaired physical health around and after the cancer diagnosis of their partner. We aimed to determine their primary care (PC) use in this period.

**Methods:** Cohort study in which we included partners of 3,071 patients with breast, prostate, colorectal or lung cancer. Patients were diagnosed in 2001-2009 and were alive at least 2 years after diagnosis. We determined the number of PC contacts and health problems in partners between 6 months before and 2 years after diagnosis.

**Results:** In the first six months after diagnosis, partners' PC use was similar to baseline (18-6 months before diagnosis). Between 6-24 months after diagnosis, PC use was increased in partners of breast, prostate and colorectal cancer patients, an increase of 31% (p=0.001), 26%(p=0.001) and 19%(p=0.042), respectively. In partners of breast cancer patients, PC use was increased for psychosocial symptoms, acute symptoms and chronic diseases. In partners of prostate cancer patients, an increase was seen in acute symptoms, chronic diseases and infections. In partners of colorectal cancer patients, an increase was seen in psychosocial and acute symptoms. In partners of lung cancer patients, PC use for psychosocial symptoms was increased. Problems with the illness of the partner were a frequent reason for contact in the first six months after diagnosis.

**Conclusions:** PC use of partners of cancer patients is increased 6-24 months after diagnosis, health problems vary between cancer types. GPs should be alert for somatic and psychosocial problems in partners of cancer patients.

Disclosure: No conflict of interest declared



1195

**Presentation type: Oral Communication****Measures for improvement the participation in colorectal cancer screening**

N. Král, B. Seifert, J. Vojtíšková

*Department of General Practice, First Faculty of Medicine, Charles University in Prague, Prague, Czech Republic*

**Background:** Despite the fact that organized two steps colorectal cancer screening (FOBT+colonoscopy) was introduced in the Czech Republic in 2000, the participation in screening remains low. To improve the situation changes were introduced in 2009; the immunonochemical FOBT on a yearly basis from the age of 50 yrs, the engagement of primary care-based gynaecologists and the option of a primary screening colonoscopy at the age 55.

**Methods:** Data on FOBTs and screening colonoscopies are collected by sick funds and pass through National Reference Centre to a central institute for analysis. Following indicators were used: number of FOBT, the number of primary screening colonoscopies (PSC), coverage of target population, regional FOBT coverage, FOBT positivity rate.

**Results:** The number of FOBT performed in primary care increased from 352 595 in 2008 to 414 300 in 2009 and to 521 429 in 2010 (48% increase since 2008). 3887 PSCs were performed in 2010, representing 0,7% of screening interventions. The total coverage of the target population over 50 yrs was 22,8% (20,9% men and 24,1% women) and 27% (both sexes, age 55-74yrs). Gynaecologists contributed 8,3% of FOBT in total, respective 14,3% in women. The coverage in 15 regions of the Czech Republic varied from 16,1% to 29,3%.

**Conclusions:** The data showed a substantially increasing trend in screening attendance. Introduction of immunochemical tests, annual testing in 50-55 yrs and involvement of gynaecologists were considered to be effective measures. Regional variations indicated a room for improvement. The introduction of primary screening colonoscopy did not affect the uptake in screening.

Disclosure: No conflict of interest declared

1292

**Presentation type: Oral Communication****Identifying patients in UK primary care for palliative care**L. Brown<sup>1</sup>, A. Finnuacane<sup>1</sup>, S.A. Murray<sup>1</sup>, D. Oxenham<sup>2</sup>, P. McLoughlin<sup>3</sup><sup>1</sup> *Primary Palliative Care Research Group, University of Edinburgh, Edinburgh, United Kingdom;*<sup>2</sup> *Marie Curie Hospice Edinburgh, Marie Curie Cancer Relief, Edinburgh, United Kingdom;*<sup>3</sup> *Service Developments, Lothian Health, Edinburgh, United Kingdom*

**Objectives:** A patient with any advanced progressive diseases may benefit from an early palliative care approach. However, current palliative care services largely treat cancer patients in their last months of life. In the UK GPs are reimbursed for keeping practice palliative care registers. We aimed to document and understand variations in the recording of patients for palliative care in primary care.

**Methods:** Case note review of all patients who had died in nine UK GP practices over 12 months to examine if and when they had been identified for palliative care before they had died. Interviews with health care professionals. We conducted routine statistical and thematic analyses.

**Results:** 29% of deceased patients had cancer; 25% had organ failure, and 23% had frailty and/or dementia. 75% of patients with cancer were identified for a palliative approach in comparison to only 20% of other patients. Patients were identified for palliative care only seven weeks (median) before death. Those with frailty and/or dementia were identified significantly later than those with cancer or organ failure. A cancer diagnosis, routine practice meetings, and financial incentives facilitated identification. Individual decision-making, patient's association of "palliative care" with imminent dying, and administrative burden, were barriers to identifying patients.

**Conclusion:** Only 20% of patients with organ failure and frailty and/or dementia are being formally identified for palliative care. Patients are being identified at a very late stage of illness if at all. Better and earlier identification of patients for palliative care would allow them to access better support.

Disclosure: No conflict of interest declared

## 3.20. TRADITIONAL AND ALTERNATIVE MEDICINE

374

Presentation type: Oral Communication

### The effectiveness and safety of ten of medicinal plants among Filipinos: A metaanalysis

B. Santiago

Medical, National Healthcare Group Polyclinic, Singapore, Singapore

#### Objective:

- 1) to assess the efficacy and safety of the ten medicinal plants among Filipinos.
- 2) determine the incidence of adverse effects of these plants.

**Methodology:** A systematic search of literature from 2000 to 2010 was done to screen studies for inclusion. Included were randomized controlled trials. Study quality was evaluated using primary and secondary validity guides. Data was analyzed using Review Manager 4.1.

**Results:** The results of this metaanalysis showed that the ten medicinal plants namely.

- 1) Akapulko reduced the skin lesions due to scabies.
- 2) Ampalaya lowered down the blood glucose level of patients with RBS > 200mg/dl.
- 3) Bawang reduced the mean total cholesterol level of patients whose total cholesterol level > 200mg/dl.
- 4) Bayabas exerted its antiseptic property by determining the Mean Concentration of S.aureus and Paeruginosa
- 5) Lagundi suppressed cough and improved the color of phlegm of patients with cough
- 6) Niyog-niyogan completely eradicated Ascaris lumbricoides
- 7) Pansit-pansitan reduced inflammation of joints
- 8) Sambong dissolves kidney stones
- 9) Tsaang gubat relieves abdominal colic
- 10) Yerba Buena soothes spasm of irritable bowel.

**Conclusion:** The ten medicinal Plants were shown to be effective among Filipinos in terms of their respective claimed medicinal value and appeared to be safe compared to placebo

Disclosure: No conflict of interest declared

657

Presentation type: Oral Communication

### The use of acupuncture as Complementary Therapy to treat patients

F. García

Family Medicine Service, Italian hospital de B.A., CABA, Argentina

**Introduction:** The use of acupuncture in treating patients, is recognized by most countries as a medical act and obtaining benefits in the treatment of different ailments. However, this practice is not recognized by private medical companies and public health system in Argentina.

A few years ago the Italian Hospital of Buenos Aires introduced this practice as one of the Complementary Therapies.

#### Objectives:

- 1) Determine who are the main users and beneficiaries of this therapy.
- 2) Know the main ailments treated.
- 3) To determine the level of satisfaction expressed by patients.

**Methods:** This practice is developed by the Medical Services Family. Patients are referred by a primary care physician.

Treatments were agreed in 10 sessions on a weekly basis during 2012.

**Results:** 160 patients completing treatment. Of these, 110 (68.75%) were female.

The 41% of patients were over 70 years.

The most frequent reason for consultation was pain. The spinal pain, accounted for 60% of consultations.

Other complaints were omalgias (7.3%), knee pain (7.3%), anxiety disorder (13.7%), fibromyalgia (3.7%) and headache (3.75%).

The majority are patients not answer to standard treatments.

130 patients reported being very satisfied with the treatment (81.25%) and 20 patients satisfied (12.5%).

**Conclusions:** The incorporation of these disciplines and recognition is a tool of unspeakable value for treatment and health care of patients.

The incorporation of these practices formally can benefit a larger number of patients and increasing accessibility to complementary medicines.

Disclosure: No conflict of interest declared

850

**Presentation type: Oral Communication****The treatment of snake bites in hospital near Phanomdongrak mountain in Thailand**

A. Boonpradub

*Medical staff organization, The King's birthday celebrations 80 years Phanomdongrak Hospital, Amphur Phanomdongrak Surin Province, Thailand***Objective:**

- To study the epidemiology of patients who were bitten by poisonous snakes.
- To study the methods and results of treatment of patients who have been bitten by a poisonous snake.

**Methods:**

- Retrospective Descriptive study
- Information obtained from reviewed the medical records of patients who had been bitten by a snake at 12 of community hospital near Phanomdongrak mountain from July 1, 2009 – June 30, 2012.

**Results:****Epidemiology**

- Studied from 684 patients; male 420 (61.4%) and female 264 (38.6%). The body part that was bitten the most is feet. (63.5%).
- The most poisonous snake bite is from the green pit viper 26.8%.
- The most common time of snake bites is between 12.00 – 18.00 (31.6%), and May is the most common month that happen (14%).
- Regarding the place, 11.4% of the patients were bitten at their residence, though 68.7% are unidentified.

**Methods, and results of treatment**

- Treatment : 10.5% for antivenom, 90.9% for antibiotic and 14.2% for herbal medicine.
- The group that used herbal medicine were healed 96.9% and 3.1% were sent to the next level (provincial) hospital. The other group that not used herbal medicine were healed 86.5% and 10.9% were sent to the provincial hospital.

**Conclusions:** For standard practice, we still follow 'The Practice guideline for management of patients with snake bite' of the Department of Health in Thailand. There are 2 hospitals used herbal to treatment, though showing effective results, it still requires further study for development of use in the future.

Disclosure: No conflict of interest declared

1704

**Presentation type: Oral Communication****Concerns about complementary medicines: data from a decade of calls to consumer medicines information lines in Australia**M. van Driel<sup>1</sup>, T. McGuire<sup>2</sup>, S. Kreijkamp-Kaspers<sup>1</sup>, S. Bedford<sup>1</sup>, M. Pirotta<sup>3</sup><sup>1</sup> *Discipline of General Practice, School of Medicine, The University of Queensland, Australia;*<sup>2</sup> *Mater Pharmacy Services and School of Pharmacy, The University of Queensland, Australia;*<sup>3</sup> *Department of General Practice, University of Melbourne, Australia*

**Objective:** An estimated two-thirds of Australians use complementary medicines (CMs), which are widely available without prescription or medical advice. As they are perceived as "natural" and "harmless", consumers often do not mention using them to their general practitioners (GPs). Yet, some CMs interact with prescription medication or trigger unexpected adverse effects. Little is known about consumers' concerns with CM use. This study explored their questions related to CMs.

**Methods:** We analysed data from three national and one state-wide (Queensland) pharmacist-operated telephone call centres that were available between 1995 and 2010 to provide information about medicines in Australia. We used quantitative and qualitative methods to assess the most frequently asked questions related to CMs.

**Results:** In total 216,776 calls were registered to the call centres, with 15,563 (7.1%) related to CMs. The top 3 most frequently cited CMs were: Fish oil, St Johns Wort and Multivitamins. Consumers were most concerned about the safety of the CMs they were taking and had questions about the interactions with other (prescribed) medication. Further quantitative and qualitative analyses are underway.

**Conclusions:** Consumers' questions about CMs show a similar pattern to questions about prescription medication, with a strong emphasis on safety and interactions. Providing easily accessible evidence-based patient oriented information about CMs can fill this identified gap and improve awareness and quality use of over the counter available products in mainstream general practice.

Disclosure: No conflict of interest declared

## 3.21. OTHERS

570

**Presentation type:** Oral Communication

### Preparing a research paper for publication

A.V. Neale

*Family Medicine and Public Health Sciences, Wayne State University, Detroit, United States*

**Workshop Objective:** to prepare novice authors to submit reports of research studies to peer-reviewed primary care journals.

**Methods:** Workshop content will include:

- 1) an overview introduction to the “Uniform Requirements for Manuscripts Submitted to Biomedical Journals”;
- 2) discussion of authorship criteria and other aspects of publication ethics;
- 3) detailed suggestions for manuscripts components and following the IMRAD format (Introduction, Methods, Results and Discussion); and
- 4) Responding to peer reviewer critiques.

**Results:** Participants will learn about editors’ expectations for papers submitted for peer review, and how to increase the probability that a manuscript is accepted for publication.

**Conclusion:** The workshop will use an interactive format, encouraging questions and audience participation.

Disclosure: No conflict of interest declared

573

**Presentation type:** Oral Communication

### An innovative procedure workshop – using virtual patients & complications

T. Iroku-Malize, R. Vesey, M. Rali, N. Philippe, C. Magnifico, M. Delman, F. Caston, R. Bonanno, S. Kirsch, G. Grinshpun

*Family Medicine, Hofstra North Shore-LIJ School of Medicine; NSLIJ Health System, Long Island, United States*

**Objective:** To create an innovative procedure workshop that would include virtual patients and train physicians on maintaining ongoing communication when complications arose.

**Methods:** This session is divided into four parts:

- a) The participants (students, residents and attending) take an individualized readiness assessment test which comprises 10 multiple choice questions. This helps faculty assess participant preparation.
- b) The case is presented via video and powerpoint. The participants deduce the diagnosis and management based on the history, physical and workup. A participant is then chosen to demonstrate how they would obtain consent from the patient. Another is chosen to describe how to explain when a complication or an error has occurred.
- c) The participants enter the procedure workroom and after wearing protective gear, prep and perform the procedure while maintaining ongoing communication with the “patient” (thawed cadaver specimens). They repeat the procedure a number of times.
- d) The participants return to the classroom for a debriefing session and for the preceptor to clarify any issues. The IRAT answers are also reviewed via audience participation. Participants complete a program evaluation.

**Results:** We have completed over 14 sessions with ~20 participants per session.

Utilizing a Lichert Scale (1 unfavorable – 6 excellent), the ratings are 5.71 for faculty, 5.64 meeting learning needs, 5.69 procedure performance, 5.59 complication recognition, and 5.72 likelihood to recommend program.

**Conclusion:** This workshop is an appropriate medical educational tool for both training and refreshing skills in performing procedures and recognizing complications.

Disclosure: No conflict of interest declared

1144

**Presentation type: Oral Communication****The ECOGEN study: Accessing to the black box of French general practice**

L. Lezilliart<sup>1</sup>, I. Supper<sup>1</sup>, P. Boulet<sup>1</sup>, M. Schuers<sup>1</sup>, M.-H. Elsensohn<sup>2</sup>, D. Darmon<sup>1</sup>, M. Favre<sup>1</sup>, A. Mercier<sup>1</sup>

<sup>1</sup> CNGE, French College of teaching general practitioners, Vincennes, France; <sup>2</sup> Département de biostatistiques, Hospices Civils de Lyon, Lyon, France

**Context:** The content of the consultations in general practice is poorly known in France. The main objective of the ECOGEN study was to describe the reasons for encounter and processes of care associated with the main health problems managed in French general practice.

**Methods:** The investigators were 54 residents, during their training in 128 teaching practices attached to 27 university departments of general practice. Following an interactive training seminar on the use of ICPC-2, they collected the elements of each consultation during 20 days distributed across 5 months. The assessments as well as the associated reasons for consultation and processes of care were filled in on a paper form and secondarily entered into a centralized database, accessible on a dedicated Website.

**Results:** The database included 20,818 consultations. On average, 2.2 health problems (assessments) per consultation were managed by GPs. Beyond general problems (16.7 %), the main health problems managed concerned the circulatory (13.5 %), the musculoskeletal (12.6 %), respiratory (12.3 %), endocrine/metabolic/nutritional (10.7 %) and the psychological systems (8.2 %). For each health problem, the patient had presented with 1.2 reason for encounter and the physician initiated 2.1 processes of care (either performed or planned). A proportion of 11.3 % of health problems managed was initiated by the general practitioner.

**Conclusions:** Numerous and various processes of care, previously not recognized because not subject to billing, are performed or planned in French primary care. General practitioners do not only respond to patients' requests, but also identify additional health issues.

Disclosure: No conflict of interest declared

1270

**Presentation type: Oral Communication****The influence of pharmaceutical companies on medical prescriptions**

M. Gliozzi, R. Tato, A. Carlota de Bragança, S. Reis

*USF Arco, USF Arco, Lisbon, Portugal*

**Objective:** To characterize the influence of pharmaceutical companies on medical prescriptions.

**Methods:** Research in Medline, Cochrane Reviews, NHS Evidence, National Guideline Clearinghouse. Mesh terms: drug industry, prescription. Limits: July 2007 to July 2012. Languages: English, Portuguese, Spanish and French. SORT taxonomy was used.

**Results:** 963 articles were found, 35 were selected: 3 guidelines, 2 systematic reviews, 10 cohort, 17 cross-sectional and 3 case-studies. The information given by the pharmaceutical companies is considered useful and credible by many clinicians. Most of them consider they are influenced by the pharmaceutical industry when prescribing; however they believe that they themselves are less susceptible to this than their colleagues. The use of drug samples appears to increase the costs and reduce the proportion of generic drugs prescribed (Level of Evidence, LE 2/3). Pharmaceutical sales representatives' visits seem to increase the prescription of the advertised drug (LE3). A systematic review concludes that drug industry information had negative (higher prescribing frequency, higher costs and less prescribing quality) or no effect on prescription (LE2). The analysis was complicated by the heterogeneity of the studies and the difficulty in establishing a cause-effect relationship.

**Conclusions:** More multicenter trials are indispensable to evaluate clinical outcomes. Due to the ethical principal of precaution and because of the lack of evidence of a positive impact of the pharmaceutical companies' influence, we recommended to avoid or minimize/optimize this relationship (Strength of Recommendation, SOR C). It is also necessary to create guidelines on this matter (SOR C).

Disclosure: No conflict of interest declared

1435

**Presentation type: Oral Communication****Are particle repositioning maneuvers effective to treat benign paroxysmal positional vertigo? An evidence-based review**M.F.M.J. Costa<sup>1</sup>, R.F. Maia<sup>2</sup><sup>1</sup> *USF Serpa Pinto, ARS Norte, ACeS Porto Ocidental, Porto, Portugal;* <sup>2</sup> *UCSP Carvalhido, ARS Norte, ACeS Porto Ocidental, Porto, Portugal*

**Objective:** Benign Paroxysmal Positional Vertigo (BPPV) is the most common positional vertigo and is associated with considerable morbidity.

The purpose of this work is to review the available evidence regarding the efficacy of canalith repositioning maneuvers (Epley, Semont) to treat adults with BPPV.

**Methods:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms «benign paroxysmal positional vertigo» and «therapy», published from January 2008 to November 2012, in Portuguese and English.

The Strength of Recommendation Taxonomy (SORT) of the American Family Physician was used to establish strength of recommendations (SR) and levels of evidence (LE).

**Results:** Guidelines from American Academy of Neurology stated SR A for the effectiveness of Epley maneuver (EM) and SR B to Semont maneuver (SM). Guidelines from American Academy of Otolaryngology concluded a SR B to both maneuvers. Cochrane meta-analysis concluded a LE 1 to efficacy of EM. Meta-analysis from Prim-Espada concluded that effectiveness of EM is superior to expectant approach (LE 2). Systematic review from Helminski showed that EM and SM have equal efficacy (LE 3). Randomized controlled trials (RCT) concluded that both maneuvers are more effective than expectant approach. Two RCT compared the effectiveness of the vestibular suppressant medications and results were inconsistent.

**Conclusion:** Available evidence indicates that EM (SR A) and SM (SR B) are effective in treating patients with posterior BPPV. These maneuvers can be a useful therapeutic approach in the family physician practice. However, more clinical trials are warranted.

Disclosure: No conflict of interest declared



**POSTERS**

## 1.1. HYGIENE / EPIDEMIOLOGY

62

### Alcoholism and the use of illicit drugs as factors predisposing to hospitalization for treatment of tuberculosis in Brazil

R. Telarolli Jr.

Biological Sciences – Faculty of Pharmaceutical Sciences, Universidade Estadual Paulista – UNESP, Araraquara, Brazil

Since the late 20th century, Brazil has shown a reduction in the incidence and mortality from tuberculosis. In some groups of the population, however, the disease continues with higher prevalence, as in the prison population, HIV-positive, homeless, suffering from alcoholism and illicit drug users. A possibility to increase the levels of healing in those socially vulnerable groups is the hospital treatment. In Américo Brasiliense, municipality in the southeast of Brazil, there is one of the last hospitals specializing in the treatment of tuberculosis, in situations where the outpatient treatment is not enough. We reviewed the medical records of all patients who were admitted and were discharged in 2010 in Hospital Nestor Goulart Reis, Américo Brasiliense, rising information about medical, demographic and social variables. Were 114 total admissions, of which 82.5% were men and 17.5% were women. Of the total, were 9.7% homeless people (all men), young adults (28% had up to 30 years of age) and the low level of schooling (85.2% had up to 8 years study). Alcoholism appeared as the most frequent comorbidity, present at 71.0% of in-patients. Then came the use of illicit drugs, in 15.8% of inpatients, followed by hepatitis C, present in 12.3%. These data demonstrate that, for the effective control of tuberculosis in Brazil, it is essential to include specific measures that include individuals with alcoholism and illicit drug users.

Disclosure: No conflict of interest declared

112

### Vaccine effectiveness of 2012 trivalent influenza vaccine for prevent ILI symptoms in healthcare workers, Satuek hospital, Buriram, August – October 2012

E. Yodkalw<sup>1</sup>, N. Ropariram<sup>1</sup>, T. Ruangpaisarn<sup>1</sup>, Y. Aekrathok<sup>1</sup>, P. Utaravichien<sup>1</sup>, K. Tutong<sup>1</sup>, N. Kaewpitoon<sup>2</sup>, R. Rujarakul<sup>3</sup>, N. Namwichisirikul<sup>3</sup>, S. Churproong<sup>3</sup>

<sup>1</sup> Family and community medicine, Satuek hospital, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>2</sup> Pathology, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>3</sup> Family and community medicine, Suranaree University of Technology, Nakhonratchasima, Thailand

**Background:** Healthcare workers in Thailand are advised to influenza vaccination in every year. The objectives are to identify factors associated with influenza like illness and assess vaccine effectiveness of the 2012 trivalent influenza vaccine.

**Methods:** For a descriptive study. We conducted active case finding to determine of Influenza-like illness among HCWs in Satuek hospital. Case definition of ILI was defined as a person who worked in Satuek Hospital and developed fever with cough and/or sore throat and/or myalgia between 1 August and 18 October 2012. Retrospective cohort study was performed to identify possible risk/protective factors and assess vaccine effectiveness. Univariate and multivariate analyses were used to estimate crude risk ratio and adjusted odds ratio with 95% confidence interval. Evaluation of vaccine effectiveness was carried out.

**Results:** 70 cases met to definition. Median age of cases was 33 years (IQR: 27-41 years), male to female ratio was 1:4. In univariate analysis the significant factor was 2012 trivalent influenza vaccine (crude RR = 0.46, 95%CI=0.32-0.65), BMI > 25 kg/m<sup>2</sup> (crude RR = 1.69, 95%CI=1.15-2.47) and 2011 trivalent influenza vaccine (crude RR = 0.56, 95%CI=0.39-0.82). In multivariate analyses only 2 significant factors was 2012 trivalent influenza vaccine (adj OR = 0.29, 95%CI=0.12-0.70) and BMI > 25 kg/m<sup>2</sup> (adj OR = 2.40, 95%CI=1.13-5.09). The vaccine effectiveness was 54.0%.

**Conclusions:** The 2012 trivalent influenza vaccine and BMI >25 kg/m<sup>2</sup> was a statistically significant protective and risk factor. The vaccine effectiveness of 2012 trivalent influenza vaccine for preventing ILI was modest.

Disclosure: No conflict of interest declared

156

**Prevalence and the determinants of smoking among high-school students, in Tirana, Albania**S. Enkelejda<sup>1</sup>, D Shtiza<sup>2</sup><sup>1</sup>Family Medicine Department, Faculty of Nursing, Tirana, Albania; <sup>2</sup>University Hospital Centre: Mother Theresa, Tirana, Albania

**Objective:** To assess the prevalence of smoking and its associated factors among high-school students in Tirana, Albania

**Methods:** An anonymous questionnaire survey was carried out among 797 high-school students (63% females), in Tirana, the Albanian capital city in March-April 2012. The questionnaire included socio-demographic data and information on smoking habits of students, their family members, and their closed friends. Pearson's chi-square test was used to assess the difference in prevalence rates of smoking between students from different subgroups.

**Results:** The overall prevalence of daily smoking was 14.9% (95%CI = 12.5% – 17.6%). It was 24.3% in males versus 9.4% in females (P<0.001). Other 'predictors' of smoking were low academic performance (P<0.001), having smoking friends (P=0.001) and smoking parents (P=0.001).

**Conclusions:** Smoking habits among high-school students in Albania resemble the patterns reported in other countries. Given the high smoking rate among adults, there is an urgent need to implement a more effective tobacco control law in Albania.

Disclosure: No conflict of interest declared

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**Bacterial resistance in the community acquired pneumonia**

A.M. Slanina, D. Felea, S. Matasaru

Department of Family Medicine, University of Medicine and Pharmacy „Gr. T. Popa“, Iasi, Romania

**Objective:** Our aim was to establish the etiology of outpatient CAP (Community Acquired Pneumonia) and the degree of bacterial resistance in a group of study from an urban Family Medicine setting.

**Methods:** We enrolled 140 patients with CAP, over a period of 5 years, and collected sputum samples before initiation of antibiotic treatment. The specimens have been analyzed using the traditional Gram-Giemsa coloration and plate-diffusion method has been employed to test susceptibility to a variety of antibiotics commonly used in primary care.

**Results:** There have been identified 39 strains of *S. pneumoniae*, 29 of *H. influenzae*, and 26 of *M. catarrhalis*. Pneumococcal resistance was highest for penicillin (56%) and erythromycin (40%), with better outcomes for III<sup>rd</sup> generation cephalosporins (8% resistant strains), fluoroquinolones (18% resistance) and amoxicillin (25% resistance). The strains of *H. influenzae* and *M. catarrhalis* identified have shown a higher susceptibility to amoxicillin-clavulanic acid combination, as well as to the III<sup>rd</sup> generation cephalosporins.

**Conclusions:** Bacterial resistance of the germs causing respiratory tract infections is an important issue with an impact on the therapeutic outcome in the family medicine area. The multi-drug resistant *S. pneumoniae* is a threat mostly because Romania is one of the European countries with the highest degree of penicillin resistant strains. Efforts to implement immunization for Pneumococcal Disease are mandatory.

Disclosure: No conflict of interest declared



521

**Knowledge levels on Crimean Congo Hemorrhagic Fever among a sample of doctors in Istanbul, Turkey**N.S.Atakisi<sup>1</sup>, Z.A. Saglam<sup>1</sup>, F. Sargin<sup>2</sup><sup>1</sup> Family Medicine, Istanbul Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey; <sup>2</sup> Clinical Microbiology and Infectious Diseases, Istanbul Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey**Introduction:**

(CCHF) is an acute, fatal zoonotic illness which constitute a threat for public because of the epidemic potential and high fatality ratio. Doctors' awareness is important for instituting proper control/treatment measures. This study was conducted to determine the attitude, knowledge and practice among Turkish doctors regarding CCHF.

**Methods:** This descriptive and cross-sectional survey was conducted between August/2011-January/2012 among doctors of Istanbul Goztepe Training and Research Hospital. Data on demographic status(Q1) and general knowledge (Q2) was collected.

**Results:**The mean age of the study group (n=286) was 32.4yrs; 109 were specialists, 117 were residents. Mean knowledge score was 39,19±2,68. 81 doctors(28,3%) have encountered with a tick but not removed, 98(34,3%) have done both. 107(37,4%) doctors have never seen a tick; 50 of them couldn't recognise the picture of a tick. 112(39,2%) had prior education on ticks. 125(43,7%) doctors felt having insufficient knowledge and 179 (62,6%) wanted to have further education. There wasn't a statistical difference between specialists' and juniors' scores except knowledge on treatment(p:0.002). Doctors who didn't work in rural areas (n=138;48,3%) were more successful at the theory of tick removal (p:0.023). Working experience of 1-10 years caused statistically lower scores at treatment than doctors practicing for >10 years (p=0,009).While generally scores were sufficient in 241(%84,27) doctors, scores of "managing the serious cases" and "differential diagnosis" were the lowest.

**Conclusion:** Healthcare professionals should have sufficient knowledge on clinical findings, management and protective measures about CCHF. The basic education given at the medical school should be periodically updated

Disclosure: No conflict of interest declared

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**The secular trend in the incidence of hip fractures in Spain. Is it changing?**R. Azagra<sup>1,2,3</sup>, M. Zwart<sup>3,4</sup>, A. Aguyé<sup>1,3</sup>, J.C. Martin-Sanchez<sup>5</sup>, F. López-Expósito<sup>1,2</sup>, G.Encabo<sup>6</sup>, S. Güell<sup>1,2,3</sup>, G. Roca<sup>2,7</sup>, N. Puchol<sup>1,3</sup>, J. Pujol-Salud<sup>3,8,9</sup><sup>1</sup> Primari Care Center, Institut Català de la Salut, Barcelona, Spain; <sup>2</sup> Medicine, Universitat Autònoma de Barcelona., Barcelona, Spain; <sup>3</sup> Unitat Suport Recerca, Idiap Jordi Gol, Barcelona, Spain; <sup>4</sup> Primary Care Center, Institut Català de la Salut, Girona, Spain; <sup>5</sup> Statistics, Universitat Internacional de Catalunya, Barcelona, Spain; <sup>6</sup> Nuclear Medicine, Hospital Universitario Valle de Hebron, Barcelona, Spain; <sup>7</sup> Primary Care Center, CST, Barcelona, Spain; <sup>8</sup> Surgery, Universitat de Lleida, Lleida, Spain; <sup>9</sup> Primary Care Center, Institut Català de la Salut, Lleida, Spain

**Introduction:** It has been suggested possible changes in trend in hip fracture in some developed countries. Spain has published partial trend analysis that is not yet clarified. The main objective is to establish whether there are changes in trends in the incidence of hip fractures in Spain.

**Methods:** Ecological study with data from hospital discharges nationwide. Our study includes patients aged ≥65 years from 14 years (1997-2010). To know changes in trend analysis were compared two periods of four years: 1997-2000 and 2007-2010

**Results:** There were 119,857 fractures in men and 415,421 in women. The crude incidence rate / 100,000 inhabitant/year increases 2.3%/year in men (259 in 1997 vs. 325 in 2010) and 1.4%/year in women (664 in 1997 vs. 766 in 2010). Adjusted for population, the rate increases 0.3%/year in men, but decreases 0.3%/year in women. In both sexes the incidence rate rises over ≥ 80 years, but is higher in men. Otherwise the rate at <80 years descends, but more in women. Mortality declines 22% in both sexes. The rate of population ageing rises 24% in men and 17% in women.

**Conclusion:** There is an increase in the crude incidence rate of hip fracture incidence in Spain that is associated with demographic changes (both longer life expectancy and less mortality). When the analysis is adjusted for population, there is a change in trend with an increase in older men over 80 years and decrease in women under 80 years.

Disclosure: No conflict of interest declared

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**Antimicrobial resistance of urinary tract pathogens and rationale for empirical therapy in Serbia**

M. Markovic, D. Melentijevic, S. Conic, M. Brkic, M. Stankovic, T. Gajdasevic Radojkovic, J. Dinic  
*Primary health care, DZ Dr Simo Milosevic, Belgrade, Serbia*

Uncomplicated urinary tract infections (UTI) are a frequent reason for consultation of patients in primary health care. Antibiotic treatment is usually started empirically, before urine culture results are available. Unfortunately, antibiotic resistance has become an increasingly pressing issue in many countries.

**Objective:** To investigate the sensitivity to antibiotics of bacteria that are the predominant cause of urinary infections; to evaluate the options for empirical antibiotic therapy in primary care.

**Methods:** A retrospective analysis of urine culture that were positive in period January to November 2012 and were antibiotic sensitivity tested. Data were analyzed by descriptive and analytical statistics methods, and software program SPSS.

**Results:** In 113 patients included in the study 24(21,2%) were male, 89(78,8%) were women. Middle of ages were  $63,59 \pm 17,5$  (min 21, max 94). E.coli was responsible for 54% UTI, Enterococcus for 16,8%, Proteus species for 10,6%, Klebsiella 6,2%, Pseudomonas 4,4%, Morganella 3,5%, Staphylococcus 2,7%, Streptococcus for 1,8% UTI. The resistance rates were in %: ampicillin (62), trimethoprim/sulphamethoxazole (61), piperimic acid (45), cephalexin (35), norfloxacin (34), gentamicin and nitrofurantoin (28), amoxicillin/clavulanic acid (22), ciprofloxacin (21), ceftriaxon (19). We investigated correlation between ages and bacterial resistance. There were significant correlations between patients ages and bacterial resistant to ampicillin ( $r=0,23, p<0,05$ ), to trimethoprim/sulphamethoxazole ( $r=0,3, p<0,01$ ), piperimic acid ( $r=0,4, p<0,01$ ), ciprofloxacin ( $r=0,33, P<0,01$ ), ceftriaxon ( $r=0,31, p<0,01$ ).

**Conclusion:** Empirical antibiotic selection should be based on knowledge of the local prevalence of bacterial organism and antibiotic sensitivities, because resistance pattern may vary in different regions and different ages.

**Keywords:** antibiotic resistance, empirical treatment, urinary infect

Disclosure: No conflict of interest declared

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**Occupational epidemiology of prevalence and cardiovascular risk factors of nonalcoholic fatty liver disease among the elderly agricultural and fishing population in Taiwan**

H.C. Shih<sup>1</sup>, Y.C. Hu<sup>2</sup>, Y.F. Chen<sup>3</sup>, H.C. Shen<sup>4</sup>, T.H. Tung<sup>5</sup>

<sup>1</sup> Department of Nursing, Kaohsiung Armed Forces General Hospital, Kaohsiung, Taiwan;

<sup>2</sup> College of Nursing, Taipei Medical University, Taipei, Taiwan; <sup>3</sup> Institute of Health and Welfare Policy, National Yang-Ming University, Taipei, Taiwan; <sup>4</sup> Department of General Surgery, New Taipei City Hospital, Taipei, Taiwan; <sup>5</sup> Department of Medical Research and Education, Cheng-Hsin General Hospital, Taipei, Taiwan;

**Objective:** To explore any gender-related differences in prevalence of and cardiovascular risk factors related to non-alcoholic fatty liver disease (NAFLD) amongst the elderly agricultural and fishing population in Taipei, Taiwan.

**Methods:** The study participants were conducted with a total of 6,511 (3,971 males and 2,540 females) healthy elderly subjects voluntarily admitted to a teaching hospital for a physical check-up in 2010. Blood samples and real-time ultrasound-proved fatty liver sonography results were collected.

**Results:** The prevalence of NAFLD for this elderly study population was found to be 27.2%, the proportion revealing a statistically significant decrease with increasing population age ( $p<0.001$ ). Females showed a greater prevalence of NAFLD than did males (34.1% vs. 22.7%,  $p$ -value for  $\chi^2$ -test  $<0.001$ ). Using multiple logistic regression analysis, in addition to female gender, a younger age, higher ALT, higher BMI, presence of hypercholesterolemia, hypertriglyceridemia, lower HDL, and higher fasting plasma glucose were the significant factors associated with NAFLD. Gender-related differences as regards associated factors were also revealed. For females, hypertension (OR=1.18, 95%CI: 1.00-1.40), and lower HDL (OR=1.31, 95%CI: 1.10-1.56) were significantly related to NAFLD but these were not so for males.

**Conclusions:** Several gender-related differences were noted pertaining to the prevalence of and relationship between hypertension, lower HDL, and NAFLD in this occupational elderly study population.

Disclosure: No conflict of interest declared

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**Emergency department physicians in Greece: do they comply with the hygiene rules?**E. Fafliora<sup>1</sup>, G. Mantzouranis<sup>2,1</sup>, V. G. Bampalis<sup>1</sup>, I. Spiliopoulou<sup>3</sup>, M. Christofidou<sup>3</sup><sup>1</sup> Department of General Medicine, University Hospital of Patras, Patras, Greece; <sup>2</sup> Health Unit Evinoxoriou, General Hospital of Mesologgi, Mesologgi, Greece; <sup>3</sup> Department of Microbiology, School of Medicine, University of Patras, Patras, Greece;

**Objective:** Poor hygiene strategies and the subsequent contamination with microbial flora of devices and items may contribute to spread of nosocomial infections. The aim of this study was to investigate the cleaning habits of physicians and their impact on bacterial load.

**Methods:** The present study was conducted in a University Hospital. Forty-six Emergency Department physicians completed a closed-type questionnaire regarding their cleaning habits, while bacteriological culture swabs from their stethoscopes were obtained. The samples were processed by standard laboratory methods and colony forming units (CFUs) were calculated.

**Results:** Forty-three (93.5%) of the participants reported that washed their hands, while only 31 (68.2%) of them repeatedly after every patient's examination. All physicians believed that they should clean their tools, but only 13% cleaned their stethoscope after every patient's examination. The vast majority reported lack of education about either the necessity of hygiene practices (89.1%) or the means used for the above purpose (97.8%), whilst 7 out of 10 strongly agreed on the need of creating such training programs. All sampled stethoscopes had bacterial contamination. Among them 73.9% showed >1000 CFUs per stethoscope; women had more often the less contaminated ones (p=0.050). Stethoscopes cleaned after every examination or every shift were significantly less contaminated as compared to those cleaned randomly (p=0.040).

**Conclusions:** This study revealed a low physician's compliance with the hygiene practices and a subsequent heavy contamination of their stethoscopes. The urgent need of establishing strict hygiene training programs is underlined.

Disclosure: No conflict of interest declared

723

**Relationship between sleep duration and prevalence of diabetes mellitus**

B.S. Kim, K.H. Moon, C.W. Won, H.R. Choi

Family Medicine, Kyung Hee University Hospital, Seoul, Korea

**Objective:** Relationship between sleep duration and prevalence of diabetes mellitus is still controversial; this study attempted to investigate their relationship in Korean adults.

**Methods:** We used data extracted from the Korean National Health and Nutrition Examination Survey V in 2010 for analysis. Participants who were 20 year-old or over were grouped by the tertile of daily sleep duration. Fasting blood glucose level above 126 mg/dL was diagnosed as diabetes mellitus in this study. To analyze the influence of sleep duration on the prevalence of diabetes mellitus, logistic regression analysis was used and the associated factors were adjusted through 3 steps.

**Results:** In comparison to the middle sleep duration group(6-8 hours/day), odds ratio of the prevalence of diabetes mellitus was significantly higher in both  $\geq 9$  hour and  $\leq 5$  hour groups(OR 1.354, 95% CI 1.349~1.359; OR 1.163, 95% CI 1.157~1.169). After adjusting associated factors, the odds ratio of the lowest sleep duration group( $\leq 5$  hours/day) was significantly higher compared to that of the middle sleep duration group(OR 1.105, 95% CI 0.901~0.909). The odds ratio was significantly higher in the highest sleep duration group( $\geq 9$  hours/day) after adjustment as well(OR 1.271, 95% CI 1.264~1.278).

**Conclusions:** In this study, we found that sufficient sleep duration is related to low prevalence of diabetes mellitus in Korean adults. However, further prospective study might be necessary to demonstrate the preventive effects of sufficient sleep duration in diabetes mellitus.

**Keywords:** diabetes mellitus, sleep, blood glucose

Disclosure: No conflict of interest declared

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**Community residents perceptions towards participation on dengue hemorrhagic fever prevention and control in Krabi province**N. Ninchantara<sup>1</sup>, P. Perngmark<sup>2</sup>, P. Singchungchai<sup>2</sup>*Krabi Provincial Public Health Office, MOPH, THAILAND, Krabi, Thailand;*<sup>2</sup> *Faculty of Nursing, Prince of Songkla University, Hat Yai, Thailand*

**Objective:** to describe and compare difference between level of community residents perceptions towards participation on dengue hemorrhagic fever Prevention and Control rating of self-assessment and of health care providers assessment.

**Method:** Cross sectional research, sample was 91 people and was selected by collected by using simple random sampling. Closed – ended questionnaire composed of 2 parts and was reviewed by five experts. Reliability test using Cronbach's alpha coefficient of self-assessment was 0.96 and of health care providers assessment was 0.97. Data were analyzed using descriptive statistic and paired – t-test

**Results:** results of the study showed that overall level of community residents perceptions towards participation on dengue hemorrhagic fever prevention and control by self-assessment was at a moderate level ( M= 3.11, SD = 0.67) and by health care providers assessment was at a moderate level (M= 3.29, SD=0.69) The difference between levels of community residents perceptions towards Participation on dengue hemorrhagic fever prevention and control rating by self-assessment and by health care providers assessment was statically significant difference,  $p < 0.01$

**Conclusion:** Results of this might be benefit in planning and adjust the development participate in in the prevention and control the disease hemorrhagic fever of the community and health care providers have the efficiency

Disclosure: No conflict of interest declared

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**Back pain: incidence, sociodemographic characteristics and resulting inability in primary health care**M. Sant'Ana<sup>1</sup>, C. Ferreira<sup>2</sup>, C. Carvalho<sup>3</sup>, M. Pereira<sup>3</sup>, S. Soares<sup>4</sup>*<sup>1</sup> USF Espaço Saúde, ACeS Porto Ocidental, Porto, Portugal;*<sup>2</sup> *USF Alpendurada, ACeS Tâmega I, Marco de Canavezes, Portugal;*<sup>3</sup> *USF Freamunde, ACeS Tâmega III, Paços de Ferreira, Portugal;*<sup>4</sup> *USF São Martinho, ACeS Tâmega II, Penafiel, Portugal*

**Objective:** Low back pain is a very common reason for consultation in primary health care. Features high prevalence in industrialized countries, with a tendency to increase and is associated with multiple risk factors. It is one of the major causes of absenteeism and entails high socio-economic costs. In Portugal there are few studies on low back pain and it has not yet been assessed the resulting inability of this pathology with validated questionnaires. This project aims to determine the incidence of low back pain in an adult population of users of primary health care in the northern region of Portugal, evaluate the resulting inability of low back pain and analyze sociodemographic factors associated with.

**Methods:** Analytical prospective longitudinal observational study, covering the population between 18 and 65 years enrolled in the list of users of 22 doctors of family health units in the northern region of Portugal. To each of the sample users it was given a self-completion validated questionnaire, the Roland-Morris Questionnaire, for determination of incapacity resulting from low back pain, and doctors completed a questionnaire with demographic characterization of the population surveyed.

**Results and Conclusions:** Data collection began in August 2012 and will end in January 2013. The results, including incidence of low back pain, socio-demographic factors associated with it, and the resulting disability, will be available from March 2013.

Disclosure: No conflict of interest declared

821

**Epidemiological view from the conjunctivitis epidemic in Bhu Sao Rafael**

T. Manesco, J.H. Delamain, L.V.F. Maranagoni, L.P. Santos, S. Souza

*Medical School, UNICID – Universidade Cidade de São Paulo, São Paulo, Brazil*

**Objectives:** Analyze from an epidemiological view the conjunctivitis epidemic in the BHU (Basic Health Unit) São Rafael, in Guarulhos, SP.

**Materials and methods:** We studied prospectively, patients with viral conjunctivitis treated at a Basic Health Unit (BHU) in Jardim Sao Rafael. Patients were assessed using standardized forms containing identifying and demographic data (age, sex, origin and place of residence), clinical history (signs, symptoms, intensity, duration), and the registration number of the family. Utilizing graphics, we evaluated the correlation between age and place of residence with the total number of cases. We carried out an epidemic curve from the date of onset of symptoms with the total number of cases.

**Results:** The conjunctivitis epidemic began in February 2011. In the BHU Guarulhos, the first cases suggestive of conjunctivitis were seen in referral centers for Ophthalmology. Due to the increased demand for care, the service flow was directed to the UBS of the reference cases. In the period between March 20, 2011 and April 4, 2011, 265 cases of conjunctivitis were treated in the UBS San Rafael. The majority of the Patients in the UBS were females, totaling 62.6%.

**Conclusions:** There was a predominance of viral conjunctivitis in females, with higher frequency in the age group of 10-19 years, with a concentration of cases in the area 42 of the UBS.

Disclosure: No conflict of interest declared

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**Alcohol consumption may decrease subcutaneous adipose tissue and increase visceral adipose tissue in Korean male adults.**J.S. Han<sup>1</sup>, S.-W. Oh<sup>2</sup>, H. Kwon<sup>2</sup>, J.-H. Park<sup>2</sup>, H. Choi<sup>2</sup>, B. Cho<sup>2</sup><sup>1</sup> Family Medicine, Seoul National University Bundang Hospital, Seongnam-si, Korea; <sup>2</sup> Family Medicine, Seoul National University Hospital, Seoul, Korea

**Background:** Cross-sectional studies have reported inconsistent results about the association between alcohol consumption and obesity, abdominal adiposity, especially visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT).

**Objective:** We tested the hypothesis that alcohol consumption is differently associated visceral and subcutaneous adipose tissue.

**Design :** Data come from a cross-sectional study conducted in 2008.3.3~2010.2.26 and included 4023 Korean healthy male subjects. Baseline information on the weekly alcohol intake was determined by the number and frequency of alcoholic beverages consumed. We measured SAT, VAT and of abdomen by CT scanning. We used analysis of covariance and multivariate logistic regression to determine the relationship between alcohol consumption and adipose tissue areas (cm<sup>2</sup>), visceral-to-subcutaneous ratio (VSR) and metabolic syndrome.

**Results:** Weekly alcohol consumption shows reciprocal relations to SAT and VAT respectively: inversely associated with SAT ( $p$  for trend < 0.001) and positively associated with VAT ( $p$  for trend = 0.032) independent of age, BMI, smoking status, regular exercise, systolic blood pressure, fasting glucose and total cholesterol level. Furthermore, alcohol consumption is directly associated with VSR ( $p$  for trend = 0.000). The multivariate-adjusted odds ratio (OR) for > 3 metabolic syndrome components was significantly increased according to alcohol consumption [0.94 (0.65-1.36) 1.37 (0.94-2.00) 1.51 (1.01-2.28) 1.57 (0.95-2.59) 2.55 (1.56-4.14) 2.62 (1.74-3.95)  $p$  for trend = 0.000].

**Conclusion :** The results of our study indicate that self-reported alcohol consumption is inversely related to SAT, positively related to VAT, VSR and directly associated with risks of metabolic syndrome. Large population-based prospective studies are needed to confirm the effects of alcohol consumption on adipose tissue.

Disclosure: No conflict of interest declared

922

**Efficacy of antibiotics on Escherichia coli isolated from urine in Serbia**

T. Gajdasevic Radojkovic, D. Melentijevic, S. Conic, M. Brkic, M. Stankovic, M. Markovic, M. Zoric

*Primary health care, DZ Dr Simo Milosevic, Belgrade, Serbia*

Urinary tract infections (UTI) are one of the most common infections in humans. Worldwide, approximately 150 million people are diagnosed with urinary tract infections resulting in \$6 billion health care expenditures. Approximately 80% of the cases with a significant positive urine culture for pathogens an infection with Escherichia coli (E.coli) can be expected. E coli resistance to antibiotics is growing and needs to be imperative in choosing medication for the empirical treatment.

**Objective:** To investigate the prevalence and antibiotic resistance E.coli as as the cause of UTI.

**Methods:** The study was carried out in The Primary Health Center in Belgrade, DZ Dr Simo Milosevic. A retrospective analysis of urine culture that were positive in period january to november 2012 and were antibiotic sensitivity tested. Data were analysed by descriptive statistically methods.

**Results:** In 113 patients included in the study 24(21,2%) were male, 89(78,8%) were women. Middle of ages were 63,59±17,5. E.coli was responsible for 61 (54%) UTI. The resistance rates were in %: ampicillin (54,1), trimethoprim/sulphamethoxazole (41,0), pipemidic acid (27,9), cephalexin (14,8), norfolxacin (23), gentamicin (13,1), nitrofurantoin (11,5), amoxicillin/clavulanic acid (6,6), ciprofloxacin (19,7), ceftriaxon (3,3).

**Conclusions:** The increased resistance rates of ampicillin, trimethoprim / sulphamethoxazole, pipemidic acid should be respected when choosing an appropriated antibiotic for uncomplicated UTI. The increased resistance to cioprofloxacin is what should concern us, and warn of the dangers of antibiotic misuse. Public health work is intended to prevent recurrent infection and reduce the need for antibiotics.

**Keywords:** urinary infection, antibiotic resistance, Escherichia coli

Disclosure: No conflict of interest declared

965

**Descriptive analysis of fecal parasitology results ordered by a primary care center**L.A. Calleja Cartón<sup>1</sup>, J. Paz Galiana<sup>1</sup>, JP. García Paine<sup>1</sup>, T. González-Granda García<sup>2</sup>, J.M. Santa Cruz Talledo<sup>1</sup>, B. Palop Borrás<sup>3</sup><sup>1</sup> El Palo Health Center, Malaga Sanitary District, Málaga, Spain; <sup>2</sup> Clinical Analysis, Carlos Haya Hospital, Málaga, Spain; <sup>3</sup> Microbiology, Carlos Haya Hospital, Málaga, Spain;

**Goal:**To evaluate the results from the isolation of fecal parasites requested in a primary care center in the period of one year.

**Material and Methods:**

**Design:** Descriptive longitudinal

**Location:** Urban Health Centre with two rural clinics.

**Selection Criteria:** Fecal Parasitology requested in 2011.

**Subjects:** Stools cultures (n = 20) requested by the health center in 2011 (N = 284).

**Measurement:** Age, gender, results of the study of parasitology, microorganism isolated, antigen detection of adenovirus and rotavirus.

**Findings:** 284 fecal parasites studies were requested in 2011, 57% were analyzed in women. 87.3% (248 samples) showed no parasites, and 7% (20) were positive. The mean age of the positive results was 29.15 years (16-65). 5 different types of parasites were found, **Blastocystis Hominis** cysts being the most common in 55% of the positive (11 samples) more often found in the age group between 1-10 years and 45-55 years.

**Giardia Lamblia** cysts were detected in 25% (5 samples) more frequently between 5-10 years of age. The other detected cysts were **Entamoeba Coli** 10% (2 samples), **Enterobius Vermicularis** and **Endolimax Nana** with 5% (1 sample) each. Detection of Rotavirus and Adenovirus was performed in only 2.8% (8 samples) and all the results were negative.

**Conclusion: Blastocystis Hominis** cysts are the most frequently isolated. In our sample it is more common in patients younger than 55. Knowing the fecal parasites in our area can help decision making empirically.

Disclosure: No conflict of interest declared

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### The regional differences in the incidence of hip fractures are important for risk estimation. What happens in Spain.

R. Azagra<sup>1,2,3</sup>, M. Zwart<sup>4,2</sup>, J.C. Martin-Sanchez.<sup>5</sup>, F. López-Expósito<sup>3,1</sup>, A. Aguye<sup>1,2</sup>, G. Encabo<sup>6</sup>, S. Güell<sup>3,2,1</sup>, G. Roca<sup>3,7</sup>, Cl. Savone<sup>1</sup>, E. López-Valdueza<sup>1</sup>

<sup>1</sup> Primary Care Center, Institut Català de la Salut, Barcelona, Spain; <sup>2</sup> Unitat Suport Recerca, Idiap Jordi Gol, Barcelona, Spain; <sup>3</sup> Medicine, Universitat Autònoma de Barcelona, Barcelona, Spain; <sup>4</sup> Primary Care Center, Institut Català de la Salut, Girona, Spain; <sup>5</sup> Biostatistics, Universitat Internacional de Catalunya, Barcelona, Spain; <sup>6</sup> Nuclear Medicine, Hospital Vall d'Hebron, Barcelona, Spain; <sup>7</sup> Primary Care Center, CST, Barcelona, Spain

**Objective:** To analyze the incidence of hip fracture in the 17 regions that integrate the Spanish nation and their evolutionary changes.

**Methods:** Ecological study of hospital discharges in Spain and population aged  $\geq 65$  years, followed for 14 years (1997-2010). Two periods are analyzed by rate-adjusted hip fracture separately grouped in four years: 1997-2000 (P1) and 2007-2010 (P2).

**Results:** The male rate compared to the average of the country in P1 is above the average in 4 of the 17 autonomous community and is below it in 13. In P2 are 7 and 10 respectively. This rate varies in P1 between 157.8 fractures/100000 inhabitants / year in Canary Islands and 355.5 in Catalonia (55.6% lower). In P2 between 187.8 in Galicia and 359 in Valencia (47.7% lower) ( $p < 0.05$ ).

The rate in women compared to the average of the country in P1 is above the average in 8 of the 17 autonomous community and is below it in 8. In P2 are 7 and 10 respectively. This adjusted rate varies in P1 between 369.6 fractures/100000 inhabitants / year in Canary Islands and 866.8 in Catalonia (57.4% lower). In P2 between 498.3 in Galicia and 863 in Castile-La Mancha (42.3% lower) ( $p < 0.05$ ).

**Conclusions:** We can see significant variation in the adjusted rate of hip fracture in men and women between the different regions in Spain that can affect risk estimates if they are based on partial epidemiological studies.

Disclosure:

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### Systemic arterial hypertension: vulnerability and risk factors in a group of elderly

T.V. Takaishi<sup>1</sup>, E. Yu Me Yout Gemignani<sup>1</sup>, C.A. Furbino Marcondes De Moura<sup>2</sup>, W. Freitas Jr.<sup>2</sup>

Medicine – Integration Program in Community Health, UNICID – Universidade Cidade de São Paulo, São Paulo, Brazil; <sup>2</sup> Unity Family Health Jd Jacy, Municipal Health Guarulhos, Guarulhos, Brazil

In today's world obesity associated with hypertension is a major problem of public health.

**Objectives:** Identify key vulnerabilities and risk factors in a group of elderly patients with Hypertension in Primary and propose actions to promote prevention and improve quality of life.

**Methods:** The study included 73 elderly patients with hypertension over 60 years of age, of both genders, registered in 2011 in area 4 of the Unit Family Health Jd. Jacy, the city of Guarulhos. For data analysis we used the Stratified Risk Quantification and Prognosis, Body Mass Index and Waist Circumference SISHIPERDIA Program (MS, Brazil).

**Results:** Of the 73 elderly hypertensive patients analyzed, 41.1% were male and 58.9% female, 71% ethnic brown and black and 29% white. Regarding the Risk of Hypertension Stratified, 31% had grade one, grade two 6% and 64% grade three. Regarding BMI 1.4% were underweight, 17.8% in the healthy weight; 35.6% overweight, 26% obese grade I, 13.7% grade II obesity, 5.5% grade III obesity. 75% of women had a waist circumference greater than 88 cm and 25% of men greater than 102 cm.

**Conclusion:** The identification of risk factors and vulnerabilities correlated with hypertension in this study revealed prevalence in females, and the prevalence of obesity a factor that increases the risk cardiovascular complications such as myocardial infarction, stroke and other chronic degenerative conditions for these elderly. Changes in lifestyle have a high chance of preventing hypertension, and may reduce other cardiovascular risk factors at a small cost and with minimal risk, reducing hospitalizations.

Disclosure: No conflict of interest declared

1365

**Teenage pregnancy, an actual study in Uruguay.**

C. Nosei, M. Scopise, V. Ferrando, R. Sanchez, R. Clavero

*Family and Community Medicine Department, Universidad de la República, Uruguay*

**Introduction:** In Uruguay there are 168 teenage pregnancies per 1,000 pregnancies a year, this is noticeably above the average for Latin America and the Caribbean which is 71 teen pregnancies per 1,000. This is why the need to research on teen pregnancy in the primary healthcare arises.

**Objective:** Carry out a situational diagnosis of pregnant teenage users of State Health Services Administration, in the Municipality A of Montevideo, Uruguay, in the period from August to December 2012.

**Target Population:** Pregnant women between 11 and 19 years.

**Methods:** Observational, transverse, quantitative, descriptive study. Interviews were conducted using a questionnaire, with semi-open and closed questions.

**Results:** There were 30 pregnant girls surveyed, the average age was 17.8 years. 63.3% were in a stable relationship and 30% were single, 16 teenagers integrated an "extended family". 19 of the 30 pregnancies were unplanned, 58% were due to failure of a contraceptive method (55% used condoms). The average of beginning of sexual relations was 15.5 years. The averages years of formal education was 6.5 years.

**Conclusions:** More than half of the teenagers who got pregnant had not planned to; however most of them used a contraceptive method. It's a need to prioritize work in education and promotion of sexual and reproductive health during the school years, thereby encouraging self-care and responsible informed decisions in teen years.

Disclosure: No conflict of interest declared

1418

**Work absenteeism due to oral diseases among a sample of portuguese workers**I. Coelho<sup>1</sup>, N. Veiga<sup>2</sup>, C. Carneiro<sup>2</sup>, O. Ribeiro<sup>2</sup>*Family Health Unit, Grão Vasco, Viseu, Portugal; <sup>2</sup> Health Sciences, Universidade Católica Portuguesa, Viseu, Portugal*

**Objectives:** The objectives of this study was to quantify the work absenteeism due to oral reasons of workers of the PSA Peugeot/Citroën Enterprise of Mangualde, the possible personal repercussions resulting from such labor absenteeism and what are the main reasons for this same absenteeism. Another objective was to evaluate the oral health related quality of life of these workers.

**Methods:** We designed a cross-sectional epidemiological study with the application of a questionnaire in a sample of 310 employees of PSA Peugeot/Citroën Enterprise of Mangualde, as well as the application of the OHIP-14 scale to assess the oral health-related quality of life. For the statistical analysis we used the statistical program SPSS 20.0.

**Results:** We found a prevalence of absenteeism of 11.6% due to oral reasons being toothache the main factor involved (63.6%). A total of 280 hours of work were lost and 580€ were deducted in the worker's salaries due to the absenteeism. The impact of oral health on the quality-of-life of the sample was relatively low and the main dimensions affected were the „Pain“ and „Psychological Discomfort „.

**Conclusions:** A low rate of absenteeism and a low impact on labor by oral health reasons were recorded, however more studies in Portugal are needed to establish more conclusive results. According to similar studies, we can verify that in our sample the main dimensions affected were the „Pain“ and „Psychological Discomfort“ and that the impact of oral health on the quality of life is relatively low.

Disclosure: No conflict of interest declared



1485

**Oral health profile of the Guarani indian people of the south of Brazil**J. Baldisserotto<sup>1,2</sup>, A. Fererira<sup>1</sup>, C.M. Warmling<sup>2</sup><sup>1</sup> *Epidemiology Postgraduation Program, Federal University of Rio Grande do Sul, Porto Alegre, Brazil;* <sup>2</sup> *Faculty of Dentistry, Federal University of Rio Grande do Sul, Porto Alegre, Brazil*

**Objective:** to investigate the oral health status of the Guarani indian people who live in the south of Brazil.

**Methods:** epidemiological oral health survey realized from september 2009 to July 2010 in 19 small Indian communities spread around the state of Rio Grande do Sul. A total population 203 in different ages was investigated. The methods used were the same as those described by WHO and SB Brazil project.

**Results:** children at 5 y.o. showed an average dmf of 2,8 and a 37,7% of caries free children. At the age of 12 and between 15-19 y.o. an average DMFT of 1,3 and 3,4 respectively. Nevertheless, the higher component of the index at the age 12 was decayed (D) with 54,3% and in the 15-19 age group was the component filled (F) with 49,4%. Among the adults (35-44) the DMFT index was 11,55 and the missing (M) was responsible for 69,3%. The old people from 65-74 showed a DMFT of 18,6. In relation to malocclusion, 91% of the indian children had a normal pattern. Acceptable patterns of fluorosis were found in 91,4% of the 15-19 y.o. group. Oral hygiene and use of fluoride toothpaste was also related by 95% of people in the same age group.

**Conclusions:** oral health status of the Guarani population is better than the Brazilian population in general. The mean DMFT in different ages and groups is lower in the Guarani´s indicating a lower dental caries experience.

Disclosure: No conflict of interest declared

1618

**Comorbidities in patients consulting their general practitioner for low back pain**E. Pernellet<sup>1</sup>, C. Bouton<sup>1</sup>, A. Ramond-Roquin<sup>1</sup>, C. Raber<sup>1</sup>, A. Mercier<sup>2</sup>, L. Letrilliart<sup>3</sup>, J.F. Huez<sup>1</sup><sup>1</sup> *Department of general practice, Faculty of medicine of Angers, ANGERS, France;* <sup>2</sup> *Department of general practice, Faculty of medicine of Rouen, ROUEN, France;* <sup>3</sup> *Department of general practice, Faculty of medicine of Lyon, LYON, France*

Low back pain (LBP) is a major public health problem, and one the most frequent reasons for encounter (RFE) in general practice (GP). In France, we are lacking data on comorbidities and health care behaviours of patients with LBP in GP.

The aim of this ongoing study is to describe the associated RFE of patients from 18 to 65 consulting their general practitioner for LBP.

Ecogen is a French national descriptive study, undertaken in 128 different offices of GP in 2012. One day by week, for all the consultations, all the RFE, the diagnosis and the procedures implemented by the GPs were recorded according to the International Classification of Primary Care (ICPC-2). All the consultations of patients from 18 to 65 seeking care for LBP were selected. Then the population and all the RFE and diagnosis related to these consultations were described, and their frequencies were compared to those of a matched sample of patients having not sought care for LBP. Finally, some typical associations of RFE and diagnosis were looked for, and compared according to the characteristics of the patients.

About 650 consultations will probably be selected. As suggested by international literature, other musculoskeletal complaints, pain syndromes and psychosocial problems may be more frequent in the patients with LBP than in others.

This study will provide a more accurate assessment of the frequency of these comorbidities, and might lead to more original results, as the frequency of other chronic diseases and specific associations of comorbidities in patients with BP.

Disclosure: No conflict of interest declared

1767

**What is the role of thermal treatments in the relief of low back pain? A review of evidence.**

R. Regadas, M. Cambao, P. Freitas, M. Neves

Low back pain is associated with musculoskeletal or osteoarticular pathology. It can be disabling and a major cause of absenteeism. Balneotherapy refers to treatments with natural mineral water. It is believed to be beneficial but the lack of concrete evidence can negatively influence it.

**Objective:** Review of evidence on benefits of thermal treatments in low back pain.

**Methods:** We searched clinical guidelines, meta-analyzes, systematic reviews and randomized controlled trials, published between Jan 2000-Sep 2012, in Portuguese and English, using the MeSH terms: low back pain and balneotherapy.

**Results:** We found 51 articles and selected 5. The CG documented absence of evidence regarding the role of balneotherapy in acute low back pain; as for chronic pain there was an improvement in comparison to no intervention but effects on disability were controversial (SOR1); there was no additional effect compared to other non-pharmacological interventions (SOR2). According to the MA, there is a potential beneficial effect of long term treatment in chronic low back pain but confirmation based on more robust studies is needed (SOR2). The SR that reviewed evidence on the efficacy of use of thermal immersion baths to treat lumbago pointed out the lack of studies and their methodological limitations (SOR2). One RCT that evaluated the effect of balneotherapy in patients with chronic low back pain treated with physical therapy showed additional improvement with the dual treatment (SOR2).

**Conclusions:** The available evidence suggests that balneotherapy has a potential beneficial effect in patients with low back pain, however it is not strong enough for recommending its therapeutic use. More consistent studies are needed to assess its effectiveness and cost-effectiveness.

Disclosure: No conflict of interest declared

**1.2. PUBLIC HEALTH**

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**Alternating medical doctor dispatch by the japanese society after the great east japan earthquake**T. Hata<sup>1</sup>, K. Ueda<sup>1</sup>, H. Maruyama<sup>1</sup>, H. Tomita<sup>2</sup>, T. Takaya<sup>3</sup>, M. Kobayashi<sup>4</sup>, S. Ishibashi<sup>4</sup>, T. Ishii<sup>4</sup>

<sup>1</sup> Department of Medicine, Musashino Red Cross Hospital, Musashino-City, Tokyo, Japan;

<sup>2</sup> Headquarter, the Japanese Red Cross Society, Minato-Ku, Tokyo, Japan; <sup>3</sup> Department of

Medicine, Saitama Red Cross Hospital, Saitama, Japan; <sup>4</sup> Emergency Center, Ishinomaki Red Cross Hospital, Ishinomaki-City, Japan

**Introduction:** The Great East Japan Earthquake struck off the north-east coast of Japan, 2011, and the Tsunami left almost 20,000 people dead or missing. Ishinomaki city suffered with 4,000 people left dead or missing. Fortunately, the Ishinomaki Red Cross Hospital (IRCH) was intact as it had been moved to away from the Pacific Ocean. However, other medical facilities suffered enormous damage.

**Methods:** The Japanese Red Cross Society (JRCS) assembled doctors from across the country and transferred them to IRCH. The purpose of mission was to support the provision of emergency medical care and to assist the Accident & Emergency department of IRCH.

**Results:** As many as 81 doctors were dispatched to IRCH between April and August 2011. The medical team was made up of specialists in internal medicine (38), emergency medicine (12), surgery (6), pediatrics (3), orthopedics (3), anesthesiology (2), obstetrics and gynecology (2), and trainee doctors (15). At first, each team worked for 6 days and slept makeshift beds in IRCH. Volunteer doctors worked together with volunteer nurses to set up temporary medical out-patient facilities in IRCH. They worked in shifts to support the provision of secondary care across all medical fields and helped provide tertiary care. The rubble in the affected area resulted in many respiratory tract infections. Orthopedic cases consisted of leg injuries or broken bones. Mental health was also an issue, suicide cases hanging after the disaster.

**Conclusion:** The Hospital in the area with many earthquakes should be moved to apart from the sea to avoid the Tsunami.

Disclosure: No conflict of interest declared

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**Intermediate care for the elderly in Taiwan**M.-C. Lee<sup>1,2</sup>

<sup>1</sup> Department of Family Medicine, Taichung Hospital, National Department of Family Medicine, Taichung City, Taiwan; <sup>2</sup> Center for Education and Research on Geriatrics and Gerontology (CEROGG), Chung Shan Medical University, Taichung City, Taiwan

The proportion of the elders in Taiwan has been above 7% since 1993, and will reach to 14% in 2018 when Taiwan will become an aged society. It's common for elderly patients that they have atypical diseases presentation, function decline, and medically complex. Thus, we need a special health care system called intermediate or subacute care to link acute care and chronic care system. The intermediate care system has been performed well in the United Kingdom, and is about the same but called subacute care system in north America. In Taiwan, now we have two system to provide intermediate care for the elderly, one in public hospitals of the National Department of Health since 2009; the other is in local veterans Hospital belonged to the Veterans system since 2007. The initial evaluation results of the effectiveness of intermediate care in Taiwan found that there is a statistically significant improvement in functional status and reduction in one-year mortality rate for those receiving intermediate care prior to returning back to home or moving to a nursing home.

Disclosure: No conflict of interest declared

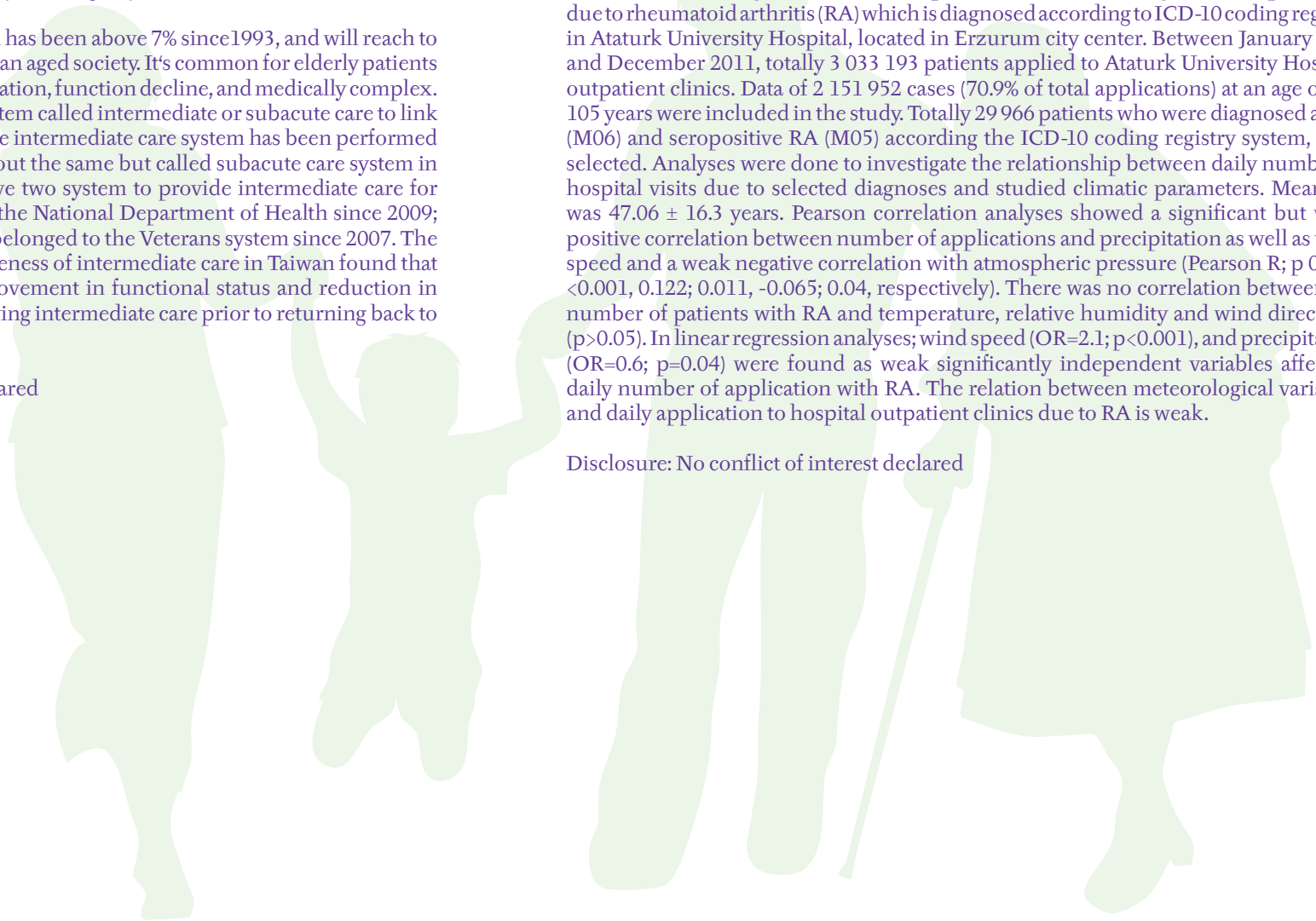
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**Climatic effect on rheumatoid arthritis**

M. Isik, A. Sattar Khan, U. Avsar, T. Set, Y. Cayir  
Family Medicine, Ataturk University, Erzurum, Turkey

We aimed to investigate the relationship between climatic changes and hospital visits due to rheumatoid arthritis (RA) which is diagnosed according to ICD-10 coding registry in Ataturk University Hospital, located in Erzurum city center. Between January 2007 and December 2011, totally 3 033 193 patients applied to Ataturk University Hospital outpatient clinics. Data of 2 151 952 cases (70.9% of total applications) at an age of 18-105 years were included in the study. Totally 29 966 patients who were diagnosed as RA (M06) and seropositive RA (M05) according the ICD-10 coding registry system, were selected. Analyses were done to investigate the relationship between daily number of hospital visits due to selected diagnoses and studied climatic parameters. Mean age was  $47.06 \pm 16.3$  years. Pearson correlation analyses showed a significant but weak positive correlation between number of applications and precipitation as well as wind speed and a weak negative correlation with atmospheric pressure (Pearson R;  $p < 0.161$ ;  $< 0.001$ , 0.122; 0.011, -0.065; 0.04, respectively). There was no correlation between the number of patients with RA and temperature, relative humidity and wind directions ( $p > 0.05$ ). In linear regression analyses; wind speed (OR=2.1;  $p < 0.001$ ), and precipitation (OR=0.6;  $p = 0.04$ ) were found as weak significantly independent variables affecting daily number of application with RA. The relation between meteorological variables and daily application to hospital outpatient clinics due to RA is weak.

Disclosure: No conflict of interest declared



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### The nursing work in primary attention to health care in Brazil: implications and risks

H. Fernandes

*Nursing, UNIFITALO, São Paulo, Brazil*

This research had the objective identify the related common work risks on professionals of Nursing work in primary attention to health care in Brazil and its implications; to learn the health improvement strategies of these workers; and to identify the repercussions of this work on the people's life quality. It is an integrative literature review, considering the MEDLINE, SciELO, and LILACS databases, and used six descriptors for the search of published material from 2000 to 2010. Thus, 18 were selected, and then divided into 3 analytical categories. It became clear that the risks of psychological and biological burden are more frequent, generating repercussions on workers' mental health, on labor life quality, and, then, enhancing the absenteeism risk, sick leave and retirement, due to undeveloped promotion of effective programs, prevention, and rehabilitation of workers' health on primary care. Thus, it is needed to increase researches oriented to this theme with greater levels of evidence.

**Descriptors:** Worker's health; Primary health care; Nursing.

Disclosure: No conflict of interest declared

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### Body weight models in a population-based study of Albanian school adolescents

E. Shkurti<sup>1</sup>, D. Shtiza<sup>2</sup>*<sup>1</sup>Public Health Department, Faculty of Nursing, Tirana, Albania; <sup>2</sup>University Hospital Centre: Mother Theresa, Tirana, Albania*

**Objective:** The aim of the study was to investigate the body weight models among Albanian adolescents school students and the prevalence of overweight and obesity.

**Methods:** A cross-sectional study on a stratified sample of 1786 adolescents, 705(39%) males and 1081(61%) females was conducted in Albania in January-December 2011. They were interviewed and examined for weight and height using standardized techniques.

**Results:** Regarding 2007 WHO classification for BMI scale it resulted that 4.4% 95% CI 3.5 -5.4 adolescents were overweight (32.9% females, 67.1% males) with a statistically significant difference among them,  $p < 0.01$ . The prevalence of overweight in adolescent females was 2.4%, in males was 7.5%. The prevalence of obesity class I resulted 0.4%, the obesity class II 0.3% and obesity class III 0.1% 95% CI 0.02 - 0.3 from the total of participants. A remarkable finding of our study was that 70.8% of adolescent students were in normal weight, 20% of them underweight, 71.7% were females,  $p < 0.01$ .

**Conclusion:** Actually overweight and obesity isn't a big public health problem among adolescents students in Albania. The problem is more prevalent among boys. Considering that a big part of adolescents participants were underweight, mainly girls that may develop unhealthy lifestyles with disordered eating and possible suicide rates health promotion strategies should be implemented.

Disclosure: No conflict of interest declared

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**Treatment of chronic varicose ulcers associated with acupuncture in the public health system in Bom Sucesso – Paraná – Brazil.**

M.A. Raniero

*Municipal Health of Bom Sucesso – Paraná – Brazil, Municipal Health of Bom Sucesso – Paraná – Brazil, Bom Sucesso – Paraná, Brazil*

Acupuncture, according to the World Health Organization (WHO, 2006), is a complementary treatment method. Traditional Chinese medicine (TCM) indicates their use for about 300 diseases, based on the experience of its adoption as a treatment technique for health over the 5,000 years of Chinese culture. (Sussmann, 2007).

The overall objective of the study is to provide a better quality of life for patients with chronic varicose ulcers, reducing discomfort and accelerating the healing process.

Patients are evaluated adult patients with chronic varicose ulcers, presenting various symptoms beyond the injury itself, such as: low back pain, cervibraquialgia. Sweating, edema, vertigo and others. The patients live with the disease for more than 12 years on average. Perform acupuncture treatment twice a week, as suitably qualified, using the techniques of acupuncture moxibustion associated systemic.

After 6 months of treatment revealed a significant reduction (60% on average) the extent of varicose ulcers and significant improvement in symptomatology.

Nowadays acupuncture is applied in virtually all the world. The results are satisfactory including cures for various diseases, motivating organizations responsible for public health to adopt it in the treatment of most pathologies.

In our study, patients continue on treatment, however, there has been significant improvement in picture, reflecting on their self-esteem and quality of life.

Disclosure: No conflict of interest declared

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**Voluntary choice of healthy life style – social-economical kontekst**

P. Štec

*general practice amulance, PROMEDA, Kežmarok, Slovakia*

**Objective:** The preventive health care on the level of social determinants of health means an effective shaping of public voice to express and declare whole-of-society requirement for health inequity reduction.

**Methods:** „Petition for preventive spa health care for working people“ - intension to open spa to higher count of people by regulation of funding this type of health care by public health insurance to support motivation for healthy living with emphasis on aspect of human work.

We focused on:

**1.measurement of activity on the level of preventive care:**

1.1. pointed on effectiveness of partnership characterized by:

1.1.1. promotion provided by local authorities (municipalities) based on health care provider´s challenge

1.1.2. promotion provided by professional community based on citizens´ initiatives´ challenge (on national level)

1.2. pointed on effectiveness of public support as a quantity of collected electronic signatures based on citizens´ initiatives´ challenge (promoted at the website on national level)

**2. measurement of outcome on the level of:**

2.1. whole-of-society requirement expressed as quantity of all signatures below petition.

2.2. change of law – political decision based on public promotion.

2.3. real implementation – expected decline of health care linked with illnesses as an inverse functionality of preventive spa consumption.

**Results:** Preliminary numerous statements will be published firstly at the WONCA conference in Prague 2013.

**Conclusions:** Because of current steepness of social gradient an decreasing social mobility in Europe WHO region, working people can´t afford to finance nutrition and activities necessary for healthy life style. The net result is worsening of public health and working potential of population. Let´s search solutions.

Disclosure: No conflict of interest declared

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### Knowledge and willingness of nurses in the public primary health care setting of sub-district "F" in the Johannesburg metro district to promote the use of the female condom

M. Petkova, Z. Elabor, E. Reji

*Family Medicine, Public Primary Health Care, JHB Metro District, Johannesburg, South Africa*

#### Objectives

- To assess the public primary health care nurses' knowledge in female condom use.
- To explore the willingness of the public primary health care nursing staff to promote the use of female condoms.
- To determine possible association between the baseline variables, knowledge and willingness to promote female condom use.
- To determine a possible association between the knowledge and willingness to promote female condom use.

**Methods:** A quantitative cross sectional descriptive survey was conducted in 16 primary health care clinics. Three hundred and ninety eight nurses participated in the study.

**Result:** Seventy nine per cent of the participants had more knowledge on female condom use than the rest of the nurses. Fifty nine per cent of the participants were more willing to promote the use of the female condom. There was no statistically significant relationship between willingness to promote the use of female condom and knowledge on female condom use. (Chi-square with one degree of freedom =2.7243,  $p=0.099$ ). However, those nurses who are more knowledgeable on the use of female condom are noted to be more willing to promote female condom use (though this may not have been statistically significant).

**Conclusion:** The more knowledgeable group of participants in this study was determined to be high (80%). Fifty nine per cent of the participants were more willing to promote female condom use than the others. Being more knowledgeable in the use of female condom did not positively predict willingness to promote female condom use.

Disclosure: No conflict of interest declared

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### Let us create friendly schools for our diabetic child

A. Alsharief, A. Alkhier Ahmed, E. Alsharief

*Primary health care, National guard health affairs, Jeddah, Saudi Arabia*

**Background:** Children at the age of school spent around one fourth of their day time in their schools.

School is not a place for study only but it is a place where the children can learn and grow.

The theme which I hope that all of us will work to apply it through the coming years is „*hand with hand we can create friendly schools for our diabetic children*“

#### What we mean by friendly school?

It is a school where the diabetic children can study and grow safely. It is a school where the rights of the diabetic children is completely preserved without any sense of discrimination based on their illness.

#### How to achieve this objective?

This objective can be achieved by the followings:

- 1) Provide social, psychological and economic support for the diabetic children at their schools
- 2) Provide medical support inside schools
- 3) Provide free access for diabetes information in these schools and work hardly to raise the level of knowledge about diabetes in these schools
- 4) Provide training classes for teachers looking after diabetic children
- 5) Supply diabetic children with free blood glucose monitoring devices if they have no ability to have one.
- 6) Provide simple workshops to train diabetic children on how they can deal properly with their illness.
- 7) Promote adherence to treatment through involving diabetic children in suitable entertainment events.
- 8) Assure that diabetic children participate normally with other normal children in all aspects of their daily life. This goal can be assess by arranging combined campaigns between diabetic and non diabetic children and observe diabetic children and their responses to other children.

#### What can diabetic children benefit from such project?

Diabetic children can live safely in the friendly schools and trained enough to look after them self independently.

Disclosure: No conflict of interest declared

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**Family medicine and global health: a critical contributor to impacting the global burden of disease**N.C. Doohan<sup>1</sup>, K A Kelly McQueen,<sup>2</sup><sup>1</sup> Family Medicine, Eisenhower Medical Associates, La Quinta, California, United States;<sup>2</sup> Anesthesiology, Vanderbilt Institute for Global Health, Nashville, Tennessee, United States

A majority of the world's population does not receive adequate medical care. The reasons for this are multi-factorial, but include centralization of quality medical facilities and personnel, brain drain to resource rich countries, and lack of access to the services needed for the changing distribution of disease burden. By the year 1997 a majority of low income countries, and many of the world's leading donors of medical aid, appropriately targeted infectious and communicable disease as the greatest health threat in low income countries. But as HIV/AIDS and TB have become increasingly chronic, and as the world's population is living longer, non-communicable disease is a greater contributor to the global burden of disease. By 2012, the leading causes of death will include cardiovascular disease, trauma, and cancer, and maternal morbidity and mortality will continue to be a major contributor to premature disability and death, in spite of interventions which have decreased this important public health indicator. The family medicine model has the capacity to impact the Global Burden of Disease in a substantive manner, as family doctors treat communicable and non-communicable disease, while also providing pre-natal and newborn care, cardiovascular prevention and treatment, basic trauma interventions, c-sections and surgical intervention for post-partum hemorrhage. Furthermore these physicians with broad training and talents have the capacity to educate a range of providers, depending on the specific needs of a country. Additionally, the Family Medicine emphasis on addressing and responding to the social determinants of disease, provides thought leadership in global health.

Disclosure: No conflict of interest declared

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**Outpatients' morbidity in Dobo region**

B. Janjic, B. Kupresak, N. Janjic

<sup>1</sup> Public Health Institute, Public Health Center, Dobo, Bosnia-Herzegovina; <sup>2</sup> Health insurance fund of RS, Health insurance fund, Dobo, Bosnia-Herzegovina; <sup>3</sup> Family medicine, Primary health care centre of Banja Luka, Banja Luka, Bosnia-Herzegovina;

**Objective:** Based on routine statistical data to view group of diseases in primary health care in Dobo region in the period from 2003 to 2007.

**Methods:** Retrospective analysis of data on morbidity in primary health care departments. We used the data of the Regional Institute for Health Protection of Dobo, collected in the form of activity reporting, organization and outpatients' institutions. An overview was done using tables and graphs with appropriate statistical methods.

**Results:** The most common group of diseases in primary health care was a group of diseases of the digestive system (28.0-26.4%), followed by respiratory diseases (19.3 to 16.1%), and the third place are the factors that influence health status and the contact with health department. There is a shift in the cause of the disease, from fourth to third place because of cardiovascular diseases (since 2004). Morbidity due to diseases of urinary-genital system changed from 5 place (2003) to place 4 (2007).

**Conclusion:** There was an increase of 34.4% for diseases and conditions for which the patients increasingly reported in the primary health care centers. This is conditioned by rising prevalence of diseases of the digestive system, which is higher by 26.7%, respiratory diseases are on the rise by 13.6%. Number of patients with diseases of the circulatory system increased by 88.2%, as well as diseases of urinary genital system by 76.6%.

Disclosure: No conflict of interest declared

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**Obas an area of changes in learning teaching in scenery of Pisco.**

F. Neman, T. Ruiz

*Medicine course, UNICID, São Paulo, Brazil*

The primary healthcare is a field of potential practical and necessary for health. Valuing education in the core network is paramount meet a demand of our country. In the experience of this process came the demand for more knowledge pointed out by professionals working in our practice scenario, a Basic Health Unit (BHU) who works with the Family Health Program (PSF).

**Objective:** This activity aimed to provide space for discussion and expand knowledge on topics of interest to the group of UBS employees.

**Methods:** The study was descriptive, reporting their experience by undergraduate students in medicine UNICID in 2012.

**Results:** The total workload was eighteen hours of presentation and discussion of nine hours, with an average attendance of 18 employees each time. Os participants receive an overview of the topic for later reading or consultation. In this approach we enable a better understanding of the topic, strengthen preventive, disseminate knowledge and clarify doubts, without forgetting the potential to promote integration among students and staff.

**Conclusions:** The activity has a good acceptance and the health professional is sensitized to meet the new, expanding their knowledge and optimizing their work. As students, develop bonding, ability to work in teams, exercise responsibility and commitment, as well as committing to the professionals who enable their learning in this scenario.

Disclosure: No conflict of interest declared

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**Infra-structure of family health units in Ribeirao Preto – Brazil**F. F. Quagliato<sup>1</sup>, A. R. Netto<sup>2</sup>, M. M. Dutra<sup>1</sup>, M. H. S. Vieira<sup>1</sup>, A. M. Yasuda<sup>1</sup>*<sup>1</sup> Public Health, Centro Universitário Barão de Mauá, Ribeirão Preto, Brazil; <sup>2</sup> Social Medicine, Faculdade de Medicina de Ribeirão Preto – USP, Ribeirão Preto, Brazil*

Infra-structure is a relevant point to be considered in the development of Primary Care. It varies among different countries, considering characteristics of the health system, mode of financing and regulation.

**Objective:** This study aims to evaluate, through grades given by Family Health teams' members, the conditions of the infra-structure of the Health Centres in Ribeirão Preto, SP, Brazil.

**Methods:** A questionnaire about infra-structure of the Health Centres was applied to the Family Health teams in Ribeirão Preto, SP, Brazil. The teams were asked to grade some items or inform the presence or absence of some resources in the Unity.

**Results:** Ribeirão Preto has 24 Family Health teams, out of which 20 were interviewed, totaling 137 professionals. Half of these teams work in adapted Family Health Units, that is, they were not originally built to be a health centre. The conditions to respect the privacy of the patients had a mean grade of 7.63 (2.70). The adequacy of the physical area of the health centre got the lowest score, 5.35 (3.52). The cleaning conditions scored only 6.0 (2.27). Fifteen (75%) teams had inhalotherapy and oxygen therapy resources, 16 (80%) teams had material and basic equipment to deal with emergencies and cardiorespiratory arrest. None of them had cardiac monitors or a cardioverter. Only 13 (65%) had adapted offices and restrooms for wheelchairs.

**Conclusions:** The fact that 50% of the teams work in adapted Family Health Units demonstrates the lack of planning, financing and regulation of the health system in the city.

Disclosure: No conflict of interest declared



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**Caregivers of the patients with cerebral palsy in a regional rehabilitation center in Turkey**D.Yucel<sup>1</sup>, Z.A.Saglam<sup>2</sup>

<sup>1</sup> Home-Care Department, MBA, Istanbul Medeniyet University, Göztepe Training and Research Hospital, Istanbul, Turkey; <sup>2</sup> Family Medicine, Ass. Prof, Istanbul Medeniyet University, Göztepe Training and Research Hospital, Istanbul, Turkey

**Introduction:** Home based care-giving is of importance especially in providing long-term home care of patients with cerebral palsy(CP).Since ongoing care is managed essentially at home in Turkey, family caregivers essentially function as de facto health providers.In this cross-sectional study the caregivers' situation is evaluated through their socio-demographic features relevant to the caregiving situation.

**Material Method:** Caregivers of 150 children with CP attending to a regional center at Bursa (Dr.Ayten Bozkaya Rehabilitation Center) were invited for a face to face questionnaire and demographic information about the patient, the family and the caregiver was collected.The results are expressed in Tables 1, 2 and 3.

**Results:** The mean age of the CP patients (n=150) was 9.15±9.19(min. 1,max.35 yrs), 63% of whom were boys. Caregivers were mainly mothers (88%).Only 26% of them had special education on rehabilitation of the patient. 75% of the caregivers declared that they didn't have time for the other siblings and 78% declared 'limited or no social activities'.Fortunately family unity was 96% present yet CP patient didn't receive further attention (86%) in terms of rehabilitative activities.

**Discussion:** The psychological and social problems of the caregiver result with incompetency at managing the patient's long-term dependence meaning less rehabilitative interventions at home. Low education level (76%) may be the reason for mismanagement of home-based interventions.Directorial strategies should be developed to in order to optimize the caregivers's social and psychological health and care recipient's biopsychosocial improvement.

Disclosure: No conflict of interest declared

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**Patient perceptions of hypertension in rural South Africa**P. Duncan<sup>1</sup>, Z. Manakuza<sup>2</sup>

<sup>1</sup> Academic Unit of Primary Care, University of Bristol, Bristol, United Kingdom; <sup>2</sup> Primary Health Care, Manguzi Hospital, Manguzi, South Africa

**Aim:** To investigate patient perceptions of hypertension in rural South Africa

**Introduction:** In South Africa, hypertension is a common problem, which is inadequately treated and poorly controlled. The prevalence of hypertension in the Agincourt sub-district of South Africa, a similar population to this study, was found to be as high as 43%. Little is known about patients' perceptions of hypertension in this population.

**Methodology:** From May to June 2012, trained local volunteers recruited 500 adult patients receiving prescribed anti-hypertensive medication from five primary health care clinics in the Manguzi district, KwaZulu-Natal, South Africa. A questionnaire including written consent, blood pressure readings, height and weight measurements, demographic information and open questions about the causes of hypertension and ideas of how the clinics could improve hypertension management was administered in Zulu. Data was entered into Excel and imported into Stata for analysis.

**Results:** The average age of study participants was 58 years, 78% of participants were female, 58% had never been to school and 64% perceived their health to be poor. Only 5% of participants perceived that they were overweight but 60% were found to be overweight with a body mass index > 25. Two thirds of participants had inadequately controlled blood pressure (BP>140/90). Commonly reported causes of hypertension were emotions, diet and poverty. Analysis is ongoing.

**Conclusion:** The majority of patients in this study had inadequately controlled blood pressure. Many hypertensive patients who were overweight perceived that they were of normal weight. Patients asked for better education about their blood pressure.

Disclosure: No conflict of interest declared

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**Continuing education in mental health in primary care.**

R. Pegorari, I. Tiburcio Faria, E. Yu Me Yut Gemignani  
*Medicine, UNICID Universidade Cidade de São Paulo, São Paulo, Brazil*

**Introduction:** Mental Health is not just the absence of mental disorders. It is defined according to the World Health Organization as a state of being in which the individual realizes his own abilities and work productively. The performance of the healthcare team and support the family in a shared matrix allows the integration of actions to promote the quality of life to citizens, their families and their caregivers, and social reintegration user with a mental disorder. The Community Health Agent has a very important role in the disease-healing process in primary care, for accompanying families in the community and conducts activities for preventing health problems and risks of illness.

**Objective:** Conduct Continuing Education on Mental Health for Community Health Agents

**Methods:** was used Conversation Circle (Freire, 2002) to motivate the construction of the autonomy of individuals through questioning, reflection and exchange of knowledge geared for action.

**Results:** The community health agents play an important role in the health-illness and disease in the bond they establish with the community. The result of this round of conversation with community agents will be evaluated longitudinally because of the challenge to consolidate and enhance the field of mental health interventions.

**Conclusion:** Continuing Education in Mental Health is an important tool for the agent community to produce and monitor therapeutic projects geared to the needs of users with mental disorder, according to their life contexts.

Disclosure: No conflict of interest declared

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**The analysis of reasons for low influenza vaccination coverage rate in Poland in relation to the patients' age.**

K. Nessler, T. Chmielowiec, D. Jarczewska, A. Windak  
*Department of Family Medicine, Jagiellonian University Medical College, Krakow, Poland*

**Objective:** In Poland, there is the lowest rate of influenza vaccination coverage rate among all European Union countries. In fact, only 4,5% Polish citizens were vaccinated in 2011, which was the lowest rate in many years.

Interestingly, the vaccination coverage rate in Poland is almost three times higher among people over 65 years of age. Nevertheless, even in this age group, it is still very low.

In 2011, the Advisory Committee on Immunization Practices together with WHO extended the list of medical conditions which obligate the patient to be regarded as the high risk group patient. Consequently, more patients should be vaccinated against influenza in 2012/2013 season.

This study was performed to identify reasons for not taking vaccines depending on the patient's age in order to design strategies to achieve higher vaccination rates.

**Methods:** The anonymous questionnaire survey was conducted in 20 different Family Medicine Practices located in Cracow and suburbs. 600 adult patients, who visited their primary care physicians for various reasons, participated in the study.

**Results:** The coverage rates varied between the age groups, with highest among elderly people. The patients justified their decisions not to undergo vaccination by no need to vaccinate, lack of time, and by costs.

**Conclusions:** There is an urgent need to intensify educational efforts in order to increase the awareness of importance of vaccination against influenza in the high risk patients, regardless of age.

Disclosure: No conflict of interest declared

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**Effectiveness of the different managements of hipertense patient**

H.V. Franco da Costa de Oiveira, M. Morelli, A.P. Mathias, O. de Sá Rocha Melo, A.L. Carvalho, M. Laporta Chudo, R. Pessoa de Melo Hermida  
*Medicine Graduation, Universidade Cidade de São Paulo, São Paulo, Brazil*

**Objectives:** In the county of Guarulhos in São Paulo, Brazil, the health basic unit (HBU) Jd Rosa de França has three coverage areas designated by SUS, and wich area should have a professional team that coordinate other activities like a federal program called Hiperdia and the Group of Hipertenses. We believe that after analyzing the diferences in each area we may be able to explain the different numbers in compensated patients observed from an area to another.

**Methods:** We searched for information from each of the coverage areas and found out the existence of differences between the areas involving the compositiong of the teams and the kind of activities performed by them, and maybe this may justify the difference.

**Results:** The areas that doesn't perform the Group of Hipertenses activity showed very similar results, with 34% of compensated patients in the area 61 and 47% in the area 62. These numbers contrast with the numbers of the area 63, that had an impressive amount of 87% of compensated people.

**Conclusions:** We concluded that the instauration of the Group of Hipertenses is very effective way to increase the number of compensated patients, way more than the Hiperdia and the information provided by the medic during the consultation. The diference in the effectiveness may result from the different approach of the Group of Hipertenses, in the sessions the patientes are able to learn more about his condition, allowing a better understanding that leads to a higher accession to the treatment.

Disclosure: No conflict of interest declared

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**The occupational therapy and the use of assistive technology with visually impaired under school**

M.I. Nobre, T. Azevedo, R.C. Montilha  
*Centro de Estudos e Pesquisas em Reabilitação Prof. Dr. Gabriel Porto – Faculdade de Ciências Médicas, UNICAMP, Campinas, Brazil*

**Objective:** To assess the knowledge and use of assistive technologies for the visually impaired in school.

**Methods:** Quantitative research. Held data collection through a semi-structured questionnaire.

**Results:** The sample consisted of 33 visually impaired predominantly female (60%). The mean age of subjects was 14 years, and all participants of the Rehabilitation Program CEPRE / FCM / UNICAMP and inserted into the Public Education Network. Regarding knowledge of assistive technologies: 70% of subjects reported not knowing and not use these technologies at school. We presented the following technologies: inclined plane, enlarged lines and letters, Braille Mobile, adapted ruler and tiposcópio.

**Conclusion:** The visually impaired did not know assistive technologies, it is necessary to provide knowledge and use of assistive technology for the visually impaired in the school, so that they develop their potential, overcoming the limitations of their disability.

Disclosure: No conflict of interest declared

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**How college students understand the major causes of mortality?**C.Y. Hsu<sup>1,2,3,4,5,6,7</sup>, C.H. Hsieh<sup>2</sup>, H.C. Lin<sup>8</sup>, C.Y. Shu<sup>7,9</sup><sup>1</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan; <sup>2</sup> Department of General Education, National Taichung University of Science and Technology, Taichung, Taiwan;<sup>3</sup> Department of General Education, Chaoyang University of Technology, Taichung, Taiwan;<sup>4</sup> Department of General Education, National Chin-Yi University of Technology, Taichung, Taiwan; <sup>5</sup> Department of General Education, Central Taiwan University of Science and Technology, Taichung, Taiwan; <sup>6</sup> Department of General Education, Feng Chia University, Taichung, Taiwan;<sup>7</sup> Department of General Education, National Chi Nan University, Puli, Taiwan; <sup>8</sup> Medical Education Office, Cheng-Ching Hospital, Taichung, Taiwan; <sup>9</sup> Department of Optometry, Central Taiwan University of Science and Technology, Taichung, Taiwan

**Objective:** In order to have health life, we should know the major causes of mortality occurring in recent years. The ten major causes of mortality were analyzed every year by department of health. The objective of this study is to investigate how college students understand the 2010 ten major causes of mortality in Taiwan.

**Method:** Between 2010 and 2011, 240 college students from 3 universities (two public, one private) were provided the questionnaires. The 2009 ten major causes of mortality were asked. There were 10 questions to be answered.

**Result:** The median age was 20. Seventy-four (30.8%) males and 166 (69.2%) females agreed to answer the questionnaire. One hundred and nine (45.4%) of the students were science majors and 131 (54.6%) were humanities major. One hundred and sixty-three (67.9%) students knew the 3 major causes of mortality which were malignancy, cardiac disease and cerebrovascular accident. One hundred and twenty-six (52.5%) students knew the 3 major malignant causes of mortality which were lung cancer, hepatocarcinoma and colorectal cancer.

**Conclusion:** Despite the government's intensive efforts to propagate health life, one-third of college students didn't know the major causes of mortality occurring in recent year. Health education is needed in campus.

Disclosure: No conflict of interest declared

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**Medical students involved in training health agents: empowering the family health program, improving primary care and promoting future family doctors.**N. de Lima Froio<sup>1</sup>, L. Inada<sup>1</sup>, I. Passos Martins<sup>1</sup>, D. Careta<sup>1</sup>, F. Nadai<sup>1</sup>, A. C. Ribeiro<sup>1</sup>, S. Moraes<sup>1</sup>, M. A. Janaudis<sup>1,2</sup>, D. Stabile<sup>1</sup>, M. Saiga<sup>1</sup><sup>1</sup> Public Health, Jundiai Medical School, Jundiai, Brazil; <sup>2</sup> Family Medicine, Brazilian Society of Family Medicine, São Paulo, Brazil

**Context:** Brazilian Federal Constitution (1988) gave to all citizens the right to access preventive services and health promotion, through the Public Health System (SUS- *Sistema Unico de Saúde*). In 1994 the Government launched the Family Health Program (PSF- *Programa de Saúde da Família*) envisioning the installment of professional health teams to meet the needs of the population. In this context, the role of the Community Health Agents is critical, since they become the bridge between the Health Care Team and the Community. The point is how could those Community Agents be trained for improving their communication and consequently facilitating the Health Care Team work?

**Objective:** A group of Medical Students from Jundiai Medical School –JMS (São Paulo, Brazil) engaged in a social project, leaded for two years a training program for Community Health Agents through interactive lectures and periodic meetings.

**Design:** A JMS faculty member (also from SOBRAMFA – Medical Education and Humanism Board) helped to transform the students' experience into academic outcome.

**Results:** Conveying information about relevant topics, bringing to discussion health issues from their daily challenges, constructing knowledge for action between the participants were the main outcomes pointed out by the Health Agents. They reported a better performance in their jobs after the training program. Beside this, the students were renovated as well: they developed a more comprehensive knowledge, learnt how to work in a team, grew up in interdisciplinary perspectives and became aware of the real role of family doctors for making the difference in peoples' life.

Disclosure: No conflict of interest declared

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**Synovial sarcoma of the lung in a patient who diagnosed by a general screening program: a case report**S. Civi<sup>1</sup>, R. Kutlu<sup>1</sup>, L.Tavli<sup>2</sup><sup>1</sup> Department of Family Physician, University of Konya, Meram Medical Faculty, Konya, Turkey;<sup>2</sup> Department of Pathology, University of Konya, Meram Medical Faculty, Konya, Turkey

**Introduction:** Primary pulmonary sarcoma (PPS) is an extremely rare tumor, accounting for less than 0.5% of all lung tumors and often easily misdiagnosed. This case was diagnosed by chest X-ray during a general screening program. We reported a case of a 34-year-old man, who complained of any pain, cough or other complaint.

**Case Report:** A 34-year-old man was diagnosed during a general screening program. He had smoked a packet of cigarettes daily for the last 15 years. There was no history of past exposure to asbestos. On general survey, there was no abnormal sound of lung and palpable cervical and axillary lymph node. Homogenous nodule was seen on chest X-ray. A 20 X 30 mm lenfadenopathy was detected by thoracic computer tomography. In the upper right-hand of the paratracheal region 25X25mm lenfadenopathy was seen. A high intensity FDG uptake was seen in the right upper lung lobule nodule (SUVmax 9.36), in the right inferior paratracheal region (SUVmax8.36), in the right hilar region (SUVmax8.13) (Figure 1-4).

Further work-up for metastases was negative. In the department of thoracic surgery mediastinoscopy was used and lymph biopsy was taken.

Our case was characterized by the presence of spindle cell synovial sarcoma (monophasic cell sarcoma) on histopathological examination, the tumor cells being negative for cytokeratin, epithelial membrane antigen, CD99, BCL-2. Thus, diagnosis was primary synovial sarcoma of the right lung.

Chemotherapy was planned with adriamycin and phosphamide. He was taken under control.

Disclosure: No conflict of interest declared

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**The investigation of flexibility training programme and medical treatment in ankle sprains**O.C. Tel<sup>1</sup>, S. Ekinci<sup>2</sup>, A.Parlak<sup>3</sup>, C. Serin<sup>4</sup><sup>1</sup> Physical Therapy and Rehabilitation, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Ortopedia, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Family Medicine, Agri Military Hospital, Agri, Turkey;<sup>4</sup> Physical Therapy and Rehabilitation, Abant İzzet Baysal University, Bolu, Turkey

**Introduction:** In this study, we aimed to research flexibility training programme and medical treatment in humans who actively engaged in sports.

**Materials and Methods:** 500 patients were included in this study. The study was performed by a questionnaire. Patients ankle sprains formation, flexibility training programme, and clinical situations were asked. The degree of injury was determined as 1, 2 and 3.

**Results:** While 30.8% (n=154) of patients were interested in football, 27.2% (n=136) in volleyball, 23.6% (n=118) in basketball, 10.4% (n=52) in running. When the weekly flexibility training programme were evaluated, only 5.2% (n=26) of the patients 10 and above, 21.6% (n=108) 7-9, 29.6% (n=148) 4-6, 43.6% (n=218) 3 and fewer times were going for training. When the mechanisms of injury were evaluated, 45.4% of the patients had medial, 32.4% had lateral, and 22.2% had rotational sprain. According to the results of sprain, 46.8% of the patients had first degree, 32.6% had second degree and 20.6% had third degree of muscle injury. Elastic bandage was administered for 50.8% of the participants, rigid bracelet for 17.2%, electro therapy for 16.2%, plaster for 8.6%, and surgical treatment for 7.2% for ankle sprain.

**Result:** This study was demonstrated that humans who actively engaged in sports, usually trained flexion, had a mild muscle injury and were treated with conservative treatment methods.

Disclosure: No conflict of interest declared

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**The use of scavenger hunt as a resource for children health education**

W. Poton, M. Alves, M. Carvalho, A. Szpilman

*Medical School Department, Vila Velha University, Vila Velha, Brazil*

**Introduction:** Through a situational diagnosis, the main problem identified by the students was the garbage accumulation in the district streets and ground, which was a public health risk for diseases transmission to the community, especially dengue and leptospirosis.

**Objective:** To realize a health education action, with 100 children and their parents in a district of Vila Velha, Brazil, to approach the streets garbage issue, directing and encouraging the children, in a ludic way, about the importance of keeping a clean environment.

**Methods:** The action was developed by the Medical School students, in 2010, with the Family Health Team and the community. The event was called "A day in the village". The children, who participated in this event, had to take a pet bottle, which were posteriorly donated to recycling. The theater, "The village is duty", was presented, with the garbage as the main theme. After the theater, a scavenger hunt was realized with a lot of children's games.

**Results:** There was an active participation of the community, with a great awareness of the importance of keeping the district clean in order to avoid diseases, like dengue and leptospirosis.

**Conclusion:** The children showed interesting to the education model used, and demonstrated knowledge about the consequences on accumulation of garbage and diseases transmission. It was reported that the community increased the concern with the presence of garbage in the streets and with the correct disposable place for it.

Disclosure: No conflict of interest declared

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**Children nutrition evaluation in the public school Nair Dias Barbosa in Vila Velha, Brazil**

M. Barreto, M. Fonseca, N. Corona, R. Gomes, R. Coradi, L. Almeida, A. Szpilman

*Medical School Department, Vila Velha University, Vila Velha, Brazil*

**Introduction:** the anthropometric index is used as a valid strategy to generate sensible indicators on the population groups' nutritional state and life conditions evaluation.

**Objective:** anthropometric evaluation of 134 students in the public school *Professora Nair Dias Barbosa* in Vila Velha, Brazil.

**Methods:** the evaluation was from February 2012 to June 2012. The materials used were: digital weighting device, yardstick and nutritional evaluation table.

**Results:** 134 students evaluated, 71 female and 63 male, from 7 to 13 years old. The nutritional state was classified as: Low weight (percentile <5), Nutritional Risk (percentile between 5 and 10), Eutrophic (percentile between 10 and 95) and Overweight (percentile >95). The results were: two Low Weight, six Nutritional Risk, 103 Eutrophics and 18 Overweigh. Among the Overweigh, 66,67% were boys and 33,33% were girls. A prevalence of 1,49% of Low Weight was found.

**Conclusion:** there weren't important nutritional alterations registered in the population studied. This find may be a result of the school meals regular delivery, as well as the engagement on educational activities and leisure time that favors a children growth. Besides, it can be attributed to family income improvement, to coverage expansion of sanitation, health and education services in Brazil. The results highlight the importance of nutritional education activities continuity in order to promote healthy food habits and better life quality.

Disclosure: No conflict of interest declared

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**A successful life style change experience impacting in oral health**A. Szpilman<sup>1</sup>, F. Martins<sup>1</sup>, L. Silva<sup>2</sup>, C. Jantorno<sup>2</sup>, N. Sylvestre<sup>2</sup>, E. Coutinho<sup>2</sup>, K. Aroeira<sup>1</sup>, D. Endringer<sup>2</sup><sup>1</sup> Dental Department, Vila Velha City Hall, Vila Velha, Brazil; <sup>2</sup> Dental School Department, Vila Velha University, Vila Velha, Brazil

**Introduction:** With the intention to graduate professionals inserted in the Brazilian social context, students attending graduation courses become part of an unmatched experience, proportioned by the Health Ministry, The Health-PET.

**Objective:** inform and stimulate habits changes in order to improve oral care.

**Methods:** the odontology graduation students from Vila Velha University, inserted in the Health-PET experienced various activities, both ambulatory, preventive, interdisciplinary, as research. Nevertheless, for this report, was selected the educational actions follow-up in the shape of informative lectures by this dentist, in the period of April to November 2010, being accomplished in the total of six lectures. The first one was for a waiting list group, the second for 60 teenagers, third for the Hypertensive and diabetics patients, fourth for a private elementary school, fifth for 150 children and their mothers, and the last one in a fundamental school in a profession fair.

**Results:** Were observed that with the health education, was possible to inform the population about some pertinent aspects on tooth decay and other oral cavity bouts; it was possible to orient the population towards an oral health promotion and prevention perspective; besides make feasible an oral condition healthier, avoiding dental lost situations, a lot more common before.

**Conclusion:** Therefore, promoting educational campaign and lectures to the assisted users; besides getting involved with community-teaching-service programs and research programs; can be considered a great start to the arduous walk that the healthcare imposes to its professionals.

Disclosure: No conflict of interest declared

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**To choose or not – experiences of the free choice of primary care provider**

F. Hermansson

Region Västra Götaland, Dep of Health Care, Research and development unit i primary health care, Södra Älvsborg, Borås, Sweden

**Objective:** To strengthen patient autonomy in health care, the Swedish government introduced the free choice of Primary Health Care Provider (FCPHCP), in 2009. Simultaneously, thoughts arose about what factors influence the individual to actively choose another health care provider. What are the experiences and knowledge of suddenly being offered freedom of choice?

In the aftermath it is clear that the vast majority of citizens in the region of Västra Götaland did not make an active choice. Was this a deliberate choice and if so, why waive the option? The individual experiences around the FCPHCP have not previously been investigated. Therefore, the present study aims to describe individual's experiences and knowledge of the possibility to freely choose primary health care provider.

**Methods:** Ten informants that have made an active choice in the FCPHCP will be selected strategically to obtain the greatest possible variation in data. They will be interviewed semi-structurally with focus on their experiences and knowledge about of the FCPHCP. Daily life experiences are suitably illuminated by empirical holistic approach and a qualitative design with content analysis was therefore chosen for this study. Data collection is in progress.

**Expected results:** A better understanding of individual experiences and knowledge of FCPHCP will help to shed light on the consequences and in time, if needed improve the design of the FCPHCP.

Disclosure: No conflict of interest declared

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**Diagnosis and prevention of arterial hypertension in adolescents based on „School Health Program“ at a public school in the city of Guarulhos**E.Cervantes<sup>1</sup>, B. Tavares<sup>1</sup>, J. Filho<sup>1</sup>, M. Chudo<sup>1</sup>, R. Pessoa de Melo Hermida<sup>2</sup><sup>1</sup> Medical School, Universidade Cidade de São Paulo (UNICID), São Paulo, Brazil; <sup>2</sup> Family Medicine Physician, Guarulhos Major City, Sao Paulo, Brazil

**Objectives:** Identify and address potential early hypertensives, to prevent pathological progression of cardiovascular disease in adult age, considering that teenagers usually neglect their health. To reach this goal, we follow the Federal Government program “School Health Program” (“PSE” in Portuguese) with following actions: collect anthropometric data, blood pressure measurement, data analysis and referral of adolescents with amended values.

**Methods:** Screening of children and adolescents (06-13 years old), divided in three steps of measurement, according recommendation of PSE: 1-anthropometric data (weight, height, BMI) and blood pressure of 551 students; 2-BP measurement of 146 individuals; 3-BP measurement of 57 students. Tools: scales, sphygmomanometer, stethoscope. Team: six medical students from Universidade Cidade de São Paulo (UNICID), school staff, health agents from Basic Health Unit. Students were oriented to empty their bladder, don't eat neither do exercises 15 minutes before BP measurement.

**Results:** 551 measurements there of 26,4% with abnormal BP. Second measurement with 39% abnormal BP. 24.5% of third measurement were confirmed as potential early hypertensive. 14 adolescents sent to Family Health's team (eSF) at Basic Health Unit.

**Conclusions:** The high percentage of abnormal BP is a fact in adolescents at this community and the PSE is a way to involve the actors and use the school as a privileged space for the practice of health promotion and prevention of diseases and illnesses. The sample size and the evidences collected can thus strengthen health strategy at the city contributing to reduce the regarding prevalence of hypertension in young adults. This screening will continue in 2013.

Disclosure: No conflict of interest declared

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**Association of risk factors for chronic kidney disease in Taiwan adults**

H. Chih-I, L. Wen-Cheng

Family medicine, Chang-Gung Memorial Hospital, Taoyuan, Taiwan

**Objective:** Chronic kidney disease (CKD) is emerging as major causes of morbidity worldwide. Current studies investigate some metabolic syndrome (MS) risk factors have a relative high risk for development CKD. In the present study, we discuss the optimized cut-off points and the priority for MS risk factors in prediction of CKD.

**Methods:** This study was population-based, cross-sectional study conducted in Taiwan. A total 46255 adults were enrolled with investigated eGFR and associated factors of with CKD. CKD was defined as an estimated glomerular filtration rate (eGFR) below 60 ml/min/1.73 m<sup>2</sup>. We performed areas under ROC curve (AUC) to show the accuracy of MS risk factors, which include waist circumference, waist-to-height ratio, mean arterial pressure (MAP), fasting glucose, and TG/HDL-C ratio, in prediction of CKD.

**Results:** The AUC of waist circumference, waist-to-height ratio, MAP, fasting glucose, and TG/HDL-C ratio in predicting CKD for males is 0.630, 0.667, 0.685, 0.649, and 0.596; on the other hand, AUC of these factors in predicting CKD for females is 0.631, 0.637, 0.669, 0.622 and 0.644.

MAP had the highest AUC in predicting CKD for both gender with statistical significantly higher than other factors. Besides, waist-to-height ratio had the second highest AUC, also significantly higher than that of waist circumference. TG/HDL-C ratio had the second highest AUC for females. However, no significant difference was observed as compared from other factors.

**Conclusion:** These findings suggest that the MAP is the most useful parameter in prediction of CKD in both gender. Other risk factors including waist-to-height ratio, fasting glucose, and TG/HDL-C have lower accuracy in prediction CKD.

Disclosure: No conflict of interest declared



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**Oral health networks: challenges and advances**

D. da Silveira, J.A. Melo Faria, R.J. Kitamura, P. Flores Capelossi Pimentel, M. da Gloria Zenha Wieliczka, C. Khawali, A. Marcia de Oliveira, J. Yuri Miranda, M. Tabita Bulhoes, M. Souza Ribeiro  
*Health Care, OS Santa Catarina, São Paulo, Brazil*

The oral diseases are important public health problems due to its prevalence and impact on individuals and society, despite its determinants are known and there are effective methods of prevention. Considering the aforementioned factors, they constitute chronic conditions and have singular importance in systematic network of oral health care. The objective of this study is to describe the process of structuring the network as well as its progress and challenges. Interest in the subject is guided in the paucity of studies that recognize specific oral diseases such as chronic condition and to collaborate for the structuring and integration of the network of care services. For this study, we opted for the methodology of reporting experience. The local network described consists of 21 units of primary and secondary care unit for assistance to a population of approximately 516.000 inhabitants. We quote results as improving access and quality of care, the possibility of assessment and demand control of specialties from the demand of Primary, shared care for the most complex cases, responsible for routing users in rehabilitation, the possibility of risk stratification and integrated discussion with the actors of the network. Our main challenges remains the consolidation of the network at the local level and tertiary, the matricial, expansion of primary care teams, implementation of tools for epidemiological studies and scarcity of resources for computerization of the network. In this sense, it is relevant to the maintenance of effort for network consolidation and empowerment of Primary Care for the coordination of care.

Disclosure: No conflict of interest declared

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**Evaluation of the quality of life of caregivers household of a basic health unit, Sao Paulo, Brazil.**

V. Nogueira, B. Mendonça  
*Nursing of School, UNINOVE, São Paulo, Brazil*

The study aimed to evaluate quality of life of home caregivers of residents in an area covered by the Basic Health Unit in São Paulo, Brazil. It was an exploratory's research conducted in the months of August and September 2011. 100 questionnaires were administered World Health Organization Quality of Life, in its short form (WHOQOL) of the World Health Organization. It was used as the statistical treatment EPI-INFO. The sample, 76% were female, 51% aged between 50 and 69 years, 92% were family members, 38% of patients cared for and domestic's activities, 53% attended high school. The interviewed, 41% care for patients between 1 to 5 years. Regarding self-assessment of their quality of life 31% reported being very poor, 28% felt satisfied with their life and 54% had no opportunity of leisure and 27% always has negative feelings. The study showed that home caregivers, have significant damage in all areas examined (physical, psychological, social relationships and environment); areas of best and worst scores were psychological (40.83) and social relations (50.58) respectively. Encourage the caregiver to organize your day to day in order to maintain self-care, preventing the diseases, it becomes a challenge for professionals in primary health care and provide health interventions to improve adherence to treatment of patients and their home caregivers.

Disclosure: No conflict of interest declared

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**Diabetes mellitus and sugar consumption; an ecological study**M. Talha Khan<sup>1</sup>, U. Janlert<sup>2</sup>, Nawi NG<sup>2</sup><sup>1</sup> Family and community medicine, King Faisal University, Hofuf, Saudi Arabia; <sup>2</sup> Public health and clinical medicine, Umea University, Umea, Sweden

**Background:** It is known that sugars, especially glucose is consumed in increased amounts, there is a possibility of increased and stressful insulin secretion by the pancreas due to its high glycemic index, which can lead to type 2 diabetes mellitus. Therefore we sought to analyze the 144 WHO member states to assess ecologically whether there is any association present. **Method:** It is an ecological study based data resources. For sugar consumption per capita in kilograms; data was taken from the Sugar Year Book 2008. While urban living percentage that is used as a proxy variable for confounders, data was taken from the World Health Statistics 2010. Data for prevalence of diabetes mellitus percentage among people of 20 to 79 years old was taken from the International Diabetes Atlas 2003 and 2007 and from the International Diabetes Federation website [www.idf.org](http://www.idf.org), for year 2010.

**Results:** Analysis has shown a significant positive association between the prevalence of diabetes mellitus and sugar consumption after controlling for confounding, when the averages of all three variables for 144 countries were used to perform linear regression. A positive association was seen between the prevalence of diabetes mellitus and urbanization. Urbanization was used as the proxy variable for confounders.

**Conclusion:** The prevalence of diabetes mellitus appeared to be increasing with time and linked with sugar intake and urbanization. In order to reduce the substantial impact of diabetes mellitus we need to address it at primary health care level globally.

Disclosure: No conflict of interest declared

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**Television viewing and BMI among Hong Kong adult population: findings from the Hong Kong Family and Health Information Trends Survey (HK-FHINTS)**Y.J. Xie<sup>1</sup>, S.S.C. Chan<sup>2</sup>, S.M. Stewart<sup>3</sup>, T.H. Lam<sup>1</sup><sup>1</sup> Department of Community Medicine and School of Public Health, The University of Hong Kong, Hong Kong, Hong Kong; <sup>2</sup> School of Nursing, The University of Hong Kong, Hong Kong, Hong Kong; <sup>3</sup> Department of Psychiatry, University of Texas Southwestern Medical Center at Dallas, Dallas, TX, United States

**Objectives:** The purpose of this study was to examine the association of television viewing with BMI in the Hong Kong adult population, and to determine whether this association is moderated by demographic and lifestyle variables.

**Methods:** The HK-FHINTS collected data on the public's use of media for health information and family communication. This study is a secondary analysis of these data that were obtained by using a random digit dial (RDD) system for telephone interviews with Hong Kong adult (age  $\geq 18$ ) citizens. The first survey was conducted in 2009 and a second survey followed in 2010. They yielded samples of 1510 and 1506 respondents respectively. Two years' data were combined and weighted by composition of age and sex of Hong Kong population for each year.

**Results:** TV viewing time increased with age but decreased with education level (both  $p < 0.01$ ). Linear regression analysis showed that after controlling for gender, age, employment status, marital status, education level and smoking, longer TV viewing time was significantly associated with higher BMI (Coefficients B: 0.18, 95% CI: 0.11, 0.25). This association was stronger in women than men (Coefficients B: 0.18 versus 0.14) and highest in 18-34 years old participants (Coefficients B: 0.34). Gender and age both interacted with TV viewing time on BMI (both  $p$  for interaction  $< 0.05$ ).

**Conclusions:** Hong Kong adults with a longer time TV viewing were more likely to be overweight/obese, especially in women and young adults.

Disclosure: No conflict of interest declared

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**Longevity and chronic diseases: education for self care**

Z.Z.L.C.Bittencourt, S.S.Costa

FCM, UNICAMP, CAMPINAS, Brazil

Recently the demographic and epidemiological process promoted longevity gains so that is considered a new cultural phenomenon. The population aging has implications like the development of chronic diseases including hypertension and diabetes mellitus and their complications, increases the utilization of health services. In Brazil, the health policy has given support to the supplies of essentials medicines for such diseases. The pharmacological treatment has high cost and may result in treatment dropout. Elderly patients have poor adherence to treatment and often they do not return to regular medical consultations. Objective: this study aims identify among hypertensive and diabetic patients enrolled in a health service, the causes of non-adherence to drug therapeutic. Methods: this study was conducted in a health service that has about 2000 registered patients with diabetes mellitus and hypertension that should withdraw free medicines monthly. The data showed that 54% of the patients had hypertension, 28% diabetes mellitus, 18% both hypertension and diabetes and 64% were over 60 years old. The study involved those who did not adhere to drug therapeutic for three consecutive months. These patients were contacted by phone with questions about life habits, educational activities participation, family support, use of drugs, difficulties and reasons for treatment abandon. Results: the findings were the use of self-medication or alternative treatments, the lack of educational activities for hypertensive and diabetic, including physical exercise and nutrition information. Conclusion: the study showed the educational for self-care and health promotion could guarantee a long life with quality.

Disclosure: No conflict of interest declared

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**What do we know about childhood cancers?**G. Eminsoy<sup>1</sup>, F. Sozen<sup>1</sup>, A. Kut<sup>1</sup>, M. Colak<sup>2</sup>, F. Saralioglu<sup>3</sup>

<sup>1</sup> Faculty of Medicine Dept. of Family Medicine, Baskent University, Ankara, Turkey; <sup>2</sup> Faculty of Health Sciences, Baskent University, Ankara, Turkey; <sup>3</sup> Faculty of Medicine Dept. of Pediatric Oncology, Baskent University, Ankara, Turkey

**Objective:** This study aims to investigate the level of knowledge of parents towards childhood cancers.

**Methods:** This descriptive cross-sectional study was performed on 200 parents volunteered to undergo a face to face interview regarding childhood cancers, while they were applying to their family doctor with minor health concerns. All subjects were interviewed and responses were recorded by the same investigator.

**Results:** Of the respondents 45.5% stated that they have at least one relative with diagnosed cancer. Subjects pointed out Leukemia (71.5%) correctly as the most frequent childhood cancer in Turkey, followed by 26.0% Lymphoma and 18.5% CNS cancers. When asking the frequency of cancers in relation to adult types, 56.5% of the respondents stated correctly that childhood cancers are rarer, while again 65% correctly claimed that childhood cancers are more curative. Of the responding parents 6.5% said that childhood cancers are contagious. When asking about most frequent symptoms of cancers parents pointed 78% to swollen glands and palpable abdominal masses, 77.5% to incurable wounds, and 76% to enduring pain.

**Conclusion:** Parental awareness, early diagnosis and psychosocial approach in childhood cancers increase the success of treatment, expected lifetime and quality of life. Although Turkey is a developing country and our study population is heterogeneous regarding to socioeconomically status, knowledge towards childhood cancers is found to be impressively high. Also the symptom of childhood cancers seems to be known very well. Performed campaigns like the "Leukemia Campaign" in Turkey significantly increase awareness and knowledge of the population.

Disclosure: No conflict of interest declared

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### Higher level of glycated hemoglobin A1C associated with increased liver cancer risks in patients with type 2 diabetes enrolled in National Diabetes Care Management Program

H.J. Chen<sup>1</sup>, T.C. Li<sup>2</sup>, F.Y. Wu<sup>1</sup>

<sup>1</sup> Department of Public Health, China Medical University, Taichung, Taiwan; <sup>2</sup> Graduate Institute of Biostatistics, China Medical University, Taichung, Taiwan

**Objective:** Glucose control is one of classic risk factors that have been explored to explain the excess of mortality and morbidity in diabetes. However, what is still unclear is whether glucose control is also an important factor of liver cancer incidence in Chinese patients with type 2 diabetes in Taiwan. The aim of the study was to examine whether glycated hemoglobin A1C (HbA1C) was associated with liver cancer incidence in type 2 diabetic patients.

**Methods:** A retrospective cohort study consisted of 53,009 patients with type 2 diabetes aged 30 and over enrolled in National Diabetes Care Management Program before 2004 was used in Cox's proportional hazard regression model.

**Results:** The mean follow-up years was 7.9 years. The incidence rates of liver cancer were 2.73, 2.78, 2.65, 2.72, and 2.66 per 1000 person years in groups of 1st (<6.6%), 2nd (6.6%-7.3%), 3rd (7.4%-8.4%), 4th (8.5%-9.8%), and 5th (≥9.9%) quintiles of the HbA1C, respectively. After adjusting for fasting plasma glucose, acute alcoholic hepatitis, hepatitis B, hepatitis C and other risk factors, HbA1C was independently associated with liver cancer incidence, and the corresponding hazard ratios for 3rd, 4th and 5th versus 1st quintiles of HbA1C were 1.23 (1.01, 1.49), 1.31 (1.07, 1.61), and 1.34 (1.08, 1.67), respectively. There was a significantly positive linear trend in liver cancer incidence with increasing HbA1C (p for trend=0.0041).

**Conclusions:** Our findings suggest glucose control may become a measure in clinical practice for the goal of care management and liver cancer prevention of these patients.

Disclosure: No conflict of interest declared

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### Health, social and economic consequences of std

R. Njeri Mbugua

School of Medicine, Nairobi University/Center for Diseases Control & Prevention (CDC) Kenya, NAIROBI, Kenya

**Objectives:** The epidemiology HIV/AIDS is very different from that in Western countries: level of sexual activity, not sexual orientation is apparently the risk factor and heterosexual transmission of (HIV) is the predominant mode. There is evidence, that genital ulceration, and perhaps other STD facilitate the sexual transmission of HIV infection.

**Method:** Although the health, social and economical consequences of STD are huge, until recently, many governments and international donor agencies tended to ignore the real magnitude of the problem. It needed a fatal STD to alert decision makers worldwide and the community to the STD problem and to generate resources for prevention and control. It is now established that the frequency rates of STD overall are much higher in both rural and urban areas. For example, STD are among the top five causes of consultation at health services in many African countries. The rate would be higher if age-specific consultation rates were available for 15-44 age group.

**Results:** STD have high incidence and prevalence in specific population groups like female prostitutes and their clients. Prostitution is an important factor in the transmission of STD in Africa, where prostitutes are named by 90% source of infection.

**Conclusions:** Major STD complications and sequelae are adverse pregnancy outcome for mother and newborn, neonatal and infant infections, infertility both sexes, ectopic pregnancy, urethral stricture in males, blindness in infants due to gonococcal ophthalmia neonatorum and in adults due to gonococcal kerato-conjunctivitis, genital cancers, cancer of the cervix and penile cancer.

Disclosure: No conflict of interest declared

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**Knowledge of cancer prevention and neoplasms risk factors – a pilot survey in Polish.**

M. Kurczewska, P. Kardas

*Family medicine, Medical University, Lodz, Poland*

**Purpose:** General practitioners play a very important role in early and quick diagnosis of numerous oncological conditions. The purpose of this pilot study was to assess the knowledge of cancer prevention and neoplasms risk factors among Polish outpatients.

**Methods:** This was an open study in primary care patients. The study was based on original questionnaire designed for that purpose, and administered among the primary care patients in urban settings of Lodz, Poland.

**Results:** The convenience sample of 100 outpatients took part in this study. Study results revealed that the knowledge of risk factors of cancer progress among the primary care patients is only average. Only minority of respondents regarded the oncological markers as a very specific and useful screen test for cancer detection. Tobacco smoke seems to be a well-known substance leading to the cancer, and the awareness of the other risk factors is lesser. Noteworthy, the awareness of preventive measures is very limited. Only minority of studied patients took part in national screening programs.

**Conclusion:** Results suggest that the some patients know how important primary cancer prevention is. Unfortunately, the uptake of available national preventive programs is only limited. Moreover, Polish general practitioners do not conduct cancer screening as frequently as they should. Considering ageing of Polish population and the rising tide of oncological diseases, a critical need to engage Polish primary care doctors in both cancer prevention, and screening is urgently required.

Disclosure: No conflict of interest declared

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**Using the community-oriented primary care (COPC) model to improve the quality of life of elderly people who live alone in Kaita, Japan: a collaboration by Aso Iizuka-Kaita Family Medicine, Japan and University of Pittsburgh Medical Center Family Medicine (UPMC) Shadyside Residency Program PA, USA.**Y. Osugi<sup>1</sup>, K. Kinjo<sup>1</sup>, S. Yoshida<sup>1</sup>, H. Ichinose<sup>1</sup>, Y. Honda<sup>1</sup>, H. Imura<sup>1</sup>, T. Sairenji<sup>2</sup>, M. Meyer<sup>2</sup>*<sup>1</sup> Family Medicine, Iizuka-Kaita Family Medicine Residency Program, Iizuka, Japan; <sup>2</sup> Family Medicine, University of Pittsburgh Medical Center Family Medicine Residency Program, Pittsburgh, United States*

**Objective:** The Japanese geriatric population is rapidly growing, with an expected increase of 37% by 2025 of those over 65 who live alone. Changes in the medical system are implemented to account for this growth, but less attention goes to their quality of life (QOL). Iizuka-Kaita and UPMC Family Medicine Residency Programs collaborated to improve the QOL of a targeted geriatric population in the Kaita region. Education regarding the COPC model was provided by UPMC, and progress was monitored via monthly internet meetings.

**Methods:** We moved through 3 stages of the COPC model: (1) defining the community, (2) identifying a problem, (3) developing an intervention. Our community was composed of 165 people over 75 and who live alone. Personal interviews and a focus-group discussion were conducted to identify their problems. A multi-disciplinary group comprised of stakeholders such as local administrators, community experts and volunteers helped implement the intervention. The next step: (4) monitoring the intervention is planned for upcoming community events.

**Results:** The community identified transportation issues as their main problem; they had difficulty getting to grocery stores and clinics. We found that resources exist, but are difficult to access and use, so we organized information and provided easy access so it could be utilized by our community.

**Conclusion:** This is one of the first COPC projects conducted in Japan. We predict that other communities in Japan will benefit from the development of this model, and from specific outcomes of this project.

Disclosure: No conflict of interest declared

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**Review of cardiovascular risk factors in patients with chronic kidney disease (CKD) pre and post workshop recommendations.**

E. Matas Castelló, P. Franco, L. Troyano, M. De Ciurana, M. Sieira, A. Rafols  
FAMILY MEDICINE, ABS GIRONA 2, GIRONA, Spain

**Methods:** A retrospective and comparative study of cardiovascular risk factors (CVRF) control in CKD by pre and post workshop recommendations review of: sex, age, CKD's stage, blood pressure (BP), glycemia (HbA1c), cholesterol (HDL, LDL), albumin/creatinine ratio (A/C). Treatment with NSAIDs, ACE inhibitors/Angiotensin receptor antagonists (ARA2) Statins and comorbidities. The post review it has been 6 months after workshop.

**Results:** In 2011, 245 patients were diagnosed with CKD, in 2012, 377 patients. Both years, 60% were female and 40% male, and the median age was 75.5/13. The stage of CKD, BP, HbA1c, cholesterol and A/C could not be evaluated due to lack of data. NSAID use in 2011 was 7.3%, in 2012, 15.4% ( $p < 0.05$ ). The use of ACE inhibitors/ARA2 and Statins in both years are similar, also associated diseases: HTA, stroke, DM, ischemic heart disease and intermittent claudication ( $p > 0.05$ ).

**Conclusions:** There has been an increase in the diagnosis of CKD in our health center after workshop recommendations, unchanged by age or sex. The cause of the lack of data of CVRF is attributed to the completion of analysis and BP measurement every 12 months instead of every 6, so we should do another review to see if the workshop has been effective for analytical control. There was a significant increase in the use of NSAIDs, but similar kidney protector drug use. We observe a similar prevalence of comorbidities. We think it is necessary to do another workshop emphasizing in NSAID treatment.

Disclosure: No conflict of interest declared

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**Implementation of the family health strategy in the central region of Sao Paulo**

M. Cavalcanti, R. Brizzi

Saude da Familia, Prefeitura Municipal de Saúde de São Paulo, São Paulo, Brazil

**Introduction:** The family health strategy (ESF) is the health care model of primary health care advocated by the Ministry of health that is based on work by multiprofessional teams and develops health actions in a defined territory, with focus on the family.

**Objective:** to describe the implementation process of the ESF in the central region of São Paulo, Brazil.

**Method:** Descriptive and bibliographic research carried out in the year of 2012.

**Results;** In 2001 the city of São Paulo was not integrated in any management model of the Brazilian unified health system, but had family health teams run by social organizations that were partners of the State Government.

The management that started, defined the ESF, decentralization as a structuring axis of the SUS in the municipality.

For operation of the ESF, the SMS used as a mechanism for recruitment of professionals, the agreement with private institutions, called partner organizations, which took over from administrative roles and of transfer of financial resources to training activities, coordination and direct supervision of the health teams.

The central region of the city of São Paulo, with a current population of 440,076 inhabitants, diversified with insufficient professionals, teams and equipment to cover an attention of quality, little moved forward with the implementation of the ESF; can infer little investment in the basic attention, partner organizations with different levels of autonomy, the occupation of the urban space marked by a great heterogeneity.

Disclosure: No conflict of interest declared

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**Menopausal symptoms and health outcomes in Hong Kong women**

E.L.Y. Wong, F. Huang, C. Wong, A.W.L. Cheung, S.Y.S. Wong

*The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China*

**Objectives:** To assess common menopausal symptoms experienced in Hong Kong women and the relationship of these symptoms to health outcomes.

**Methods:** A cross-sectional survey was conducted on women aged  $\geq 40$  years old from 7 women clubs of Family Planning Association, to explore menopausal women's symptoms and health outcomes using self-administered questionnaires. The Menopause Rating Scale was used to assess menopausal symptoms, the Short Form 12 health survey was used to assess the health-related quality of life, the Centre for Epidemiologic Studies Depression Scale was used to assess depression status, and Female Sexual Function Index and Sexual Quality of Life-Female were used to measure sexual functioning in women.

**Results:** Of 561 respondents, 131 were premenopausal, 33 were perimenopausal, and 376 were postmenopausal. 86.1% of women had at least one symptom. The most prevalent symptoms were joint & muscular discomfort (85.2%), physical & mental exhaustion (69.2%) and sleep problems (63.6%). The presence of psychological and urogenital symptoms was associated with poorer mental health, depression status and sexual quality of life ( $P < 0.05$ ). The presence of somatic and psychological symptoms was significantly associated with a worse physical health ( $P < 0.01$ ). There was no correlation found between menopausal status and health related quality of life, depression status and sexual quality of life, but female sexual function.

**Conclusion:** The majority of Hong Kong women reported one or more menopausal symptoms. The presence of menopausal symptoms was significantly associated with poorer health outcomes in women.

Disclosure: No conflict of interest declared

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**Hypertension and diabetes mellitus as a risk factor for dementia in home-care patients**T.Ozturk Uzun<sup>1</sup>, Z.A. Saglam<sup>1</sup>, Y. Uzun<sup>2</sup><sup>1</sup> Family Medicine, Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey; <sup>2</sup> Emergency Medicine, Kartal Yavuz Selim State Hospital, Istanbul, Turkey

**Objective:** The continued growth in the number of elderly age-related chronic diseases and dementia causes an increase in demand for palliative care. Numerous variables are associated with increased risk of developing dementia. The objective of the study is to explore the frequency of dementia in home care patients with respect to diabetes (DM) and hypertension (HT).

**Materials&Methods:** The study was designed as a descriptive case-control study among registered patients ( $n=630$ ) of Istanbul, Goztepe Training and Research Hospital's home-care unit. The records of the patients were analyzed retrospectively. Patients with HT+DM (Group I:  $n=319$ ; mean age:  $81.95 \pm 8.33$ ) were compared with control subjects (Group II:  $n=311$ ; mean age:  $84.05 \pm 8.76$ ) who were defined as patients having diseases any other than HT+DM (osteoarthritis, stroke, several malignancies, femur fracture, benign prostat hypertrophy, amyotrophic lateral sclerosis, multiple sclerosis..). The frequency of dementia was compared in both groups. Descriptive statistical tests as well as Student's-t, Chi Square and One-way Anova were used.  $P < 0.05$  showed statistical significance.

**Results:** There wasn't a statistical difference regarding ages between Group I [(DM: 35 (10.97%), HT: 191 (59.87%), HT+DM: 93 (29.15%)] and Group II. There wasn't a statistical significance between groups in regarding the frequency of dementia ( $p > 0.05$ ). Yet, the frequency of dementia in patients with HT and group II was higher than patients with HT+DM ( $p = 0.034$ ;  $p = 0.023$  resp.). Dementia occurred earlier in patients with HT+DM.

**Conclusion:** Impaired microvasculature through pathological progression of DM and HT has been shown to increase the incidence of dementia. We couldn't demonstrate any increase in terms of dementia in patients with DM or HT but two illnesses together significantly caused dementia in early ages.

Disclosure: No conflict of interest declared

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**Culturally sensitive care for non-western elderly immigrants through ethnic community health workers**

I. Verhagen

*Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, Netherlands*

**Objective:** In Western countries, health and social welfare facilities are not easily accessible for non-Western elderly immigrants and their needs are suboptimally addressed. A transition is needed to overcome barriers to make cure and care accessible. We developed an intervention programme in which ethnic community health workers act as liaisons between elderly and local health and social welfare services. Trusted and respected community members serve as community health workers who cooperate with elderly and providers of services in creating and implementing culturally sensitive services.

**Methods:** In a quasi experimental design, the effectiveness of introduction of community health workers, health needs assessment and follow-up intervention programme will be evaluated in three (semi) urban residential areas in the Netherlands. The primary outcome is care consumption. Secondary outcomes are quality of life and functional impairments. The target number of participants is 194 elderly. Implementation of the intervention programme will be examined with focus groups and data registration of community health worker activities. Elderly's informal care givers are included to examine caregiver burden.

**Results:** Study results will be expected in 2014.

**Conclusions:** To enable a successful transition, proper identification and recruitment of community health workers is required. Taking this into account, the study aims to provide evidence for an approach to improve the care and access to care for elderly immigrants whereby they actively participate. Once proven effective, this study can create a basis for further integration of the community health worker function into the existing local health care and welfare system.

Disclosure: No conflict of interest declared

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**Determination of sleeping disorder prevalence and its relation with different parameters in patients who applied to family medicine clinics**

B. Tagtekin Sezer, D. Toprak

*Family physician, Sisli Etfal Training and Research Hospital, Istanbul, Turkey*

**Objective:** In our study we aimed to determine the prevalence of sleep disorders and the factors related with these problems in patients who attended to Family Medicine Clinics in Sisli Etfal Training and Research Hospital with any complain.

**Methods:** Patients over 18 years of age were included in the study. After giving information about the questionnaire, verbal approval was received. SPSS (Statistical Package for Social Sciences) version 19.0 was used,  $p < 0.05$  accepted as statistically significant.

**Results:** Totally 143 individuals were participated the study. While snoring complaint was mostly in middle age group (%65,6, n=40); feeling tired and waking up hardly complaints were decreasing as the age increased. In addition, feeling of "inadequate sleep" was most frequent in young adults (%69,57, n=16). There was a significant relationship between working in shifts and work accidents due to carelessness ( $p=0,000$ ). We found significant relationship between traffic accident story due to carelessness and hardly- tired waking up ( $p=0,046$ ) and sleep apnea ( $p=0,003$ ) histories. There were positive significant relationships between anthropometric parameters and day time sleepiness, more than 11 hours night sleep ( $p < 0,05$ ). Also significant relationship was found between having chronic diseases and excessive daytime sleepiness ( $p=0,01$ ).

**Conclusion:** In our study we found a significant relationship between sleep parameters and sociodemographic attributes, being a shift worker, having a chronic disease and menopause. Questions asked for scanning sleep disorders in periodic health examinations would be helpful to diagnose and treat the sleep disorders.

**Keywords:** Sleep disorders, sociodemographic factors, chronic disease, Epworth Sleepiness Survey

Disclosure: No conflict of interest declared



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**Pharmaceutical behavior in patients through Greek economic crisis**

G. Mantzouranis, A. Bitas, K. Katsanaki, C. Sabazioti, S. Barlika, V. Mbambalis, A. Giakoumis, I. Lentzas  
General practice, Medical University of Patras, Patra, Greece

**Purpose:** The study aims to assess the impact of the economic environment in the pharmaceutical patient behavior and the possible implications on the patients' health status.

**Methods:** The 195 participants completed an anonymous closed questionnaire, consisting of 40 questions where the demographic, social, economic and nosological (health) profile of respondents, opinions and attitudes regarding the drug-related costs and the role of the physician in the management of the drug were investigated.

**Results:** 70.3% of respondents indicated that their monthly income is insufficient to purchase all drugs, and 89.7% commented that they faced difficulty in buying it. 55.4% of the sample omitted a dose or their whole medication due to economic weakness. 1/3 of respondents asked the doctor(physician) to prescribe a cheaper drug. 73.8% would accept substitution of a drug with a cheaper and equally effective one, although 36.4% do not consider the cheaper drugs as equally effective. It is noteworthy that 79% felt that the failure to receive their drug therapy is associated with increased rates of anxiety, depression and sleep disorders.

**Conclusions:** The cost of medicine is of great interest not only because of the economy but also has a social character as it directly related to citizens' health. General Family Physician must redefine his relationship with the patient medical escaping stereotypes, most calculating and the socioeconomic profile of user of the system.

Disclosure: No conflict of interest declared

1108

**Painkillers and hearing loss, are they related?**

R. Cunha<sup>1</sup>, M. João Macedo<sup>2</sup>

<sup>1</sup> ACES Cávado I, USF Bracara Augusta, Braga, Portugal; <sup>2</sup> USF Ronfe, USF Ronfe, Guimarães, Portugal

The use of analgesics such as aspirin, ibuprofen and acetaminophen, is recurrent in clinical practice. They are over-the-counter drugs, have an easy access, and are frequently administered chronically.

Hearing loss is one of the most common sensory disorders, concerning one third of middle-age individuals.

The association between the use of analgesics and hearing loss may represent an important public health issue.

It is intended to determine the relationship between analgesic use and hearing loss.

For the survey, conducted in October 2012, the *Mesh* terms used were „hearing loss“, „analgesics“, „aspirin“, „ibuprofen“ and „acetaminophen“. Portuguese, Spanish and English articles were included; animal studies were excluded. The databases used were: *National Guideline Clearinghouse*, *National Electronic Library for Health*, *Canadian Medical Association*, *Bandolier*, *Primary Care Clinical Practice Guidelines*, *The Cochrane Library*, *DARE MR*, *Pubmed* and *Medline*. *Strength of Recommendation Taxonomy (SORT)* scale was used.

With the *Mesh* words quoted above, 42 articles were found, 8 of which were included: 2 Systematic Reviews, 3 Randomized Controlled Trials and 3 Original Articles.

According to the currently scientific evidence available, it is reasonable to infer that the use of analgesics is associated with hearing loss (SORT B).

The Family Physicians should consider the ototoxicity inherent to painkillers when facing progressive hearing loss without apparent cause.

The use of these drugs should always be prudent, as to improve the quality of life now, we can make it worse later: as the popular saying, “better safe than sorry”.

Disclosure: No conflict of interest declared

1110

**On the radio airwaves AMORB / FM – communication in health: the challenges of broadcasting imbricated with health care**

R. Pekelman<sup>1,2,3</sup>, C. Famer Maria Rocha<sup>4</sup>, C. L. Mallmann<sup>4</sup>,  
N. Barcelos Beatriz de Farias<sup>4</sup>, M. F. Petry Londero<sup>4</sup>, M. Campos de Quadros<sup>4</sup>

<sup>1</sup> *Municipal Health Counseling, Municipal Counseling, Porto Alegre, Brazil;* <sup>2</sup> *Hospital Nossa Senhora Conceição, Conceição Hospitalar Group, Porto Alegre, Brazil;* <sup>3</sup> *Radio AMORB/FM, Association of Residents of Neighborhood Ruben Berta, Porto Alegre, Brazil;* <sup>4</sup> *Collective Health School, Federal University of Rio Grande do Sul, Porto Alegre, Brazil*

**Objectives:** The objective is health promotion in two weekly programs in a community radio AMORB-FM, Porto Alegre / Brazil, the meeting between the university, the health service and the community.

**Method:** The university extension project includes development and participation in the program „Health in the Community“ that presents and discusses health issues, and „Fourth Intentions: a real date with their imaginary friends“ a mental health intervention. **Results:** The enlarged health concept is developed in the two programs, the first, health comes as a right of citizenship, discussing issues on social, community, individual vulnerability. In the second one, the health care process happened on the airwaves shuffling identities, positions of therapists and patients circulate elsewhere, in other productions of being, as the planner of the program, the announcer, a friend of labor. The communication skills are developed by the scholarship students and residents of community health and mental health, as well as health workers and people from the local community.

**Conclusions:** The project „On the radio airwaves“ is a powerful space for training of health professionals to communication skills; to problematize the health situation with the local community; a differentiated care for mental health with social inclusion; a space of social empowerment, about health and health communication. Interinstitutional experience potentiates the project, four institutions are involved: Association of Residents of Neighborhood Ruben Berta, Federal University of Rio Grande do Sul, Conceição Hospitalar Group, the Municipal Health Counseling.

Disclosure: No conflict of interest declared

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**Community-based strategy in identifying individuals at risk for pulmonary tuberculosis and promoting disease awareness in the community**

L.A.B. Abrogena  
*Seamen's Hospital Family and Community Medicine, Philippine Academy of Family Physicians, Manila, Philippines*

In the Philippines, TB still ranks as 6<sup>th</sup> among the leading causes of death. Efforts in disease surveillance to identify cases has been initiated but still with poor outcome.

**Objectives:** The program aims to establish a model for a community-based strategy that will improve identification of individuals who are at risk for PTB. It also intends to increase and promote awareness about the disease in the community.

**Methodology:** The program involved the participation of community health volunteers who are trained to fill-up a validated survey questionnaire accessing disease risk in an individual. The initial phase of the program was conducted at a pilot community for two weeks. Individuals who were identified to be at risk of PTB were then referred to the local health center for sputum AFB smear. Disease awareness and prevention were promulgated through information dissemination, posters and active house-to-house campaign for an initial period of three months. **Results.** A total of 112 of 190 households in GK Molave community were surveyed. 24 individuals were identified as at-risk and were referred for sputum AFB smear for which only two tested positive and enrolled for treatment. A follow-up focus group discussion was conducted and showed increased awareness about TB and reduced stigma about the disease.

**Conclusion:** Strategies involving active participation of a community will contribute to the effectiveness of a health program like PTB awareness. Disease surveillance can be grass-rooted by increasing awareness about the disease and affect change in the health seeking behaviour of the community.

Disclosure: No conflict of interest declared

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**Evaluation of sociodemographic features of infertile Turkish women**S. Haliloğlu<sup>1</sup>, Z. A. Saglam<sup>2</sup>, D. Toprak<sup>3</sup>, A. Cetin<sup>4</sup>

<sup>1</sup> Family Medicine, Haseki Training and Research Hospital, Istanbul, Turkey; <sup>2</sup> Family Medicine, Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey; <sup>3</sup> Family Medicine, Sisli Etfal Training and Research Hospital, Istanbul, Turkey; <sup>4</sup> Gynecology and Obstetrics, Haseki Training and Research Hospital, Istanbul, Turkey

**Aim:** Infertility is defined as inability to conceive a pregnancy after a year of unprotected intercourse. This case-control study presents the effect of demographic characteristics and comorbidity on infertility of women.

**Methods:** Data of female patients (n=300) followed-up between 2005-2012 at Infertility Department of Haseki Training and Research Hospital were retrospectively evaluated for demographic characteristics and comorbidity. Age matched 100 women who applied to gynecology department for complaints other than infertility served as control group. Descriptive statistics and Chi-Square tests were used for statistical analysis;  $p < 0.05$  showed statistical significance.

**Results:** The mean ages were  $29.56 \pm 5.62$  and  $28.98 \pm 6.22$  years for infertile and control group respectively. The mean durations of marriage and infertility of infertile group were  $6.3 \pm 4.9$  and  $4.9 \pm 4.5$  years respectively. The mean menarche age was  $13.30 \pm 1.39$  for infertile group and  $12.92 \pm 1.16$  for control group ( $p = 0.015$ ). Menstrual regularity was not a risk factor for infertility ( $p = 0.787$ ). Compared with controls the infertile group's education level was higher ( $p = 0.001$ ) and they had a higher employment rate ( $p = 0.006$ ). They consulted for help in the first five years of their marriage. Hypothyroidism (4.3%), hypertension (0.3%), DM (2%), asthma bronchialis (1.3%), chronic hepatitis (0.3%), familial mediterranean fever (1%) and epilepsy (0.3%) were recorded as comorbid diseases in infertility patients. There wasn't a significant difference in terms of comorbidity among groups ( $p = 0.325$ ). Smoking was not found as a risk factor for infertility ( $p = 0.888$ ).

**Conclusion:** Women who are employed and have higher educational levels more likely seek for help for infertility. Comorbidity is expected to be associated with infertility but larger number of women should be analyzed for better results.

Disclosure: No conflict of interest declared

1168

**Prevnatura – prevalence study of natural products consumption**A.L. Soares<sup>1</sup>, A. Moutinho<sup>2</sup>, D. Velho<sup>2</sup>, R. Campos<sup>1</sup>, A. Teixeira<sup>1</sup>

<sup>1</sup> USF Nova Via, ACES Grande Porto VIII Espinho/Gaia, Vila Nova de Gaia, Portugal;

<sup>2</sup> USF Santiago, ACES Pinhal Litoral II, Leiria, Portugal

**Objectives:** Determine prevalence on consumption of natural products in two family healthcare units. Describe users and consumptions, verifying any association between them.

**Methods:** An observational study was carried in the Nova Via and Santiago Family Health Units using a convenience sample. Data were collected by questionnaire on April 2012 using variables like demographics, medical history, regular consumption of natural products, looking for prior information about natural products, purchase site, source of information, active consumption information provided to family physician and presence of side effects.

**Results:** 366 questionnaire were validated, median age was 50,4 years, 63,9% were females, 33,1% had less than 4 years of school education and 19% had at least an university degree.

Consumption of 64 natural products was identified. Highest percentages of natural product consumption were attributed to Lemon balm infusion (73,2%), chamomile infusion (57,9%) and linden infusion (57,1%). 52,2% were taking natural products on a regular basis. 73,5% took natural products by personal initiative, 75,2% did not provide any type of information to the family physician. Side effects were reported by 1,5%. 48,4% mentioned to have at least one pathology being hypertension and diabetes more common.

A statistical association was verified between consumption and female sex ( $p = 0,002$ ).

**Conclusion:** There were identified consumptions with higher prevalence when compared with other studies. These consumptions are capable of causing pharmacological interactions and side effects that must be taken care after, so physicians must be aware of its patient's habits.

Disclosure: No conflict of interest declared

1187

**Factors affecting health-related quality of life among adult smokers in Korea**Y.J. Paek<sup>1</sup>, Y.H. Kim<sup>2</sup><sup>1</sup> Family Medicine, Hallym University Sacred Heart Hospital, An-yang Si, Korea; <sup>2</sup> Department of Nursing, Pukyong National University, Busan, Korea

**Objective:** The purpose of this study was to investigate factors affecting health-related quality of life (HRQL) among adult smokers in Korea. **Methods:** The study subjects were 563 adult smokers who have registered in 8 smoking cessation clinics of public health centers in Busan City, Korea. HRQL was measured by using SF-8. Data were collected from September to November 2010 and analyzed by T-test, ANOVA and multiple regression analysis using SPSS 18.0. **Results:** There were positive relationships of favorable health habits with HRQL. Social insurance, mental health and number of chronic diseases were related to the physical functioning (PF) and role physical (RP). Bodily pain (BP) was related to sex, mental health, number of chronic diseases and Body Mass Index (BMI). Social functioning (SF) was related to social insurance, mental health and alcohol drinking. Vitality (VT) was related to sex, oral health, BMI and alcohol drinking. Mental health and alcohol drinking were related to role limitation-emotional (RE). Mental health (MH) was related to exercise and mental health. Multiple regression analysis revealed that the factors related to general health (GH) was sex, education, nutrition, oral health and mental health.

**Conclusions:** This study showed that HRQL of adult smokers was significantly influenced by various health behaviors. To improve HRQL, it is important to have favorable health habits. It will be mandatory to develop and evaluate the health promotion programs for adult smokers in Korea.

Key words: Smoking, Health, Quality of life.

Disclosure: No conflict of interest declared

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**Follow-up of women with inadequate papanicolau smear**F. Lopez<sup>1</sup>, E. Arcos<sup>1</sup>, O. Quezada<sup>2</sup><sup>1</sup> Facultad Enfermería, Universidad Andres Bello, Santiago, Chile; <sup>2</sup> Citopathology Laboratory, Complejo Asistencial Barros Luco Trudeau, Santiago, Chile

**Background:** In Chile, the classification system of cervical cytology reports diagnostic codes defined in the National Cervical Cancer Program (adapted from the classification of Bethesda 2001) has helped define the quality of cytology specimens and their specific characteristics.

**Object:** To know the cytological result of the compliance of the standard ministerial Cervical Cancer Program, regarding cytology reports classified as inadequate in health control women of a primary care South Metropolitan Area of Santiago de Chile, period 2010-2011.

**Patients and methods:** An epidemiological cyto-histologic follow-up study of 2,547 women with inadequate cervical cytologic reports which were followed by cohort by cause of inadequacy (smears with endocervical cells only, indicating little, hemorrhagic, inflammatory, poorly secured, scarce and limited hemorrhagic and inflammatory). The analysis of the data was performed using the „Tree Conditional Probabilities.“

**Results:** Of the 2547 women with these smears, half of them 1285 (50.5%) met the standard ministerial repeat of these inadequate smears. 1087 women with normal cytology (85.7%) and the detection of cervical lesion cohort ranged between 1.1% (low and inflammatory) and 4.2% (bad set). Cohorts of smears and endocervical cells only scarce and hemorrhagic showed no cytopathological lesions.

**Conclusions:** To ensure the quality and safety of the national program is essential to increase the performance of the standard tracking inadequate smears, especially in women with inadequate cytological reports of bleeding and inflammatory

Disclosure: No conflict of interest declared

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**To evaluate usage of cigarette and tobacco products in official institutions of Konya province, Turkey**S. Çetin<sup>1</sup>, K. Marakoglu<sup>2</sup>, O. Battir<sup>3</sup>, R. Kutlu<sup>4</sup>, M. Aksel<sup>3</sup>, F.N. Yaman<sup>5</sup>, N.Ç. Kargin<sup>2</sup><sup>1</sup> Deputy Governor of Konya Province, -, Konya, Turkey; <sup>2</sup> Department of Family Medicine, Selçuk University, Selçuklu Medical Faculty, Konya, Turkey; <sup>3</sup> Health Directorate of Konya Province, Konya, Turkey; <sup>4</sup> Department of Family Medicine, Necmettin Erbakan University, Meram Medical Faculty, Konya, Turkey; <sup>5</sup> Public Health Directorate of Konya Province, -, Konya, Turkey**Objective:** In this study, aimed to evaluate usage of cigarette and tobacco products in official institutions of Konya province located in the central of Turkey.**Methods:** In 2012, 16 official institutions exist in center of Konya province, with sampling method 1155 people included into study of 23,099 officers working in the official institutions. Evaluate the usage of cigarette and other tobacco products with a questionnaire consisting of 39 questions with face to face interview technique applied to 983 people with completed data participated into study.**Results:** Participants mean age was 37.79±8.63. Participants were found to be 42.4% smoking everyday or sometimes, 15.4% cessation smoking and 42.4% non-smoker. Among these institutions, health institution officers smoking frequency were found as 31.0%. Widowers smoking rate was (60.7%) significantly found higher than singles (42.6%) married people (41.5%) smoking rates (p=0.001). Primary school graduates smoking frequency rate is (56.2%) significantly found higher than high school graduates (%43.9) and university graduates (%41.1) smoking rates (p=0.019). Generally usage of water pipe frequency is found as; 11.9%, usage of pipe frequency; 2.1%, usage of cigar frequency 5.3% and usage of rolled tobacco frequency 5.5%. Smokers, respectively, as high as the statistical significance of the water pipe (21.4%), pipes (3.6%), cigars (10.8%) and rolled tobacco (10.8%) use were higher (p=0.000), (p=0.015), (p=0.000), (p=0.000).**Conclusions:** As per result of the global adult tobacco survey in Turkey in 2012 usage of smoking frequency decreased up to 27%, but Konya province smoking frequency rate moreover than mentioned rate. At the same time cigarette smokers are using the water pipe, pipe, cigar and rolled tobacco significantly rates.

Disclosure: No conflict of interest declared

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**Tackling global obesity**

F. Rizvi, C.K. Archer

Heatherbrook Surgery, 122 Astill Lodge Road, Leicester, United Kingdom

Health is the foundation for social and cultural growth, for both political and economic sustainability. Health problems are transcending national borders and we are increasingly managing people and communities with “international” diseases. Obesity is directly linked to significant co-morbidities like diabetes, cardio-vascular diseases, cancer and psychological problems. At least 2.8 million adults die each year as a result of being overweight or obese and the incidence is rising.

Consider this from the WHO:

1. Worldwide obesity has more than doubled and tripled in Europe since 1980
2. In 2008, more than 1.4 billion adults were overweight.
3. More than 40 million children under the age of five were overweight in 2010.

The purchase of cheap unhealthy food is aggressively promoted by fast food chains and supermarkets. This is a highly lucrative business but at the price of people's health. The message of the importance of healthy eating needs further promotion. Supermarkets should be encouraged to display healthy food more readily and curtail the promotion of unhealthy food.

At a national level regular physical activity needs to be built into the structure of everyday life. This requires investment in infrastructure to facilitate exercise such as building safe cycle ways, walking paths and improved public transport.

From my experience sustainable weight loss is very difficult to achieve; so prevention is essential. This initiative will help us live longer in a healthy state and enable us to serve humanity even when we are old.

We hope to raise our glasses and wish “Nazdravi”.

Disclosure: No conflict of interest declared

1285

**Physiological determinants of exercise adherence and physical activity in weight-reduced men**

I. Lentzas, G. Tzavara, A. Seretis, A. Mproustas, V. Bellou, M. Bellou, A. Marinopoulou, D. Milia  
*General Practice, Health center of Simopoulo, Simopoulo, Greece*

**Introduction:** The aim was to identify factors predicting adherence to prescribed exercise and subsequent free-living PA.

**Subjects and methods:** Forty five middle-aged, sedentary, obese men (BMI 30-40, mean 33.0) started a very-low-energy-diet (VLED) producing a 14.2 kg (4.0) weight-loss. After VLED they were randomised into 3 weight maintenance (WM) groups (walking, W; strength training, S; control, C;) for 9 months. Exercise groups trained 3 x 45 min/week. WM was followed by 24-month unsupervised follow-up (FU).

**Results:** During WM group W adhered better to prescribed exercise volume (84% vs. 71%,  $P = 0.07$ ). In combined exercise groups, abdominal strength and greater weight-loss during VLED predicted exercise adherence. PA during FU (27 men remaining) was predicted by baseline PA and Leg strength, PA and improved back strength during WM and abdominal strength after WM ( $r^2 = 0.89$ ). Adherence to prescribed exercise or weight-loss did not predict long-term PA.

**Conclusion:** Weight-loss improves short-term adherence to exercise, but weight-loss or greater exercise adherence did not predict long-term free-living PA. Long-term PA was mostly explained by previous PA, but also by strength gains during WM. Our results imply that PA behaviour is hard to change, but improved fitness gains from exercise intervention may have a small role in increasing or maintaining long-term PA.

Disclosure: No conflict of interest declared

1295

**The risk of osteoporosis in long term survivors of gastric cancer after curative gastrectomy**

C. Hyun sun, L. Jung a, K. Young Sik, S. Sung  
*family medicine, AMC, Seoul, Korea*

**Introduction:** In Korea, the incidence of gastric cancer that occurs very frequently in the East Asian is 0.06% and 1<sup>st</sup> prevalent cancer. After surgical treatment of gastric cancer, however, can cause side effects such as anemia, osteoporosis, weight loss frequently appear. Particularly a decrease in BMD is the main side effects. Therefore, in this study, we exam factors associated with osteoporosis in long-term survivors after gastric cancer surgical treatment.

**Methods:** Patients with history of gastric cancer, who survived more than 5 yrs after curative gastrectomy, are generally consulted to department of FM from department of Surgery in Asan Medical Center. Pt underwent BMD were included in the study. We investigated the anthropometric and laboratory data including body mass index (BMI), hemoglobin, lipid profiles, and bone mineral density (BMD), and the frequency of medical tests which had been performed after the surgery, at the time of consultation. Through the medical records of hospitalized patients at the time of surgery for weight, BMI, operative procedure, stage, and the data were collected.

After visiting the Department of Family Medicine, BMD, body weight, BMI were measured.

Univariate analysis, the t-test and chi-square test was used and In multivariate analysis, logistic regression analysis were used.

**Results:** Total 109 patients were included, and 60.5%, average age of 61.2 and men 43.1%, women 56.9%, respectively. L-spine T-score of this prevalence of osteoporosis was 37.6% and the prevalence of osteoporosis of the femur neck 11.9%. L-spine osteoporosis or femur neck osteoporosis, even though only one place that was considered. Osteoporosis prevalence was higher when you look at the overall incidence of osteoporosis and related factors in univariate analysis, older age of the patient, and osteoporosis prevalence appeared to be higher when the initial weight ( $P < 0.001$ ) at the time of admission is low ( $P = 0.009$ ). In multivariate analysis, older age was (OR 1.11 95% CI 1.06-1.70) higher risk of osteoporosis and higher weight was lower risk of osteoporosis (OR 0.94 95% CI 0.88-0.99). Body weight Change and BMI change were not relevant to the occurrence of osteoporosis.

**Conclusion:** In gastric cancer long-term survivors who underwent BMD at FM clinic, the prevalence of osteoporosis was 39.4%. The risk of osteoporosis was more associated with weight at the time of surgery rather than body weight Change and BMI change

Disclosure: No conflict of interest declared

1342

**Newborn, child, maternal mortalities and health, socio-economic related indicators in China**H. Wang<sup>1</sup>, L. Wang<sup>2</sup>, G. Y. He<sup>3</sup>, C. Wang<sup>1</sup>, L. Zhang<sup>1</sup><sup>1</sup> Family Medicine, Shanghai Tongji Hospital, Tongji University, Shanghai, China; <sup>2</sup> Control Science and Engineering, Tongji University, Shanghai, China; <sup>3</sup> School of Humanities and Social Science, The Hong Kong University Science and Technology, Hong Kong, Hong Kong

**Objectives:** The Ministry of Health of the People's Republic of China has been publishing Health and Health related indicators of the country annually since 1991. However, these indicators and the factors related to health system resources, demographic and socio-economic indicators have not yet been investigated in a systematic manner. The overall aim of this study was to analyze the relationships between indicators of newborn, child and maternal health and health system resources and demographic and socio-economic indicators.

**Methods:** This study was conducted on Health and Health related indicators of China from the year 1991 to 2010. The indicators of Newborn Mortality Rate (NMR), Infant Morbidity Rate (IMR), Mortality Rate of Children Under 5 (U5MR) and Maternal Mortality Rate (MMR), Health systems resources, Demographic and socio-economic indicators were extracted and analyzed. The relationship of NMR, IMR, U5MR, and MMR with Health systems resources, Demographic and socio-economic indicators were established using intelligent calculation techniques.

**Results:** There were negative relationships between NMR, IMR, U5MR, MMR and Total Health Expenditure, Number of Health Care Institutions, Medical Technical Personnel in Health Care Institutions per 1000 Persons, Gross Domestic Product, Per Capita Annual Income. There was positive relationship between NMR, IMR, U5MR, MMR with Engel's Coefficient of Urban & Rural households.

**Conclusion:** There is obvious decrease in NMR, IMR, U5MR, MMR. It is related to Improvement of socio-economic conditions in China.

Disclosure: No conflict of interest declared

1387

**Reorganization of the territory covered teams of the family health strategy in the western region of Sao Paulo, Brazil.**

G. Mano, C. Tamié, R. Rocha, S. Romero

Western Region Project, Faculty of Medicine, University of São Paulo, Faculty of Medicine, University of São Paulo, São Paulo, Brazil

The Family Health Strategy is configured as one of the most important benchmarks of the organization of primary care in Brazil. The review and revision of the territory are instruments that allow the diagnosis and planning for the actions of the teams. The Ministry of Health recommends for each team that has a territory from 3000 to 4000 people. Objective: To describe the process of reorganizing the territory of teams of the Family Health Strategy of the Western Region of São Paulo. Method: In a unit with 4 teams Strategy Family Health analyzed the number of people registered through the ISPC – Information System for Primary Care. And among professionals developed a strategy to reorganize the teams. Results: We observed that only one of the four teams had over 3000 people registered (team 1 = 2886, Team 2 = 2849, 3 = 3058 staff team and 4 = 2866). Observed within non-registered families and at risk totaling 1545 people. These people were divided among four areas: team 1: 2866 + 334 = 3200, Team 2: 3058 + 142 = 3200, Team 3: 2849 + 351 = 3200 and team 4: 2886 + 314 = 3200. Conclusion: The unit reorganized the territory, people equated the distribution of risk area and fit to the recommended by the Ministry.

Disclosure: No conflict of interest declared

1411

**Health status among a sample of portuguese children**I. Coelho<sup>1</sup>, C. Pires<sup>1</sup>, A.M. Correia<sup>1</sup>, L. Correia<sup>1</sup>, O. Costa<sup>2</sup>, E. Pinto<sup>3</sup>, N. Veiga<sup>4</sup><sup>1</sup> Family Health Unit, Grão Vasco, Viseu, Portugal; <sup>2</sup> Family Health Unit, Terras de Azurara, Mangualde, Portugal; <sup>3</sup> Family Health Unit, Viriato, Viseu, Portugal; <sup>4</sup> Health Sciences, Universidade Católica Portuguesa, Viseu, Portugal

**Objective:** The decrease of physical exercise and an unbalanced diet contributes for the increase in childhood obesity. To determine the evolution of the prevalence of overweight/obesity and dental caries in two samples of 5 years old children, born in 1995 and 2005, belonging to a Family Health Unit (FHU).

**Methods:** A retrospective observational epidemiological study was designed. The data was obtained by consulting the medical files of four FHU, corresponding to the overall health of children born in 1995 and 2005. We evaluated gender, body mass index (BMI) and dental caries. Statistical analysis was performed using SPSS version 20.0.

**Results:** We obtained a final sample of 81 users born in 1995 and 57 born in 2005. Regarding BMI, 29.6% were classified as being obese or with overweight. For children born in 2005, the increase in weight corresponded to 17.3%, showing a decrease of 12.3% in 10 years, although this decrease was not statistically significant. The prevalence of dental caries among children born in 1995 was 26.6%. Children born in 2005 show a prevalence of dental caries of 23.2%, verifying a tendency of improvement of 3.4% in a decade. The average number of dental caries per child corresponded to 2.3 for children born in 1995 and 2 in 2005.

**Conclusions:** Surprisingly all parameters assessed have improved in a decade. This may be justified by subsequent community campaigns for the development of healthy lifestyles, awareness of health professionals, parents and community to the importance of controlling these diseases.

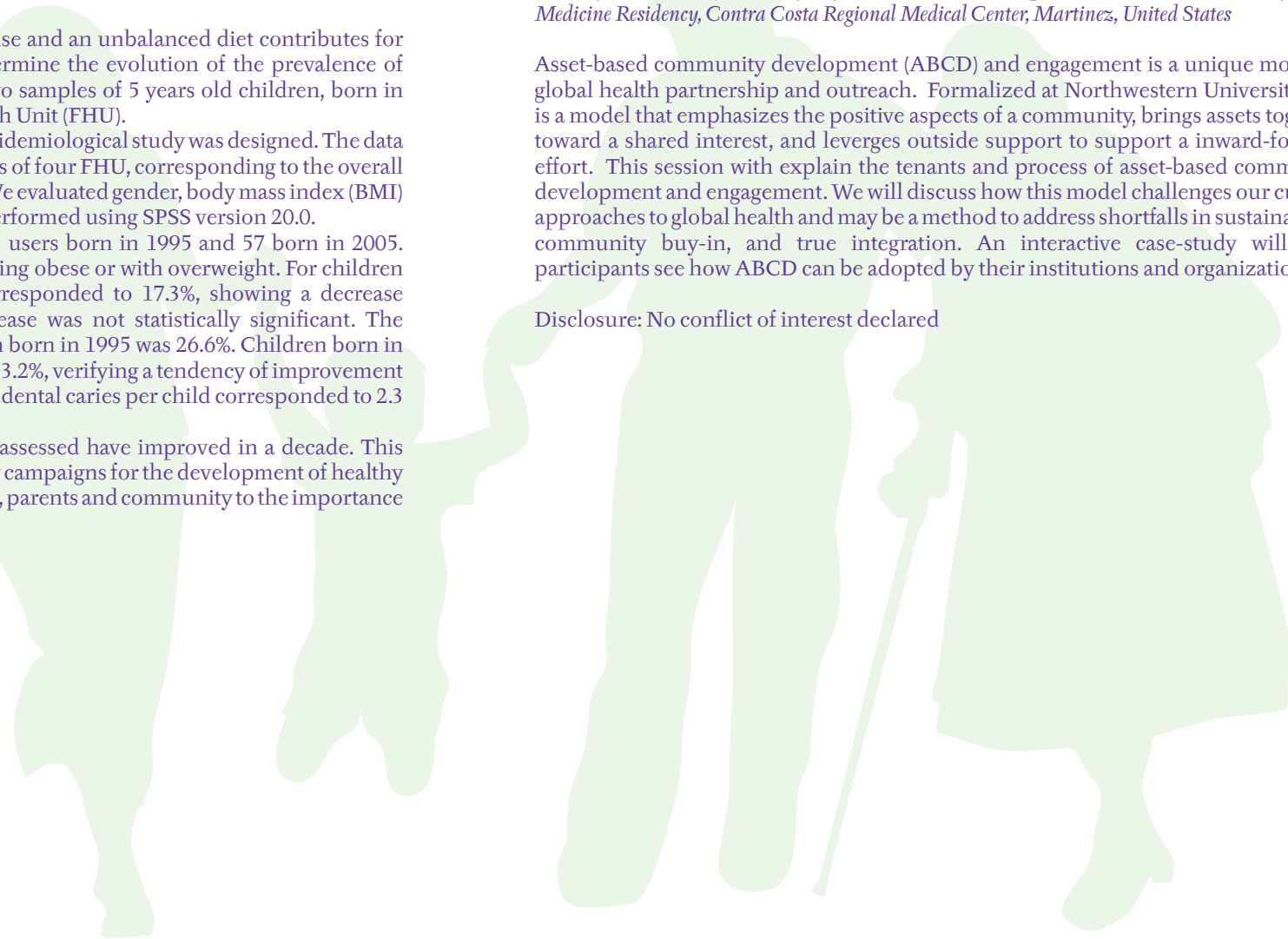
Disclosure: No conflict of interest declared

1427

**Global health program design: asset-based community development and engagement**J. Evert<sup>1</sup>, S. Loeliger<sup>2</sup><sup>1</sup> Department of Family and Community Medicine, UCSF/CFHI, San Francisco, United States;<sup>2</sup> Faculty/Board Certified Family Physician in OB-GYN Department, Contra Costa Family Medicine Residency, Contra Costa Regional Medical Center, Martinez, United States

Asset-based community development (ABCD) and engagement is a unique model of global health partnership and outreach. Formalized at Northwestern University, this is a model that emphasizes the positive aspects of a community, brings assets together toward a shared interest, and leverages outside support to support a inward-focused effort. This session will explain the tenants and process of asset-based community development and engagement. We will discuss how this model challenges our current approaches to global health and may be a method to address shortfalls in sustainability, community buy-in, and true integration. An interactive case-study will help participants see how ABCD can be adopted by their institutions and organizations.

Disclosure: No conflict of interest declared





**1510****The Italian reform law in 1888: the roots of modern primary health care**

F. Lupano

*primary care, SIMG – Società Italiana di Medicina Generale, Trofarello, Italy*

Italy became an independent kingdom in 1861 and at the beginning of its history the social and health conditions of Italian people was very poor. Child mortality in the first year of life was 232,1 per 1000, and general mortality was 30,8 per 1000. Infectious diseases were the main cause of death, about in 44% of cases. Italian government decided to improve health care developing the institute of country doctors, diffused in Italy since the Middle Age, and well-known for their struggle against poverty and social diseases.

The 24<sup>th</sup> December 1888, the Health Reform Law was promulgated, with important statements about public primary care:

- 1) in every Municipality there will be a salaried doctor and a midwife in order to give free health care for the poor, and to promote health and hygienic education among the population; a free pharmaceutical service for poor is created, and a public veterinary service to survey on breeding and food of animal origin;
  - 2) every province will have a Health Council, headed by a medical doctor, to survey on local hygienic conditions;
  - 3) a National Health Council is created, with the aim of making decisions on hygiene and public health, and promote researches and inquiries on health problems;
- In 1914, thirty-five years later, total mortality lowered to 18 per 1000, child mortality to 130 per 1000, and mortality for infectious diseases reduced of more than two thirds. A model for developing countries to face problems of primary health care.

Disclosure: No conflict of interest declared

**1525****Universal health coverage in Mexico: “Seguro Popular”, a public program created to care for generations. Experience at Hospital General de México.**S. Rios<sup>1</sup>, J.A. Valdivia<sup>1</sup>, V. Sánchez<sup>2</sup>, E. Sarabia<sup>2</sup>*<sup>1</sup> General Practice Unit, Hospital General de México O.D., Mexico City, Mexico; <sup>2</sup> Internal Medicine Unit, Hospital General de México O.D., Mexico City, Mexico*

Public health policies targeted to achieve universal health coverage (UHC) for specific populations have been introduced since the nineteenth century. The World Health Organization's fact file on UHC proposes that these policies should ensure that all people can use health services without financial hardship. Policies should also include a 15% of government expenditure to health, better tax collection strategies, actions targeted to lower health budget waste, among others. The UHC process includes 3 stages: enrolment, regular access and attainable results. In Mexico, 2003 marked the beginning of the Seguro Popular (SP) a health program legislated through the System of Social Protection in Health (SSPH) reform and also the Constitutional reform implemented in 1983. In 2012, after 9 years of implementation, the country reached a major milestone in universal coverage. As of April, 52.6 million Mexicans, previously uninsured, were incorporated into the SSPH and the budgetary allocation for universal coverage was achieved. During 2005, 279 patients were enrolled in the SP at Hospital General de México (HGM). Initially, only patients suffering from leukemia, cervical cancer and cataracts could be included in the program. Since then 13,778 patients have been enrolled and cared for. The SP has had a yearly average increase of 117.07% in the number of patients enrolled and now twelve diseases are covered. The purpose of this essay is to present the complete results of SP at HGM as a useful program that, when implemented correctly, can help public institutions and physicians care for generations.

Disclosure: No conflict of interest declared

1528

**Characterization of primary care consultations in a family health center in the city of Ribeirao Preto-SP, Brazil**

M.A. Cenedesi Jr., I.O.V. Silva, E.J.A. Santos, E.B. Lavor, A.A.T. Uchiyama, T.F. Nascimento, R.C.M. Mendanha, S.C. Mazin, M.H.S. Vieira  
*Department of Public Health, School Medicine of University Center Barão de Mauá, Ribeirão Preto-SP, Brazil*

**Objectives:** To analyze the demographic profile of the study population, emphasizing the most common gender and age range among users of a Family Health Center, highlighting the most prevalent diseases and complaints, in addition to the percentage of medications prescription and exam requests.

**Methods:** This present study was a cross-sectional and observational study. We analyzed medical records of the Family Health Center located in Avelino Palma neighborhood, Ribeirão Preto-SP, Brazil, from June 2011 to May 2012.

**Results:** The prevalence of women and people over 40 years was 59.4% and 45.1%, respectively. Regarding the type of consultation, 58.1% were characterized as scheduled appointment and 41.9% were non-scheduled (spontaneous demand). Regarding the most frequent complaints, we found that cough is the first one (6.3%), followed by low back pain (3.4%) and epigastralgia (3.2%). Regarding the distribution of disease (diagnostic hypothesis), arterial hypertension was the first one (12%), followed by dyslipidemia (9.5%) and diabetes mellitus (5.8%). However, the prevalence of arterial hypertension and diabetes mellitus was 28.8% and 14.1%, respectively. In 60.4% of the primary care consultations there was some kind of medical prescription and in 45.7% of the consultations exams were requested.

**Conclusions:** This study allowed us to characterize the demographic profile of a Family Health Center located in Ribeirao Preto-SP, Brazil, and also identify the major causes of primary care consultations, while emphasizing the most prevalent complaints and diseases.

Disclosure: No conflict of interest declared

1552

**International and Domestic Student Health-Information Seeking**

S.T. Austin  
*Communication, Portland State University, Portland, United States*

This study increases the body of literature that exists on university students and healthcare, to analyze reported levels of efficacy for college students, and to examine individuals' information-seeking behavior as it relates to going to university health services. The Theory of Motivated Information Management (W. A. Afifi & Weiner, 2004) served as the foundation for this study to examine the preferences of students in terms of the ways they seek information about their health concerns. The author examines two groups – international and domestic students at Portland State University – in terms of motivations to seek university health services. Differences in international and domestic students' anxiety and efficacy with doctors and nurses were supported. International students reported more anxiety than domestic students. Domestic students reported being more efficacious than international students when talking to a medical provider about a current medical issue. Subjects are asked if they currently have a medical concern for which they might consider consulting a doctor at PSU health services. If this scenario applies, subjects are asked to rate a variety of possible, theoretically informed motivations for seeking medical information by consulting a doctor. The results contribute to the understanding of information-seeking processes and support the theory's effectiveness in this situation, explaining where international and domestic students are significantly different in regard to their responses.

Disclosure: No conflict of interest declared

1595

**Barriers to early detection of breast cancer among women aged of 40 to 69 years in family health strategy**

A. Batiston, J. Fernandes, V. Sanches, C. Calixto, W. Vargas, M. Santos  
*Physiotherapy, Federal University of Mato Grosso do Sul, Campo Grande, Brazil*

**Objective:** Identify the early detection for Breast Cancer(BC) and risk factors between women registered in Family Health Strategy (FHS)in the state of Mato-Grosso-do-Sul/ Brazil.

**Methods:** Data were collected through interviews with 747 women aged 40 to 69 years that lived in the two largest cities in Mato-Grosso-do-Sul/Brazil. We investigated the socio-demographic variables, the clinical breast examination(CBE)and mammography frequency for screening the precocious detection of BC. The results were analyzed by chi-square and Fisher's exact tests(5% significance level).

**Results:** The average age of women was 52.50 ±8.03 years, in which 57.30%were black/ brown, 43.80%had 1-4 years of schooling and 64.40% lived with a partner.On early detection of BC, 37.10% of the women never performed CBE, and only 25.40% had their breasts examined annually for the past three years. Mammography has been performed by 65.5% of women. The greatest performing of CBE was associated with condition of having a partner( $p=0.0005$ ) and having performed Pap smear( $p=0.0000$ ). The average age of women at first mammogram was 40.16 ±14.93 years. The greatest performing of the mammography was associated with higher schooling ( $p=0.01$ )and with the performing of CBE( $p=0.0000$ ).

**Conclusions:** The frequency of mammography was higher than expected, however, CBE is seldom performed by professionals FHS. Only women who perform the Pap smear have been submitted to the CBE. In addition, women without partners and with less frequent sex performed fewer CBE and Pap smear. The data indicate the need to invest in specific actions for vulnerable groups that are not included in the actions of early detection of BC.

Disclosure: No conflict of interest declared

1603

**Views on and experiences with family medicine regarding type 2 DM of Turkish immigrants in Netherlands compared to inhabitants of Turkey: a qualitative study**

R. Kahveci<sup>1</sup>, M. van den Muijsenbergh<sup>2</sup>, P. Doner<sup>1</sup>, D. Ayhan<sup>1</sup>, I. Sencan<sup>1</sup>, I. Kasim<sup>1</sup>, A. Ozkara<sup>3</sup>

<sup>1</sup> Family medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Primary Care and Community Care, University Medical Centre Nijmegen St Radboud, Nijmegen, Netherlands; <sup>3</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** The family physicians provide, continuing, comprehensive care in a personalized manner to patients of all ages. Ethnicity, gender, religion, language, education and personal history shape expectations and behaviors. Emigrants might experience difficulties because of the cultural differences between patients and physicians. If there is no consensus, communication is interrupted and the treatment becomes insufficient. This is especially important in patients with chronic diseases, such as Type 2 DM. Lack of mutual understanding could lead to less patient compliance and less patient involvement in the treatment of his disease. The aim of this study is to explore views and experiences of Turkish immigrants in Netherlands with primary care regarding DM management and compare it with inhabitants in Turkey. We aim to understand whether cultural, religious or language diversities affect patient-physician communication and the uses of primary care facilities.

**Method:** We are planning to use grounded theory approach, and conduct in-depth, semi-structured, face-to-face interviews with Turkish immigrants in Netherlands, who have visited a primary care physician at least once in the recent year, with DM diagnosis, and similar interviews will be conducted by inhabitants in Turkey as well. Interviews will be audio-recorded and transcribed, and qualitatively analyzed afterwards.

**Findings:** The study is still in progress, and the findings are planned to be presented in WONCA 2013 World Conference that will be held in Prag. The results are expected to contribute further understanding of the migrant care and give us idea about the ways to overcome identified challenges.

Disclosure: No conflict of interest declared

1638

**Research on health status and its influencing factors of occupational population in Desheng community, Beijing City**Juan Du<sup>1</sup>, Xianghong Liu<sup>2</sup>, Aimin Guo<sup>1</sup>, Xiqin Lu<sup>1</sup>, Zhengzheng Han<sup>2</sup><sup>1</sup> Department of Family Medicine, Capital Medical University, Beijing, China; <sup>2</sup> Department of Performance Appraisal, Desheng community health service center, Beijing, China

**Objectives:** To learn the condition of occupational population's health status and its influencing factors in Desheng Community, Xicheng District of Beijing City, and to provide scientific evidence for further intervention.

**Methods:** With stratified cluster sampling, 990 employees in 6 kinds of workplaces, including government, school, state-owned company, private-owned company, hotel and research institute, were conducted a questionnaire survey. The status of health was assessed according to the COOP/WONCA functional assessment charts.

**Results:** 22.8% of respondents worked more than 8 hours; 78.9% of the respondents felt pressure; 75.2% of the respondents could not proactively take exercise and the prevalence of overweight and obesity were 36.6%. The school teachers tended to increase the risk of sub-optimal scores for all the charts but the physical fitness scores. The major influencing factors of the assessment of the health status were age, occupation, chronic disease condition, taking exercise condition and feeling pressure condition.

**Conclusions:** There are some common health risk factors among the occupational groups in Desheng community and workshop health education should be carried out recently. The health status in teachers should be enhanced through developing the psychology intervention in this occupational group.

Disclosure: No conflict of interest declared

1669

**The economical crisis affects the access of patients to primary health care centers in Greece**S. Kourtparasidou<sup>1</sup>, F. Fragkoudi<sup>2</sup>, E. Aivazidou<sup>2</sup>, G. P. Xerra<sup>2</sup>, K. Tsolaki<sup>3</sup>, S. Thodis<sup>3</sup>, M. Vakas<sup>4</sup>, G. Diamantopoulos<sup>5</sup>, A. Racopoulos<sup>1</sup><sup>1</sup> primary health care center of Amyntaio, general hospital of Florina, Amyntaio, Greece; <sup>2</sup> primary health care center of Prosotsani, general hospital of Drama, Prosotsani, Greece; <sup>3</sup> primary health care center of Sapes, general hospital of Komotini, Sapes, Greece; <sup>4</sup> university general hospital of Alexandroupolis, university general hospital of Alexandroupolis, Alexandroupoli, Greece; <sup>5</sup> primary health care center of Samothraki, university general hospital of Alexandroupolis, Samothraki, Greece

**Objective:** the aim of this study is to understand the influence of the financial crisis upon the number of patients that visit primary health care centers located in four different geographic areas.

**Methods:** statistical data was collected from two health care centers situated in rural areas distant from the cities. These results were compared to the data obtained from two health care centers located near urban areas.

**Results:** we have concluded that the number of patients that have visited health care centers located close to cities has dramatically been reduced in the last year. A main reason for this seems to be quick access to private doctors and hospital due to the continuing strikes for lack of payment of the doctors in the public health care system. The decrease of tourism in our country has caused low access of patients to one health care center situated in an island. On the other side, in the health care center located in a rural but not touristic area the number of patients remained stable. This was attributed to the big distance from the city.

**Conclusions:** the economical crisis has influenced the access of patients to primary health care centers in different ways. The quality of medical service offered to the patients has extremely worsened.

Disclosure: No conflict of interest declared

1682

**Factors that lead to early weaning in USF Palmira – Guarulhos**F. Neman<sup>1</sup>, M. Rodrigues<sup>2</sup>, N. Oliveira<sup>2</sup>, A. Moraes<sup>2</sup>, C. Rivera<sup>2</sup><sup>1</sup> *Medicine, Teacher, Sao Paulo, Brazil;* <sup>2</sup> *Medicine, Student, Sao Paulo, Brazil*

The objective of this research was to determine factors that lead to early weaning, and propose an intervention that improves this situation, based on collect data with mothers during the exclusive breastfeeding in USF Palmira – Guarulhos. A questionnaire was applied with data from mother and child. The present study evaluated mothers who gave birth to children with Apgar appropriate, without complications during and after birth, in the period between January and August 2012. Exclusion criteria were: women with psychological changes such as depression, drug users and addicts with HIV. Factors associated with early weaning were: advice from family; medical guidance; nursing guidance; “weak milk”; bruised breast; back to work and lack of time. There was a real lack of information and training of community workers on the stage start breastfeeding and postpartum women. In conclusion, this work is of fundamental importance that might know the difficulties of the group of agents to pass information to mothers and help them to answer their questions.

Disclosure: No conflict of interest declared

1691

**The prevalence of chronic diseases among migrants in Korea according to their length of stay and residential status**S. Hong<sup>1</sup>, C.-h. Lee<sup>2</sup>, J.-s. Han<sup>2</sup>, S.-m. Park<sup>2</sup>, Y.-s. Park<sup>3</sup><sup>1</sup> *Family Medicine, THE CATHOLIC UNIV. OF KOREA, Incheon ST.MARY`S HOSPITAL, Incheon, South Korea;* <sup>2</sup> *Department of Family Medicine, Seoul National University College of Medicine, Seoul, South Korea;* <sup>3</sup> *Department of Anthropology, Seoul National University College of Social Sciences, Seoul, South Korea*

**Objective:** Migrant health is becoming public health issues, as the migrant populations are increasing and their length of stay are prolonged. This study aims to analyze the differences in prevalence of chronic diseases among migrants according to length of stay and residential status.

**Methods:** An initial population pool were 3024 who were assessed with health screening programs by Migrant Health Association. 2459 migrants were selected for final analysis. Via STATA 10 we conducted univariate logistic regression analysis to examine the effects of their length of stay and residential status on the prevalence of hypertension, diabetes, dyslipidemia and obesity. In the final analysis, the result of each sex was adjusted for age, nationality, length of stay and residential status via multiple logistic regression analysis.

**Results:** Longer length of stay tends to increase the prevalence of hypertension in male; 4~6 year stay-duration group demonstrated statistically significant excess compared to 1 year or less group (adjusted OR 1.39, CI 1.01-1.92). After adjustment, male migrants stayed more than 7 year showed considerably higher dyslipidemia than male migrants stayed less than 1 year (adjusted OR 1.95, CI 1.05-3.64). Compared to the group with 1 year or less stay-duration, the prevalence of obesity in male was significantly higher among 4~6 year (adjusted OR 1.65, CI 1.17-2.32) and 7 year or more stay-duration group (adjusted OR 1.65, CI 1.11-2.45).

**Conclusions:** Longer length of stay correlated to higher prevalence of hypertension, dyslipidemia and obesity among some population of migrants. So more researches and developing new policies are needed for this problem.

Disclosure: No conflict of interest declared

1696

**Vulnerability and environmental health: report of experience in the kátia's village**B. S. Leite<sup>1</sup>, B. Fernandes<sup>1</sup>, F. A. Amanthéa<sup>1</sup>, F. Hurtado<sup>1</sup>, J. A. Costa<sup>1</sup>, M. Q. Rodrigues<sup>1</sup>, P. F. M. Macedo<sup>1</sup>, A. Corrêa<sup>2</sup><sup>1</sup> *Medicine, Student, São Paulo, Brazil*; <sup>2</sup> *Medicine, Teacher, São Paulo, Brazil*

**Objective:** Based on an exploratory visit to a family who live alone in an isolated neighborhood ("Jardim Kátia") in Guarulhos, Brazil. This family is composed for more than 40 people divided in sundry houses in the same propriety, like a small village. This research is justified by the need of the health team in develop a link to promote an integral health care, avoiding risks to this population and to society in general.

**Methods:** For this, we have made a careful observation(in loco) and we analyzed they health condition based on Charles Maguerez arc and reviews of environmental health, risk and vulnerability.

**Results:** We've found that this population is inserted in an ambience which are a lot of risks, like: chemicals, physicals and biological. Those risks, unidentifiable by this population, can produce social problems for generations and infectious diseases, generating outbreaks and epidemics, causing a big economic problem.

**Conclusions:** This people are without a health quality and extremely vulnerable, therefore, this review is a tool to make the government take a look on this "negative standard deviation" and, together with us and the health team develop an specific intervention strategy.

Disclosure: No conflict of interest declared

1702

**Experience of the health center (hc) about the participation in a community health project in one of the most marginal neighborhoods of Barcelona**X. Ferrer, A. Gili, C. Gonzalez, P. Escobar, L. Ibañez, D. Aparicio, M. Guerrero, M. Muns, S. Meymand, A. Larrañaga  
*Primary Care, ICS, Barcelona, Spain*

**Background:** The Intercultural Investigation Project (ICI) and the "Neighborhood Health Plan" of the Barcelona Town Hall were both implemented in Raval, one of the most marginate neighborhood of the city, joining to a Health Community Action proposal.

All the entities of the neighborhood formed a working group that met monthly. At the HC a multidisciplinary committee (nurses, general physicians and social worker) was created to attend meetings and participate in the project.

**Objectives:** Participate in the development of joint strategies to improve the health of the neighborhood using existing resources.

Know and improve the network of entities.

Promoting community health at the HC

**Methods:** First meeting for Health Community Action: working group created and its functions described.

Presentation of neighborhood Health Problems identified from several public health system sources.

Health Problem prioritization.

Community Diagnosis of the prioritized health problem.

Elaboration of subcommittees to work on community health strategies.

**Results:** Health problem prioritized were: mental Health/affective and reproductive health/elderly health care. At the HC the prioritization had a wide participation from the team, and differently from others entities, cardiovascular health was first.

**Conclusions:**Health professionals often lack of a community perspective, this makes our efforts went in vain to non-priority health problems for the patients. When implementing a community-based interventions all phases must be applied, especially monitoring and evaluation, to maintain projects that demonstrate their effectiveness. An operating network must be created to avoid efforts duplication and to a better refer of the citizens. Therefore is essential to improve citizen participation in community health.

Disclosure: No conflict of interest declared

1730

**Psychosocial perspectives of care to the family of people living with HIV/AIDS**

E.R. Pereira, D.C. Oliveira, R.M.C.R.A. Silva, T.S.A. Lemos, P.S. Trasmontano, S.M. Refrande, M.A.Silva, P.C.R. Pereira

**Objetives:** To examine the psychosocial dynamics that involves the family of the person with HIV/AIDS established in representations of health professionals.

**Methods:** A qualitative descriptive study, based on Social Representations Theory was conducted with thirty health professionals who care for people living with HIV/AIDS in the seven outpatient HIV/AIDS in Brazil. Data were collected through semi-structured interviews and interpreted by analysis of Bardin.

**Results:** Two thematic axes were constructed: challenges of psychosocial care to the relatives of the patient; and co-responsibility in care: family involvement of people living with HIV/AIDS. AIDS is still accompanied by feelings of fear and prejudice in societies, causing psychic suffering of the patient, but also psychosocial conflicts in the family, constituting a challenge for the implementation of approaches to family and their integration into the context care. Moreover, the primacy of actions for the disease also becomes a challenge to decision-making in relation to psychosocial care to family members. Promote human care to patients living with HIV AIDS and families was considered important, through support and listening in order to clarify their doubts, minimize anxiety and mediate their conflicts. Equally important, the inclusion of the family in patient care, as this partnership helps patients in their choice of self-care.

**Conclusion:** A creative intervention together with the family can optimize the care of people living with HIV/AIDS, where it is considered freedom of choice, the corresponsibility in health and appropriate technologies for the effective inclusion and adherence to pacts recommended health policy on AIDS.

Disclosure: No conflict of interest declared

1752

**Improving well child and antenatal care in areas covered by the family health team (FHT) in poor areas of the city of Sao Paulo (SP), Brazil.**

R.V. Di Lorenzo, S. Moraes, L.A. D'Angelo, M. Prado, R. Zambelli, Augusta, A. Meirelles, Luciene, M.L. Santa Cruz, M.E. Fernandes  
*Estrategia Saude da Familia, Associacao Saude da Familia, Sao Paulo, Brazil*

**Overview:** The PHC in Brazil is implemented through FHT which comprises 1 GP, nurse, 2 nurse attendants and 6 community health workers (CHW). FHT is responsible for near 1000 families. In SP, FHT cover 40% of population, are located in poorer areas in order to provide care to more vulnerable population. ASF coordinate 122 FHT in 22 health units (HU) covering over 400.000 people.

We have observed that despite the frequent appointments in the HU and monthly basis visits by CHW, risk condition were not perceived by the FHT, specially risk related to mental health and neurological development of children.

**Objective:** To sensitize and train the FHT for child and maternal care adequate to this population

**Methods:** Sensitization and training FHT and specially the CHW to deal and improve detection of vulnerable families and situations such as familiar violence and non-healthy homes. Manage care instruments to facilitate FHT care and a social and biological risk classification of the children was implemented. The FHT training involved workshops and supervised home visits performed by the multi-professional team responsible to give support to the FHT.

**Results:** Till now we manage to implement the maternal and children risk classification in 100% of the HU and to capacitate 50% of FHT. We could perceive an important improvement in the CHW home visits and their ability to detect unhealthy situation. The instruments created have facilitated the high risk children management by the FHT. This project has also approximated GP and nurse to the multi-professional team.

Disclosure: No conflict of interest declared

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**Academia Carioca da Saúde program: innovation in primary health care of Rio de Janeiro**

J. Cardoso, J.A. Guimaraes de Oliveira, M. Torres, L.F. Pinto, D. Soranz  
*Municipal Secretariat of Health and Civil Defense of Rio de Janeiro, Rio de Janeiro City  
Government, Rio de Janeiro, Brazil*

This paper presents the purpose and logic of operation of the Program *Academia Carioca da Saúde* (PACS), implemented by the Municipal Secretariat of Health and Civil Defense of Rio de Janeiro. The Program is a strategy of prevention and health promotion, which aims to encourage physical activity performed in a simplified and accessible way. Furthermore it provides information to the population in order to build a more active and healthy society, decreasing sedentary lifestyle, risk factor for many global chronic diseases. The PACS operates synchronized with the primary care, represented by the Family Health Strategy, and conducts its activities associated with a Basic Health Unit (BHU). Currently, PACS is developed in 73 BHU, serving 25.115 people of different age groups referred by a health professional. Results obtained through longitudinal follow-up indicate that 97% of hypertensive participants control their blood pressure in acceptable levels, 91% of diabetics keep their glycemia at normal levels, 92% of overweight and obese participants reduced their weight, 89% reduced the dosage of medication while 9% stopped taking a medical prescription for it. This outcome demonstrates the importance of the PACS in the primary care policy. In conclusion, this proved to be an effective strategy, which together with other interdisciplinary areas, should continue to receive investments in order to improve the quality of life through positive changes in the determinants and conditioning of health.

Disclosure: No conflict of interest declared

**1.3. SEXUALLY TRANSMITTED DISEASES**

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**The vulnerability of brazilian young male homosexuals to STD and AIDS**

H. Fernandes, R. Ventura, E. Oliveira  
*Nursing, Centro Universitário Ítalo-Brasileiro, São Paulo, Brazil*

Qualitative research with the objectives of knowing the histories of life of young male homosexuals with STD and/or HIV/AIDS and identifying the possible relationship of violence, homophobia, development of sexuality and love with the vulnerability to STDs and/or HIV/AIDS in this population. The life history method was used viewed by Vulnerability „concept“. The data were collected through interviews with structured plot in the Center of Immunologic Diseases Control from Unifesp, in the months of November and December 2009 with five male homosexuals. The main results were: the homoeroticism and homoaffectivity experiences in silence, violence, prejudice and homophobia, falling in love, intrusion, idealism of love, the strength of (homo) eroticism over the vulnerability and perception of AIDS as a chronic disease and its medicalization. It was concluded that young male homosexuals have increased pre-conditions to vulnerability to STD and/or HIV/AIDS.

**Descriptors:** HIV. Sexually Transmitted Diseases. Acquired Immunodeficiency Syndrome. Homosexuality. Violence. Love.

Disclosure: No conflict of interest declared



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### Evaluation of management of sex education curriculums in schools for teenagers' sexual health in Thailand: CIPP Model

P. Singchungchai<sup>1</sup>, P. Hemla<sup>2</sup>

<sup>1</sup> Department of Administration in Nursing Education and Nursing Services, Faculty of Nursing, Prince of Songkla University, Hatyai Songkhla, Thailand; <sup>2</sup> Provincial of MOPH, Stoon, MOPH, THAILAND, STOON, Thailand

**Objective:** To evaluation and follow-ups on the management of sex education in order to provide teenagers with knowledge and understanding of sexual risk

**Methods:** This cross-sectional study evaluated the management of sex education for teenagers in primary and secondary schools using CIPP (Context- Input- Process and Product) Model. The subjects were primary and secondary school administrators of 151 schools.

**Results:** Schools that could manage sex education curriculum had to be in the secondary school context and the most important input was school administrators' policy. The teaching and learning process was still found to be teacher-centered, and the products of sex education course management were found to be in three categories. 1). Schools that could systematically cover at least 16 teaching plans in a sex education course for all students of all levels, and the course was part of the curriculum; there were only 5.3 percent of the schools in this category. 2) Schools that could integrate sex education with other courses responsible for by teachers who were ready or convenient to teach the course; there were 86.1 percent in this category. 3. Schools that could not include sex education in their teaching and learning management; there were 8.6 percent. It was also found that the type of schools was significantly related to the category of sex education management (p<.05)

**Conclusions:** Teaching a sex education course in schools continuously is one way to provide knowledge about sexuality to youth, to reduce problematic sexual behaviors such as early sexual relationships.

Disclosure: No conflict of interest declared

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### Prevention and Assistance: the strategies for HIV serodiscordant relationships

D. Fontenelle<sup>1</sup>, A. Machado<sup>2</sup>, V. Soares<sup>3</sup>, A. Onam<sup>4</sup>, R. Barbalho<sup>5</sup>

<sup>1</sup> Epidemiology Service – Pedro Ernesto University Hospital, State University of Rio de Janeiro – UERJ, Rio de Janeiro – RJ, Brazil; <sup>2</sup> Medical Psychology – Pedro Ernesto University Hospital, State University of Rio de Janeiro – UERJ, Rio de Janeiro – RJ, Brazil; <sup>3</sup> Social Assistance – Pedro Ernesto University Hospital, State University of Rio de Janeiro – UERJ, Rio de Janeiro – RJ, Brazil; <sup>4</sup> School of Medicine, State University of Rio de Janeiro – UERJ, Rio de Janeiro – RJ, Brazil; <sup>5</sup> School of Medicine, Federal University of Rio de Janeiro – UFRJ, Rio de Janeiro, Brazil

**Objective:** There is an increased frequency of serodiscordant couples in outpatient clinics, due to the effectiveness of anti-retroviral therapy has contributed to providing a better life for people with HIV/AIDS. Once illness is a biopsychosocial process, most of HIV sexual transmissions occur in regular relationships, when a sense of relaxation on preventive care rises and the treatment adherence falls. This study highlights the importance in public health of new approaches to HIV/AIDS serodiscordant couples therapeutic practices and the inclusion of the couple's seronegative partner as a strategy for a better adherence to treatment.

**Methods:** This study comprehends 24 couples: 20 heterosexual and 4 homosexual. A counseling team comprising a physician and a psychologist, working in an outpatient clinic at Pedro Ernesto University Hospital – State University of Rio de Janeiro/Brazil, performs interconsultations, beside group techniques. Consultations are held every two months, the viral burden and CD4 are appraised three times a year, and an annual interview with the partners is made.

**Results:** The discussions turn around safe sex practice, prejudices, reproductive desires and the preservation of the negative partner's status. Guilt, rejection and fear are expressed and the interdisciplinary team could offer the couples full assistance and counseling, motivating them to carry on in their life projects.

**Conclusions:** The practice of a whole assistance based in prevention, through dynamic consultations, has presented itself as an important tool into counseling of these HIV affected couples. The couples experiences shared with the team have enlarged the comprehension about coexisting with the HIV/AIDS.

Disclosure: No conflict of interest declared

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**The human immunodeficiency virus (HIV/AIDS).....a global cry**R. N. Mbugua<sup>1,2,3,4,5,6,7,8</sup>, E. A. Bukusi<sup>1,8</sup>, P. Cherutich<sup>8</sup>, A. Wagura<sup>2</sup>, S. Wachira<sup>3</sup>, L. Miano<sup>1</sup>, J. Mwathi<sup>7</sup>, R. Munyi<sup>3</sup>, D. Njambi<sup>5</sup>, G. Wangari Githini<sup>8</sup>

<sup>1</sup> RESEARCHER, Kenya Medical Research Institute, NAIROBI, Kenya; <sup>2</sup> RESEARCH/CO-ORDINATOR FIELD SERVICES, Kenya Network of Women Living with HIV/AIDS, NAIROBI, Kenya; <sup>3</sup> MEDICAL STUDENT (Obstetrics & Gynecology), Nairobi University, NAIROBI, Kenya; <sup>4</sup> KEMRI/CDC's HIV Implementation Science and Services (HISS) Testing and Counseling team, Center for Diseases Control & Prevention (CDC), NAIROBI, Kenya; <sup>5</sup> Infectious and Tropical Disease Institute, Kenya/ National AIDS/STD Control Programme, NAIROBI, Kenya; <sup>6</sup> Health Care Training, Capacity Building and Advocacy in HIV/AIDS, Malari and Family Health, African Medical Research Foundation (AMREF), NAIROBI, Kenya; <sup>7</sup> ADOLESCENT ISSUES, Population Council Kenya, NAIROBI, Kenya; <sup>8</sup> Research Care and Training Program (RCTP), Centre for Microbiology Research (CMR) at Kenyatta National Hospital and Kenya Medical Research Institute, NAIROBI, Kenya

**Objectives:** The Human Immunodeficiency Virus (HIV) is a retro-virus that attacks the immune system of the host individual, slowly invading and killing T-cells. As the disease progresses, individuals become increasingly susceptible to other illnesses. Eventually usually within 7 to 10 years the compromised immune system will lead to death through another proximate cause.

**Methods:** The most common channels of transmission are sexual; the other major type of transmission is vertical from mother to child either in the womb, during birth, or while breastfeeding. HIV can also be spread through sharing needles (either by intravenous drug users, or poor hygiene in hospitals) and through transfusions with infected blood.

**Results:** The efficiency of these transmission mechanisms varies. Infection rates are higher for anal than vaginal sex, higher still for mother-to-child transmission, and extremely high (close 100 percent) for transfusion with infected blood.

Drugs that dramatically slow the progression of HIV have become available in recent years. Use of these regimens in the developing world is rare, due both to the cost of the drugs (even in generic form) and the difficulty of administering daily drug cocktails on a continent with few doctors.

**Conclusions:** Interventions in Africa have focused more on prevention and treatment of opportunistic infections, including prevention of mother-to-child transmission, education about changes in sexual behavior, treatment of other sexually transmitted infections (STIs) and treatment of tuberculosis and other disease associated with HIV/AIDS.

Disclosure: No conflict of interest declared

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**Antiretroviral treatment and aids related deaths**

R.N. Mbugua

Researcher/ Co-Ordinator Field Services, Kenya Network of Women Living with HIV/AIDS, NAIROBI, Kenya

**Objectives:** The expansion of antiretroviral treatment has led to a 50 percent decrease in AIDS-related deaths since 2005.

**Methods:** Around half of those infected with tuberculosis (TB) are co-infected with HIV in Kenya, although this varies widely according to region. Antiretroviral treatment for co-infected individuals has been found to improve patient survival if it is administered as soon as possible after TB treatment. Therefore, WHO recommend antiretroviral therapy for all HIV and TB co-infected patients, whatever the stage of HIV progression. However, facilities where dual treatment is available are limited and many of those who require ARVs alongside TB treatment are not receiving it.

**Results:** Despite an increase in access to HIV treatment for children, the overall coverage for children remains extremely low. Only 31 percent of children with HIV in need of treatment get it. A child's access to treatment can be inhibited by reasons other than the reach of treatment services. This include: neglect by caregivers; lack of information about medical care for children; and the stigma and guilt associated with HIV and AIDS.

**Conclusion:** Adequate nutrition for people living with HIV is essential. Yet, as poverty levels are high in Kenya and food shortages frequent, people living with HIV are often unable to eat a healthy, balanced diet. Evidence shows that malnourished people are less likely to benefit from antiretroviral treatment and are at a higher risk of quicker progression to HIV/AIDS. In addition, taking treatment without food can be very painful.

Disclosure: No conflict of interest declared

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**Neurological manifestation in HIV/AIDS**R. N. Mbugua<sup>1,2,3</sup>

<sup>1</sup> RESEARCH/MEDICAL STUDENT, *Kenyatta National Hospital (Obstetrics & Gynecology, NAIROBI, Kenya*; <sup>2</sup> RESEARCH, *KENYA MEDICAL RESEARCH INSTITUTE, NAIROBI, Kenya*; <sup>3</sup> RESEARCHER, *KENYA NETWORK OF WOMEN LIVING WITH HIV/AIDS, NAIROBI, Kenya*

**Objective:** To determine the profile of clinical and laboratory characteristics of hospitalised HIV+ patients with neurological complications at Kenyatta National Hospital from January 2012 to June 2012.

**Methods:** Retrospective observational study: One thousands hospitalised patients.

**Results:** Records of 708 HIV+ hospitalised patients were reviewed, 150 patients had neurological complications; giving a six-month point prevalence of 21.2%. Males were 86 (57.3%), females 64 (42.7%) M:F ratio = 1.3:1. Mean age was 38.84 years. The five commonest neurological complications were; cryptococcal meningitis 33 (22%), encephalitis 28 (18.7%), cerebral toxoplasmosis 19 (12.7%), stroke 19 (12.7%) tuberculous meningitis 16 (10.7%). Overall, 72 patients (63%) had CD4+ counts done. Cryptococcal meningitis patients' CD4+ count, (mean 60, median 17, range 1-273/cmm). Encephalitis patients' CD4+ count, (mean 82, median 54, range 3-495/cmm). Cerebral toxoplasmosis patients' CD4+ count, (mean 59, median 58, range 11-120/cmm). Stroke patients' CD4+ count, (mean 120, median 30, range 15-394/cmm) Tuberculous meningitis patients' CD4+ count, (mean 67, median 62 and range 12-154/cmm). The other neurological manifestations included peripheral neuropathy, HIV associated dementia (HAD), myelopathy and myopathy. 200 (72%) patients were on anti-retroviral therapy. The commonest drugs used in various regimen combinations included efavirenz and combivir. Fourteen (9.3%) patients died in hospital; eight of them were among those with the top five neurological complications.

**Conclusion:** Patients come to hospital when severely immune compromised and have overwhelming opportunistic infections. The profile of opportunistic infection is comparable to that observed in studies elsewhere. Some of the facts observed here may not reflect the situation in public health institutions where resources are scarce.

Disclosure: No conflict of interest declared

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**Sexual health education and the role of the general practitioner**S. Alekova<sup>1</sup>, K. Atanasova<sup>2</sup>, I. Ovcharov<sup>3</sup>

<sup>1</sup> *General practice, trakia university, stara zagora, Bulgaria*; <sup>2</sup> *financial department, ESTRE OOD, sofia, Bulgaria*; <sup>3</sup> *Urology, trakia university, stara zagora, Bulgaria*

**Introduction:** Sexually transmissible infections include a group of clinical syndromes caused by different pathogens, transmitted in sexual activity. Due to the high morbidity, disability and mortality among young people, venereal diseases are an important social problem. Significant role in promoting sexual health awareness by the patient plays a GP.

**Objective:** Our objective is to examine the role of GPs in providing highly qualitative medical information about sexually transmissible infections, knowledge of contraceptive methods and family planning among young adolescents, parents, risk and minority contingents.

**Methods:** We used literary-analytical method in the study of materials available on the possibility of family physicians to conduct educational talks and consultations related to the forming of sexual health education for patients, prevention of risky behavior, methods of contraception and family planning as an essential part of the promotional and preventive activities of general practice.

**Results:** Every year hundreds of thousands of young people suffer from sexually transmitted infections. This determines the increasing need for knowledge on sexually transmitted diseases, to know how to protect and when to seek competent medical help. In many of these diseases there are no complaints or they go without paying attention. Failure of adequate and timely measures to prevent their development can lead to infertility, damage to the fetus during pregnancy or the newborn child and seriously harm one's health.

**Conclusion:** Health education and training of the patient in relation to increasing sexual health culture, protecting and maintaining reproductive health is a key element in promotional activities of the GP.

Disclosure: No conflict of interest declared

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**Risk factors for HIV transmission and correlation of periodontal status with CD4 cell count of infected patients.**S. Siddique<sup>1</sup>, A. Kumar<sup>2</sup>, P. Jodalli<sup>1</sup><sup>1</sup> PUBLIC HEALTH, YENEPLOYA UNIVERSITY, MANGALORE, India; <sup>2</sup> PATHOLOGY, PSM COLLEGE AND HOSPITAL, TRICHUR, India

CD4 cell count has been established to be a standard laboratory marker for monitoring disease progression. The purpose of this study was to find out risk factors for HIV transmission and if any correlation exists between the severity of periodontal disease and the CD4 cell count in HIV patients.

**Methods:** Fourty five male and five female HIV positive patients attending various treatment units in Yenepoya hospital at Mangalore, India were examined according to a predesigned proforma and CD4+ counts assessed after obtaining informed consent. They were categorized according to the CD4 cell count cutoff as Group I–Patients with CD4 Cell count < 200/  $\mu$ l and Group II–Patients with CD4 Cell count  $\geq$  200/  $\mu$ l. The Assessment of the periodontal status was using Community Periodontal Index (CPI). The data was analysed using chi – square test and pearsons correlation coefficient.

**Results:** 45 male and five female HIV positive patients were studied. 70% were in 20–40 years age group. 40% were related to transport services. The prevalence of periodontitis was significantly greater in patients of the group having CD4 < 200 (27.3%) than in the group having CD4 > 200 group (9.5%). A statistically significant correlation was found between CD4 cell count and periodontal status as shown by highest CPI score in the present study.

**Conclusion:** Occupation was the important risk factor for HIV transmission and heterosexual contact is the most common mode of spread. The present study reaffirms the effect of CD4 count on periodontal diseases in HIV infected patients.

Disclosure: No conflict of interest declared

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**Prevalence of cardiovascular risk factors in HIV-infected patients in a primary city center**

A. Franco, T. Louro, F. Franco Alonso

Family Medicine, ICS, Barcelona, Spain

**Introduction:** we work in a city primary care center in Barcelona with a high prevalence and incidence of human immunodeficiency virus (HIV) and other sexual transmitted diseases.

**Objective:** The objective of our study is to determine the prevalence of cardiovascular risk factors in human immunodeficiency virus (HIV)-infected patients. Patients and methods. A cross-sectional study was performed with HIV-infected patients aged 18 or over managed at our primary care center during 2012. Clinical and epidemiological characteristics of HIV infection and cardiovascular risk factors were evaluated. Variables of the study are: HIV infection, HAART (yes or not), hypertension (yes or not), diabetes (yes or not), dislipemia (yes or not), tobacco smoke (yes or not), sex (men or women), age, family history (yes or not).

**Results:** Work in progress. Conclusions. Smoking and HDL cholesterol were the main cardiovascular risk factors in this HIV-infected cohort.

Disclosure: No conflict of interest declared

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**„Doctor...I´m a Man! I don´t use condoms!“ ... an uncommon STD.**I. Coelho, A.M. Correia, C. Pires, L.S. Correia, N. Veiga, E. Pinto, O. Costa  
*USE, Grão Vasco, Viseu, Portugal*

**Case Report:** 69 year old male, retired, belonging to a nuclear family, in Phase VIII of Duvall´s cycle, moderately functional family. Personal history of hypertension and dyslipidemia, medicated, with regular appointment. Presents to an emergency appointment in his family health unit referring intense pruritus in the inguinal region that extended to regions throughout the whole body with growth hair except the scalp. The physical exam showed erythema in the inguinal region and scapula. Observing more closely with a magnifying glass, small insects compatible with Phthirus were identified in the chest, axillary and pubic hair. Being a sexually transmitted infection (STI), the patient was questioned about unprotected sexual activities. The patient said he had three extramarital affairs without using a condom, citing: „Doctor, I am a man, I don´t use condoms.“

Treatment and the demystification of the use of condoms associated with masculinity was performed, informing the patient of the need of treatment of other contacts and the importance of condom use. Analysis screening for HIV, Hepatitis B and C and syphilis was requested.

**Discussion:** This case reveals the persistence of false myths related to sexuality that must be addressed, alerts us to sexuality in the elderly and the risk for former STD long forgotten.

Disclosure: No conflict of interest declared

**1.4. TOBACCO, ALCOHOL AND DRUGS**

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**The effectiveness of law enforcement minister of public health (no.18) b.e.2550 (a.d.2007) notification: smoke free market at khon kaen municipality.**R.Charupash<sup>1</sup>, C.Charupash<sup>2</sup>

<sup>1</sup> *strategic and developing Affair, Sirindhorn College of Public Health Khon Kaen., Khon Kaen Province, Thailand;* <sup>2</sup> *Faculty of Pharmaceutical Science, Khon Khan University, Khon Kaen Province, Thailand*

**Purpose:** To study about the information received by five target groups: shoppers in markets, market venders, municipal police, police and market owners of the Notification of the Ministry of Public Health (No.18) B.E 2550 (A.D.2007) Pursuant to the Protection of Non-Smoker´s Act B.E.2535 (A.D.1992), the Notification, and the effectiveness of media channels that the five target groups received.

**Method:** A cross sectional survey with data collection done by interviews and observation in six markets, Khon Kaen municipal area, sample sizes was 764.

**Results:** 51.1% of market venders, 45.6% of shoppers and all of the municipal police, police and market owners received the information and the nonsmoking law (to a fine not exceeding 2,000 baht) The posters (37.7%) were the most of the major media channels that the sample received the information. 92.0% of the sample agreed with the Notification, in the case of markets being smoke free areas. However, could still be seen smoking in markets.

**Concussion and Recommendation :** Although five target groups received the information, they ignored the Notification. the method to reduce smoking in markets this group should be to set a place to be a “smoking area”. The measure to fine violators could not be implemented now and continue promotion especially in the small markets, increase social measures by warning those who violate the Notification.

Disclosure: No conflict of interest declared

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**Smokers' primary health care physicians can counsel for smoking cessation, a difficult question to be answered**A.S. Khan<sup>1</sup>, Z. Al-Rayees<sup>2</sup><sup>1</sup> College of Medicine, King Faisal University, Al- Hassa, Saudi Arabia; <sup>2</sup> Directorate of postgraduate Scholarship Training, Ministry of Health, Riyadh, Saudi Arabia

**Background & objectives:** Physicians are respected community in all countries and considered role models so far, however if they don't follow what they preach then difficult to convince their clients for follow up for good deeds. This study sought to find out why primary health care physicians do address cessation smoking seriously.

**Method:** This is a qualitative study based on a semi-structured interview of general practitioners. It was conducted in 2011 from January to September during a process of training of general practitioners for consultation and communication skills. The purposive sample of 20-25 primary health care physicians has been selected from six different urban and rural areas of Saudi Arabia.

**Results:** The mean age of participants was 37.94±6.03 while experience in number of years was 7.81±4.96. The results depicted that 54% were labeled as "Ever" smokers while out of this, 45.2% were current smokers and majority (56.16%) started smoking at medical schools. According to these physicians, 38.5% were regularly advice their clients however 25.2% never advice their clients. Majority (52%) confessed that they don't know exactly how to counsel for cessation of smoking while 28% were feeling guilty while advising their patients. Interestingly 20% even don't believe that there is any benefit for counseling (p=0.0001).

**Conclusion:** The physicians who are smokers were not very confident to advice their clients / patients therefore it is compulsory that we should start urgently some anti-smoking campaign among physicians. And should do some intervention to stop it from grass root level.

Disclosure: No conflict of interest declared

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**The changes of placenta in women smokers**Ü. Aydoğan<sup>1</sup>, C.M. Ercan<sup>2</sup>, S. Kavuk<sup>1</sup>, A. Parlak<sup>3</sup>, A. Özcan<sup>4</sup>, İ. Alanbay<sup>2</sup>, O. Sari<sup>1</sup>, O. Gursel<sup>5</sup>, A.E. Kurekci<sup>5</sup>, K. Saglam<sup>1</sup><sup>1</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey; <sup>2</sup> Obstetric and Gynecology, Gulhane School of Medicine, Ankara, Turkey; <sup>3</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>4</sup> Pathology, Gulhane School of Medicine, Ankara, Turkey; <sup>5</sup> Pediatrics, Gulhane School of Medicine, Ankara, Turkey

**Objective:** In this study, we aimed to investigate the changes on the placenta due to smoking.

**Material ve methods:** 25 smoking and 19 non-smoking pregnant women were included in the study. All the pregnant women in the smoker group included in the study were smoking before pregnancy. Placentas of the patients were examined after birth on the histopathology laboratory. The findings were recorded and analyzed.

**Results:** Mean age was 31.04±5.03 years and 28.21±4.43 years in smoker and non-smoker group respectively. Median values of number of pregnancies were 2 (range: 0-6) and 1 (range: 1-4) in smoker and non-smoker groups respectively. In 19 patients of the smoker group (76%) intervillous fibrin deposition detected while in 7 patients of non-smoker group (36%) intervillous fibrin was detected. Placenta infarction was observed in 7 patients of smoker group (28%) but no infarction found in non-smoker group. Focal chorionitis and chorioamnionitis was detected in 11 patients of smoker group (44%) and 4 patients of non-smoker group (21%). No postpartum complications developed in mother and fetus.

**Conclusion:** Effects of smoking during pregnancy on fetus and oxidative status have been described before but in this study morphologic changes on placenta revealed. In this study more fibrin deposition and infarction found in the placenta of pregnant women who smoke. Although the current situation had caused no complication in this patient group, morphological examination of the placenta showed mother and infant may face problems during labor.

Disclosure: No conflict of interest declared

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**Detection of eating habits, diet problems and drug use of pregnant women**S. Kavuk<sup>1</sup>, U. Aydogan<sup>1</sup>, C.M. Ercan<sup>2</sup>, A. Parlak<sup>3</sup>, İ. Alanbay<sup>2</sup>, O.Gursel<sup>4</sup>, A. Atay<sup>4</sup>, A.E. Kurekci<sup>4</sup>, H. Yaman<sup>5</sup>, K.Saglam<sup>1</sup>

<sup>1</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey; <sup>2</sup> Obstetric and Gynecology, Gulhane School of Medicine, Ankara, Turkey; <sup>3</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>4</sup> Pediatrics, Gulhane School of Medicine, Ankara, Turkey; <sup>5</sup> Biochemistry, Gulhane School of Medicine, Ankara, Turkey

**Objective:** The aim of this study is to identify proper eating habits, rates of used vitamins and body weight gained during pregnancy of women.

**Material and method:** 80 pregnant women included into this study. Nutritional status, body weight and vitamin usage of pregnant women recorded beginning from preconceptional period until the post-natal period.

**Results:** Mean age, pre-pregnancy weight and BMI of pregnant women participating in the study were  $33.50 \pm 10.60$  years,  $62.30 \pm 5.80$  kilograms,  $28.10 \pm 2.15$  kg/m<sup>2</sup>, respectively. Participants' mean age at first pregnancy was  $23.35 \pm 4.60$  years, median value of previous curettages was 1 (range: 0-3), median value of abortions was 1 (range: 0-2). 80% of pregnant women (n=64) were in regular diet, while 25% (n=20) of them had a problem in their diet. It was noticed that 50% of pregnant women (n = 40) were not using vitamin preparations before and after pregnancy. Mean weight participants gained during pregnancy was  $12.45 \pm 6.75$  kilograms. Patients reached  $74.60 \pm 10.45$  kilograms after pregnancy Average gestational age of the participants was  $39.25 \pm 0.60$  weeks and average weight of neonates was recorded as  $3185.25 \pm 430.50$  grams. Vitamin B12 and folate levels of patients during pregnancy were found to be lower than normal.

**Conclusion:** Participants found to have healthy pregnancy; weight gain due to pregnancy was normal and had participated in regular doctor visits. In addition, a part of the pregnant women found to have insufficient diet and did not taking prenatal vitamins in accordance.

Disclosure: No conflict of interest declared

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**Alcohol consumption among medical students**S. Kravic<sup>1</sup>, M. Racic<sup>2</sup>, J. Matovic<sup>3</sup>

<sup>1</sup> Family Medicine, Health Centre, Gacko, Bosnia-Herzegovina; <sup>2</sup> Family Medicine, University East Sarajevo, East Sarajevo, Bosnia-Herzegovina; <sup>3</sup> Family Medicine, Health Centre, Foca, Bosnia-Herzegovina

**Objectives:** The college years are the time many youths first experiment with alcohol, while others move from experimentation to frequent use. The aim of this study was to assess the prevalence of excessive drinking among medical students.

**Method:** The study was conducted at Medical School, University East Sarajevo. The study population were first and fourth year medical students. All students were asked to complete and return the AUDIT questionnaire before the beginning of their lectures.

**Results:** Medical students' response rate was 100%. 125 first year medical students and 50 fourth year medical students responded to the questionnaire. The results of the study found that 48% of first year students and 58% of fourth year students had the score of 0 to 7 (sensible drinking). The score of 8 to 15 (hazardous or harmful drinking) was found in 33% of first year students and 26% of fourth year students. Eleven percentages of first year students and 10% of fourth year students had the score of 16 to 19 (high level problems). Eight percentage of first year students and 6% of fourth year students had a score of 20 or higher (possible dependence).

**Conclusions:** Alcohol screening revealed that significant number of medical students drink alcohol beyond the sensible level. The transition to college life is a key risk period. Harmful and hazardous patterns of alcohol consumption carry significant health risk and likely prevent academic progression what emphasizes the necessity for a good guide for routine screening of excessive drinking among students.

Disclosure: No conflict of interest declared

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**Alcohol use and drinking motives among medical students in Korea**

K.J. Nam, S.W. Cha, S.Y. Lee, Y.J. Kim, J.G. Lee, D.W. Jeong, Y.H. Cho, Y.H. Lee, E.J. Choi, Y.J. Tak  
*Family Medicine, Pusan National University Yangsan Hospital, Yangsan, Korea*

**Background:** Lifestyle habits during medical college affect the quality of counseling provided by the physician. It is necessary to teach medical students about their own drinking habits as well as the theoretical education about alcohol. This study about alcohol use allows us to have a basis of student guidance in current medical students in Korea.

**Methods:** 323 subjects from 5 medical colleges in Korea completed the questionnaire. We used a structured questionnaire of 14 questions concerning demographic details including smoking status, consumption of alcohol and drinking motives.

**Results:** The heavy drinking and binge drinking of Korean medical students are markedly higher than other countries and general population aged 21 to 25 years in Korea, but lower than other college students. Female medical students drink as much as male students, much higher than other women. Their drinking was strongly correlated with smoking. Drinking to enhance positive mood was the most important motivation that can best predict drinking problem.

**Conclusion:** Korean medical students have higher alcohol consumption and problem drinking than the national general population or other country's medical students. Therefore, medical students need the guidance of drinking alcohol and there is a need to pay relatively more attention to female medical students' alcohol drinking.

Disclosure: No conflict of interest declared

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**Over-the-counter drugs use in adult**

L.P. Cheng<sup>1</sup>, C.F. Mu<sup>2</sup>, C.Y. Hsu<sup>2</sup>

<sup>1</sup> *Department of Internal Medicine, Kuang Tien General Hospital, Taichung, Taiwan;*

<sup>2</sup> *Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan*

**Introduction:** Drugs overuse can cause severe physical or psychological problems. To have a safety behavior for medication is important. The objective of this study is to present over-the-counter (OTC) drugs use in adult.

**Method:** Between Aug and Sept 2012, 100 adults participated in this survey. Nineteen questions were included in the questionnaire. Self-medication experience was asked. Drugs variety and frequency were recorded.

**Result:** Sixty-five (65%) participants (43 women, 22 men) took OTC drugs in the past one year. Among the 65 participants, 28 (43.1%) took OTC drugs every 2 weeks. The top 3 reasons for the participants to take OTC drugs were headache (35.4%), common cold (35.4%) and muscle soreness (18.5%). Painkiller was the most used (56.9%), the second was for colds (32.3%).

Most (52.3%) of the participants used OTC drugs due to convenient and mild illness.

**Conclusion:** High percentage of people used OTC drugs. Safety medication should be focus on. Education of safety medication should be done in community.

Disclosure: No conflict of interest declared



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**Factors associated with risky alcohol consumption among male adults in a Family Health Unit in Brazil**

S.C. Franco, N. Baldin, M. Paiva

*Masters in Health and Environment, University of Joinville Region, Joinville, Brazil*

**Objectives:** The objectives of this study were to describe the profile of male adults residents in a Family Health Unit area, to stratify them into risk zones for alcohol consumption and to identify risk factors.

**Methods:** A domiciliary survey was conducted among all male adults residents in a Family Health Unit area, using a sociodemographic questionnaire and the AUDIT.

**Results:** 564 men were interviewed and classified into zones I (78,5%), II (15,6%), III (3,0%) and IV (2,9%). Most of them (59,2%) were less than 45 years old, employed (78,7%) and belonged to low socioeconomic class (55,7%). 37% of them started the consumption before the age of 15, one third (32,8%) were smokers and a small percentage (3,2%) declared themselves as consumers of other drugs. Greater occurrence of risky consumption (zones II, III and IV) was found among men younger than 35 and belonging to low socioeconomic classes. The multivariate analysis showed association between risky alcohol consumption and tobacco use ( $p=0,003$ ) and having suffered an accident ( $p=0,035$ ).

**Conclusions:** Alcohol consumption and problems related need an effective actuation of the whole society as well as the health sector. The characteristics of the primary care context, such as the proximity to the community and the family, make it a privileged scenery to manage risks, to identify precociously these individuals through the use of screening tools and the delivery of evidence-based health care.

Disclosure: No conflict of interest declared

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**Demographics and baseline characteristics of the nalmefene phase 3 programme study population**A. Gual<sup>1</sup>, P. Sørensen<sup>2</sup>*<sup>1</sup> Department of Psychiatry, Alcohol Unit, Institute of Neurosciences, Hospital Clinic, Barcelona, Spain; <sup>2</sup> Biostatistics, H. Lundbeck A/S, Valby, Denmark*

The phase 3 programme investigating nalmefene for reduction of alcohol consumption in patients with alcohol dependence comprised two 6-month studies (identical design) and one 1-year study, conducted in specialist settings in different parts of Europe. 1997 patients with a DSM-IV diagnosis of alcohol dependence were recruited from the study sites' own patient pools, by referrals to study sites, or using advertisements. The average patient was a middle-aged man (mean age: 47 years, 73% men), who was employed (62%) and living with someone (76%). In the Brief Measure of Readiness to Change Questionnaire 'readiness to change' subscale, a high score of 8 out of 10 indicated a patient population very motivated to change their alcohol consumption. The majority of patients (65%) had never received treatment for alcohol dependence, despite having a long history of alcohol problems (more than 12 years on average). At baseline, patients had (mean±SD) 17±7.2 heavy drinking days (HDDs) per month (defined as a day with alcohol consumption ≥60g for men and ≥40g for women) and an average total alcohol consumption (TAC) of 81±44g/day. Based on the baseline Clinical Global Impression – Severity of Illness (CGI-S), the patient population was defined as on average being moderately ill.

The baseline characteristics of the subgroup of patients (n=854) with high drinking risk level at randomisation (>60g/day for men; >40g/day for women) were similar to those of the total study population, except for baseline drinking parameters (HDDs: 21.8±6.2 days; TAC: 104±45g/day) which were higher than in the total population.

Disclosure: Per Sørensen is an employee of H. Lundbeck A/S

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**Smoking habits and associated factors among young adults**Y.C. Doganer<sup>1</sup>, U. Aydogan<sup>2</sup>, O. Sari<sup>2</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Tobacco addiction is a public health problem that cause to chronic obstructive lung disease, asthma, lung cancer etc. Smoking habits and associated factors among young adults were evaluated in our study.

**Methods:** 257 young adults applied to primary care center and had smoking habits were accepted to study. Evaluation questionnaire form including questions about sociodemographic properties, tobacco addiction and smoking habits was delivered to participants after taking consent form of study.

**Results:** Mean age of participants was 22.44±2.52. Educational levels were as follow: 51.8% (n=133) graduated from elementary school, 29.6%(n=76) graduated from high school, 18.7%(n=48) graduated from university. Marital status of participants; 90.3%(n=232) were single, 7.8%(n=20) were married, 1.9%(n=5) were divorced. When participants classified according to monthly income; 29.6%(n=76) low, 58.8%(n=151) medium, 11.7%(n=30) high economic level. 67.7%(n=174) of smoking participants had a family history about tobacco addiction, 32.3%(n=83) had no family history. Mean age of beginning of smoking for the first time was 13.84±3.41, mean age of starting of smoking regularly was 15.34±3.05. Mean duration of smoking till now was 7.19±3.16. 74.3%(n=191) of participants had a wish to quit smoking, 25.7%(n=66) emphasized not to have any wish to quit.

**Conclusions:** Smoking is one of initial factor among the preventable risk factors of mortal diseases. Age of try smoking and use regularly is decreased to almost childhood period as detected in our study. Thus, even patients applied to primary care center for different purposes, state of smoking and tobacco addiction should be questioned.

**Key Words:** Smoking, Young Adults, Sociodemographic properties

Disclosure: No conflict of interest declared

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**“Change of addiction” : community program to stop smoking and replaced by physical activity**P. Iturrizoz<sup>1</sup>, V. Rubio<sup>2</sup>, J.M. Maiz<sup>2</sup>, L. Unzueta<sup>2</sup>, I. Iturrizoz<sup>3</sup>, N. Garate<sup>2</sup>, A.L. Rengifo<sup>2</sup>, I. Odriozola<sup>2</sup>, L. Arriaga<sup>2</sup><sup>1</sup> Unit of Family and Community Medicine Gipuzkoa, Osakidetza, San Sebastian, Spain; <sup>2</sup> Health Centres Irun Center, Dumboa, Hondarribia, Osakidetza, Irun, Spain; <sup>3</sup> Provincial Council of Gipuzkoa Sport, City Council of Irun, Irun, Spain

**Objective:** To evaluate whether the 48 patients who participated in the program to quit smoking and to do physical activity remain without smoking and actives, after 2 years of completing the program.

**Methods:**

Design: Community Intervention Program.

Subjects: 48 sedentary and smoker people, who wanted to quit smoking and to start a supervised exercise program in the municipal sports centers for a period of three months.

Participants: 3 health centers, 3 municipal sports centers, Association of Cancer Patients, Town Halls of Irun and Hondarribia (Social Welfare and Sports Department). Intervention: We conducted a telephone interview after two years of implementation of the program to know how many people remain without smoking and doing physical activity. Three primary care physicians previously trained to carry out the study, conducted interviews.

**Results:** After 2 years of the study, we managed to interview by telephone to 38 (79.2%) out of the 48 participants. 13 out of the 38 interviewed (27.1%) continue without smoking and from those who have relapsed, 6 (24%) referred having made new attempts to quit smoking.

10 out of the 38 (26.31%) participants, continue to perform physical activity in sports centers and 21 (55.26%) reported sufficient physical activity in their free time. 24 of the interviewed (63.15%) identified barriers to being active, the most important: economic, family and lack of time.

**Conclusions:** Community program with a multidisciplinary and cross approach that has shown positive results to quit smoking and start a physical activity plan with great patient satisfaction.

Disclosure: No conflict of interest declared

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**Prevalence of smoking in people attending primary care centers in Bosnia and Herzegovina**O. Batic-Mujanovic<sup>1,2</sup>, L. Gavran<sup>3</sup>, A. Beganlic<sup>1</sup>, E. Karic<sup>4</sup>, E. Ramic<sup>4</sup>, S. Herenda<sup>1</sup>, S. Selmanovic<sup>4</sup><sup>1</sup> Family Medicine Teaching Center, Health Center Tuzla, Tuzla, Bosnia-Herzegovina;<sup>2</sup> Department of Family Medicine, Medical Faculty of Tuzla University, Tuzla,<sup>3</sup> Family Medicine Teaching Center, Health Center Zenica, Zenica,<sup>4</sup> Department of Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina

**Objective:** Cigarette smoking is the most important modifiable cause of premature death in developing countries. We investigated the prevalence of smoking in people who attended primary care centers in Tuzla Canton, Unsko-Sanski and Posavski Canton.

**Methods:** This cross-sectional study included 21 primary care centers in three cantons in Federation of Bosnia and Herzegovina. Every family medicine team, involved in Program of Additional Training in Family Medicine, completed questionnaire for 100 patients about their smoking status and readiness to quit smoking. Data collection was performed between February 2012 and March 2012.

**Results:** This study included 2100 patients (aged 10-88 years): 1011 (48.14%) men and 1089 (51.86%) women. Prevalence of smoking was 47.71%. Significantly more men than women were smokers (53.71% vs. 42.15%;  $p < 0.0001$ ). Only 357 (17%) patients were ex smokers with significantly more men than women (22.06% vs. 12.3%;  $p < 0.0001$ ). More than third of patients (35.29%) never smoked. Significantly more women than men never smoked (45.55% vs. 24.23%;  $p < 0.0001$ ). More than half of smokers (53.6%) didn't think to quit smoking, while (37.53% smokers think to quit in the next six months and only 8.88% smokers were ready to quit smoking at the moment.

**Conclusion:** Results of this study showed a high prevalence of smoking in Federation of Bosnia and Herzegovina. It indicates more effective strategies of primary care teams to identify all people who smoke and offer them comprehensive advice and appropriate treatment to quit smoking in order to improve overall health in community.

Disclosure: No conflict of interest declared

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**The impact of divorce on smoking**M. Kaya<sup>1</sup>, S. Cebeci<sup>2</sup>, E. Avci<sup>3</sup>, R. Gunay<sup>3</sup>, I. Yilmaz<sup>3</sup>, E. Oncel<sup>3</sup>, K. Turkmen<sup>3</sup>, M.R. Yigitoglu<sup>4</sup><sup>1</sup> Public Health, Fatih University Faculty of Medicine, Ankara, Turkey; <sup>2</sup> Family Medicine, Fatih University Faculty of Medicine, Ankara, Turkey; <sup>3</sup> Kutahya Health Province, Kutahya Health Province, Ankara, Turkey; <sup>4</sup> Biochemistry, Fatih University Faculty of Medicine, Ankara, Turkey

**Objective:** This study was designed both to determine the frequency of smoking in married and divorced parents in the city of Kütahya, located in the Middle Western region of Turkey, and to determine some related factors.

**Methods:** The sample included 300 married and 300 divorced parents. The questionnaire included demographic properties, which are thought to have an effect on smoking. The data was collected via face-to-face interviews.

**Results:** 45,7% of divorced and 30,0% of married parents were current smokers ( $p=0,000$ ). 10,4% of divorced and 2,3% of married parents has started smoking in the last 3 years ( $p=0,021$ ). 47,1% of divorced and 27,3% of married parents had depression symptoms, 48,5% of divorced and 33,7% of married parents had anxiety symptoms ( $p=0,000$ ). When the symptoms of depression and anxiety variables were controlled, in divorced parents the frequency of starting smoking in the last 3 years were 2,96 times greater than that of married parents ( $p=0,015$ ).

**Conclusions:** When the divorced and married parents are compared, it is found out that the frequency of becoming a smoker in the last three years is higher in divorced parents. Divorce, itself, regardless with the moods of the individuals is an independent cause for becoming a smoker. Divorce, on the other hand, is considered to be a factor affecting the development of depression and anxiety. In efforts which are carried out to prevent smoking in a society taking those with a risk of getting divorce into consideration, will contribute to the success rate of these efforts.

Disclosure: No conflict of interest declared

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**Smoking habits of adolescents**

S. Bosankic, L. Halilovic, S. Herenda, F. Brahimaj  
*Family medicine, Primary Health Care Center, Zivinice, Bosnia-Herzegovina*

**Introduction:** Tobacco use is a risk factor for six of the eight leading causes of death. Tobacco smoking prevalence amounted to 26% of all adults population aged 15 years or older. The current tobacco use is an important predictor of future burden of tobacco related diseases.

**Aim:** To find out smoking habits among adolescents.

**Method:** The research in this project was based on the personally designed anonymous questionnaire which consisted of 11 questions. The investigated population consisted of 486 students of higher grade. The investigated population consisted of 486 students of higher grade.

**Results:** Study sample included 138 male and 348 female respondents, age from 17 to 19 years. The results showed that out of all 486 students, 126 of them (25.92%) were smokers. Among non-smokers 174 (48.33%) students had smoked some time in their lives. A significant proportion of the smokers, 53 (42.06%) smoked more than 10 cigarettes per day. Approximately one third (29.42%) of all students tried smoking between the age of 15 – 17 years. The most common reasons for smoking were: enjoyment and out of boredom. In total, 129 (26,5%) of the 486 students reported that their mothers were smokers, 165 (33,9%) fathers, and 72 (14,8%) reported that both parents were smokers.

**Conclusions:** The results of our study showed that prevalence smoking among highschool adolescents was 25.92%. This is a relatively high prevalence of smoking and it is necessary to work intensively on the prevention of smoking among school population.

Disclosure: No conflict of interest declared

582

**Managing tobacco use and dependence in patients with hypertension**

A. Bodoutchian, T. Iroku-Malize, M. Tiffany, H. Motwani, A. Ovadia, E. Battinelli  
*Family Medicine, Hofstra North Shore-LIJ School of Medicine; NSLIJ Health System, Long Island, United States*

**Objective:** According to the Center for Disease Control and Prevention (CDC), “using chronic disease management programs to integrate tobacco dependence interventions into treatment may be an effective and efficient way to deliver tobacco use interventions to these populations”. Our goal was to implement determine the status of an outpatient practice with regards to screening for tobacco use, implementation of interventions and patient response to said interventions. The patient population in this setting were those with a cardiac co-morbidity as manifested by a diagnosis of hypertension.

**Methods:** In 2012, the outpatient faculty practice office of a family physician from the Hofstra North Shore-LIJ School of Medicine & NSLIJ Health System, did a random sample audit of the practice to survey their patients with a diagnosis of hypertension and tobacco utilization. Approximately 35% of the patients had a dual diagnosis.

The practice then proceeded to implement an intervention in the following manner:

- a) Behavioral counseling from the family physician and/or external resources
- b) Referral for hypnosis therapy
- c) Pharmacotherapy

The patients were offered a combination of counseling plus the other two options. They could also opt not to participate.

**Results:** A follow-up audit of the practice a month later showed an improvement in the appropriate management of this population. Several patients have quit smoking continuously to date. The study is ongoing.

**Conclusion:** Tobacco dependence screening and intervention in a family medicine outpatient practice is an effective method of complying with the CDC guidelines on “Treating Tobacco Use and Dependence.”

Disclosure: No conflict of interest declared

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**Why smokers who smoke? A look from complementary therapies**

F. García

*Family Medicine Service, H.I.B.A, CABA, Argentina***Objective:**

- Provide a view from complementary therapies on the causes of smoking
- Provide tools that complement traditional treatments for smoking cessation

**Method:**

The causes that lead patients to smoke

- Nicotine addiction
- Oral gratification
- Occupation coordinated fingers
- Reliable source of fire
- Social facilitator
- Status

These causes are real but the root cause why people smoke is that it allows them to „feel their breath.“ Smoking enhances the feeling of breathing and this is the basic activity of our life, is vital activity par excellence and never stop thinking about it.

Different cultures like Hindu and China recognize its importance and develop disciplines looking to learn to breathe correctly (Tai chi, yoga, meditation)

The coordinated breathing increases vital energy. If we learn to regulate breathing, we can regulate the body, mind and life.

Breathing opens channels through which the life force can flow.

**Conclusions:**

To develop some of the disciplines that teach breathing like yoga, tai chi, meditation can feel our breath without the need to smoke, and we can adjust each of the other causes that lead the individual to obtain gratification by smoking. Learning to breathe and using meditation, get other benefits such as relaxation, health, welfare and the expansion of our conscience.

Disclosure: No conflict of interest declared

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**Frequency of smoking among the cancer patients**N. Demirbas<sup>1</sup>, R. Kutlu<sup>1</sup>, S. Civi<sup>2</sup>, M.C. Börüban<sup>2</sup>

<sup>1</sup> Department of Family Physician, Meram Medical Faculty, University of Konya, TURKEY, Konya, Turkey; <sup>2</sup> Department of Medical Oncology, Meram Medical Faculty, University of Necmettin Erbakan Konya, TURKEY, Konya, Turkey

**Objective:** Cigarette smoking is the most important preventable risk to human health and an important cause of morbidity and premature death worldwide. This study was carried out to describe the prevalence of smoking among cancer patients.

**Methods:** This descriptive study was performed among 300 cancer patients receiving treatment at Medical Oncology Department of Meram Medical Faculty. Data were obtained via a questionnaire form and revealed socio-demographic characteristics, smoking-related attitude and behaviors. Fagerstrom Test for nicotine dependence was used to determine the level of nicotine dependence.

**Results:** In this study, of the participants, 164 (54.7%) were male, the mean age was 57.9±13.2 (range: 18-85). The prevalence of current smokers was 10.3% (n=31), former smokers 49.7% (n=149), never-smokers 40.0% (n=120), quit ratio [quit ratio is defined as the number of former smokers divided by the number of ever smokers (current and former smokers)] was 82.8%, respectively. The lowest age starting smoking was 14, the highest age was 30 and the mean value was 18.5±2.7. The median value of Fagerstrom dependence was 5 and 62.5% was placed at a low and very low addiction degree. The median value of the duration of smoking (years) was 35. The best way of smoking-cessation was sudden quitting (80.5%). Especially, respiratory tract (78.0%) and genitourinary tract cancers (70.6%) were mostly affected by duration of smoking.

**Conclusion:** Nicotine's effect on cancer cell apoptosis, tumor angiogenesis, invasion, and metastasis are important. Smoker cancer patients have a worse prognosis than nonsmokers. An effective national anti-smoking policy must be urgently established.

Disclosure: No conflict of interest declared

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### Evolution of smoking registered prevalence in a general practice surgery from a health care centre

D.F. Pruteanu, F. Antón García, I. Tomás Saura, P. Antón Castellote, P. Pastor Tiburicio  
9th Health Care Area Valencia, Fuensanta Health Care Centre, Valencia, Spain

**Objective:** To assess the evolution of smoking data records in a general practice surgery, comparing it to the rest of the surgeries.

**Methodology:** There are 8 general practitioners (GP) in our health care centre (HCC). Evaluated period: 2006-2012. We determined the evolution of the smoking registered prevalence in the HCC comparing it to that of our surgery. The data were obtained from the Electronic Medical Records (EMR). In our surgery we also determined the prevalence in a sample of 147 patients (43.5% males) in 2010, assessing its features.

**Results:** Registered smoking prevalence (%) in the HCC/our surgery: 2006: 8/11.8. 2007: 10.1/15.9. 2008: 12.2/20.6. 2009: 13.6/23. 2010: 17/27.5. 2011: 18.3/29.4. 2012:19.6/30.3. Calculated prevalence for our surgery in 2010: 28.6%. Smokers: males 66.7%, 71.4% of them were smoking up to one package a day. Sample mean age: 59 years old (SD 18.5). Mean age in smokers: 42.9 years old. Mean age in non-smokers: 65.4 years old,  $p=0.000$ . Sample Body Mass Index (BMI) 27.8 (SD 4.6), smokers 26.4 and non-smokers 28.4,  $p=0.02$ . 20% of the non-smokers live with smokers. There is personal history of COPD or cardiovascular disease in 5% of the smokers and 29% of the non-smokers.

**Conclusions:** Our surgery systematically registered smoking status better than the others surgeries of the HCC. The registered prevalence in 2010 is very similar to the one obtained in our sample. Among smokers, the majority of them are males, having mean age and BMI clearly inferior to non-smokers.

Disclosure: No conflict of interest declared

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### Why don't the health care providers want to quit smoking?

T.E. Yilmaz<sup>1</sup>, E.M. Koc<sup>1</sup>, I. Sencan<sup>1</sup>, I. Kasım<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Ozkara<sup>2</sup>, D. Ayhan<sup>1</sup>

<sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey;

<sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Smoking, the world's fastest-growing epidemic disease, cause many chronic diseases. 5.4 million people per year die because of the diseases caused by smoking worldwide. In Turkey, 23% of all death arises from tobacco-related illnesses. 'National Tobacco Control Program' had developed in Turkey by the Ministry of Health (MoH) in 2009 with amendment of Law 5207 in 2008. Law 5207, made all closed places smoke-free. The National Media Campaign has been initiated with the slogans "Smoke Free Air-Zone" (SFAZ) for raising public awareness. From 2008 to 2010 the ratio of smoking consumption decreased from 33,4% to 27,1% with this campaign and 2 million 200 thousand people stopped to smoke.

Doctors and other health care providers are one of the important milestones in that campaign for being an example to the community. The aim of our study is to determine the tobacco related health knowledge, smoking patterns, attitudes, quit attempts/successes and the barriers to quitting smoking reported by current smokers of hospital staffs four years after the application of SFAZ.

**Methods:** In this study we used four different instruments; Fagerstrom Nicotine Dependence Test, a questionnaire to obtain attitude of SFAZ in hospitals, Smoke Free Hospital Application Questionnaire and a questionnaire about socio-demographic factors and smoking habits. We applied these instruments to Ankara Numune Training and Research Hospital Staffs.

**Results:** Results will be announced at WONCA 2013 World Conference.

**Conclusion:** What can be done for health care providers to quit smoking is a very important issue because they are examples for the community.

Disclosure: No conflict of interest declared

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### Mapping about when students first try tobacco in public school in Campo Grande / Brazil

M.L.M. Santos, J.M. Fernandes, V.S. Sanches, N.A. Muzili, T.A. Rios, A.P. Batiston  
Center of Biological and Health Sciences, Federal University of Mato Grosso do Sul, Campo Grande, Brazil

**Objective:** Identify the incidence and factors associated with those who try cigarettes, such as age and reasons for smoking, along with verifying the existence of parental smoking among children and teenagers of school age.

**Methods:** It is a cross-sectional population-based study involving children and teenagers students at five public schools and one non-governmental organization in the city of Campo Grande/Brazil. A semi-structured questionnaire was applied which contained questions regarding trying a cigarette. There were 905 students invited to participate, of those, 662 completed the questionnaire. The results were analyzed using descriptive statistics (means and standard deviations).

**Results:** The mean age was 10.9 years ( $\pm 2.3$ ), of which 52.5% were male and 47.5% female. Of these, 14.1% reported having tried cigarettes, with a mean age of 12.4 years ( $\pm 2.2$ ), mostly male, 59.5%. Among those who have ever tried cigarettes, 47.8% have parents who smoke, and those who have not tried, only 29.8% have parents who smoke. About smoking influence, 13.8% reported being under the influence of friends, followed by 7.4% due to the parents and family. About where they first tried smoking, 43.6% reported being on the street, square, school, party or other environments, and 33% said they were in their own homes or with relatives. Currently, 8.5% report being smokers.

**Conclusions:** Considering the vulnerability and numerous risk factors that lead to the younger audience smoking, family influence is notorious for early experimentation and social cigarette. Specific preventive measures create awareness that this age group is important to avoid premature death due to smoking.

Disclosure: No conflict of interest declared

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### Evolution of polydrug use in schooled teenagers in Andalusia (Spain) during the last decade.

L Simão-Aiex<sup>1</sup>, A. Pérez-Milena<sup>1,2</sup>, M.V. Juárez-Jiménez<sup>1</sup>, M.L. Martínez-Fernández<sup>3</sup>, F.J. Leal-Helmling<sup>4,2</sup>, M.I. Mesa-Gallardo<sup>5,2</sup>, I. Jiménez-Pulido<sup>6,2</sup>, R. Pérez-Milena<sup>7,2</sup>, C. Álvarez-Nieto<sup>8</sup>

<sup>1</sup> El Valle Health Centre, Andalusian Health Service, Jaén, Spain; <sup>2</sup> Teenager working group, Andalusian Society of Family and Community Medicine, Granada, Spain; <sup>3</sup> Jabalcuz High School, Ministry of Education of Andalusia, Jaén, Spain; <sup>4</sup> Jódar Health Centre, Andalusian Health Service, Jaén, Spain; <sup>5</sup> Condado-Campiña Health District, Andalusian Health Service, Huelva, Spain; <sup>6</sup> Úbeda Health Centre, Andalusian Health Service, Jaén, Spain; <sup>7</sup> Albayzin High School, Ministry of Education of Andalusia, Granada, Spain; <sup>8</sup> Nursing Department, University of Jaén, Jaén, Spain

**Objective:** To know the evolution of joint consumption of tobacco, alcohol and street drugs between adolescents during 2001-2010.

**Methods:** Cross-sectional, descriptive study in pupils of high-school from one urban area (11-19 years). The questionnaire is administered in the years 2001, 2004, 2007 and 2010. Measurements: age, sex, alcohol, tobacco and illegal drugs consumption (quantity and quality).

**Results:** 1303 adolescents (3% loss) with mean age 14.2 years ( $\pm 0.3$ ) and 50% female. Decrease the prevalence of tobacco consumption (29%-10%), alcohol (63%-29%) and illegal drugs (24%-4%) while increasing adolescents not taking any substance (34%-70%). Beer and wine are changed by high-ranking beverages ( $p < 0.001$  test  $\chi^2$ ). Cannabis remains the drug most frequently used. Adolescents consume the three substances in 16% of cases; other patterns: alcohol 55%, alcohol+tobacco 21%, alcohol+illegal drugs 4% and tobacco+other drugs 0.5%. Daily consumption of alcohol and smoking at weekend are related to the use of other drugs ( $p < 0.001$  test  $\chi^2$ ), while decreases with intermittent consumption. In the polydrug use, the amount of alcohol and tobacco consumed are higher (10 grams/week  $\pm 0.5$  and 18.2 cigarettes/day  $\pm 10.4$ ) ( $p < 0.05$  test ANOVA).

**Conclusions:** In the last decade the drug consumption diminishes, but they appear new patterns of consumption involving alcohol, tobacco and illegal drugs together. Patterns and quantity of alcohol and tobacco are related to polydrug consumption in andalusian adolescents. A multidisciplinary intervention is necessary to promote healthful habits between the adolescents.

Disclosure: No conflict of interest declared

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**Smoking patterns of Resident Internal Specialists in Andalusia (Spain), nicotine dependence and motivation for change**FJ Valverde-Bolívar<sup>1</sup>, MV Juárez-Jiménez<sup>2</sup>, L Simão-Aiex<sup>2</sup>, A Pérez-Milena<sup>2</sup>, A Moreno-Corredor<sup>1</sup><sup>1</sup> *Familiar and Community Medicine Teaching Unit, Andalusian Health Service, Jaén, Spain;* <sup>2</sup> *El Valle Health Center, Andalusian Health Service, Jaén, Spain***Objective:** Describe smoking patterns among resident internal specialists (EIR) in Andalusia (Spain), nicotine dependence and motivation for change.**Methods:** Multicenter, cross-sectional study with survey to all EIR who studying in Health Centres Teachers from Andalusia. A questionnaire is sent by e-mail (three times) collecting age, sex, speciality and year, country of origin, qualitative-quantitative consumption of tobacco, age of onset/cessation, Fagerström test and stage of change (Proschaka).**Results:** 2667 participants (62% of total). Mean age 29.1±5.2 years, 68% female, 86% Spanish, most physicians (6% nurses, 4% pharmacy/psychology). 83% don't smoke and 9% smoke daily; intermittent consumption is higher among women (p=0.048  $\chi^2$ ). The age of onset is 17.4±3.4 years. The quantitative consumption is 7.5±7.1 cigarettes/day, higher among physicians (p=0.067 ANOVA). The dependence is low at 82% and higher by 1%, also probably higher in physicians (p=0.078  $\chi^2$ ). 7% stopped smoking with a mean age of 27.6±6.0 years. 51% have tried to quit smoking (number of attempts: 5.2±3.8). The motivation for smoking cessation is: 52% precontemplation, 38% contemplation, 10% preparation. Daily consumption is associated with greater nicotine dependence and higher cessation attempts (p <0.001  $\chi^2$ ). No differences by age or country.**Conclusions:** The consumption of tobacco in EIR is less than the general population, with a low dependence and better willingness to change. The period of specialized training is a good time to offer tobacco interventions.

Disclosure: No conflict of interest declared

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**Results of a smoking cessation program in primary care by mixture of individual and group intervention**M. Menéndez-Suárez<sup>1</sup>, I. Repiso-Gento<sup>2</sup>, A. de la Cal-de la Fuente<sup>2</sup>, A. Gomez-Arranz<sup>2</sup>, Y. Valpuesta<sup>3</sup>, E. Ibañes-Jalon<sup>2</sup>, M. Gonzalez-Sagrado<sup>4</sup>, T. Salado-García<sup>5</sup>, I. Enrique-Cabero<sup>2</sup>, C. Fernandez-Alonso<sup>6</sup><sup>1</sup> *Digestive Department, Hospital Clínico Universitario Valladolid, SACYL, Valladolid, Spain;*<sup>2</sup> *Health Care Center „Casa del Barco“, Health Care Service of Castilla y Leon, SACYL, Valladolid, Spain;* <sup>3</sup> *Health Care Center „Medina de Rioseco“, Health Care Service of Castilla y Leon, SACYL, Valladolid, Spain;* <sup>4</sup> *Hospital Río Hortega, Health Care Service of Castilla y Leon, SACYL, Valladolid, Spain;* <sup>5</sup> *East Area Management, Health Care Service of Castilla y Leon, SACYL, Valladolid, Spain;* <sup>6</sup> *Regional Management, Health Care Service of Castilla y Leon, SACYL, Valladolid, Spain***Objective:** To evaluate medium and long-term results of a smoking cessation program combining individual and group therapy in a Primary Care Center**Methods:** Sample: 15 smoker groups (2004-2012): 380 patients (148 men and 232 women). Combined therapy of individual and group intervention: weekly sessions for 8 consecutive weeks; guiding for behavioral and pharmacological treatment, followed by group interaction realized by PC doctors and nurses. Follow up of abstinence at 2, 6 months and annually up to 7 years**Variables:** smoking history, dependence (test Fageström, Richmond and Glover-Nilsson) Follow up: withdrawal symptoms, tolerance to medication, exhaled CO, blood pressure, weight, smoking abstinence smoking abstinence afterwards**Results:**

Age: 50.3 ± 12.1 years

Exhaled CO: 19.2 ± 11.8 ppm

Packs-year index: 32.4 ± 20.3

High physical dependence: 30.6%

High motivation: 63.1%

Psychological dependence: 11 (9-13).

Gestural dependence: 12 (8-18)

Social dependence: 6 (4-7)

Craving: 2 (0-3)

26.7% received nicotine replacement therapy: 13.6% Bupropion, 21.1% Varenicline and 0.3% Benzodiazepines

Smoking cessation rate at the 2 months: 47.8%; 6 months: 33.8%; 1 year 26.0%; 2 years 20.7% maintained at 5 years and amounted to 25.9% at 7 years.

Relapses: 32.6%

Surrenders: 41.8%

**Conclusions:** Success rate was high relative to similar interventions, decreasing with time similarly to observed in other studies, to stabilize at around 25% at 6-7 years, what we consider an acceptable result. The initial surrender was high. We believe that Primary Care is a right place for the development of smoking cessation programs as effective as and more efficient than those in other contexts.

Disclosure: No conflict of interest declared



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**Tobacco use among teenagers in Trujillo, Peru**

D.J. Ricks, B. Weaver, E. Parkinson, D. Parkinson, J.H. Ricks, S. Benson

*Department of Family and Preventive Medicine, University of Utah School of Medicine, Salt Lake City, United States*

**Background:** Tobacco use is a major cause of death and disease worldwide. It causes over 5 million deaths annually from cancer and other chronic illnesses. The economic burden is estimated at \$193 billion annually in the USA alone. 80% of smokers live in low and middle income countries, such as Peru. This study assesses teenage tobacco use in Trujillo, Peru.

**Methods:** Working with Universidad de Cesar Vallejo (UCV), an adapted form of the World Health Organization's Global School-Based Student Health Survey (GSHS) was administered to students at schools throughout Trujillo. Answers were tabulated, statistically analyzed, and compared to results from Lima.

**Results:** 2,529 students responded. Among students who smoke, 66.2% (CI=63.08 to 69.32) smoked before the age 14 (Lima 60.3%\*), 20.6% (CI=19.02 to 22.18) smoked in the previous month, (Lima 18.9%), and 79.6% (CI=75.98 to 83.22) have tried to quit (Lima 82.7%). Among all respondents, 52.7% (CI=50.74 to 54.66) have had others smoke in their presence within the last week (Lima 58.6%\*) and 6.9% (CI=5.9 to 7.89) have a parent that smokes (Lima 12.5%). \*Statistically significant difference

**Conclusion:** Our study shows that Trujillo teens start smoking at an earlier age than Lima teens, even though they are less likely to have parents who smoke or others smoke in their presence. Youth remain vulnerable to the addiction of tobacco. We need to work together as health professionals, with families and communities to educate and guide our youth to prevent the consequences of this often lifelong addiction.

Disclosure: No conflict of interest declared

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**Knowledge about electronic cigarette in patients who made at least one attempt to quit smoking: cross sectional study**

L. Petraglia, M. Troilo, K. Zelada, M. Mutchinik, J. Saimovici, S. Terrasa

*Departamento de Salud Pública del Instituto Universitario Hospital Italiano de Buenos Aires, Servicio de Medicina Familiar y Comunitaria del Hospital Italiano de Buenos Aires, Programa de Control de Tabaco del Hospital Italiano de Buenos Aires, Hospital Italiano de Buenos Aires e Instituto Universitario Hospital Italiano de Buenos Aires, Buenos Aires, Argentina*

**Objective:** to determine the prevalence of knowledge and consumption of "electronic cigarette" (EC) in a population that visited at least once the "Smoking Cessation Program" (SCP) office belonging to an HMO system of a Private University Hospital in Buenos Aires, Argentina.

**Methods:** cross-sectional study based on surveys administered by telephone and e-mail during 2011 to an aleatorized sample (n=288) obtained from the SCP database.

**Results:** response rate was 31.7% (81/288). 71.6% of respondents reported having knowledge about EC, but 74.1% of them ignored if National or International Health Agencies had approved its use and if that kind of device is associated to any health risk or benefit.

**Conclusions:** the majority of respondents doesn't know the efficacy, safety and current regulations of EC marketing in Argentina.

Disclosure: No conflict of interest declared

## 1.5. FOOD AND NUTRITION

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### Menstrual irregularity among morbid obese women candidate for laparoscopic bariatric surgery, a multicenter cross-sectional study (2007\_2011)

A. Pazouki, Z. Tamannaie, S. Chaichian

*Tehran university of medical sciences, Minimally invasive surgery research centre, Tehran, Iran*

The incidence of obesity in this century is increasing very rapidly. Obesity and especially morbid obesity affects women more than men. Obesity can change the normal pattern of menstrual cycle so it has a negative impact on women's reproductive health. Previous studies have shown that obese women are more likely to experience menstrual cycle irregularity but most of these studies have been limited by small sample size and none of them had focused on morbid obese women and candidates for bariatric surgery.

In this observational study, women whom were 15\_50 years old, non-pregnant, with BMI over 40 were included and their menstrual cycle characteristics were asked by a General Practitioner with precision.

From 724 patients with morbid obesity who underwent laparoscopic bariatric surgery in Hazrat Rasul Hospital, Milad Hospital, Parsian Hospital and Moheb Hospital during the year of 2007 to 2011 who were evaluated before surgery, 234 patients were participated in our study.

The mean age of the patients was 38.3 ( $\pm 10.52$ ). From all patients 111 patients or 47.4% had irregular menstruation, it was very higher than normal population and the incidence of hypermenhorea, dysmenhorea, oligomenhorea, poly menhorea, and amenorrho were 16.7, 5.1, 5.1, 3.8, and 16.7 respectively. And about 3.8% of married women had infertility that was 3 times more than normal weight women. There was a significant relationship between morbid obesity and menstrual irregularity ( $p$ -value $<0.05$ )

In conclusion the morbid obese women should be treated by recommended method to improve their reproductive health and fertility.

Disclosure: No conflict of interest declared

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### Food habits at school age

A. Mesquita, J. Chaparim

*MEDICAL, UNICID, SÃO PAULO, Brazil*

**Introduction:** Brazil is going through profound changes in the nutritional profile of its population, especially children and teenagers with significant occurrence of overweight and obesity. This process is known as nutritional transition, phenomenon in which an inversion in the distribution patterns of nutritional problems occurs among a population over time, in other words, a shift from malnutrition to obesity. It is believed that these changes occur in the composition and quality of food, but also in eating habits and lifestyle.

**Objective:** To evaluate the nutritional status of students of the School João Guimarães Rosa, Guarulhos / SP and promote healthy eating habits.

**Method:** 567 children participated in this study, aged between two and seven. Anthropometric measurement was performed to calculate the Body Mass Index (BMI) according to the criteria of the World Health Organization (WHO) and verification of food habits.

**Results:** The sample revealed that 44.2% had normal BMI, 26.1% were overweight, 18.9% were obese, 10.6% had severe obesity and 0.20% showed malnutrition.

**Conclusion:** The study showed that 55.8% had nutrition alteration, because of these factors: changes in eating habits, lifestyle, composition of industrial foods, lack of nutrition education in schools, lack of family diet and advertising campaigns encouraging the use of artificial products. This sample confirmed the findings in the literature about the increase in overweight and obesity in the Brazilian population, emphasizing the need for nutrition education and physical exercise. The school environment is conducive to the encouragement and shaping of these habits, valuing the health.

Disclosure: No conflict of interest declared

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**Childhood obesity – Prevention strategies**M.H. Teixeira Fernandes<sup>1</sup>, A. C. Moreira<sup>2</sup><sup>1</sup> Family Medicine, USF Nova Via, Valadares – Vila Nova de Gaia, Portugal; <sup>2</sup> Family Medicine, UCSP Oliveira do Douro, Oliveira do Douro – Vila Nova de Gaia, Portugal

Childhood obesity has become a serious problem. It's a condition in which an excess of fat may increase the risk of other diseases.

**Objective:** Literature review about strategies against childhood obesity and parent's support in a primary care consultation.

**Methods:** Publications between 2000 and 2012 on sites of evidence-based medicine and scientific society in English and Portuguese. Mesh words Childhood obesity, prevention, strategies.

**Results:** Obesity is a chronic and multifactorial disease determined by the interaction of genetic, biological, socio-economic and environmental factors. However the balance between energy consumed and energy expended is the main issue. It's a matter of individual and familiar behavior. Unlike adults, children have limited ability to understand the long term consequences of their behavior.

There are critical periods in which the risk of obesity is major: fetal period, first year of life, adiposity rebound (5-6 years), and adolescence. The adiposity rebound period is the most critical.

To manage the excess weight you need to intervene in lifestyles, combining diet, exercise and behavior modification. The use of strategies to promote behavioral changes should be based on family, age compliant and adapted to needs. The primary objective is to develop awareness of positive and negative habits. The behavior modification can increase their knowledge about healthy behaviors and increase their capacity to achieve this. Parents should be a role model.

**Conclusion:** The pediatric age is an ideal period for effective prevention strategies because it allows the modification of behavior in the long term, contributing to the so-called primordial prevention

Disclosure: No conflict of interest declared

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**Risk of malnutrition in patients over 65 years in primary care**

J.M. Ortin, S. Ruiz de Aguirre, T. Gil, G. Silva, P. Cuadrado, I. Santos, E. Delsors,

D. de los Santos

Centro de Salud Jesus Marin, Servicio Murciano de Salud, Molina de Segura, Spain

**Aim:** To determine the nutritional status of people over 65 in our Healthcare area and know if there are differences between the Mini Nutritional Assessment (MNA-SF \* Screening Test), the Malnutrition Universal Screening Tool (MUST) and the Controlling Nutritional Status (CONUT) to identify people at risk of malnutrition.

**Material and Methods:**

**Design:** Descriptive, transversal (survey and analytical).

**Place:** Primary Health Care Center

**Subjects:** 72 patients. Systematic random sampling (95% confidence, precision 5%). Use of MNA-SF \* which consists of six sections with maximum score of fourteen points, MUST test with three variables and maximum score of six points and CONUT test (assessment of laboratory parameters: cholesterol, albumin and lymphocytes) with maximum score twelve points.

A descriptive statistical analysis was performed using chi and SPSS 18 program

**Results:** Mean age 75.38 years ± 6.69. 45.8% male. 42.9% were obese, 27.1% overweight grade II and 11.4% overweight grade I. 55.6% of patients were polypharmacy (more than five drugs) not presenting a higher risk of malnutrition. The MNA-SF detected 18.1% at risk of malnutrition, MUST 6.9% and CONUT 11.1% with no significant sex differences. There are significant differences (p = 0.001) between MUST and MNA-SF. Increased risk of malnutrition in patients with psychiatric disorders with MNA and MUST (p = 0.007 and p = 0.001 respectively)

**Conclusions:**

-High proportion of obese

-Increased detection of people at risk of malnutrition with the MNA-SF

-Increased risk of malnutrition was detected in patients with psychiatric disorders

Disclosure: No conflict of interest declared

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**Dietary magnesium intake and risk of cancer: A meta-analysis of epidemiologic studies**

H.J. Ko, C.H. Youn

*Department of Family Medicine, Kyungpook National University Hospital, Daegu, Korea*

**Objective:** Magnesium has an important role in genetic stability and DNA synthesis. A number of observational studies of magnesium and cancer incidence have been conducted, but the results are inconsistent. The aim of this study was to investigate the association between dietary magnesium and the risk of overall cancer using a meta-analysis.

**Methods:** We searched PubMed, SCOPUS, and the Cochrane Review through November 2012. All the articles searched were independently reviewed by 3 authors based on predetermined selection criterion.

**Results:** A total of 14 epidemiologic studies, 6 case-control studies and 8 prospective cohort studies involving 1,286,261 participants, were included in final analysis. When all studies were pooled, the relative risk (RR) of overall cancer for the highest level of dietary magnesium intake was 0.804 (95% CI 0.675-0.959) compared with the lowest level of dietary magnesium intake. In subgroup meta-analyses by study design, there was a significant inverse association between dietary magnesium and risk of cancer in case-control studies (RR 0.663, 95% CI 0.475-0.925), whereas there was no significant association in prospective cohort studies (RR 0.885, 95% CI 0.753-1.041). A significant reduction of cancer risk was observed in females (RR 0.839, 95% CI 0.715-0.985) but not in male subjects (RR 0.800, 95% CI 0.541-1.183). Furthermore, there was a significant preventive effect of dietary magnesium for colorectal cancer (RR 0.775, 95% CI 0.655-0.919), but not for other cancer.

**Conclusions:** Our meta-analysis showed that higher dietary magnesium intake seems to have a protective effect for cancer, especially colorectal cancer and in females.

Disclosure: No conflict of interest declared

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**The effects of cooking for oneself on daily salt intake among Japanese outpatients: a cross-sectional study**K. Takamura <sup>1</sup>, M. Okayama <sup>2</sup>, T. Takeshima <sup>2</sup>, J.-i. Murakami <sup>3</sup>, M. Harada <sup>4</sup>, M. Eto <sup>5</sup>, E. Kajii <sup>2</sup>

<sup>1</sup> *Department of General Practice, Nishimera municipal clinic, Nishimera, Japan;* <sup>2</sup> *Division of Community and Family Medicine, Center for Community Medicine, Jichi Medical University, Shimotsuke, Japan;* <sup>3</sup> *Department of Internal medicine, Mine City Hospital, Mine, Japan;*

<sup>4</sup> *Department for Support of Rural Medicine, Yamaguchi Grand Medical Center, Hofu, Japan;*

<sup>5</sup> *Department of Internal Medicine, Wakuya Medical and Welfare Center, Wakuya, Japan*

**Objective:** This study aimed to clarify the association between cooking for oneself and daily salt intake among Japanese outpatients.

**Methods:** We enrolled 875 patients (351 men) from five clinics and hospitals. Using questionnaires, we asked subjects whether they cooked for themselves and whether they preferred a high-salt diet. Daily salt intake was estimated in analyzing early morning second urine samples. We assessed the association between the two questionnaire items "cooking for oneself" and "taste of salt" and estimated daily salt intake.

**Results:** Overall, 58% participants cooked for themselves and 53% preferred high-salt diets. The mean estimated daily salt intake was  $11.5 \pm 3.7$  g, and there was no difference between the participants who cooked for themselves ( $11.3 \pm 3.6$  g) and those who did not ( $11.9 \pm 3.6$  g). Daily salt intake was lower among men who cooked for themselves than among those who did not ( $p = 0.07$ ); the opposite was true for women ( $p = 0.06$ ). Among participants who preferred a high-salt diet, the overall daily salt intake was lower in those who cooked for themselves than in those who did not ( $p = 0.07$ ). However, women who preferred a high-salt diet showed a tendency toward increased salt intake ( $11.6 \pm 3.7$  g vs.  $10.3 \pm 3.0$  g;  $p = 0.07$ ). Salt intake was comparable among all participants who did not prefer a high-salt diet.

**Conclusions:** Our results indicate that women who prefer high-salt diets and/or cook for themselves have increased daily salt intake.

Disclosure: No conflict of interest declared

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**Health on School (HS) – tracking and monitoring of indicators of health and nutrition**C.A. Furbino Marcondes de Moura<sup>1</sup>, M. Nunes Alves<sup>2</sup>, W. Freitas Jr.<sup>3</sup>, E. Yu Me Yut Gemignani<sup>4</sup><sup>1</sup> Prefeitura de Guarulhos, Médico da Família, Guaurulhos, Brazil; <sup>2</sup> Prefeitura de Guarulhos, Enfermeira da Família, São Paulo, Brazil; <sup>3</sup> Prefeitura de Guarulhos, Gerente da Unidade Básica de Saúde, Gurulhos, Brazil; <sup>4</sup> Professora do Programa de Integração em Saúde na Comunidade – PISCO no curso de medicina, Universidade Cidade de São Paulo, São Paulo, Brazil

The Health on School aims to promote the quality of life of students during the school development to prevent health problems articulating the actions of public health.

**Objective:** Perform tracking and monitoring with nutritional risk classification in children enrolled in elementary school Hebert de Souza in the city of Guarulhos

**Methods:** Participants in this sample 837 children between 5-11 years of age, of both genders, from March to June 2012 whose guardians and family signed the consent form. We conducted the examination of anthropometry and calculated the Body Mass Index, according to criteria of the World Health Organization This study was developed by a team of family health care – area 4 UBS Jacy Garden with support from students of Medicine UNICI. Statistical analysis of the collected data was performed by the program Microsoft Excel 2010.

**Discussion:** According to the criteria of the Body Mass Index of the World Health Organization, the results of this sample showed changes in the nutritional assessment of 493 children, and 132 were obese, 151 overweight, and 210 thinness. These findings corroborate the data on the nutritional status highlighted by the National Demographic and Health Survey (PNDS, 2006) nationwide found that low height for age, weight for height, weight for age and excess weight for height, deficit BMI in adolescents of both sexes, overweight in adolescents.

**Conclusions:** Promoting and protecting the health and crawls through monitoring of health indicators and nutrition contributes to that can be made intersectoral actions for coping of vulnerabilities that may compromise the development and learning process, important for the development of citizenship.

Disclosure: No conflict of interest declared

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**Knowledge attitudes and behaviour of individuals over 18 years towards daily salt intake and consumption of salty food.**F. Sozen<sup>1</sup>, G. Eminsoy<sup>1</sup>, I. Olcay Eminsoy<sup>2</sup>, C. Tuz<sup>1</sup>, M. Colak<sup>3</sup>, A. Kut<sup>1</sup><sup>1</sup> Faculty of Family Medicine, Baskent University, Ankara, Turkey; <sup>2</sup> Nutrition and Dietetics Unit, Baskent University, Ankara, Turkey; <sup>3</sup> Faculty of Health Sciences, Baskent University, Ankara, Turkey

**Objective:** This study aims to investigate the knowledge, attitudes and behavior of regular people over 18 years of age towards daily salt intake and consumption of salty food in various shopping centers in Ankara.

**Methods:** This descriptive cross-sectional study consists of 600 volunteering subjects (312 female, 288 male) older than 18 years of age, randomly chosen in various shopping centers. All subjects underwent a 41-item questionnaire regarding habits of using salt and utilizing salty food. All subjects were included between March–June 2012 to the study group.

**Results:** Of the respondents 52% were female, 55% were between 18-33 years of age. 78% of all participants recognized that excessive salt intake is related to severe diseases. While the appropriate amount of daily salt intake was stated between 2-3 gr/day by 34% of all subjects, 45% pointed to 5-7 gr/day of salt. While 79.2% of participants stated that they tend to buy a 1 Kg package of salt each month, 50.7% think that their daily salt intake is in normal ranges. When asking the subjects if they are using salt before tasting their dishes, only 46.2% said “never”. Despite that 55.8% felt uncomfortable when they are recognizing people eating excessively salty food.

**Conclusion:** Although most of the participants are aware of the relation of excessive salt use and severe diseases and appropriate amounts of daily salt intake, they are still not recognizing their excessive utilization of salt, which translates to the fact, that they are not ready to change their habits.

Disclosure: No conflict of interest declared

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**Knowledge, attitudes and behaviour towards salt consumption of university students, faculty members and administrative staff in Turkey.**F. Sozen<sup>1</sup>, G. Eminsoy<sup>1</sup>, A. Kut<sup>1</sup>, M. Colak<sup>2</sup>, C. Tuz<sup>1</sup>, I. Olcay Eminsoy<sup>3</sup><sup>1</sup> Faculty of Medicine Dept. of Family Medicine, Baskent University, Ankara, Turkey; <sup>2</sup> Faculty of Health Sciences, Baskent University, Ankara, Turkey; <sup>3</sup> Nutrition and Dietetics Unit, Baskent University Hospital, Ankara, Turkey

**Objective:** To investigate knowledge, attitudes and behaviors towards salt consumption in a higher educated group.

**Methods:** This descriptive, cross-sectional study consisted of 300 volunteering subjects including university students, academic and administrative staff, and was performed using a 41-item questionnaire regarding daily salt consumption which was completed in April 2012.

**Results:** Demographic data reveals a rate of 53.7% of women, 82% with a university degree, and 62% of students from different faculties. 53.7% thought that excessive salt use badly affects health, and 46% thought that their daily salt intake is normal. However most of the people knew that excess salt intake may cause hypertension, kidney failure or worsen cardiac diseases; only 49% stated that they feel uncomfortable when they see people eating salty food. 61% didn't know that sparkling beverages contain large amounts of salt, and 8% pay attention to the salt content of products they buy. While 41% thought that reducing salt is very important, 48% won't do anything to take control. Finally while 85.7% of subjects were unsure to confirm removal of salt & pepper shakers in restaurants, most respondents stated that salt consumption is a personal matter.

**Conclusion:** A little more than 50% of the subjects were aware of negative effects of excessive salt usage. The level of education and graduation clearly affects the rates of knowledge and attitudes. The study reveals that although there is an awareness regarding good knowledge and attitudes in the society, people aren't ready to give up their habits regarding salt consumption.

Disclosure: No conflict of interest declared

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**Drug and food interactions with warfarin**A. Ebiloglu<sup>1</sup>, U. Aydogan<sup>1</sup>, O. Sari<sup>1</sup>, T. Cayci<sup>2</sup>, A. Sonmez<sup>3</sup><sup>1</sup> Family medicine, Gulhane military medical faculty, Ankara, Turkey; <sup>2</sup> Biochemistry, Gulhane military medical faculty, Ankara, Turkey; <sup>3</sup> Endocrinology, Gulhane military medical faculty, Ankara, Turkey

**Objective:** Amount of dietary vitamin K intake and drugs can interact with oral anticoagulants and interfere with therapeutic safety and efficacy. In our study we wanted to evaluate the knowledge of patients about drugs and food interactions with warfarin.

**Methods:** Our study was performed on 126 patients under warfarin therapy, applied to provide blood sample for INR control, between August 2011 – March 2012 in Gulhane Military Medical Faculty, Department of Biochemistry. A questionnaire form was applied to participants about drugs and food interactions with warfarin. The participants' knowledge were evaluated.

**Results:** 39 patients (31%) were aware of warfarin-food interaction. 26 patients (20.6%) were directed to dietitian. 37 patients (29.4%) were aware of warfarin-drug interaction. 115 patients (91.3%) were using different drugs simultaneously warfarin treatment.

**Conclusions:** Many drugs and food interact with warfarin. Patients should be informed about drug and food interactions with warfarin by family physicians.

Disclosure: No conflict of interest declared

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**Nutritional and consumer attitudes of Afyon Kocatepe University students, Turkey**E. Karaca<sup>1</sup>, A. Caglar<sup>2</sup>, D. Toprak<sup>3</sup>

<sup>1</sup> Health Training School, Department of Nutrition and Dietetic, Afyon Kocatepe University, Afyonkarahisar, Turkey; <sup>2</sup> Engineering Faculty, Department of Nutrition Science, Afyon Kocatepe University, Afyonkarahisar, Turkey; <sup>3</sup> Family Medicine Department, Sisli Etfal Training and Research Hospital, Istanbul, Turkey

**Objective:** To assess the university students' nutritional preferences and their knowledge about healthy foods.

**Methods:** Totally 1500 students in different departments of Afyon Kocatepe University included in the study. The subjects answered a questionnaire composed with the questions about their sociodemographic features and nutritional habits.

**Results:** Most of the students (48.5%, n=728) preferred to take 3 meals a day. 8.6% (n=128) of the students were living with their families or relatives, 28.6% (n=430) in governmental dormitories and these two groups' 3 meals/day ratios were 60.2% (n=77) and 48.1% (n=207) respectively ( $p < 0.05$ ). While the fast food and home made food consumption were similar, we found that the students who lived in rural preferred home-made foods more (61.3%, n=92) than the students lived in provincials. Fast-food preferences were similar in the students living in governmental and private dormitories ( $p > 0.05$ ). Daily food consumption of the students were found as 48.4% (n=726) bread group, 21.6% (n=324) meat group, 14.7% (n=221) vegetables, 9.5% (n=142) milk-yoghurt group and 5.8% (n=87) fruit group. While 44.1% (n=662) of the students had information about organic foods; 13.9% (n=208) didn't have enough information. Also, 36.2% (n=543) of them didn't have any idea about genetically modified organisms (GMO). The 57.1% (n=856) of students paid attention to the food labels, 37.5% (n=562) of students sometimes examined the food labels but 5.5% (n=82) never examined the food labels. 57.8% (n=867) of students preferred glass, 19.3% (n=290) plastic, 16.5% (n=247) paper as food packages.

**Conclusion:** Healthy foods are provided in schools, dormitories, dining halls and canteens. University students should be informed about GMO, Organic Foods and healthy foods and also must gain the habit of conscious consumption.

Disclosure: No conflict of interest declared

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**Comparison of serum vitamin B12 levels of obese and non-obese children**O. Sezer<sup>1</sup>, Z. A. Saglam<sup>2</sup>, M. Erguven<sup>3</sup>, I. Ozer<sup>3</sup>, D. Toprak<sup>4</sup>

<sup>1</sup> Family Physician, Gaziosmanpasa Karadeniz Family Health Center, Istanbul, Turkey; <sup>2</sup> Family Physician, Medeniyet University Goztepe Research and Training Hospital, Istanbul, Turkey;

<sup>3</sup> Pediatrics, Medeniyet University Goztepe Research and Training Hospital, Istanbul, Turkey;

<sup>4</sup> Family Physician, Sisli Etfal Research and Training Hospital, Istanbul, Turkey

**Objective:** Comparison of serum B12 levels of obese and non-obese children was aimed in this study.

**Methods:** One hundred and sixty-nine obese children who were at the age of 6 to 17 and did not have a chronic disease were chosen among patients attending to Istanbul Medeniyet University Pediatric Nutrition and Metabolism Clinic. Control group consisted of 114 non-obese children at the same age, living in the same region of the city and who did not have a chronic disease. Serum B12 levels of groups were compared.

**Results:** Serum B12 levels of obese children are found to be significantly higher than non-obese children.

**Conclusion:** Thirty-six percent of obese group have lower than 200 pg/ml of serum vitamin B12 level; 68% of non-obese children have lower than 200 pg/ml of serum vitamin B12 level. In obese children's group, B12 levels are higher than non-obese children's group. This means that children living in our region have low dietary B12 intake. Obese children take more B12 vitamin along with increased food intake.

**Keywords:** Obesity, B12, kobalamin

Disclosure: No conflict of interest declared

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### Culturally acceptable weight reduction program for obese females of low and middle income countries (LMIC) conducted in a primary care setting: randomized trial

R. D. N. Sumanasekera<sup>1</sup>, R. P. J. C. Ramanayaka<sup>1</sup>, A. Pathmeswaran<sup>2</sup>

<sup>1</sup> Department of Family Medicine, University of Kelaniya, Ragama, Sri Lanka; <sup>2</sup> Department of Public Health, University of Kelaniya, Ragama, Sri Lanka

**Background:** According to WHO's global estimates, over one billion adults are overweight (BMI 25kg/m<sup>2</sup>) and nearly 300million are obese (BMI 30kg/m<sup>2</sup>). Sri Lanka is a middle-income country with a population of 20.7million where 25.2% are overweight and 9.2% are obese. Female sex, urban living and being middle aged were associated with obesity in Sri Lanka.

Most weight loss programs involving special dietary supplements, expensive items of food or a gym membership that's affordable only to the elite Sri Lankans. These are not within the grasp of middle aged Sri Lankan females. This is also not culturally acceptable in most Sri Lankan communities.

#### Objectives:

1. To develop a comprehensive lifestyle modification programme suitable for low and middle income obese female population
2. To determine the effectiveness of intensive lifestyle modification programme aimed at weight reduction of obese females attending a primary care setting

**Methodology:** Randomized controlled trial, with 50 obese females conducted at University Family Medicine Clinic. Baseline anthropometric measurements were obtained and they were given the routine advice regarding diet and exercise. This is the first phase lasting 6 months where their weights are monitored.

During the second phase, the study subjects participate in intensive lifestyle modification program. After literature review and interviewing key persons, a culturally acceptable lifestyle modification program has been drawn up which includes both behavioural and cognitive approaches for changing behaviour.

This study is currently in phase one and the first objective has been met. The results of the second phase are needed to conclude on the cost-effectiveness of the program.

Disclosure: No conflict of interest declared

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### Anthropometric nutritional survey using a health world organization's anthropometric software

H. Oliveira, Y. Martins, A. Gonçalves, Y. Ferreira, C. Freitas  
Public Health, Federal University of Juiz de Fora, Juiz de Fora, Brazil

**Objective:** To assess overweight/obesity prevalence among Brazilian schoolchildren and the applicability of a Health World Organization's Anthropometric Software (WHOAS).

**Methods:** All children and teenagers of a Brazilian public school were weighted and heighted in 2011, using both platform scale and anthropometer. Data were recorded in the aforementioned software, while being collected. Body mass index was computed, graded, thereafter, by international standards.

**Results:** Overweight/obesity prevalence of 27,5% was registered among 234 schoolchildren: 32% on less than 7 years old; 30% on between 7 and 9; 24% on aged 10 and older ones. Software was easy to handle, allowing a quick diagnosis, both individual and collective.

**Conclusions:** Higher general rates than other Brazilian surveys. Higher rates among the youngest, reaching developed countries ones. Maybe the nutritional transition is going on, in a developing country like Brazil, with some factors strongly present in the youngest, at first. Industrialization (less physical effort; food industry with low nutritional food production), urbanization (taking the population away from healthy food sources and physical effort), increase of high income families (and industrialized food consumption) and low access to a nutritional education have been outlined as these factors. The software charts show this trend to obesity. Nutritional diagnosis showed the obesity trend is going on at this sample and WHOAS was supposed to be a quite useful tool.

Disclosure: No conflict of interest declared



1203

**Wholegrain consumption in the diet in clinically asymptomatic patients**I. Skuja<sup>1</sup>, I. Stukena<sup>2</sup>, G. Krievina<sup>3</sup>, A. Lejnieks<sup>2</sup><sup>1</sup> Family Medicine, Riga Stradins University, Riga, Latvia; <sup>2</sup> Internal Medicine, Riga Stradins University, Riga, Latvia; <sup>3</sup> Institute of Experimental and Clinical Medicine, University of Latvia, Riga, Latvia

**Objective.** Diet is an important factor of the development of cardiovascular diseases (CVD) and diabetes mellitus type 2 (D2M). The objective of this study is to find associations between dietary patterns in connection with consumption of wholegrain, clinical and biochemical changes.

**Methods.** 93 clinically asymptomatic patients (42 men) aged 30-45, non-smokers were interviewed in GP's practice. Body mass index (BMI), pulse, systolic and diastolic blood pressure, biochemical analyses (glucose (GLU), ALT, GGT, ApolipoproteinA1 (APOA1), HDL-c and non-HDL-c, triglycerides (TG)) were also obtained. Patients were divided into three groups: A- patients comply with diet recommendations for a balanced use of fibre and wholegrain; B- partly comply with diet; C- do not respond.

**Results.** The study shows that BMI was higher in group C comparing to A (p=0.022); glucose was higher in group C comparing to B (p=0.032) and A (p=0.007); ALT was higher in group C comparing to B (p=0.046) and A (p=0.002); GGT was lower in group A comparing to B (p=0.043) and C (p=0.049); HDL-c was higher in group A comparing to B (p=0.011) and C (p<0.001) and higher in group B comparing with C (p=0.012); TG were higher in group C than in A (p=0.05) and APOA1 was lower in group C than in A (p=0.001).

**Conclusion.** The findings of this study demonstrate that a balanced intake of fibre and wholegrain positively affects to BMI, liver enzymes levels, glucose and lipoprotein metabolism and prevent the development of CVD and D2M. It is important to comply with diet completely.

Disclosure: No conflict of interest declared

1232

**The effect of isoflavone supplementation on serum lipids according to existence of Equol productibility in post-menopausal women for 12months**

Y.B. Kim, H.J. Seo, J.H. Kang, B.Y. Yu

Family Medicine, Koyang University Hospital, DAE JEON, Korea

**Objective:** Equol, metabolite of soy isoflavones, was known to act like estrogen. So, in some studies, it was proposed that Equol has the effect of cardiovascular risk reduction for post-menopausal women. We studied for the effect of isoflavone supplementation on serum lipids according to existence of Equol productibility in post-menopausal women for 12months.

**Methods:** We enrolled 60 women who was not intake any drug affecting to bone metabolism and had menopausal symptoms to be satisfied with the Korean MRS questionnaire. We divided two groups randomly, isoflavone group and placebo group. Before study and after 12months we measured serum lipids, high sensitive C-reactive protein, glucose, insulin level and HOMA-IR.

**Results:** In isoflavone group, serum total cholesterol, triglyceride and LDL cholesterol level were increased and a serum HDL cholesterol was decreased after 12months. But there was no significant difference between isoflavone with placebo on a change of serum lipids level for 12months. In Equol producers of isoflavone group, a serum HDL cholesterol level is increased after 12months ( $\Delta$  change  $2.57 \pm 8.92$  mg/dl) and there was a statistically significant difference of a mean change for serum HDL cholesterol compared with Equol non-producers in isoflavone group.

**Conclusion:** In this study, there is no significant difference for a mean change of serum lipids level between isoflavone and placebo group for 12months. In Equol producers in isoflavone group, a serum HDL cholesterol level was increased comparing with non-producer in isoflavone group after 12month.

Disclosure: No conflict of interest declared

1251

**Educational health program in primary care: lifestyle modification**R. Oliveira<sup>1</sup>, M. J. Abreu<sup>1</sup>, C. Bulhões<sup>2,3</sup>, S. Lima<sup>1</sup>, G. Albuquerque<sup>1</sup>, N. Pereira<sup>1</sup><sup>1</sup> Ponte Family Health Unit, Ponte Family Health Unit, Guimarães, Portugal; <sup>2</sup> São Martinho do Campo Health Care Unit, São Martinho do Campo Health Care Unit, Santo Tirso, Portugal;<sup>3</sup> School of Health Sciences, University of Minho, Braga, Portugal

**Objective:** Cardiovascular diseases are one of the main causes of morbidity and mortality in the world. Hypertension and type 2 diabetes are the main risk factors and are associated with some lifestyles, like sedentariness and unhealthy dietary habits. The aim of our study was to evaluate the impact of healthy lifestyle program in a primary care unit.

**Methods:** A quasi-experimental prospective study was performed. A diabetic and/or hypertensive population was evaluated twice (at baseline and 2 months later). The intervention group underwent educational sessions, after baseline evaluation. Demographic and clinical data were evaluated.

**Results:** 67 patients were included (31 in the intervention group and 36 in the control group), with average age of 54 years. There was a decrease of body mass index, abdominal circumference and blood pressure after 2 months ( $p < 0.001$ ) in the intervention group. When comparing both groups, there was a greater decrease of body mass index ( $p = 0.01$ ) and blood pressure ( $p = 0.001$ ) in the intervention group.

**Conclusions:** Family Physicians play a crucial role in earlier cardiovascular risk factors modification. Educational programs are effective in the short term. The second part of this study is still in progress (third evaluation at 12 months).

Disclosure: No conflict of interest declared

1286

**Eating habits of students**

J. Juškevič, R. Macutkevič, A. Vingras

Vilnius University Faculty of Medicine, Family Medicine, Vilnius, Lithuania

**Objective:** Eating habits play an important role in our lives. Students of medicine should know well how to eat healthy in order to increase the level of knowledge of the population, to stimulate interest in life and in influence of a diet on a person's health. In our case we wanted to study and analyse eating habits of first and fourth year students of universities of Vilnius and Klaipeda and find out the connection between eating habits and digestive disorders.

**Methods:** The research was carried out in universities of Vilnius and Klaipeda. 650 students were surveyed anonymously. There were chosen 516 forms in which all answers had been given.

Analysis was carried out with the use of Excell and SPSS20 statistical packets, non-parametric comparison of quantity  $\chi^2$  test. The level of reliability  $p < 0.05$ .

**Results:** Vilnius university (VU): 79.1% of first year students and 84.5% of fourth year students have breakfast every day; Klaipeda university (KU): 68.4% versus 70.9% respectively. 62% of first year students and 62.5% of fourth year students of both universities enjoy eating fast food. 72.5% of fast food lovers suffer from gastrointestinal disturbance; 27.5% of students who do not eat fast food suffer from gastrointestinal disturbance,  $p < 0.01$ .

**Conclusions:** The majority of fourth year students in both universities have dinner every day in contrast to first year students. Statistical increase in gastrointestinal disturbance is observed among students who enjoy eating fast food.

Disclosure: No conflict of interest declared

1319

**Nutritional knowledge and food labelling use by hypertensive people**H. Oliveira<sup>1</sup>, V. Sousa<sup>1</sup>, S. Santos<sup>1</sup>, M. Santos<sup>1</sup>, N. Prado<sup>1</sup>, A. Lopes<sup>1</sup>, L. Melo<sup>2</sup>, P. Pedroza<sup>2</sup><sup>1</sup> Public health, Faculty of Medicine Barbacena, Barbacena, Brazil; <sup>2</sup> Public Health, Federal University of Juiz de Fora, Juiz de Fora, Brazil

**Objectives:** To determine nutritional knowledge, food labelling use and understanding by hypertensive people.

**Methods:** Cross-sectional study of 369 hypertensive people, of public and private health services, with an individual and quantitative interview. Scores were calculated, and grades given: insufficient, regular, sufficient. Comparisons using chi-square, 5% significance level.

**Results:** Rarely/never following specific diet (45%) or reading nutritional labels (55%); the more adherent, the greater the reading habit ( $p=0,000$ ), but just the product validity (64%). Among those who read nutrition-related information (11%), 80% search for none or just one of the four most important ones for hypertensive people. Regarding to label understanding, 47% and 24% got insufficient and regular scores. Best understanding was associated to private health service using ( $p=0,000$ ), less than 60 years old ( $p=0,0025$ ), male ( $p=0,000$ ), higher than 8 years of schooling ( $p=0,000$ ), best general ( $p=0,000$ ) and specific ( $p=0,048$ ) nutritional knowledge. When comparing with other studies – despite of its low level – nutritional knowledge were higher; similar values were recorderd regarding to adherence to diet, searching for the product validity, statistical association between variables; lower values regarding to reading labels habit and correct understanding.

**Conclusions:** labels give little input to food choices: low demand for nutrition-related information, unawareness of specific ones, incorrect interpretation. The best input the best dietary habits and nutritional knowledge, the greater level of education and use of private health services. On recommend nutrition education, including healthy eating practices and, in order to improve labels comprehensiveness, replacing words/ numbers for figures.

Disclosure: No conflict of interest declared

1385

**Vitamin D – a Multiple Sclerosis' promise?**J. Almeida<sup>1</sup>, F. Gomes<sup>2</sup>, M. J. Teles<sup>1</sup><sup>1</sup> USF Camélias, ACES Grande Porto VII, Vila Nova de Gaia, Portugal; <sup>2</sup> USF Anta, ACES Grande Porto VII, Vila Nova de Gaia, Portugal

**Background** – Multiple sclerosis is the most common chronic inflammatory disease of the central nervous system, that mainly affects previous healthy, working age individuals and that continues to have a great impact on the patient, family and society. There is no curative treatment for the disease and the therapeutic options are essentially oriented to the control of autoimmune reaction. Vitamin D and related molecules have shown an interaction with the immune system in various autoimmune diseases, including Multiple Sclerosis.

**Objective** – The aim of this review is to assess the impact of vitamin D supplementation on the progression of Multiple Sclerosis.

**Methods** – A systematic research was performed for articles published between October 2002 and October 2012, using the medical database Medline / Pubmed and Evidence Based Medicine sites, using the MeSH terms „multiple sclerosis“, „dietary supplements“ and „vitamin D“. The Strength of Recommendation Taxonomy of American Family Physician was used to rate the quality and the strength of recommendation.

**Results** – Six articles met the inclusion criteria (1 clinical trial, 3 systematic reviews, 1 evidence-based review and 1 clinical guideline). Most articles conclude that supplementation with vitamin D in patients with Multiple Sclerosis is not recommended in the light of current evidence (SOR B).

**Conclusions** – There is insufficient evidence to recommend supplementation of vitamin D in patients with Multiple Sclerosis. However, ongoing studies are expected to demonstrate the positive influence of vitamin D on major clinical outcomes and to support its use as additional therapy.

Disclosure: No conflict of interest declared

1558

**Food security and related health risks facing vulnerable youth in rural areas of Tasmania, Australia**

Q. Le, S. Auckland, H. Boi Nguyen

*Rural Health, University of Tasmania, Launceston, Australia*

The future of a nation depends on the economic and social opportunities available to its youth. The recent economic downturn, however, has exerted tremendous strains on today's youth, whose limited mobility and work experience have made them more vulnerable to unemployment and social exclusion. Among these strains is food security, which could have long-term impacts on health and related socio-economic factors, particularly in rural communities due to high cost and poorer access to healthy foods.

This project investigated the issue of food security among the youth living in the North West of Tasmania, Australia which had been experiencing a loss of industries and infrastructure.

An exploratory descriptive design was adopted using questionnaires, interviews with young job seekers, and focus groups with stakeholders. A range of interrelated factors were examined including: socio-economic status, employment opportunities, awareness of healthy foods, health conditions, access to healthy foods, and peer influences on food choices.

The study confirmed the close association between socio-economic factors, health issues and food security amongst the target study group. Young residents without a job faced a higher chance of having health problems and being food insecure. A high rate of unemployment was found to be a key characteristic of the socio-economically disadvantaged areas of Tasmania.

Socio-economic disadvantage has a direct correlation to levels of food insecurity and related health conditions. The findings and recommendations from this study may contribute to improve the health and well-being of young people within vulnerable communities through innovative and pragmatic initiatives related to food security.

Disclosure: No conflict of interest declared

**1.6. GENDER ISSUES**

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**Effects of family and social support on the physical function and mental health of female victims of intimate partner violence at a general outpatient clinic in southwest of Nigeria.**

A. Silva

*Family Medicine, University College Hospital, Ibadan, Nigeria*

**Objectives:** To determine the prevalence of IPV among women presenting to the general outpatient clinic and to assess the common symptoms that may be associated with intimate partner violence.

**Methods:** Four hundred randomly selected women 15 years and above with current or past intimate partners were studied. Interviewer-administered questionnaires were used to collect data. Women who had experienced IPV were compared with those who had not.

**Results:** Types of IPV described were controlling behaviour(79.5%), psychological(35.7%), physical(19.8%) and sexual(9.8%). Age, ethnicity, religion, type of relationship, occupational class and income level were not significantly different between the groups. Polygamous families of origin( $p=0.018$ ) and poor communication in relationship( $p=0.013$ ) was significantly associated with IPV. Non-specific complaints, complaints related to the female genital system( $p=0.037$ ), poor sleep( $p=0.049$ ), headaches( $p=0.011$ ), abrasions/scars( $p=0.012$ ), obesity( $p=0.021$ ) and suicidal ideation( $p=0.001$ ) were significantly commoner among victims.

**Conclusions:** This high prevalence of IPV among women who presented with apparently non-violence-related complaints suggests that it is a very important issue. Women with non-specific or vague complaints, female genital complaints, psychological complaints like poor sleep or neurological complaints like headaches should be screened to exclude IPV. Communication skills acquisition should be exploited in the management of IPV

Disclosure: No conflict of interest declared

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**Disability, depression, pain severity and widespread pressure pain sensitivity in women and men patients with fibromyalgia syndrome.**G. A. Matarán-Peñarocha<sup>1</sup>, A. M. Castro-Sánchez<sup>2</sup>, M. E. Aguilar-Ferrándiz<sup>3</sup><sup>1</sup> *Medicina Familiar y Comunitaria, Servicio Andaluz de Salud, Jódar-Jaén, Spain;*<sup>2</sup> *Departamento de Enfermería, Fisioterapia y Medicina, Universidad de Almería, Almería, Spain;*<sup>3</sup> *Facultad de Ciencias de la Salud, Universidad de Jaén, Jaén, Spain*

**Objectives:** To determine the differences in pain, disability, depression, and pressure sensitivity between men and women with fibromyalgia syndrome (FMS), and to analyze the relationship between pain and pressure sensitivity in FMS.

**Methods:** We develop a cross-sectional study on gender differences in pain sensitivity in individuals with FMS have not been yet clarified. Twenty-four men (age: 52±6 years) and 24 age-matched women (age: 52±5 years) with FMS diagnosed. The outcome measures were: pressure pain thresholds (PPTs) over the 18 tender points and over the second metacarpal and tibialis anterior muscle were assessed. The intensity and duration of pain, tender point count, the Fibromyalgia Impact Questionnaire, and depression (Beck Depression Inventory-II) were calculated.

**Results:** Women reported higher intensity of pain, tender point count, and depression than men ( $P < 0.01$ ). Men reported a longer history of pain and disability than women ( $P = 0.005$ ). Women showed bilateral lower PPT over suboccipital, cervical spine, second rib, supraspinatus, lateral epicondyle, gluteal region, and second metacarpal than men ( $P < 0.05$ ). Negative associations between tender point count and PPT were found in men and women. In men, negative correlations between the intensity of ongoing pain and PPT over the cervical spine were found. No significant association between PPT and other clinical outcome was seen.

**Conclusions:** Women with FMS showed higher pain severity and lower PPT than men, whereas men exhibited longer duration of symptoms and disability. In men with FMS, the intensity of ongoing pain was positively correlated to pressure hyperalgesia over the neck.

Disclosure: No conflict of interest declared

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**Profile of Family Planning's participants at a Health Center in the city of Rio de Janeiro – Brazil.**J. C. P. Bordignon<sup>1</sup>, M. M. de F. Fernandes<sup>2</sup><sup>1</sup> *TEIAS – Escola Manguinhos, Escola Nacional de Saúde Pública/FIOCRUZ, Rio de Janeiro, Brazil;*<sup>2</sup> *Centro de Saúde Escola Germano Sinval Faria, Escola Nacional de Saúde Pública/FIOCRUZ, Rio de Janeiro, Brazil*

This study has the objective of identifying the profile of Family Planning's participants during the year of 2012 at a Health Center in the city of Rio de Janeiro – Brasil. The activity consists of three meetings where the following themes are discussed: family planning itself, contraception and sexually transmitted diseases. It's a quantitative descriptive research. Data were collected from participant's medical records. There was a total of 70 participants in 2012, which 87.1% were women, with an average of 2.5 children and 29.8 years-old, highlighting the participation of 10 teenagers. In terms of education, 32.8% haven't completed the Elementary School, 24.3% have completed the High School; and 21.4% have no information registered. The chosen contraceptive method by 41.4% participants was the tubal ligation, 11.4% vasectomy, 11.4% intrauterine device, and 5.7% oral pills. None of the participants has chosen barriers methods. There was the participation of only one person who intended to get pregnant. We reached the conclusion that irreversible methods are chosen more often than the others, maybe because of the low family income as well as the social vulnerability. We emphasize that it's necessary to increase the men's participation in this activity, the quality of information registered in the medical records, and reinforce the orientations about the STDs, since the data suggests the non-utilization of barriers methods by the participants after the achievement of tubal ligation and vasectomy.

Disclosure: No conflict of interest declared

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### Gender differences in smoking cessation under an intervention program in Primary Care(PC)

C. Fernandez-Alonso<sup>1</sup>, I. Repiso Gento<sup>2</sup>, M. Menendez-Suarez<sup>3</sup>,  
A. Gómez Arránz<sup>2</sup>, A. De la Cal De la Fuente<sup>2</sup>, M. Gonzalez Sagrado<sup>4</sup>,  
Y. Valpuesta Martín<sup>5</sup>, I. Pérez González<sup>2</sup>, I. E. Cabero<sup>2</sup>, E. Ibañes Jalón<sup>2</sup>

<sup>1</sup> *Dir Técnica de Atención Primaria, Gerencia Regional de Salud, Valladolid, Spain;* <sup>2</sup> *Casa del Barco Health Center, Gerencia de Atención Primaria Va-Oeste, Valladolid, Spain;* <sup>3</sup> *Servicio de Gastroenterología, Hospital Clínico Universitario, Valladolid, Spain;* <sup>4</sup> *Unidad de Investigación, Hospital Universitario Río Hortega, Valladolid, Spain;* <sup>5</sup> *Centro de Salud Medina de Rioseco, Gerencia de A P Valladolid Oeste, Valladolid, Spain*

**Objective:** To examine gender differences in the development and results of a smoking cessation program in PC Center

#### Methods:

Sample: 15 smoker groups (2004-2012): 380 patients (148 men and 232 women).

Combined therapy of individual and group intervention: weekly sessions for 8 consecutive weeks; guiding for behavioral and pharmacological treatment, followed by group interaction. Monitoring abstinence after 2, 6 months and annually up to 7 years

Variables: smoking history, dependence. (test Fageström, Richmond and Glover-Nilsson),

Monitoring: withdrawal, tolerance to medication, exhaled CO, blood pressure, weight, smoking abstinence afterwards

**Results:** Obesity, BP and snuff consumption was significantly higher in men. Physical, psychological, gestural and social dependence, and withdrawal, were significantly higher in women (p<0.001)

The age and motivation, no significant differences

In tobacco cessation: at 2, 6, annually up to 7 years, global relapse, and dropouts did not differ significantly between men and women. Relapse by lack of motivation, greater in women (p=0.007)

**Conclusions:** The increased participation of women may have to do with the greater ease for help or accessibility. No significant differences in smoking abstinence, in relapse or dropout by gender. In men found greater obesity, BP and snuff consumption, so more active measures are best suited for men, with higher CRF than women

The withdrawal symptoms and tobacco dependence in all its forms are higher in women; thus, interventions should be designed accordingly; it is important not only to achieve abstinence, but also to facilitate cessation with the greatest possible welfare, preventing relapses

Disclosure: No conflict of interest declared

## 2.1. PRIMARY CARE POLICY

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### Impact of osteoarthritis on an elderly Filipino woman with a highly functional family: A family case

K. Ramos

*Department of Family and Community Medicine, Philippine Academy of Family Physicians, Manila, Philippines*

This is a family case showing how a family physician intervenes when a patient along with her family faces a chronic degenerative disease like Osteoarthritis, and the pain it causes to each and every member of the family. This is a case of an enlightened family, who fought the battle of Osteoarthritis, not as individual persons, but as a family.

The patient is a 66 year-old female, diagnosed with Osteoarthritis of the left knee, Hypertension, Stage II, controlled, Overweight who consulted for knee pain at the Outpatient Clinic of the Family and Community Medicine Department, University of the Philippines – Philippine General Hospital.

This case highlights the role of family physician in managing an elderly patient with a chronic illness. A holistic approach that includes psychological, pharmacologic, family and community interventions is essential in the successful management of a patient with a chronic illness such as Osteoarthritis.

The patient's family structure and function using family assessment tools such as SCREEM, APGAR Family Map and Family Illness Trajectory. Psychosocial issues of the patient and her family were also identified using the Catharsis-Education-Action Model and family counseling techniques. Home visits by a family physician has shown to be an effective intervention in securing the cooperation of the family in the treatment of a chronically ill.

Six regular follow up consults from a resident physician coupled with 2 home visits to assess the patient and her family. Significant improvement of physical, emotional, psychological functioning of the patient and her family were observed.

Disclosure: No conflict of interest declared

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**Towards better organization of diabetes care services**

E. Alsharief, A. Alsharief, A. Alkhier Ahmed

*Primary health care, National guard health affairs, Jeddah, Saudi Arabia*

**Introduction:** Diabetes mellitus is one of the growing health problems affecting the human race. It is a multi-system disease affected the human body. The effect extends to the community of the patient. Also the disease has direct and indirect effects on the patient. The standard management of diabetes needs multiple disciplinary team approach (medical and non medical). On the past, diabetes care was depending on doctor – patient relationship, but now it depends on team – patient relationship.

Organization of the services is a fundamental base to get standard diabetes care services.

**Objectives:**

Explain how to initiate a diabetic centers system and how to run it.

Explain how to maintain and develop the work in a diabetic centers system.

Explain how to organize channels of communications between the centers and the community

**Methods:** Literature review was done through many data base search engine. Multiple visits to many diabetic centers were done. Looking to many clinical audits was done. Analysis of data was done

The manpower, constructions, equipments and the administration system were the main pillars of diabetes care.

Algorithm for standard organization was built.

**Conclusion:** Organized diabetes care was the best method to run diabetes care programs. Standardized the four pillars of care is the key of success.

Disclosure: No conflict of interest declared

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**Job satisfaction of primary care physicians**

J. Grige, V. Kasiulevicius

*Clinic of Internal Diseases, Family Medicine and Oncology, Vilnius university, Faculty of Medicine, Vilnius, Lithuania*

**Objective:** To evaluate the job satisfaction level of primary care physicians in Vilnius city primary health care institutions (PHCI).

**Methods:** The study was performed in nine PHCI. At the time of the study, 243 primary physicians have been employed at Vilnius city state PHCI. The study employed a questionnaire of two parts: a) questions regarding the doctor's gender, age, work record, number of patients in assigned district, patients visiting per week, additional work and income; b) War-Cook-Wall (WCW) job satisfaction scale.

**Results:** 197 questionnaire disseminated. 148 questionnaires used for final data analysis. Respondent age range – 26 to 73. Study participants were comprised of 7% men and 93% women. The overall WCW scale Cronback alpha coefficient – 0,88. Having evaluated the Shapiro-Wilk criterion, a small deviation from the normal distribution was detected ( $p=0,167$ ). An index of overall doctor job satisfaction was calculated, equaling 4,65. Doctors are most happy with their immediate supervisor (mean 5,76), doctors working with them (mean 5,55). They were unhappy with their pay (3,09), recognition for their work (mean 3,46). A statistically reliable weak correlation was established between job satisfaction and the level of income ( $r=0,242$  and  $p=0,003$ ). A statistically reliable negative correlation between a doctor's age and income from work was established ( $r=-0,201$  and  $p=0,014$ ).

**Conclusions:** Doctors are most satisfied with their colleagues, least satisfied with their salaries. Overall job satisfaction is determined by received income level. During the course of the study it was also noted that doctor salaries decrease as doctor age increases.

Disclosure: No conflict of interest declared

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**The changing face of the victorian rural gp**

J. Baker, A. Wall

*Policy and Research, RWAV, Melbourne, Australia*

**Objective:** RWAV undertakes an annual survey to assist in identifying the recruitment, retention, professional development and support needs for GPs in rural and remote Victoria, Australia.

**Methods:** A questionnaire is sent to around 1600 rural Victorian GPs. Response rates are supported by a follow-up survey and a round of phone calls to non-respondents.

**Results:** Our findings show that the characteristics of the average Victorian rural GP have changed. For example, data accumulated from across multiple years of the survey have shown an increase intake of female GPs into the workforce. The gender breakdown of GPs has shifted from 70% male to just in excess of 65% over the last 5 years, due to GPs aged 35 and under having a near 50/50 split between both genders. The average GP has also reported a deduction in the hours worked by 1.6 hours per week as well as highlighting a substantial increase in the number of OTD's with 46% of the workforce now being made up of international graduates.

**Conclusions:** By collecting information about the skills and personal characteristics of Victoria's rural GPs, trends can be analysed and future changes predicted. The ability to predict movements of the current workforce allows us to locate areas where GPs are approaching retirement or have expressed a desire to reduce working hours. Data can be used to show where a workforce shortages will arise, allowing the community to pre-empt a GP shortage before it becomes a significant issue.

Disclosure: No conflict of interest declared

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**Pilot study of palliative care GP-out of hours handover form**P. Gregan<sup>1</sup>, S. Murphy<sup>2</sup>, M. Lynch<sup>2</sup>, E. R. Shanahan<sup>3</sup>, F. Kiely<sup>4</sup>*<sup>1</sup> Palliative care, Blackrock Hospice, Dublin, Ireland; <sup>2</sup> Development, Irish Hospice Foundation, Dublin, Ireland; <sup>3</sup> Out of hours, SouthDoc, Kerry, Ireland; <sup>4</sup> Palliative care, Marymount Hospice, Cork, Ireland*

**Objective:** There is currently no standardised palliative care handover form in use in Ireland. The objective of the introduction of the Palliative Care GP-Out of Hours handover form is to enable GPs to anticipate the palliative care needs of their patients, at home or in a residential setting, that might arise out of traditional working hours and to communicate these needs in advance to out of hours providers.

**Methods:** The handover form was developed by a subcommittee of clinical staff. SouthDoc, the out of hours provider serving Cork and Kerry, is currently piloting the handover form with almost 500 GPs. GP experience and efficacy of the form in transmitting necessary information regarding palliative care status and need is being analysed.

**Results:** There are approximately 50 calls to SouthDoc a month which have a palliative element. The target is that half of these could be anticipated. It is particularly hoped that the enhanced transmission of information from GPs to their out of hours providers will have improved providers' knowledge of patients' palliative care needs and wishes and will have resulted in: increased consistency of care; more discussions regarding advance care planning with GPs and their patients; increased numbers of deaths at home or closer to home; and reduced inappropriate hospital admissions.

**Conclusions:** It is anticipated that early conclusions would be available by mid-2013. It is hoped that the main outcome of this initiative will be improved coordination of care.

Disclosure: No conflict of interest declared



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### Why sub-Saharan African health workers migrate: a qualitative study post migration

A. Poppe<sup>1</sup>, E. Jirovsky<sup>2</sup>, C. Blacklock<sup>3</sup>, P. Laxmikanth<sup>3</sup>, S. Moosa<sup>4</sup>, J. De Maeseneer<sup>1</sup>, R. Kutalek<sup>2</sup>, W. Peersman<sup>1</sup>

<sup>1</sup> Department of Family Medicine and Primary Health Care, Ghent University, Ghent, Belgium;

<sup>2</sup> Department of General Practice & Family Medicine, Unit Ethnomedicine & International Health, Medical University Vienna, Vienna, Austria; <sup>3</sup> Department of Primary Care Health Sciences, Oxford University, Oxford, United Kingdom; <sup>4</sup> Department of Family Medicine, University of Witwatersrand, Johannesburg, South Africa

**Objective:** Many studies have investigated the migration intentions of sub-Saharan African medical students and health professionals, but only a few have looked into the reasons for migration, asked post migration. We aim to explore the reasons for migration of health workers from sub-Saharan Africa to Belgium and Austria, European countries without a history of active recruitment in sub-Saharan Africa.

**Methods:** Data were collected using semi-structured interviews. 27 health workers were interviewed about their migration experience. Participants had to fit the following inclusion criteria: born in sub-Saharan Africa, completed a basic medical training in sub-Saharan Africa and live in Belgium or Austria.

**Results:** Both Austria and Belgium showed to be no target countries for the health workers. They instead arrived there by circumstance, rather than choice. Migration proved to be the outcome of different primary and surrounding factors. Three primary reasons were reported: (1) education; (2) political instability; (3) family reunification.

**Conclusions:** Results highlight the importance of the broader economic, social and political context in which migration decisions are made. Factors transcending those at job level proved to be more important drivers for migration than strictly job-related reasons. Even when job-related factors were involved, they were not vital. Whether this can be attributed to the context of no active recruitment is not clear. No similar studies have been conducted, focusing on health personnel solely from sub-Saharan Africa, in countries that do or previously did actively recruit in sub-Saharan Africa.

Disclosure: No conflict of interest declared

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### Role of family medicine in fighting health risks of the community

F. Abdullatif Alnasir

Family & Community Medicine, Arabian Gulf University, Manama, Bahrain

Family Practice is medical specialty that provides continuing, comprehensive long, lasting healthcare which is person-focused to the individual and family.

Primary healthcare-oriented health systems are shown to be generally more effective in achieving better health at lower costs than is the case for disease management and specialty care systems. It considerably contributes to reduction of adverse impact of social inequalities on health. An increase of one primary-care doctor per 10,000 populations is associated with 1.44 fewer deaths. While strong primary-care health systems are more likely to upgrade the standard of health level in the community by providing better population health.

Many studies documented the beneficial effects primary healthcare system. It is reported that USA seniors living in areas with more primary-care doctors were less likely to be hospitalized with preventable diseases and had lower death rates. A report of 90 countries with Gross National Income of less than \$10,000 per person, stated that 30 have moved toward primary healthcare, of which 14 adopted comprehensive primary-care and have achieved much lower under-five mortality rates and greater equity in health-care with more equitable distribution of health services. While In Bahrain, after adopting the primary HealthCare Policy and initiation of the Family Residency Program in 1983, there were; less emergency room attendees with decrease in unnecessary referral and prevalence of hereditary blood diseases.

This paper will discuss importance of Primary HealthCare and Family physician and their proactive role in fighting health problems, highlighting various improved health indicators in both developing and developed countries.

Disclosure: No conflict of interest declared

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**Job satisfaction, stress and mental wellbeing of health care workers in a regional public hospital**

S. Chan Yuen Yan, F. Yu Sze Ka

*Family Medicine Department, Prince of Wales hospital, Hong Kong, Hong Kong*

**Objective:** The aim is to assess the prevalence of the psychological stress, psychological symptoms and job satisfaction of health care workers, the association between them and also the factors associated with job satisfaction in a regional hospital in Hong Kong.

**Method:** Health care workers in a large regional hospital of Hong Kong were surveyed by means of a questionnaire assessing basic demographic data, questions of the General Health Questionnaire (GHQ-12), Perceived Stress Scale (PSS), Warr-Cook and Wall job satisfaction scale (JSS). Doctors, nurses, allied health workers and supporting staffs were surveyed. prevalence of job dissatisfaction, perceived stress, and psychological symptoms was calculated. ANOVA test and Multivariate regression model were used to assess the association and the coefficient correlation.

**Results:** There were 674 eligible questionnaires. About half (47%) of the health care workers reported having perceived stress and a third (33.8%) psychological symptoms. Doctors reported the (76.8%) highest level of job satisfaction. Supportive staff had significantly higher prevalence (38.7%) and doctors the lowest prevalence (28.1%) of psychological symptom. 68% of all health care workers surveyed were satisfied with their job. The factors including shift duty, perceived stress, and psychological symptoms were negative correlated with job satisfaction. Factors such as clinical work, doctor and secondary school level were positive correlate with job satisfaction.

**Conclusion:** Prevalence of perceived stress and psychological symptoms among health care workers were high but not as high as expected. Different from popular belief, doctors had the lowest perceived stress level, lowest prevalence of psychological symptom and the highest job satisfaction.

Disclosure: No conflict of interest declared

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**Perspectives of nursing home staff on the role of advance care plans**

T. Cashell, M. Gallagher, H. Hamilton, E. O'Doherty

*General Practice, Western Training Programme in General Practice, Galway, Ireland*

**Introduction:** At present, there is no existing national policy on the use of advance care plans in Nursing Homes in Ireland. Recent media attention has focused on raising the public profile of end of life care preferences. To date, there has been little research into the perspectives and experiences of Nursing Home staff about the use of advance care plans in this setting. The aging population structure in Ireland would suggest that end of life care planning is likely to play a more prominent role in the future.

**Objective:** To explore the attitudes, experience and perspectives of a sample of health professionals working in Nursing Homes towards advance care plans.

**Methods:** Study design was qualitative. Letters of invitation for study inclusion were sent to all Nursing Homes in Mayo and Galway. One-to-one semi-structured interviews were conducted with those who provided informed consent, using a topic guide formulated following a pilot interview. Interviews were audio-taped and transcribed verbatim. Interviews and coding took place in an iterative approach. There were three levels of hierarchal coding. Common themes were identified after discussion and debate.

**Results:** Main thematic categories identified were; past experiences; future planning; value of advance care plans; barriers to implementation; family views; communication; role of health care staff.

**Conclusion:** The data is significant as it highlights lack of knowledge concerning the role of advance care plans, but recognition of their potential value and need for development of policies regarding their use in Nursing Homes.

Disclosure: No conflict of interest declared

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**Emergency care access threshold affecting life expectancy: An ecological study**

T. Nakamura, M. Okayama, M. Aihara, E. Kajii

*Center for Community Medicine, Jichi Medical University, Shimotsuke, Japan*

**Objective:** Ideally, opportunities to receive medical care should be equally provided to people regardless of their location. The aim of this study was to clarify the relationship between accessibility to emergency hospital and life expectancy.

**Methods:** We obtained data from all cities in Japan (n = 1,750) in 2010 and 2005 from the Japanese national database. Accessibility to an emergency hospital was defined as the drive time from each city hall to the nearest emergency hospital. Drive time was estimated using the geographic information system. Life expectancy was obtained from Life table published by Japanese government.

**Results:** The mean life expectancy in 2005 was 82.1 years. Median drive time to the nearest emergency hospital was 34 min. Coefficient of correlation of life expectancy with drive time was  $-0.244$  ( $p < 0.001$ ). Drive time was categorized into 4 groups: 0–20, 20–34, 34–58, and 58+ min. The mean life expectancy in the 4 groups was 82.3, 82.2, 82.1, and 81.9 years, respectively. There was significant difference between the 4 groups ( $p < 0.001$ , ANOVA). The mean life expectancy in the 58+ group was shorter than the other groups ( $p < 0.001$ ).

**Conclusions:** Life expectancy for people living in a remote area may be shorter than expected. Our findings suggested that the emergency care center should be located within a 1-hour distance from people-inhabited areas.

Disclosure: No conflict of interest declared

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**Curriculum in substance abuse for continual professional development program in family medicine in Kosovo**

Z. Tahiri, R. Ismajli, M. Qazimi, F. Skeraj, G. Bojaj

<sup>1</sup> FAMILY MEDICINE, MAIN FAMILY MEDICINE CENTER, GJILAN, Serbia;<sup>2</sup> FAMILY MEDICINE, CENTER FOR DEVELOPMENT OF FAMILY MEDICINE, PRISHTINA, Serbia; <sup>3</sup> FAMILY MEDICINE, MAIN FAMILY MEDICINE CENTER, PRIZEREN, Serbia; <sup>4</sup> FAMILY MEDICINE, MAIN FAMILY MEDICINE CENTER, KLINA, Serbia

**Background:** The aim of this project is to create curriculum in substance abuse for Continual Professional Development Program in Family Medicine.

**Methods:** The material used to create the curriculum for Substance Abuse is based in NIDA resources and other European evidence based literature. The core group from five experts has worked in the curriculum for Substance Abuse. This project is realized in collaboration with Trimbos Institute on Drug Addiction in Netherlands. The project started in January 2011 and completed in December 2011.

**Results:** Experts have worked in individual and joint sessions to produce a Syllabus and Manual for Substance Abuse, and it is working the last piece for the curriculum the Manual for Trainers. Curriculum 15 most important topics to address regarding to Substance Abuse in Kosovo, including the Motivation Interview and methadone maintenance treatment.

**Conclusions:** The overall objective of the curricula is to give family doctors solid knowledge and clinical skills related to substance abuse. Around 500 family doctors and also 500 nurses will participate the trainings that utilize this curriculum. This curriculum will be incorporated in the family medicine residency program in Kosovo.

Disclosure: No conflict of interest declared

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**Europe/the World has a financial problem: can we help?**

C. Steylaerts

*Honorary Treasurer, WONCA Europe, Diest, Belgium*

**Introduction:** Everybody is well aware of the financial crisis, since every channel of information (books, newspapers, TV, ...) is focused on it. Normally, this is no subject for a scientific conference. Since it afflicts the lives of every patient, with consequences on the equity and care parameters, it deserves our attention.

**Hypothesis:** We now have one “universal currency”, money, that we know and handle as Eur, USD, yuan, etc.

There are several “complementary” currencies and even “complimentary” currencies: fureai kippu, saber, curitiba, to name a few interesting ones.

In the WONCA Europe Definition of General Practice / Family Medicine, one of the core competencies of our profession is “to be community oriented”.

The hypothesis is “that handling 3 complementary currencies starting in our daily practice and our organisations will introduce community oriented care that was previously impossible or at least difficult to manage or imagine”.

**World Café:** In almost every European country some form of handling complementary currencies is currently used.

We invite participants to engage in

- introducing what happens in their country on the topic of complementary currency – 5 min

- making a SWOT analysis of those known projects – 10 min

And then

- to discuss the possibility of creating WONCA Miles to be used, pro's and con's – 15 min

- how to use them and how not to use them – 15 min

**Conclusion:** The WONCA Europe Honorary Treasurer is currently researching the possibilities of introducing a WONCA Coin.

Disclosure: No conflict of interest declared

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**Reasons for encounter in primary care**

D. Molony, C. Beam

*<sup>1</sup> The Red House Family Practice, Mallow Primary Healthcare Centre, Cork, Ireland; <sup>2</sup> Complete GP, Mallow Primary Healthcare Centre, Cork, Ireland*

**Objective:** There is currently no data available on the reasons for encounter during a general practice consultation. The Irish Healthcare system is currently in a state of change. Chronic care is being transferred from secondary to primary care along with a proposed universal healthcare system. Primary care will be free to patients at the point of contact. It is imperative therefore that we have a detailed description of the reasons for encounter in primary care. This will have a direct impact on the future delivery of services and governmental policy.

**Methods:** Four GPs in Mallow Primary Healthcare centre recorded the reason for encounter for every consultation over a two year period. The age of the patients was grouped according to general medical scheme age categories. ICPC-2 coding was used.

**Results:** Over a two year period 26,452 reasons for encounter were documented from 19,766 consultations involving a cohort of 3,771 patients. 496 different ICPC-2 codes were used. The number of consultations was equal for public and private patients. The most common reason for encounter was respiratory symptoms and disease. This was greatest in the 0-15 age category. Prevalence ratios for each age category allowed for comparison between age groups.

**Conclusion:** For many consultations in primary care there are a number of reasons for encounter. This study categorises and defines these reasons based on different age categories. This study informs general practitioners and policy makers of one of the core challenges of primary care which was previously unknown.

Disclosure: No conflict of interest declared

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### Occurrence of hospitalizations for Ambulatory Care-Sensitive Conditions in a large hospital in Mato Grosso do Sul / Brazil

J.M. Fernandes, M.B. Budib, K.K.R. Menezes, K.A.M. Utida, V.S. Sanches, W. Vargas, M.M. Hashiguchi, L.A.S. Bonilha, M.L.M. Santos  
*Center of Biological and Health Sciences, Federal University of Mato Grosso do Sul, Campo Grande, Brazil*

**Objective:** Identify and cognize the profile of Ambulatory-Care-Sensitive-Conditions (ACSCs) and other preventive variables that influence the occurrence of admissions of a referral hospital.

**Methods:** We followed, for two days in November 2012, the hospitalizations of patients in an emergency department at the largest hospital in the state of Mato Grosso do Sul/Brazil. From the medical records, we identified the cause of hospitalization of these patients where we evaluate which of these belonged to the list of Brazil ACSCs. The results were analyzed using descriptive statistics.

**Results:** We found 175 hospitalizations in which 71 (42.42%) were ACSCs. Of these patients, 38 (53.52%) were children under ten years, 21 (29.58%) were adults, 8(11.27%) were elderly and 3 (9.33%) were teenagers. Among the most common causes of hospitalization, 28.17% were caused by lung diseases, where children were the most affected, followed by 21.13% of ear, nose and throat infections, and 15.49% of gastroenteritis and infectious complications. Another important factor was the large number of traffic accidents, which totaled 23.94% of all admissions during the investigation.

**Conclusions:** We observed a large percentage of hospitalizations by ACSCs that could be avoided and prevented by primary health care, being more affected by children. Even with the prioritization of Primary Health Care in Brazil, there is still a long way to go for most effective results to be observed. In addition, traffic accidents, although not classified as ACSCs, are preventable conditions that must be prevented by reducing speed, respecting the traffic signs and avoiding drinking and driving.

Disclosure: No conflict of interest declared

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### Audit on referral letters in a government family medicine clinic

K.W. Chung, C.L. Wong, K.W. Leung, A.T. Lam, P.K.T. Li  
*Department of Family Medicine & GOPC( NTEC), Hospital Authority, Hong Kong, China*

**Objective:** Family Physicians are gatekeepers of medical services. Referral letters are communication between doctors. Efficiency of referral process is relied on quality of referral letters. Better quality results in better patients' outcome. However, there is no consensus of high quality referral.

**Method:**

- 1 Ovid's Medline and Cochrane database were used as literature searching tool.13 audit criteria were adopted
  - λ Destination of referral
  - λ presenting problem
  - λ history of presenting problem
  - λ physical examination
  - λ investigation
  - λ provisional diagnosis
  - λ initial treatment
  - λ past history
  - λ regular medication
  - λ drug allergy history
  - λ psychosocial history
  - λ expectation
  - λ urgency

2 Deficiencies were identified in phase I. A referral letter template was designed. It acted as a guide for writing letters. Promotion of template, education on writing letters, regular discussion and review about referral letters were done.

**Result:** 672 and 618 letters were reviewed in phase I and II. Referral rates were 3.1% and 2.3% in phase I and II respectively. Results were compared by calculating relative rates of improvement (RI) and 95% confidence interval. 11 out of 13 criteria showed significant changes ( $p < 0.05$ ) after intervention e.g. drug allergy (RI:5.46), initial treatment (RI:3.61), psychosocial history (RI:3.20), urgency (RI: 3.02)and provisional diagnosis (RI: 1.66).

**Conclusion :** Quality of referral letter is enhanced. Continuous and regular audit should be done to improve referral letters standard. We hope to apply this experience in other centers in future.

Disclosure: No conflict of interest declared

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### Primary oral health care: A mixed method study on reasons for seeking treatment for oral health problems in two primary care clinics of Myanmar

T. Myo Han<sup>1</sup>, T. Naing Maung<sup>2</sup>, M. Maung Myint<sup>2</sup>, L. May Oo<sup>2</sup>, T. Tin Hla<sup>2</sup>, T. Maung Aung<sup>3</sup>, D.M. Thuraiapprah<sup>4</sup>, A. Yusoff<sup>5</sup>, H. Pyae Win<sup>2</sup>

<sup>1</sup> Community Dentistry, Family Medicine (attached), Secretary of International Relations, Myanmar General Practitioners' Society, International Islamic University, Malaysia, Kuantan/Yangon, Malaysia; <sup>2</sup> Myanmar General Practitioners' Society, Myanmar Medical Association, Yangon, Myanmar; <sup>3</sup> Oral Surgery, MAHSA University, Kuala Lumpur, Malaysia; <sup>4</sup> Family Medicine, MAHSA University/Academy of Family Physicians, Malaysia, Kuala Lumpur, Malaysia; <sup>5</sup> Community Dentistry, Universiti Sains Malaysia, Penang, Malaysia; <sup>5</sup> Community Dentistry, Universiti Sains Malaysia, Penang, Malaysia

**Objective:** to explore reasons for seeking treatment for oral health problems in two Myanmar primary care clinics.

**Methods:** A mixed method study was conducted at two primary care clinics of Myanmar, one each from Yangon City and Hninthada district, from April to July 2012. A total of 64 patients with oral health problems (OHPs) participated in quantitative study and 5 cases were selected for qualitative case study to retrieve information on reasons for seeking treatment for OHPs and why treatment was sought at primary care clinics. Data were collected using in-depth-interview with guided questions.

**Results:** Reasons for seeking treatment for OHPs at two primary care clinics were easily accessible to services (44%) followed by familiarity with primary care physicians (9%), emergency treatment for OHPs (6%), preferring services because of trusted doctor-patients relationship (6%), requiring services provided by PCPs (4%), and being unaffordable oral healthcare cost (3%). A significant difference ( $p < 0.05$ ) was observed between reasons given by patients from Yangon and those from Hinthada district. Self-treatment, taking mixed treatment from both primary care physicians and dentists depending on severity of OHPs, co-morbidity, and affordability for oral healthcare cost were significant findings of qualitative cases analysis.

**Conclusion:** This study provided more understandable answers regarding oral health seeking behaviour of patients and highlighted that coordinative care between primary care physicians and oral health practitioners should be initiated in Myanmar. Solutions for high oral healthcare cost particularly for venerable group should be further explored.

Disclosure: No conflict of interest declared

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### Back to paper: a reflection on the development of the adult personal health record (aPHR) for Sri Lanka

S. I. Wickramasinghe<sup>1</sup>, H. S. R. Perera<sup>1</sup>, R. D. N. Sumanasekera<sup>2</sup>, A. T. Ranasinghe<sup>1</sup>

<sup>1</sup> Policy planning and Primary care services, Ministry of Health, Colombo, Sri Lanka; <sup>2</sup> Department of Family Medicine, University of Kelaniya, Ragama, Sri Lanka

**Introduction:** In an era where electronic medical records in the developed world empowers patients; a low cost, paper-based, patient held record system was pilot tested in rural Sri Lanka. A similar child health record is already in place and the aPHR attempts to bridge the gap facilitating continuity of care. This is a component of the primary healthcare retooling process.

**Objective:** To ensure continuity of care for chronic diseases throughout the individuals adult life.

**Methodology:** A seven step scientific approach

**1. Clinical record review:** Detailed review of local and international literature and electronic-record systems was conducted. This included an analysis of the existing record keeping systems of the private practitioners as well.

**2. Expert Group Meetings:** Primary draft was formulated and revised by primary healthcare and clinical specialists.

**3. Pretest:** Basic version pretested at a rural setting

**4. Component based review:** Review conducted following the pretest and modifications were made on recommendations of experts on various components of the aPHR.

**5. Pilot Study:** in 3 districts.

**6. Modification:** Practical difficulties identified. "Disease specific flowsheets" introduced.

**7. Island wide adoption:** post-adoption review planned.

**Conclusion:** The aPHR was popular amongst the patients to whom it was introduced. A phenomenon of 'bypassing the closest primary care institution' and presenting to pilot centres in order to obtain an aPHR was noted. This is a proxy indicator of the acceptance of the aPHR by its users. Complex human and organizational factors can either hinder or accelerate adoption of aPHRs in the future in Sri Lanka.

Disclosure: No conflict of interest declared

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**The importance of data gathering of siscolo/sismama for the basic health units.**

N.C.B. Dias, F.S. Sobrinho, V.A.C. Oliveira, L.H. Tanaka, I. Cirillo, A.C. Okimoto, T.S. Amaral, F.A. Neman  
 Medical School, Universidade Cidade de São Paulo, São Paulo, Brazil

**Introduction:** The unique health system should be directed and capacited for total attention to women's health, in a perspective that takes in account the health promotion. For that, it counts won tools that help in the management systems of public politics, among them the cervix cancer information system – SISCOLO and the breast cancer information system – SISMAMA. The data generated by these systems allows to evaluate the covering in the target-population, the quality of the exams, the prevalence of the injuries, as well as the situation of the women with altered exams.

**Objective:** Update the data about public politics of the SISCOLO and SISMAMA in the city of Guarulhos, São Paulo.

**Methodology:** It's a retrospective study, by analysis of the reports and files of the SISCOLO and SISMAMA, done by the medicine students in the Família Jardim Palmira health unit, between August and October of 2012. From a total data analysed of 90 women, 54 included themselves in the SISCOLO and 36 in the SISMAMA.

**Conclusion:** The research made possible a conclusive report by the medicine students of the UNICID to the USF-Palmira Management. The study reinforces the importance of the epidemiological data for directing financial resources in health. We believe to have contributed for the definition of the regional women's profile, making possible the adequation of the national politics of integral attention to women's health to the local reality, with specific actions for the needs found, as, for example, a shorter break between medical appointments.

Disclosure: No conflict of interest declared

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**Implementation family physician concept in SHI primary care provider**

D. Hendrawan<sup>1</sup>, C. Nurcahyo Utomo<sup>2</sup>

<sup>1</sup> Benefit Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia; <sup>2</sup> Provider Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia

In Indonesia, ASKES provides health care for 16.5 million social health insurance members (civil servants, retirees, pensioners, veterans, national independence soldiers and their families). The services are offered through Primary Health Care Centers (Puskesmas) and specific Askes family physicians.

In 2003, ASKES developed an Askes Family Physician Program for Askes Social members. A family physician, appointed by ASKES, is responsible for providing preventive and essential care for the Askes member registered with them.

Askes Family Physician Program is the genuine gate-keeping system and aims at strengthening a trustworthy doctor-patient relationship with the physician as coordinating agent for health care. ASKES developed a policy to strengthen primary care services by improving Askes Family Physician Program.

Askes family physicians are obliged to be gate-keeper and actively participate in the Disease Management Programs for diabetes mellitus as well as to perform promotion, prevention services and home visit. Askes family physicians are selected by using a standardized of credentialing and their competences are increased by implementing the family physician workshop. An electronic patient record is still under development. Until October 2012, 4.5 million of 16.5 Million Askes members were registered with the program. Customer satisfaction index (CSI) 2010 describes that communication and attention from family physician to the patient 87 (2010). 60.000 members participate in the Disease Management Programs (DMPs) for diabetes mellitus & hypertension. Provider satisfaction survey in 2010, the satisfaction index of family physicians are 83 (2010)

Disclosure: No conflict of interest declared

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**An update of Turkish Diabetes Prevention and Control Program**A.Ozkara<sup>1</sup>, N. Yardim<sup>2</sup>, S. Guler<sup>3</sup>, R. Kahveci<sup>4</sup>, I. Kasim<sup>4</sup>, I. Sencan<sup>4</sup><sup>1</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey;<sup>2</sup> Department of Diabetes and Endocrinology, Ministry of Health, Ankara, Turkey;<sup>3</sup> Endocrinology, Ankara Numune Research and Training Hospital, Ankara, Turkey;<sup>4</sup> Family Medicine, Ankara Numune Research and Training Hospital, Ankara, Turkey

Non-communicable diseases (NCD) are the major concern of today's and future health policy-makers, threatening quality of life of patients with high morbidity, complications and mortality, besides being a financial burden both on patients and health care systems. Primary care physicians have an invaluable role in managing NCDs as being primary contact point and having a potential advantage of following patients closely in their own setting. Diabetes prevalence in Turkey is increasing at a high rate. The Turkish Diabetes Prevention and Control Program (DIABTURK) has been started in 2010. Its vision is to prevent diabetes, improve effective management of diabetes and increase quality of life nationwide. The program components are prevention of Type 2 Diabetes, raising diabetes awareness, assuring early diagnosis, increasing quality of care, producing national guidelines for management of DM, improving information systems, improving management of related drugs and devices, encouraging research, preventing complications, providing psychological support and gaining behavioral changes. Since the start of the program Turkey has tried to take many actions in order to reach its objectives. One of the recent work of the program was to contribute to determination of clinical quality indicators and clinical pathways for diabetes management as well as referral criteria for improving integrated care. In this presentation it is aimed to discuss the challenges faced in taking such a nationwide action for fighting DM; the achievements up to today; the further steps to be taken and how primary care physicians are taking action in this program

Disclosure: No conflict of interest declared

1410

**National Programme for Improving Access and Quality of Primary Care (PMAQ) – institutional support strategy to improve the delivery of primary care in the city of Sao Paulo, Brazil.**

R. Franca, C. Lisboa, E. Hollen, V. Biller, P. Branco, F. Albuquerque, A. Zorzin,

R. Nogueira, C. Silva, H. Oliveira

*Administração PSF UNASP, UNASP, São Paulo, Brazil*

The present study attempts to describe the results during the development of the National Improving Access and Quality of Primary Care (PMAQ) in a peripheral region of São Paulo, Brazil. Shown are the strategies undertaken for the successful development of the program in Family Health Teams by partner institution PSF-UNASP.

The strategy was the differential Institutional Support PSF-UNASP, who accompanied the 43 teams entered in PMAQ, performing an average of 8 dishes per team, prioritizing those that got the lowest grade AMAQ (Evaluation for Quality Improvement of the Family Health Strategy. These accompaniments are already systematic independent evaluation period, which are visits and discussions in each ESE, on the work process.

It was observed that there was a 53.7% adherence PMAQ, all FHS realized the Self Assessment Improving Access and Quality (AMAQ).

During four days of visits were made to external evaluation by the Ministry of Health (MoH), represented by Public Universities Teaching. The performance of FHS was satisfactory throughout the process PMAQ, and there is a financial transfers linked to the performance of the Family Health Teams. There is a need for further studies to prove that the PMAQ has been reflected in care practice, health indicators and quality of life.

Disclosure: No conflict of interest declared



1415

**Prevalence of dental caries and fluorosis among children living in a fluoridated water area and a non-fluoridated water area – comparative pilot-study**I. Coelho<sup>1</sup>, N. Veiga<sup>2</sup>, A. Arrimar<sup>2</sup>, O. Ribeiro<sup>2</sup><sup>1</sup> Family Health Unit, Grão Vasco, Viseu, Portugal; <sup>2</sup> Health Sciences, Universidade Católica Portuguesa, Viseu, Portugal

**Objectives:** To evaluate and compare dental caries and dental fluorosis prevalence among a sample of students from a region with fluoridated water (Ponta Delgada, Azores) and another sample from a non-fluoridated region (Viseu). To relate DMFT (mean of decayed, missing and filled teeth) and Dean's Fluorosis Indexes with socio-demographic variables, oral health behaviours, sugar consumption and fluoride administration.

**Methods:** A cross-sectional study was conducted to assess a sample of 157 students from Ponta Delgada and 98 from Viseu, aged 10–17 years old. An intra-oral examination to identify the DMFT and Dean's Indexes was performed in every student, whom was also asked to fill in a questionnaire to assess socio-demographic data, oral health behaviours and access to different means of fluoride administration.

**Results:** The results revealed a lower prevalence of dental caries in Ponta Delgada (DMFT: 2,20 vs. 1,60) but an almost 4 times higher prevalence of dental fluorosis (15,3 vs. 4,1%). The students from Ponta Delgada had a higher sugar consumption, although they revealed better oral health behaviours. Despite only less than 30% of the sample from Ponta Delgada use to drink water from the public fluoridated water supply, in the subgroup that did, one in every four students had dental fluorosis.

**Conclusion:** The therapeutic effect of the natural presence of fluoride in the water supply system of Ponta Delgada, alongside better oral health behaviours and widespread access to alternative sources of fluoride, led to a lower prevalence and severity of dental caries, when compared to Viseu, a non-fluoridated region.

Disclosure: No conflict of interest declared

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**Drafting environmental map in the Family Health Program in Sao Paulo – Brazil**

M. Medeiros, B. Passos, P. Branco, C. Lisboa, E. Hollen, V. Biller

Administração PSF UNASP, UNASP, São Paulo, Brazil

**Introduction:** The environmental map is a tool for diagnosis and planning, providing conditions for profiling environmental and physical structure of the territory, favoring the construction process participatory and collective action.

The work presented identifies important environmental aspects, from the perspective of the Family Health Team, within the basic health units, to be analyzed and considered in the planning and execution of projects intervention PAVS – Green and Healthy Environments Program / Coordination Primary Care – Municipal Health Secretariat of Sao Paulo.

**Objective:** Create a diagnostic tool and environmental planning in twelve communities, pointing to the current situation of the District Administrative Capão Redondo, Municipality of Clear Field, South of São Paulo.

**Methods:** The study was organized in two stages:

1 st: Survey data by the communities Agents Environmental Promotion and Community Health Agents.

2nd: Systematization of information and preparation of environmental map through three practical workshops.

**Result:** As a product of this work, were built in a participatory manner between officials of 12 basic health centers, environmental map socioenvironmental

**Conclusion:** The environmental map built subsidize the strategic planning of projects, focused on the priorities of each community, taking into account the improvement of quality of life, health promotion and environmental preservation of twelve communities, District Administrative Capão Redondo, the southern of São Paulo.

Disclosure: No conflict of interest declared

1497

**A primary health care and network perspective of attention to the elderly care system of public health of grand metropolis, Brazil.**

M. Fernandes, L. Pereira, S. Soares

*Basic nursing department, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil*

**Introduction:** The biggest challenge in health care for the elderly in Brazil, is to help them to live with maximum functional capacity to finitude, requiring a network of attention to account for elderly care.

**Objective:** To analyze the network of health care established in Primary Health Care for the elderly in the Public Health System of the great metropolis, in Brazil.

**Methodology:** Study based on Ground Theory. Data collection occurred between November and December 2011, using focus groups and individual interviews, totaling 20 professionals in Primary Health Care of a large Brazilian metropolis. It respected the ethical. The analysis occurred simultaneously collected, interrupted with data saturation.

**Results:** Practitioners seek to articulate the network of care for the elderly care that meets their demands, representing the tip of the ice berg. The elderly care follows a logic biologist, geared to meet the acute conditions. There is emphasis on care in Primary Health Care for the elderly with some pathology and specifically chronic disease. The limitations of the professionals in the initial care of the elderly are somehow-expanding network of multidisciplinary care provoking interaction and interdependence of services.

**Conclusions:** The diversity of the processes of health care, the cross-sectional nature and the large number of actors involved require network structure to account for the care of this population segment in the preservation of functional capacity. The first contact elderly and Primary Health Care brings together facilities and barriers to care, seen as new, with little knowledge of specifics in Primary Health Care.

Disclosure: No conflict of interest declared

1499

**Management of the elderly care in primary health care in Brazil in urban context**

M. Fernandes, L. Pereira, S. Soares

*Basic Nursing Department, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil*

**Introduction:** The management of elderly care in Brazil in the urban context has been organized in their strategies of action /interaction ascribed territory and health services from Primary Health Care.

**Objective:** Discuss the management of elderly care in Primary Health care in Brazil in the urban context.

**Methods:** Used the Ground Theory. Data collection occurred between November and December 2011, using focus groups and individual interviews, totaling 20 professionals in Primary Health Care of a Brazilian metropolis. It respected the ethical. The analysis occurred simultaneously collected, interrupted with data saturation.

**Results:** The elderly care is permeated by concepts formulated on the basis of lack of sense common. In the absence of services and care protocols specific to the elderly, professionals create strategies for inclusion of the elderly in the health system. The conduct of elderly care is taxing on him doing the same professional references to the multidisciplinary team. The priority elderly care comes from a simple law enforcement, clinical judgment, which is common in welcoming all people in nursing according to its territory. For the local manager care management becomes more complex when it comes to management of all production spaces of care under their responsibility.

**Conclusion:** It is evident need for careful network thus covers various services, communication with family and maturing population. The management of elderly care in primary care encounters conceptual issues, methodological, organizational and legal same historically inherited Healthcare policy and fragmented health systems that are being gradually addressed and debated in recent decade.

Disclosure: No conflict of interest declared

1563

### Hospitalization for ambulatory care sensitive conditions in Rio Grande do Sul, Brazil: distribution by cause and age

F.B. Nedel<sup>1</sup>, A. Navarro<sup>2</sup>, M. Martín<sup>2</sup>, L.A. Facchini<sup>3</sup>

<sup>1</sup> Departamento de Saúde Pública, Universidade Federal de Santa Catarina, UFSC, Florianópolis, SC, Brazil; <sup>2</sup> Grups de Recerca d'Amèrica i Àfrica Llatines, Unitat de Bioestadística, Facultat de Medicina., Universitat Autònoma de Barcelona, Cerdanyola del Vallès, Spain; <sup>3</sup> Departamento de Medicina Social, Universidade Federal de Pelotas – UFPel, Pelotas, RS, Brazil

**Introduction:** Hospitalizations for Ambulatory Care Sensitive Conditions are an indicator of the effectiveness of primary care. The indicator is formed by the aggregation of different causes and group of causes. The breakdown of causes can help to the planning of focused public health actions.

**Objective:** To describe the distribution of hospitalizations for Ambulatory Care Sensitive Conditions in the state of Rio Grande do Sul (RS), Brazil, in 2007 by groups of cause, sex and age.

**Method:** were studied the residents in RS admitted in 2007, registered in the Database of Hospital Information System of the Brazilian National Health System (SUS); we describe the proportion and gross rates of the main groups of causes by sex and age (<15 years, 15 – 49 years, 50 years or +) and present maps of the adjusted rates (indirect method) by municipality in the State, for each age group.

**Results:** half of hospitalizations occur for four reasons (COPD, Heart Failure, Gastroenteritis, Asthma), the first three causes are the same in both sexes, under 15 years, more than 2/3 of admissions is caused by four causes; in more than 49 years, COPD, heart failure, cerebrovascular disease, angina and diabetes.

**Conclusions:** actions focusing on COPD and cardiovascular disease for the over 50 years old and gastroenteritis, asthma, COPD and bacterial pneumonia among children under 15 years of age should bring more immediate results.

Disclosure: No conflict of interest declared

1751

### Quality of the follow up of patients with cerebral vascular accident

C. Pires, I. Coelho, M. Correia

USF, Grão Vasco, Viseu, Portugal

**Objectives:** To determine the prevalence of Ischemic cerebral vascular accident (iCVA) and quality of the fulfillment of secondary preventive measures of patients enrolled in our Family Health Unit (FHU).

**Methods:**

Type of study: Observational, descriptive, cross-sectional

Population: The patients in our FHU

Sample: Patients who are coded with iCVA and had a medical appointment in the past 3 years.

Variables: gender, age, HbA1c, systolic blood pressure (SBP) and diastolic (DBP), LDL-cholesterol.

Source of Data: medical computerized records from VitaCare® program.

Data processing: SPSS® v18.0.

Quality Standard: insufficient (<50%), sufficient (51-69%), good (70-89%), excellent (>90%)

Results: The prevalence of iCVA in our FHU is 0.70%, (excluding three patients who did not have a medical appointment in the last three years), obtaining a final sample of 94 patients. 20.21% accompanied through home visits.

31.91% had diabetes mellitus; 63.33% of these had HbA1c <6.5% (sufficient). Dyslipidemia was present in 30.85% of patients, of these 72.41% had LDL-cholesterol <70ml/dl (good). The prevalence of hypertension was 67.02%, 74.60% had SBP <135mmHg (good), 93.55% had DBP <85mmHg (excellent); 9.57% of patients were coded with atrial fibrillation, of these 66.67% were taking anticoagulant or anti-platelet medication (sufficient).

Conclusions: Of all the quality parameters evaluated, HbA1c is the worst, the others were classified as good. The awareness of early healthy lifestyles, the avoidance of a sedentary life and the use of efficient medication when needed is important. Thus, a family physician plays a central role in prevention, the early diagnosis and treatment of cardiovascular risk factors.

Disclosure: No conflict of interest declared

1766

### Control of Hypertension in several areas covered by the Basic Health Unit (UBS) Jardim Rosa de França.

O.S.R. Mello, A.L. Carvalho, M.L. Chudo, A.P. Mathias, M. Morelli, H. Oliveira

At UBS Jardim Rosa de França, in Guarulhos, the health unit has three teams in the Family Health Strategy (FHS) but with three distinct realities. Since these comprise the following working with the following strategies:

- Area 61: nursing, ACS, HIPERDIA
- Area 62: medical, nursing, ACS, HIPERDIA.
- Area 63: medical, nursing, ACS, HIPERDIA, Group of Hypertension.

It is up to each team to plan and implement educational activities and community intervention.

The HIPERDIA is the registration and monitoring of hypertension and diabetes identified in each area, which generates information for local managers, the municipal, state, and Ministry of Health.

Group of Hypertension: holds meetings every fortnight, measure blood pressure, blood glucose, attend lectures habit of life, nutrition, exchange of experiences and practices of physical activity.

Objective is a retrospective and comparative study between areas, and determine the profile of patients in each area, the profile is determined by the last blood pressure recorded, and the values according to WHO references.

From the data collected we found that the area 63, 87% of patients had compensated; in area 62, 47% of patients had compensated; the area 61, 30% of patients had compensated. With that we realize the importance of a full team and activities recommended as HIPERDIA. We can highlight the importance of groups for hypertension due to increased interaction of patients with the team achieved a higher bond, adherence and treatment success.

Disclosure: No conflict of interest declared

## 2.2. PRIMARY CARE FINANCING

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### Profitability of a blood pressure holter in a primary health centre

J.A. Pascual López, A. Pérez Carrillo, P. Martinez Lopez, C. Martinez Delgado, Y. Mejía Alvarez, D. López Giraldo, A. Corbalán Hernández, M.E. Peña, K.Espinal, M.M. Arcos Rivera

CENTRO DE SALUD DE CALASPARRA, SERVICIO MURCIANO DE SALUD, CALASPARRA, Spain

**Objectives:** To check if the use of the ambulatory blood pressure monitoring in primary health care has a favorable cost-effectiveness in reducing expenditure on antihypertensive agents compared to the cost of the measuring devices. To study the circadian pattern of the population.

**Methodology:** A systematic random sampling among patients with high blood pressure who come for an appointment or consultation of a rural health center. After the confirmation of the high blood pressure (hypertension), the pharmacological treatment indicated is determined according to clinical guidelines and the placement of the monitoring blood pressure Holter takes place. The high blood pressure will be confirmed or denied and the benefits of the previously planned treatment will be assessed. We proceed to quantify the cost of the final treatment prescribed opposed to the one that we would have prescribed without the Holter study.

**Results:** 64% of the studies were negative (no high blood pressure). The profile of the confirmed HIGH BLOOD PRESSURE patients was 51% Dipper, 44% non-dipper, 5% Riser. The savings in treatment compared to those who had been prescribed prior to the ambulatory blood pressure monitoring in the cases carried out in the first three months of study was a total of 4150 euros per year compared to 3300 euros to the cost of the measuring device.

**Conclusions:** The results of the study indicate that in addition to the optimization of the diagnosis of High Blood Pressure, Holter, can also be a very useful tool in the adequacy of treatment and therefore it might cause significant economic savings.

Disclosure: No conflict of interest declared

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**An estimate of the opportunity cost to the Irish public health system of providing public immunisation clinics for the 2009 Influenza A (H1N1) Pandemic**

W. Behan

*Walkinstown Primary Care Centre, 115 Cromwellsfort Road, Dublin 12, Ireland*

**Objective:** A complete breakdown of the full cost of the Irish public health authorities response to the 2009 Influenza A (H1N1) Pandemic has never been published. This paper estimates the opportunity cost of reassigning health resources to the HSE public clinic vaccination program.

**Methods:** Study Design was a Cross-sectional telephone survey was performed on Local Health Offices that served a total population of 1,101,000 (25.97% of the national population)

**Results:** The aggregate base salary costs for all the staff involved over the 21.6 weeks was €2,961,690. Addition of the cost of employer taxes, pension contributions and overheads brings the total staff costs to €5,205,170. The study catchment population was 1,101,000 out of a national population of 4,239,848 (2006 national census). Extrapolation of this figure assumes a national staff and overheads cost of €20,044,623 for running the 45 clinics alone.

**Discussion:** 955,118 individuals were recorded as vaccinated with influenza pandemic (H1N1) 2009 vaccine according to provisional data, of which 378,041 were recorded as being vaccinated by General Practitioners. This means 577,077 individuals were successfully immunised in the HSE mass vaccine clinics during the 21.6 weeks. The total €20,044,623 opportunity cost equates to €34.73 per vaccine administered. It does not include the opportunity costs of planning and coordinating the whole program, developing and running the national IT and appointment systems or post campaign administrative costs. Nor does it include the direct costs of the media campaign, the purchase and delivery of the vaccine or sending out invitation letters to certain age groups.

Disclosure: No conflict of interest declared

1538

**Pharmaceutical policies and the right to essential medicines in primary health care setting in Brazil.**

R. Mota Pinheiro

*Faculty of Health Sciences, University of Brasilia, Brasilia, Brazil*

The Brazilian National Primary Care policy (2011) relies on the Family Health Program as a strategic priority for expansion and consolidation of primary care in Brazil. In November 2012, the Program is estimated to reach 105,504,290 Brazilians (54.84% of all). A Brazilian Law (12,701/2011) defines the therapeutic assistance with dispensing medicines and products of interest to health in the framework of the Unified Health System – SUS. The federal and state financing of medicines is then transferred to municipality departments of health (5,565). Each month the municipality receives USD 4.30/per capita/year (2.48 USD from national ministry of health and 0.91 USD from state and the same amount from municipality) to acquire medicines within the national essential medicines list and related to primary health care (122 different DCI's items in 231 pharmaceutical forms). The Brazilian Law allows inclusions on municipal essential medicines lists with responsibilities to agree and treaty within the Municipal Council of Health. In a recent survey, 808 municipalities stated that the value of the incentive for the acquisition of essential medicines for primary health care was not sufficient to meet the needs of the municipality (n=954). 47.5% answered that the state has not participated in an integrated programming (with financial support and technical) to ensure people's access to essential medicines in Primary Care. Indeed, there is an urgent need for studies in order to investigate the role of essential medicines and its access in primary health care and the right to health guaranteed by the Brazilian federal constitution.

Disclosure: No conflict of interest declared

## 2.3. FAMILY MEDICINE

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### Paradox in family medicine: Equity vs equality

A. Sattar Khan

Family Medicine, Ataturk University, Erzurum, Turkey

Every one should have equal right or opportunity to be healthy whether belonging to develop or developing countries. Nevertheless during last three decades after Alma Ata declaration and a decade before in 2000 development of millennium goals by World Health Organization (WHO) couldn't accomplish the rights of peoples living especially in developing countries. On the other hand, the WONCA makes clatter every year by build up of declarations for enrichment of family medicine through out the world; conversely the result is further development and enhancement of family medicine in developed countries.

In reality, the situation as regard to health status is very dreadful in developing countries and family medicine gurus who lay emphasis on that the solution of health problems is in the family medicine are failed to convince developing countries' health policy makers to broaden family medicine in their countries. For instance, in Pakistan where they have 104 medical colleges but only four institutions (3.85%) offer formal training in family medicine, in India out 345 medical colleges, only a handful (5%) offer training in family medicine whereas Bangladesh has around 50 medical colleges but a few offer formal training. The comparable circumstances present in Africa and as well as in some part of Middle East.

Thus this paper highlights the paradox in institutionalization and ennoblement of family medicine and debate about the equal or equity based establishment of family medicine through out the world

Disclosure: No conflict of interest declared

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### Breastfeeding influence on children infectious diseases morbidity

M. Plataunaite, K. Simanauskas, N. Burokiene, A. Vingras, V. Kasiulevicius

Faculty of Medicine: Clinic of Internal Diseases And Family Medicine, Vilnius University, Vilnius, Lithuania

**Objective:** Poor breastfeeding and complementary feeding practices, coupled with high rates of infectious diseases, are the principal proximate causes of malnutrition during the first two years of life. Breastfeeding contributes both to passive protection and to the development of the immune system of the infant. The objective of this study was to review retrospectively 209 ambulatory cards of children in Vilnius University Hospital Santariškių klinikos Center of Family medicine and to describe the association between the duration of breastfeeding and the frequency of infections among children during the first three years of life.

**Results:** The results showed that only 42,9% of children were breastfed longer than six months as the guidelines of World Health Organization recommend. The mean duration of lactation was  $3,6 \pm 2,2$  months. 43,3% (n=88) of mothers were using breast milk substitutes. The study confirmed that breastfeeding significantly reduced frequency of the upper respiratory tract infections during the first six months of life ( $p < 0,05$ ) and during the first year of life ( $p < 0,05$ ). Breastfeeding had no influence on infectious diseases morbidity from first to third year of life. Breastfeeding did not result in significantly lower risks of gastrointestinal tract infections, lower respiratory tract infections or otitis.

**Conclusions:** Breastfeeding offers protection against upper respiratory tract infections during the first year of life. Every effort should be made to encourage and support longer duration of breastfeeding. The results of this retrospective study suggest a protective effect of breastfeeding in our population during the first year of life.

Disclosure: No conflict of interest declared

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**Evaluation of the levels of urinary iodine and thyroid function tests of pregnant women and their newborns**

H. Ulu, K. Marakoglu, A. Kiyici

<sup>1</sup> Department of Family Medicine, Selçuk University Medical Faculty, Konya, Turkey;<sup>2</sup> Department of Biochemistry, Selçuk University Medical Faculty, Konya, Turkey

**Objective:** We aimed to evaluate the levels of urinary iodine, TSH, FT3, FT4 and thyroglobulin in mothers and newborns and to investigate the relationship between these values and the mothers and infants.

**Methods:** Women between the ages of 16-40 and their 180 newborn infants born as healthy were included in our study. Mothers urines were collected at the delivery room before the birth. The urine of the infants were collected in 1-7 days after the birth. To evaluate TSH, FT3, FT4 and thyroglobulin levels, blood samples of the mothers were taken from the antecubital vein and the blood samples of infants were taken from the umbilical cord during birth.

**Results:** The mean excreted iodine levels in the urine of pregnant women were median=95.50 µg/L and newborn infants were median=245,00µg/L. The rate of iodine deficiency (<150) is 63.3% in pregnant women and in infants, 24.4% (<100 µg /L) was detected. When the thyroid function tests were evaluated 61.1% of the mother's were normal and, 38.9% were high. When the thyroid function tests were evaluated, 83.9% of the newborns were normal, 13.3% were high and 2.8% were low. Urinary iodine levels in infants of mothers using iodized salt were statistically significant higher than babies born to mothers using rock salt(p=0.030). Thyroglobulin levels of infants of mothers using rock salt were statistically significant higher than babies born to mothers using iodized salt(p=0.007).

**Conclusions:** Mothers are at risk of significant iodine deficiency and hypothyroidism. Education of healthy nutrition and health policies should be developed for receiving preventive measures.

Disclosure: No conflict of interest declared

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**Effect of comprehensive geriatric assessment and target physical fitness in older outpatients**

J.-H. Chang, C.-W. Hung, Y.-C. Chiu, Y.-H. Shieh

Family Medicine, Wanfang Medical Center, Taipei, Taiwan

**Introduction:** The elderly always had high risk of falls. In order to prevent falls of elderly, we started a project of "Target Physical Fitness" and designed exercise prescriptions for individuals based on their physical fitness results. Our goal is to help the elderly use exercise as part of lifestyle modification, to reduce the incidence of falls.

**Method:** We collected data, including BMI (Body Mass Index), and results of sit and reach test and two-minute stair-step exercise for initial evaluation. CGA (Comprehensive geriatric assessment), including function of the extremities, cognitive function and memory, nutrition and ADL (Activities of Daily Living), was used for further assessment.

**Result:** 75 people were enrolled in this study, average age 76.4±8.5 (years), BMI is 25.2±3.9(kg/m<sup>2</sup>). 8% elderly had poor function of upper extremities; 28% elderly had poor function of lower extremities; 60% elderly had memory impairment; 24% elderly had poor nutrition; 32% elderly had poor ADL score; 12% elderly had history of falls.

**Conclusion:** Physical fitness and CGA are efficient tools in helping design individual exercise prescription, which can improve overall function of the elderly and decrease the incidence of falls.

Disclosure: No conflict of interest declared

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**Psychomotor maturity of children at the enrolment in the first grade of the primary school**G. Maravic\_Oplakan<sup>1</sup>, N. Banjac<sup>2</sup>, Lj. Jelovac<sup>1</sup>, S. Trifunovic<sup>1</sup>, V. Vulic<sup>1</sup>, N. Janjic<sup>1</sup>, M. Stijak<sup>1</sup>, V. Rebic<sup>1</sup>, M. Burgic-Radmanovic<sup>3</sup>, A. Serdar<sup>4</sup><sup>1</sup> Family Medicine, Out-Patient Clinic, Banja Luka, Bosnia-Herzegovina; <sup>2</sup> Urgicentre, Out-Patient Clinic, Banja Luka, Bosnia-Herzegovina; <sup>3</sup> Psychiatric Clinic, Clinical Centre, Banja Luka, Bosnia-Herzegovina; <sup>4</sup> Pediatric Clinic, Clinical Centre, Banja Luka, Bosnia-Herzegovina

**Introduction:** At the enrollment in school a child is expected to possess: physical, psychomotor, intellectual, emotional and social maturity. **Goal:** To establish the maturity of children at the enrollment in the first grade of the primary school and prove that there is a difference in the psychomotor development of boys and girls of the same age.

**Examinees and methods:** The research included 675 children of the age of 5.5 – 7, examined by clinical examinations and screening tests. **Results and discussion:** Poor psychomotor maturity of upper limbs (graphomotorics) was observed with 19.41% children, 29.26% with boys and 8.67% with girls. Bad psychomotorics of lower limbs was observed with 6.37% children, i.e. 9.09% boys and 3.41% girls. Bad lateralization and knowledge of parts of own body was observed with 14.14% children, i.e. 18.75% boys and 9.06% girls. Unsatisfactory results at the intellectual screening test were observed with 10.34% boys and 4.37% girls. Bad orientation in space was observed with 7.1% children. **Conclusion:** Statistical analysis proved that among the girls with the average age of 6.1 there was a statistical significance in the psychomotor organization of the following type: motor skills at the upper limbs ( $\chi^2= 44.36$ ), at the lower limbs ( $\chi^2= 8.2$ ), that they even have a better lateralization and orientation on themselves ( $\chi^2= 12.17$ ), and that they are intellectually more mature at the enrollment in school ( $\chi^2= 7.739$ ).

**Keywords:** psychomotor development, children, school.

Disclosure: No conflict of interest declared

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**A 38-year-old man with rib pain and renal failure.**

E. Gregorutti, C. Gutiérrez Jiménez, T. García Soto, M. Vynes Bernal, M. Forniellas Medina, G. Lovaton Villena, L.R. Gonzalez Romero, M.J. Cortés Milán, L. Pérez Campos

CAP Est, Consorci Sanitari Terrassa, Terrassa, Spain

**Abstract :** A 38- year-old man was admitted to this hospital because of anemia and acute renal failure.

Approximately 3 weeks earlier, he presented to the emergency department with a 4-days history of back pain irradiated to the ribs that increased with chest movement and deep breath along with fever. A chest radiograph showed a discrete opacity in the right base of the lungs. Laboratory tests disclosed a normocytic normochromic anemia. The patient received antibiotics for presumed community-acquired pneumonia.

Despite complete treatment with amoxicillin-clavulanic acid, his back pain was worse. On physical examination he was pale with normal vital measures.

Laboratory tests determined haemoglobin 8.1g/dL (9.1 g/L previously), Creatinine 226.7 umol/L, and Calcium 3.3 mmol/L. LDH normal. B2-microglobulin 5340 mg/L (5.34 mg/L). Serum protein electrophoresis showed an IgA lambda monoclonal (M) protein level of 3.19 g/dL. A bone marrow aspiration revealed the infiltration of plasma cells.

Series of X-ray disclosed multiple diffuse radiolucent lesions to the skull vault, mandibular ramus as well as in diaphysis and neck of the right humerus bone. The STIR sequence in MRI of the spine cord revealed diffuse hyperintensity lesions. A diagnostic procedure was performed.

**Conclusion:** Multiple myeloma (MM) is a plasma-cell neoplasm characterized by anemia, renal failure, lytic bone lesions, and hypercalcemia. The median age of the diagnosis is 68 years, below 40 years it is very unusual. The incidence of MM is 4 cases per 100,000 population. Predisposition to bacterial infections is frequent, generally pneumonia and pyelonephritis. Symptomatic MM requires chemotherapy

Disclosure: No conflict of interest declared



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### A study on Body Mass Index as the predictor of elevated Serum Alanine Aminotransferase level in the Nepalese context

A. Basnyat, P.N. Prasad

*General Practice, General Practitioners' Association of Nepal (GPAN), Kathmandu, Nepal*

Obesity is a risk for non-alcoholic fatty liver disease, NAFLD. With obesity, epidemics of NAFLD, NASH and their sequelae are in the offing. Elevated serum liver enzyme Alanine Aminotransferase, ALT reflects hepatic injury. Body Mass Index, BMI is a convenient way to determine human body's adiposity.

Prior studies have shown that overweight is a risk for altered liver enzymes. Since obesity is increasing in urban parts of Nepal too, a study underlining the correlation between BMI and ALT levels would be appropriate.

Thus, a cross-sectional study was undertaken in the General Health Check up Clinic of Tribhuvan University Teaching Hospital (TUTH). Data from 202 adult Nepalese regarding the BMI and ALT were collected after excluding individuals with common known causes of hepatic function derangement. Data were analyzed by classifying the sample on the basis of sex, age and BMI strata.

The mean and the median ALT for each progressively higher BMI strata was found to be greater than those for preceding lower strata and this increased ALT activity was more apparent in the pre-obese and obese groups. For both sexes, calculated median ALT was significantly below in normal and underweight strata when compared to that in overweight and obese strata (chi square= 25.32,  $p < 0.001$  for females and chi square= 11.08,  $p < 0.001$  for males).

Hence, raising social awareness as to the ill fates of unhealthy weight gain and the NAFLD spectrum becomes important in the Nepalese context too.

Disclosure: No conflict of interest declared

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### Urinary incontinence: do women trust themselves to ask their doctor?

L. Tuzikiene<sup>1</sup>, K. Simanaukas<sup>2</sup>, S. Bariliene<sup>3</sup>, L. Venceviciene<sup>2</sup>, D. Makaraviciene<sup>4</sup>, V. Kasiulevicius<sup>2</sup>

<sup>1</sup> Faculty of Medicine, Vilnius University, Vilnius, Lithuania; <sup>2</sup> Clinic of Internal Diseases And Family Medicine, Vilnius University Hospital Santariskiu Clinics, Vilnius, Lithuania; <sup>3</sup> Obstetrics and Gynecology clinic, Lithuanian University of Health Sciences Hospital Clinics, Kaunas, Lithuania; <sup>4</sup> Family Medical Center, Antakalnis Clinics, Vilnius, Lithuania

**Objective:** Lithuanian women are not sufficiently informed about the risk factors of urinary incontinence (UI), diagnosis and treatment options. The aim of our prospective one off study is to determine the share of in the Vilnius Family Medical Center enrolled women being reluctant to speak about UI to their doctors.

**Methods:** An anonymous questionnaire: 56 questions identifying the prevalence of UI and its type, frequency, nocturia, uncontrollable desire to urinate, urinary leakage episodes at rest and during exercise. Further questions examined to which doctor (family/general practitioner (GP), gynaecologist or urologist), if any, did the respondent appeal.

**Results:** 32.9% out of 164 randomly selected women had UI, 50% of them appealed to the doctor. The most and the least common types were mixed UI and stress UI (72.5% ( $p < 0,05$ ) and 7.5% ( $p < 0,05$ ) of women with UI, respectively). One-third ( $p < 0,05$ ) of women with stress UI appealed to GP, while a one-quarter ( $p < 0,05$ ) of women with urge UI turned to the urologist and GP (both 12.5%). 62.1% ( $p < 0,05$ ) of women with mixed UI appealed to gynecologist and urologist (both 34.5%). An unexpected result: one-third of women that did not indicate to have UI actually could be attributed to stress UI. These women did not appeal to doctors.

**Conclusions:** A significant share of women with UI avoids speaking about it with GP. A significant share of urinary continent women misunderstands the problem of UI due to the lack of specific knowledge. More efforts are needed in GP every-day practice in order to identify UI at a very early stage.

Disclosure: No conflict of interest declared

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**Gender differences in modifiable cardiovascular risk factors in patients with stroke in family medicine practice**O. Batic-Mujanovic<sup>1,2</sup>, S. Fajic<sup>3</sup>, L. Gavran<sup>4</sup>, Z. Saric<sup>5</sup>, E. Alibasic<sup>6</sup>, E. Ramic<sup>5</sup>, M. Becarevic<sup>7</sup><sup>1</sup> Family Medicine Teaching Center, Health Center Tuzla, Tuzla, Bosnia-Herzegovina;<sup>2</sup> Department of Family Medicine, Medical Faculty of Tuzla University, Tuzla, Bosnia-Herzegovina;<sup>3</sup> Department of Family Medicine, Health Center Lukavac, Lukavac, Bosnia-Herzegovina;<sup>4</sup> Family Medicine Teaching Center Zenica, Health Center Zenica, Zenica, Bosnia-Herzegovina;<sup>5</sup> Department of Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina;<sup>6</sup> Department of Family Medicine, Health Center Kalesija, Kalesija, Bosnia-Herzegovina;<sup>7</sup> Department of Family Medicine, Health Center Banovici, Banovici, Bosnia-Herzegovina

**Objective:** Extensive clinical and statistical studies have identified several factors that increase the risk for stroke. Some of them can be modified, treated or controlled, and some can't. In this study we evaluated the prevalence of modifiable cardiovascular risk factors in patients with established diagnosis of the stroke in family medicine practice.

**Methods:** This trial was conducted in Family Medicine Teaching Center Tuzla and included 63 patients with stroke (45 women and 18 men), aged 29-90 years. We evaluated prevalence of modifiable cardiovascular risk factors: hyperlipidemia, hypertension, diabetes mellitus, smoking, obesity, physical inactivity and unhealthy diet in patients with stroke.

**Results:** Prevalence of stroke was 4,24%. Mean age of participants was 69,89±10,5 years. Mean age of participants for stroke development was 63,98±10,75 years. There were significantly more women than men (71,42%:28,57%;  $p<0,001$ ). Recurrent stroke had 9 (14,28%) patients. The most prevalent risk factor was hypertension which was present in 50 (79,36%) patients. Hyperlipidemia was present in 45 (71,43%) patients. Diabetes mellitus had 11 (17,46%) patients and obesity 22 (35%) patients. There were 34 (53,97%) smokers, while 34 (53,97%) patients had no physical activity and 43 (68,25%) had unhealthy diet. We didn't find any significant differences in prevalence of modifiable cardiovascular risk factors related to gender except for hyperlipidemia ( $p<0,0001$ ) and obesity ( $p=0,0177$ ) which were more prevalent in women.

**Conclusion:** Results of this study showed a high prevalence of modifiable risk factors for stroke that indicates more effective intervention in primary health care in order to reduce cardiovascular morbidity and mortality.

Disclosure: No conflict of interest declared

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**Gastro-oesophageal reflux disease features in general practice**A. Baziliene, R. Meidute, K. Simanauskas, V. Kasiulevicius, V. Sapoka  
Clinic of Internal Diseases And Family Medicine, Vilnius University, Faculty of Medicine, Vilnius, Lithuania

**Aim:** To identify the frequency of typical gastro-oesophageal reflux disease (GERD) in general practice and determine its incidence by gender, education, symptoms and risk factors in different age groups.

**Methods:** A questionnaire to identify GERD and risk factors among subjects was used to interview 114 random patients who visited their family doctors during 2011 January -2012 April. Coefficients of each different question and the total Cronbach alpha coefficient were calculated for questionnaire's reliability. Statistical analysis was performed using SPSS 17.0 for Windows data packets.

**Results:** 114 people between 18-70 years old, the average age – 40.66 ( $\pm 16.20$ ) were interviewed. The overall questionnaire Cronbach alpha was 0.825 while it ranged from 0.793 to 0.849 in terms of each single question. Use of medication due to other diseases increase likelihood to get GERD (OR=3.67,  $p<0.05$ ). A frequency of GERD is lower among patients who eat on regular basis (OR=0.06,  $p<0.001$ ) compared with irregularly eating ones. A relation between the use of alcohol (OR=1.1,  $p>0.05$ ) or smoking (OR=0.95,  $p>0.05$ ) and the prevalence of GERD wasn't proved. Subjects, whose body mass index is higher than 24.99, are more likely to get GERD compared with normal body mass subjects (OR=7.86,  $p<0.05$ ).

**Conclusions:** There was no relationship between GERD origin and its dependence on gender and education in different age groups. Determined risk factors correlate with GERD clinical manifestation and increase likelihood of this disease.

Disclosure: No conflict of interest declared

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**Determinants of the scope of practice among Japanese family physicians**

I.E. Kenya, Y.C. Takemura

*Family Medicine, MIE University School of Medicine, TSU, MIE, Japan*

**Objective:** There are little investigations about factors influencing physicians scope of practice. The aim of our study is to evaluate the relationship between physicians' attributes and their scope of practice in Japanese primary care setting.

**Methods:** A cross-sectional observational study was conducted. Japanese primary care physicians answered a questionnaire regarding physicians' sex, years in medical practice, main practice setting (clinic, small scale hospital or large scale hospital), population served (urban, rural or remote), subspecialties and Japanese Scope of Practice Score (JSPS) via the online form. JSPS is a Japanese physicians scope of practice score out of 120 which reliability and validity have been guaranteed. The relationship between these items and JSPS were examined using analysis of variance.

**Results:** From June 2012 to July 2012, 40 (90.1%) questionnaires were collected. The mean JSPS were as follows; large scale hospital: 75.3, small scale hospital: 88.1, clinic: 85.2, urban: 75.4, rural: 86.6 and remote: 88.0, respectively. As for years in medical practice, the mean JSPS among 1-9 years, 10-19 years and 20 years- were 81.9, 79.2 and 92.6, respectively. Although not statistically significant, practicing in clinic, remote area and longer medical practice duration seem to correlate with higher JSPS. Pediatric health care, eye, ear and skin problems were more likely to be offered in clinic and remote area. Small hospital offered highest emergency care score.

**Conclusions:** Although the sample size was small, we may suggest that practice setting, geographic factors and years in medical practice have effect on primary care physicians comprehensiveness. The larger sample size study is currently being conducted by us and will be completed by June.

Disclosure: No conflict of interest declared

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**Profile of the immigrant who attends health centres for cases related to surgery**MJ Agüeros<sup>1</sup>, VJ Ovejero<sup>2</sup>, A Perez<sup>3</sup>, JR Lopez<sup>3</sup>, M Gago<sup>3</sup>, B Bermejo<sup>1</sup>, MT Garcia<sup>3</sup>, A Alonso<sup>1</sup>, M Gomez<sup>1</sup>, AI Cano<sup>1</sup>*<sup>1</sup> Primary Health, Servicio Cantabro Salud, Torrelavega, Spain; <sup>2</sup> Hospital Sierrallana, Servicio Cantabro Salud, Torrelavega, Spain; <sup>3</sup> Primary Health, Servicio Cantabro Salud, Santander, Spain*

**Objective:** To study the reasons why the immigrant population attends urban primary care health centres for cases related to general surgery

**Methods:** A descriptive transversal analysis of immigrants receiving medical attention for cases related to surgery over a six month period (January – June 2012). For quantitative variables, the average and typical deviations were used, and percentages were used for qualitative variables

**Results:** There were 36 medical assistances (4.06% of the total), predominantly female (61.1%) with an average age of 37.9 years (DE±11.8); mainly South American (50.4%) followed by Eastern European nationalities (43.6%); assistance mainly occurred on a Tuesday (27.8%) and in April (22.2); none were home visits. In 38.9% of the cases, further tests or courses of action were taken, mainly sick leave (57.1%) and analyses (28.6%). The main causes for medical assistance were appendicitis (22.2%), non-specific abdominal pain (22.1%), hemorrhoids (15.6%) and varicose veins in lower limbs (11.1%). 62.8% required a medical prescription (anti-inflammatory drug (23.8%), venotonic drug (21.1%) and compression stockings (18.2%).

**Conclusions:** The profile of the immigrant patient who attends a health centre for reasons connected with general surgery is a young woman, of South American origin, who complains of appendicitis or non-specific abdominal pain. Almost 40% require further tests or courses of action, mainly sick leave, and 60% require medication or follow-up checkups.

Disclosure: No conflict of interest declared

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**How well is family practice known in Samsun, Turkey**

M.K. Sahin, G. Sahin, M.F. Dikici, F.A. Artiran Igde, F. Yaris

*Family Medicine, Ondokuz Mayıs University School of Medicine, Samsun, Turkey*

**Objective:** The family medicine implementation program initiated since 2005 in Turkey. Towards the end of 2010, the family medicine practice generalized throughout the country. We aimed to investigate how well family medicine practice known in Samsun which is one of the family medicine implementation pilot provinces in Turkey.

**Methods:** In this study we developed a questionnaire containing sociodemographic data and 16 questions about the family practice and applied to the faculty of medicine student's between September and November 2012. The results were evaluated by the SPSS package program.

**Results:** 322 students were participated in the study, 190(59.0%) of them were female and 132(41.0%) were male. Mean age was  $20.12 \pm 3.39(17-61)$  years. 110(34.16%) of them were in the first class, 94(29.2%) were in second year and 118(36.64%) were third year. We asked to participants "where do you refer firstly when you have a health problem?" 109(33.9%) of them answered as family health center, 61(18.9%) state hospital, 61(18.9%) emergency room, 58(18.0%) university hospital and 32(9.9%) private hospital. 249(77.3%) participants had a family doctor but 180 (55.9%) of them don't know whether their family health center has laboratory services. The average visit number was  $1.89 \pm 2.16(0-15)$  times for family doctor and  $2.80 \pm 2.45(0-16)$  times for the hospital in the last year.

**Conclusions:** Family medicine practice is new in Turkey, although the participants have some information about the family medicine practice, they don't use primary health care facilities as hospitals. Strategies are needed to enhance the recognition and the availability of the family medicine in the community.

Disclosure: No conflict of interest declared

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**Mental problems and working pattern**

V. Petrović, B. Marković, M. Vujinović, A. Ćulafić, G. Tešanović

*Family Medicine Department, Primary Health Care Center Banjaluka, Banjaluka, Bosnia-Herzegovina*

**Background:** Due to a recent war in B&H and current economic crisis in Europe, a great deal of BH residents are unemployed and those who are employed or retired have very low incomes. The lack of social welfare is a basis for occurrence of diverse mental problems.

**Objective:** To investigate the presence of diagnosed mental problems in our patients and working pattern of patients with mental problems

**Methods:** The study was conducted in October 2012. by examining 6427 medical charts of patients from four family medicine teams in Primary Health Care Center Banjaluka. Patients with diagnosed mental problems were analyzed considering the type of mental problem, their age and gender, and their working pattern.

**Results:** Out of 118 patients with mental problems, 61(51,69%) were female and 57(48,3%) male. The majority of patients, 82(69,49%) were 36-64 years old; 17(14,4%) were 35 years old or younger; and 19(16,1%) were 65 years old or older. Mental problems: depression was found in 38(32,2%) patients; anxiety in 48(40,67%) patients; psychosis in 18(15,25%) patients; alcoholism in 9(7,62%) patients; and drug abuse in 9(7,62%) patients. Working status of our patients: 34(28,81%) were employed; 35(29,66%) unemployed; 44(37,28%) retired; and 5(4,23%) were students.

**Conclusion:** There was no significant correlation between the presence of diagnosed mental problems in our patients and their working status. Therefore, family doctors should screen for mental problems in their patients.

**Key words:** mental problems, working pattern

Disclosure: No conflict of interest declared

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**Symptoms of gastroesophageal reflux disease among patients in family medicine practice**S. Fajčić<sup>1</sup>, O. Batić-Mujanović<sup>2</sup>, S. Brkić<sup>3</sup>, E. Zaimović-Bajramali<sup>4</sup>, Z. Sarić<sup>5</sup>, L. Gavran<sup>6</sup>

<sup>1</sup> Family Medicine, Health Center Lukavac, Lukavac, Bosnia-Herzegovina; <sup>2</sup> Department of Family Medicine, Medical Faculty of University of Tuzla, Tuzla, Bosnia-Herzegovina; <sup>3</sup> Department of Medical Faculty, University of Tuzla, Tuzla, Bosnia-Herzegovina; <sup>4</sup> Department of pediatrics, Cantonal Hospital of Zenica, Zenica, Bosnia-Herzegovina; <sup>5</sup> Family Medicine of Tuzla, Health Center Tuzla, Tuzla, Bosnia-Herzegovina; <sup>6</sup> Family Medicine Teaching Center of Zenica, Health Center of Zenica, Zenica, Bosnia-Herzegovina

**Objectives:** Gastroesophageal reflux disease (GERD) is a common condition in primary care setting. We investigated severity of GERD symptoms: heartburn, regurgitation and pain, as well as duration and frequency of symptoms.

**Methods:** This study included 200 patients, aged 17-83 years, with clinical signs and symptoms of GERD, who were attended 20 family medicine practices in the municipality Lukavac. We used modified questionnaire for symptoms and signs of GERD (Likert scale).

**Results:** There were 200 participants (134 women and 66 men), mean age of participants was of 55±13 years. Significantly more women had GERD than men (67%:33%; p<0.0001). The median duration of symptoms expressed in weeks was 6 (IQ range: 4-12 weeks). Weekly frequency of GERD symptoms ranged around the median of 3 days per week (IQ range: 2-4). Daily frequency of GERD symptoms ranged around the median of 2 times per day (IQ range: 2-3). Heartburn severity score ranged around the median of 3 (IQ range: 3-4), regurgitation symptom severity score ranged around the median of 2 (IQ range: 2-3), while the pain score ranged around the median of 1 (IQ range: 1-2). There were no statistically significant differences in strength (p> 0.05) and frequency (p> 0.05) in all three symptoms in relation to gender. We didn't find any significant differences in severity and frequency of all three symptoms related to gender.

**Conclusion:** Result of this study showed that better assesment of GERD symptoms in primary care patients remains desirable in order to improve symptom relief.

Disclosure: No conflict of interest declared

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**Limbic encephalitis: An uncommon differential for depression**

E. Martinez, C. Baena, J. De Oleo

*Family Medicine, Hospital Virgen del Castillo, Yecla, Spain*

**Case Presentation:** 71 year-old female patient has been experiencing memory loss and vagueness in the last few months sometimes associated with sense of panic and terror. Her GP remitted her to the psychiatrist. She was diagnosed of depression on her first visit, but in the second visit she referred an episode of diplopia, so the psychiatrist solicited an urgent closer evaluation.

In the ED her physical general and neurological examinations were normal. During her time in ED observation she referred another episode of diplopia. Then a Brain CT scan without contrast was decided which read; poorly defined hypodense lesion in left temporal lobe, which requires MRI study of CT with contrast. The MRI concluded to be a Limbic Encephalitis.(fig 1)

**Discussion:** Limbic encephalitis has been defined since 1968 as a paraneoplastic disease primarily of breast and lung cancer. The patient was screened for these types of cancer without any positive results. The second theory for this disease is autoimmunity for voltage gated K channels. The third is idiopathic cause. The patient received methylprednisolone with which she is much better of her symptoms. She is still periodically screened for Cancer. But the real take away home message is that presentation of diseases like this one maybe confused to be depression or simply taken for granted. For this reason we must be very careful when interviewing our patients.

Disclosure: No conflict of interest declared

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**Ankle-brachial index and the incidence of cardiovascular events in the low risk ARTPER cohort**

R. Forés, M.T. Alzamora, A. Heras, G. Pera, M. Viozquez, M. Sorribes, J. M. Baena-Díez, M. Corroto, M. V. Sierra, N. Sorolla  
Primary Health center, Institut català de la Salut, Santa Coloma de Gramenet/ Barcelona, Spain

**Objective:** To determine the relation between the ankle-brachial index pathological (ABI) and incident cardiovascular events (coronary disease, stroke, abdominal symptomatic aneurysm, vascular intervention) and mortality, in Spanish ARTPER cohort  $\geq 49$  years. **Methods:** At baseline ABI was measured (3786 patients), randomly selected, adscribed to 28 Barcelona primary health centers. The following cohorts: ABI  $< 0.9$  peripheral arterial disease (PAD), ABI  $\geq 1.4$  arterial calcification (AC), ABI between 0.9 and  $< 1.4$  healthy were created. 4-years follow up has been carried out, with telephonic contacts undertaken every 6 months. Electronic medical records, computerized clinical history, general practitioner interview, emergency departments records and statistical registries of deaths have been also reviewed. All the events have been checked by a medical committee. Proportional-hazard Cox regression models have been used.

**Results:** 3307 subjects were analyzed after excluding those who presented an event before the recruitment. 260 suffered cardiovascular events (incident 2,117/100,000 person-years) and 124 patients died for any reason (incident 978/100,000 person-years). PAD duplicated the risk of presenting coronary disease (adjusted hazard ratio [HR] = 2.0; 95% confidence interval [CI], 1.3-3.2) and it increased the risk of presenting a vascular intervention (HR = 5.6, 95% CI 2.8-11.5) and the morbimortality (HR = 1.8, CI 1.4-2.5) independently of others cardiovascular risk factors. AC duplicated the risk of presentation of stroke (HR = 1.9, CI 1.0-3.5), without demonstrating relation with coronary disease.

**Conclusions:** PAD increases the risk of presenting a coronary disease and AC of stroke in a Mediterranean population of low cardiovascular risk. ABI can be a useful tool to detect patients of risk in primary care

Disclosure: No conflict of interest declared

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**Co-occurrence of diabetes and depression in Quebec**

A. Vanasse<sup>1,2</sup>, J. Courteau<sup>1</sup>, M. Giroux<sup>2</sup>, P. Roberge<sup>2</sup>, L. Nedelec<sup>2</sup>  
<sup>1</sup> PRIMUS group, Centre de recherche clinique Étienne-Le Bel, Sherbrooke, Canada; <sup>2</sup> Family medicine, Université de Sherbrooke, Sherbrooke, Canada

**Objective:** A bidirectional association has been found between depression and diabetes. Studies suggest that diabetic people with a history of depression are more likely to develop diabetic complications than those without depression. The objective is to describe and compare treatments and outcomes between patients with a co-occurrence of diabetes and depression as compared to those with diabetes or depression only.

**Methods:** A population-based cohort study using administrative data from Quebec (Canada). Three cohorts were generated using diagnoses between 2000 and 2002: 1) patients with diabetes and depression; 2) patients with diabetes only; 3) patients with depression only. Patients with bipolar disorders and those  $< 30$  years were excluded. Pharmacological treatments (anti-diabetics, antidepressants) and outcomes (emergency consultation, hospitalisation, death) were compared between the three cohorts.

**Results:** A total of 17,002 patients were included in the co-occurrence cohort; 237,250 in the diabetes cohort and 237,010 in the depression cohort. Major differences in age and sex were observed. Patients in the co-occurrence cohort suffer more from other comorbidities, were less likely to fill anti-diabetics (68.1% vs 77.1%) or antidepressants (63.6% vs 71.9%) and, even after controlling for age, sex, and comorbidities, were more at risk of emergency consultation (44.3% vs 33.8% and 35.3%), hospitalization (24.2% vs 19.9% and 18.4%), and death (9.2% vs 7.8% and 6.4%) after one year, as compared to the diabetes and depression cohorts respectively.

**Conclusions:** Patients with co-occurrence of diabetes and depression are more at risk of adverse outcomes and should be managed accordingly.

Disclosure: No conflict of interest declared

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**Evaluation of enuresis nocturna and enuresis diurna among elementary school-age children**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, O.Sari<sup>2</sup>, K.Saglam<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Enuresis Nocturna(EN) is involuntary recurrent urination in night during sleep, which is common among children at age of 5 or above. However, Enuresis Diurna (ED) is described as daytime urinary incontinence of children over 3 years old. Aim of study is to evaluate isolated EN and EN with ED.

**Methods :** The study was performed in three elementary schools in Ankara during January-May 2011.The questionnaire aiming to evaluate EN and ED condition of participants were distributed to parents. It was observed that 2314 participants' questionnaires were convenient.

**Results:** Mean age of study group of 2314 students was determined as 9.21±2.08. While general EN prevalence was 9.9%(n=230), the prevalence of EN and ED together was determined as 2.8%(n=64). Condition of students in terms of EN as follow: 58.7%(n=135) of them had this problem once a week, 10.4%(n=24) twice a week, 11.7%(n=27) three-four times a week and 19.1%(n=44) had it every day. Students having both EN and ED were evaluated as follow:71.9%(n=46) had this problem once a week, 10.9%(n=7) twice a week, 4.7%(n=3) three-four times a week and 12.5%(n=8) had it every day. When EN and the combination of EN and ED were evaluated, it was observed that there was statistically significant difference between age groups.

**Conclusions:** It has great importance that family physicians working at the primary care centers should establish efficient relationship with children and their family. Family physicians should take detailed history due to EN and ED.

Disclosure: No conflict of interest declared

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**Enuresis nocturna among of elementary school-age children and socio-demographic risk factors**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, K.Saglam<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Enuresis Nocturna(EN) is involuntary recurrent urination in the night during sleep, which is common among children at age of 5 or above. Aim of study is to research prevalence and severity of EN among elementary school-age children and socio-demographic risk factors related to it.

**Methods:** Study was performed in three elementary schools in Ankara during January-May 2011. It was planned to have 2314 students of 6-14 ages in study. Questionnaire, aiming to evaluate EN condition of participants and their characteristics, were distributed to parents.

**Results:** Mean age of 2314 participants was 9.21±2.08. 48.5%(n=1123) of students were male and 51.5% (n=1191) was female. While general EN prevalence was 9.9%(n=230); it was determined as 10.7%(n=120) for males, as 9.2%(n=110) for females. Statistically significant difference was determined between two groups, with EN and without EN, regarding age groups, education level of parents, and number of sibling, income level and positive family history. However, logistic regression analysis revealed that there was significant difference only between EN and age groups, education level of mother and positive family history. It was determined that most important and determinant variable would be positive family history.

**Conclusions:** Enuresis is a common clinical problem which impairs quality of life of both children and family. As a consequence, such factors as age groups, gender, and education level of parents, families with many children, monthly income level and positive family history could be accepted as a risk concerning

Disclosure: No conflict of interest declared

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**Awakening difficulties in the mornings and related conditions for children**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, K.Saglam<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Students living awakening difficulties in serious levels could have poor life quality and failure in lessons. Upper airway obstruction symptoms including like snoring, apne seizure etc, can be underlying these findings. State of awakening difficulties in morning and associated problems were evaluated in this study.

**Methods:** Study was performed in three elementary schools in Ankara between January-May 2011. 2314 students of 6-14 ages were included to study. Questionnaire, which consisted questions, aiming to evaluate state of awakening difficulties in morning, snoring and apne period was delivered to parents.

**Results:** %81.3(n=1881) of all participants don't have awakening difficulties Mean age of awakening difficulties(+) group was  $9.57 \pm 2.17$ , mean age of awakening difficulties(-) group was  $9.12 \pm 2.04$  ( $p < 0.001$ ). While 45.7%(n=198) of awakening difficulties(+) group were male, 54.3%(n=235) were female; 49.2%(n=925) of awakening difficulties(-) group were male, 50.8%(n=956) were female( $p=0.195$ ). When state of snoring was investigated, 31.8%(n=109) of snoring (+) group had awakening difficulties, 16.4%(n=324) of snoring (-) group had awakening difficulties ( $p < 0.001$ ). When state of apne period was investigated; 28.4%(n=63) of apne period(+) group had awakening difficulties, 17.7%(n=370) of apne period(-) group had awakening difficulties( $p < 0.001$ ). When state of awakening during night was questioned; 31.2%(n=181) of awakening during night (+) group had awakening difficulties in mornings, 14.5%(n=252) of awakening during night (-) group had awakening difficulties in mornings( $p < 0.001$ ).

**Conclusions:** Evenawakening difficulties in mornings seem innocent for children, students should be evaluated particularly. It's also explained that to be detected findings related with upper airway obstruction symptoms in our study.

Disclosure: No conflict of interest declared

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**Recurrent upper respiratory tract infections and acute otitis media among children**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, K.Saglam<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Upper respiratory tract infections(URTI) and acute otitis media(AOM) are common associated with various factors during childhood. Prevalence and severity of URTI and AOM among elementary school-age children were investigated.

**Methods:** Our study conduct upon 2314 students educating in 3 elementary school in Ankara province. Questionnaire forms were delivered to parents of students after taking written consent. Questionnaire form were including some informations about sociodemographic features, URTI and AOM prevalence during a year etc.

**Results:** Mean age of participants was  $9.21 \pm 2.08$ . 2314 students whom 48.5% (n=1123) of them were male, 51.5% (n=1191) of them were female. URTI prevalences of students during a year as follow: 51.2% (n=1184) 1-2 times a year, 26.4%(n=611) 3-4 times a year, 7.2%(n=167) 5-6 times a year, 3.3% (n=77) more than 6 times. 11.9%(n=275) of patients had no history of URTI during a year. AOM prevalences of students during a year as follow: 26.7%(n=617) 1-2 times a year, 4%(n=93) 3-4 times a year, 0.8%(n=18) 5-6 times a year, 0.1%(n=3) more than 6 times. 68.4%(n=1583) of patients had no history of URTI during a year. When age groups were compared with state of URTI and AOM, there was a statistically significant correlation between groups (respectively  $p < 0.001$ ,  $r = -0.150$ ;  $p < 0.001$ ,  $r = -0.090$ ). Also statistically significant correlation between state of URTI and AOM was detected ( $p < 0.001$ ,  $r = 0.305$ ).

**Conclusions:** Even most cases were curable and innocent; on condition of recurrent and refracter to treatment, necessary attention should be paid. Recurrent and resistance cases should be referred to ENT specialist or pediatrician.

Disclosure: No conflict of interest declared



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**Intervention in daycare for medical records assembly and organization.**

G. Garcia, R. Basso, H. Oliveira, R. Filho, L. Leite, C. Carvalho, A. Nogueira, S. Souza, R. Martins

*Medicine, Universidade Cidade de Sao Paulo, Sao Paulo, Brazil*

**Objective:** Make the medical records of 30 children, including information about their living conditions and making a relation with their behavior and school performance. This children lives in a unstable area in the state of São Paulo without basic sanitation and frequent a daycare in the same region.

**Methods:** We update some data that already existed and record new ones, such as date of birth, full name, family names and their occupations, family income, current school, actual grade, current vaccination records, who lives with the children and old information that we already have in some notes on the school. To make a good work we gathered information of each child with the coordinators of the nursery, they take care of the children every day. They told us the behavior of each one, the school performance, housing conditions and others socioeconomic information.

**Results:** The update of the medical records, allowed us to identify children who are in risk. Most of them don't live with their parents, have poor housing conditions, are not completely vaccinated and some of them have contact with drugs. In the other way children that have your parents living together has better life conditions

**Conclusions:** We identify some problems that may have connections with the socioeconomic conditions. The daycare coordinators needs support for improve the life conditions of the children and our work helped making more easily recording the information about each children. This performance was important for the family health program, now the futures assistances for the daycare children is going to be more complete and ample.

Disclosure: No conflict of interest declared

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**Performance in the fight and prevention of pediculosis in a daycare ambient**

R. Martins, G. Garcia, C. Carvalho, L. Leite, A. Nogueira, H. Oliveira, R. Filho, S. Souza, R. Basso

*Medicine, Universidade Cidade de Sao Paulo, Sao Paulo, Brazil*

**Objective:** Present a theater and make a dynamic with children showing how prevent and treat pediculosis. That children frequent a daycare in the state of São Paulo, there are 90 children in total, their ages are 4 years old.

**Methods:** The theater was based on a girl who wore the hat of a friend who had pediculosis. Throughout the drama, the boy's mother shaves his hair as a form of treatment. When the girl's mother will shave her hair appears a social worker, she stopped that and bring them to the basic unit of health. At the basic unit of health the doctor teach the correct treatment. At the end of the theater, we have prepared a dynamic for fix the content. We showed some objects and we asked if it could be borrow for the buddy or not. Those who could not, it was for personal use, which could cause risk of transmission of pediculosis.

**Results:** The results are very positive, most of them understood the message of the activities, and they confirmed it to us responding correct the answers asked by us. The coordinators who watched liked a lot our job and wanted more performances.

**Conclusions:** The intervention in the fight and prevention of pediculosis is a need for daycare, which already had some cases and other suspected. Regardless the economic situation of the child the pediculosis are present. The theater was a successful way of learning.

Disclosure: No conflict of interest declared

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**Health at school: talking of sexual abuse with pre-teens**

C. Carvalho, R. Filho, L. Leite, A. Nogueira, R. Martins, G. Garcia, H. Oliveira, S. Souza, R. Basso  
*Medicine, Universidade Cidade de Sao Paulo, Sao Paulo, Brazil*

**Objective:** Develop an intervention project aimed at the prevention of sexual abuse of pre-teens, through a multidisciplinary and intersectoral action.

**Methods:** The intervention was developed in 2 days. The first day began with the dynamic activity of the mirror that promoted the contact with the pre-teen and his own body. The second dynamic we asked the people to write in balls the body part they do not like to be touched by other peoples and defend it. They walked in the room to a safe place represented by a professor of the school and a doctor of the health care, preventing the bad guys burst the balls. These bad guys are located in a corridor before the safe place. On the last dynamic of the day they identified people in his intimate circle and types of touch they disliked. At the second meeting, with the participation of the NASF psychologist, the theme of pedophilia and sexual abuse was discussed from questions raised by pre-teens.

**Results:** At the meeting in which the psychologist was present, students reported cases of sexual abuse that occurred with relatives or acquaintances, as well as harassment practiced by adults in the neighborhood where they lived. With this action was possible to identify young people at risk and some victims of abuse. In the months following this intervention, increased demand for healthcare professionals of UBS by teens for guidance or help.

**Conclusion:** This intervention strengthened the bond between adolescents with health services and education, and provide a communication channel for them to seek help whenever they are at risk of violence.

Disclosure: No conflict of interest declared

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**Psychometric validation of the 8- and 3-item overactive bladder awareness tools for screening patients with probable overactive bladder**

F. Brenes<sup>1</sup>, J. Angulo<sup>2</sup>, I. Lizarraga<sup>3</sup>, David Ochayta<sup>4</sup>, D. Arumi<sup>5</sup>, A. Cañadas<sup>3</sup>, J. Rejas<sup>6</sup>  
<sup>1</sup> Primary Care, Llefia Primary Care Health Centre, Badalona, Spain; <sup>2</sup> Urology, Getafe University Hospital, Madrid, Spain; <sup>3</sup> Medical, Pfizer SLU, Madrid, Spain; <sup>4</sup> Health Outcomes Research – Treatment Value, Kantar Health, Madrid, Spain; <sup>5</sup> Medical, Pfizer PIO, Madrid, Spain; <sup>6</sup> Health Economics and Outcomes Research, Pfizer SLU, Madrid, Spain

**Objective:** To carry up the psychometric validation of the 8- and 3- (OAB-V8/V3) item Spanish overactive bladder awareness tools for screening patients with probable overactive bladder (OAB).

**Methods:** This was a cross-sectional study conducted in the general population over 18 years of age through a battery of questionnaires administered to subjects using an online method. Psychometric properties included feasibility, reliability (internal and test-retest), and validity. Subjects were classified as having no OAB, possible OAB, and probable OAB using an automated algorithm validated previously. Receiver operating characteristic (ROC) curve analysis, sensitivity and specificity values, and intraclass correlation coefficient (ICC) were also assessed.

**Results:** 2035 subjects participated; 49.19% women (mean age: 51.4 years) and 50.81% men (mean age: 55.6 years) were included in the study; 13.7% of subjects were classified with probable OAB, 27.9% with possible OAB, and 58.3% with no OAB. The internal consistency of OAB-V8 and OAB-V3 scales was high; 0.894 and 0.851, respectively. The optimum cut-off value for OAB-V8 identifying probable OAB was  $\geq 8$  points showing an AUC=0.895,  $p < 0.001$ , sensitivity 0.875, and specificity 0.735. The optimum cut-off value for OAB-V3 identifying probable OAB was  $\geq 3$  showing an AUC=0.910;  $p < 0.001$ , sensitivity 0.828, and specificity 0.825. Reliability of OAB-V3 with these 3 items of the OAB-V8 was also high; ICC 0.697 (95% CI: 0.669;0.772),  $p < 0.001$ .

**Conclusion:** The OAB-V8 and OAB-V3 questionnaires were feasible, reliable, and appropriate as a self-administered screening tool for detection of probable OAB patients in the general population in Spain.

Disclosure: No conflict of interest declared

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**Family physicians in the emergency department. Ministry of health- Jordan experience**

W. Halasa

*Emergency Department, Ministry of Health, Amman, Jordan*

**Objectives:** To share and document a unique experience (a new care method) in the Ministry of Health of Jordan. In November 2005 Family Medicine physicians started working and still working proficiently in newly added clinics to the emergency department of Al -Bashir Hospital, the largest governmental hospital in Amman – Jordan.

**Methods:** Reviewing emergency department registration books & recording number of patients attending the clinics each shift, daily, monthly and yearly. Reviewing literature for similar experience in other countries.

**Results:** In 2006 total number of patients was 99286 (272/day). In 2007 total number was 102127 (279.8/day). In 2008 total number was 143186 (392.2/day) with 40% increase. In 2009 number of patients continued rising reaching the maximum of 20109 (648.6/day) during the month of May. In October 2009 a nominal fee was re-established which lead to dramatic decrease in number of patients, amounting to 8126 (270.8/day) in November. In 2009 total number was 178510 (489.06/day), additional 24% increase, totaling 74% increase from 2007. In 2010 total number was 111962 (306.7/day), 37.2% reduction from 2009. In 2011 total was 116862 (320.16/day). Research from several countries support the new role of family medicine physicians in the emergency department.

**Conclusion:** Family Medicine physicians have an important and effective role in treating patients with acute medical problems attending emergency department.

Disclosure: No conflict of interest declared

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**Comparison of upper respiratory tract infections(URTI) and akut otitis media(AOM) prevalence with accompanying diseases**Y.C. Doganer<sup>1</sup>, U. Aydogan<sup>2</sup>, K. Saglam<sup>3</sup>*<sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;**<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey*

**Objective:** Allergic based some diseases can cause URTI and AOM more often. Relation between URTI and AOM among elementary school-age children was investigated.**Methods:** Our study conduct upon 2314 students educating in 3 elementary school in Ankara province. Questionnaire forms were delivered to parents after taking written consent. Allergic skin diseases, hay fever, food allergy ve asthma were described as accompanying diseases. Having an accompanying disease was described as “accompanying disease + group”, opposite was “accompanying disease – group”.**Results:** Mean age of “accompanying disease + group” was 9.47±2.14, mean age of “accompanying disease – group” was 9.14±2.05 (p=0.002). Annual URTI prevalences in “accompanying disease + group” were as follow: %46.7(212) 1-2 times a year, %30(136) 3-4 times a year, 11.9%(54) 5-6 times a year, 6.8%(31) >6 times a year. Annual URTI prevalences in “accompanying disease – group” were as follow: 52.3%(972) 1-2 times, 25.5%(475) 3-4 times, 6.1%(113) 5-6 times, 2.5%(46) >6 times a year. Statistically significant difference was detected between groups in terms of URTI(p<0.001). Annual AOM prevalences in “accompanying disease + group” were as follow: 32.4%(147) 1-2 times, 7%(32) 3-4, 2%(9) 5-6 times. Annual AOM prevalences in “accompanying disease – group” were as follow: 25.3%(470) 1-2 times, 3.3%(61) 3-4 times, 0.5%(9) 5-6 times. Statistically significant difference was detected between groups in terms of AOM(p<0.001).

**Conclusions:** Allergic based some diseases caused URTI and AOM to be seen more often by some probable physiopathologic mechanisms. Thus, not only the treatment but also preventive care is important.

Disclosure: No conflict of interest declared

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**Upper airway obstruction symptoms among children in terms of age groups**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, O.Sari<sup>2</sup>, K.Saglam<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Elementary School-Age era is a significant period for development of childhood. Upper airway obstruction symptoms (difficulties of breathing during sleep, apne seizure, open mouth sleeping, snoring) are common in this period. In our study, upper airway obstruction symptoms were evaluated in terms of age groups among students.

**Methods:** The study was performed in three elementary schools in Ankara between January-May 2011. 2314 students of 6-14 ages were included to the study. The questionnaire, which consisted questions aiming to evaluate the UAOS of students was delivered to parents.

**Results:** Study population was formed with age of 6-14 years students (1123 male, 1191 female). Mean age of students was 9.21±2.08. Students were divided into 3 groups: Group I consist of 958 students with age of 6-8 years, Grup II consist of 1014 students with age of 9-11 years, Grup III consist of 342 students with age of 12-14 years. There was statistical difference in terms of apne period among age groups ( $p=0.048$ ). No statistical difference was detected in other upper airway obstruction symptoms (difficulties of breathing during sleep, open mouth sleeping, snoring) ( $p>0.05$ )

**Conclusions:** Many factors can block airway passage in upper respiratory system like adenoid hypertrophy in childhood. These factors can effect sleep quality, and also cause serious health problems that can effect adulthood period. Thus, students applied to family medicine center should be questioned by taking help of parents about sleep quality and factors associated with problems.

**Key Words:** Elementary school-sge children, Upper airway obstruction symptoms, Sleep quality

Disclosure: No conflict of interest declared

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**Peripheral vascular disease and risk factors in diabetic patients**G.Fioretos<sup>1</sup>, G.Lyrakos<sup>2</sup>, G.Gkaitartzakis<sup>1</sup>, E.Linardoutsou<sup>3</sup>, G.Stratiotis<sup>1</sup>, S.Sakellariopoulou<sup>1</sup>, D.Michalis<sup>3</sup>, E.Chelioti<sup>1</sup><sup>1</sup> Family Medicine, „Tzaneio“General Hospital, Piraeus, Greece; <sup>2</sup> Anesthesiology, Medical School, National and Capodistrian University, Athens, Greece; <sup>3</sup> Family Medicine, Health Center of Aliartos, Thiva, Greece

**Purpose:** To assess risk factors for peripheral vascular disease (PVD) in diabetic patients.

**Material-method:** We assessed PVD with the use of ankle-brachial index and vascular triplex of limbs. The following five risk factors were studied: hypertension, dyslipidaemia, time onset of diabetes mellitus, coronary disease, body mass index (BMI), smoking and age. Statistical analysis was made with multiple regression study and  $\chi^2$  using SPSS16.

**Results:** We found a positive statistical correlation among five risk factors and PVD, time onset of diabetes mellitus ( $\beta=0.27$ ,  $t=4.055$ ,  $p=0.000$ ), smoking ( $\beta=0.339$ ,  $t=5.627$ ,  $p<0.001$ ), dyslipidaemia ( $\beta=0.320$ ,  $t=5.411$ ,  $p=0.001$ ), coronary disease ( $\beta=0.181$ ,  $t=3.043$ ,  $p=0.05$ ), hypertension ( $\beta=0.152$ ,  $t=2.674$ ,  $p<0.05$ ), BMI ( $\beta=0.125$ ,  $t=2.442$ ,  $p=0.01$ ).

**Conclusion:** Our results show that PVD in diabetic patients is highly related to the above mentioned five variables, except for age and BMI.

Disclosure: No conflict of interest declared

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**Prevalence of falls in the elderly**A. Softic<sup>1</sup>, A. Beganlic<sup>2</sup>, N. Pranjic<sup>3</sup>, S. Sulejmanovic<sup>1</sup><sup>1</sup> Family medicine, Health Center Gracanica, Gracanica, Bosnia-Herzegovina; <sup>2</sup> Family medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina; <sup>3</sup> Occupational medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina

**Objective:** Falls are an important factor morbidity and mortality in the elderly. Every year falls between 30% and 40% of people over 65 years, and the consequences of injury in this age are much harder than the younger age groups. The greatest number of falls resulting from complex interactions between the external and internal factors.

**Methods:** Retrospective-prospective study, the control type we analyzed the incidence of falls and the identification and analysis of risk factors for falls in the elderly people in Tuzla Canton. A total of 400 medical records aged  $\geq 65$  years. From the total sample was formed we studied a group of patients who have a medical record of falling. The dependent variable was the fall, and as a potential risk factor for falls in the subjects were used following independent variables: age, gender, cumulative morbidity index ( $\geq 4$  chronic diseases), polypharmacy (taking  $> 3$ -drug day).

**Results:** Of the 376 respondents, women have a significantly higher 64% compared to men 36%. Most respondents were aged 65-74 years, 60% patients. The mean age of respondents was  $73.66 \pm 5.89$  years. Most respondents have a diagnosed chronic illness 2-3, 58%. Polypharmacy is exposed to 54% patients. The prevalence of falls in the geriatric population is 34%.

**Conclusion:** It is evident that falls constitute a major public health problem of the elderly and that are essential to effective prevention programs to reduce the number of hospitalizations and mortality in the elderly are caused by falls.

Disclosure: No conflict of interest declared

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**Factors influencing the management of unwanted pregnancy among adolescents in Klang Valley, Malaysia: Private general practitioners' perspectives**K.A. Malek<sup>1</sup>, S. Othman<sup>2</sup><sup>1</sup> Discipline of Primary Care Medicine, Faculty of Medicine, Sungai Buloh Campus, Universiti Teknologi MARA (UiTM), Selangor, Malaysia; <sup>2</sup> Department of Primary Care, University of Malaya Primary Care Research Group (UMPCRG), Kuala Lumpur, Malaysia

**Objective:** This study aimed at exploring the factors affecting Malaysian private general practitioners' (GPs) intention in managing adolescents with unintended pregnancy.

**Methods:** A focus group discussion (FGD) with five private GPs was conducted; using eight structured related cases to prompt discussion about managing adolescents with unintended pregnancy. Following this, a structured summary of the discussions was distributed to 120 GPs to seek additional views. Based on the Theory of Planned Behaviour, thematic analysis was done to identify the themes underlying GPs' motivation in managing adolescents with unintended pregnancy.

**Results:** GPs' perceived satisfaction from managing adolescents' issues, tight consultation time, inadequate knowledge on resources and adolescents' concern contributed to GPs behavioural beliefs on the intention. Perceived parents' resistance towards sex education in school, religious values on abortion, poor adolescent acceptance for contraception and problems with abortion facilities were reported as sources of social pressure faced by GPs. The clinic patient load, the perceived lack of competence, communication challenges with adolescents and GPs' lack of access to specialist input affected their perceived behavioural control.

**Conclusions:** GPs' intention to manage unintended pregnancy among adolescents is affected by various factors; based on their perceived behavioral belief, the social pressure they received and their perceived ability to act on the matter. Policy makers should consider these factors when implementing changes as it provides grounded information relating the matter.

**Keywords:** Teenage pregnancy, theory of planned behaviour, general practitioners, intention

Disclosure: No conflict of interest declared

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**End of life decision making in buddhist and muslim cancerous patients**S. Jongwilaikasem<sup>1</sup>, H. Tumviriyakul<sup>2</sup><sup>1</sup> Family medicine, medicine, Thammasart university, Pratumthani, Thailand; <sup>2</sup> Family medicine, Hadyai hospital, Songkhla, Thailand

**Background:**End of life decision making in forgoing or continuing life-sustaining treatment is very difficult and complicated. Preparations for dignity and peaceful dying and decision making in end of life depend on value and belief in different religions. This study guided harmoniously cares for not only Buddhist but also Muslim patients and families during end of life according to their values, beliefs and wishes.

**Objectives:**To compare decision making and determine advance care planning in end of life of Buddhist and Muslim patients.

**Methods:**An analytic cross-sectional study of 60 cancerous patients was done during allocate October 1, 2011, and November 31, 2011 at Yen-si-ra hospice. 30 Buddhists and 30 Muslims were stratified random sampling by sex. Interview question were used for collecting data. Associations between religions and end of life decision making were analyzed using logistic regression analytic at significant level 5%.

**Results:**The odds of forgoing cardiac massage, endotracheal intubation and nasogastric tube insertion were significant higher among cancerous Muslim compared to Buddhists (OR 7.81; P=0.001, OR 9.0; P<0.001, OR 5.71; P=0.002 respectively). Cancerous-Muslims prefer dying in hospital with odds 1.67 times compare to Buddhist (OR 1.67; 95%CI 0.31-0.40). While all cancerous-Muslims denied organ or body donation, 36.67% of cancerous-Buddhist preferred it. More than 90% of participants needed relieving pain and discomfort, gentle handling from family members, and trusting doctor for clarifying dying process.

**Conclusion:**Value and belief in religions affected in desirable treatment and advance care planning during end of life. Focus and emphasis on patient's value and belief will lead to harmoniously end of life care.

Disclosure: No conflict of interest declared

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**Family guidance project**O. Tekin<sup>1</sup>, O. Goktas<sup>2</sup>, N. Balci<sup>1</sup>, G. Gulmez<sup>1</sup>, V. Kantekin<sup>1</sup>, K. Sahin<sup>1</sup>, O. Palaz<sup>1</sup>, A. Kuzulu<sup>1</sup>, Z. Doganguzel<sup>1</sup>, U. Eren<sup>1</sup><sup>1</sup> Family Medicine, Ankara Education and Research Hospital, Mamak, Ankara, Turkey; <sup>2</sup> Family Medicine, Uludağ University Family Health Center, Gorukle Campus, Nilufer, Bursa, Turkey

**Objective:** To have a service in line with global standards in teaching and investigation on family counselling in the Academic Field, along with its practice.

**Methods:** Firstly, it was planned to work concerning Family Counselling to complete work currently in progress, to put together new investigations and multi-centred investigations will be put together. Then, it was made Family Counselling known at various levels and created units which use the model of Family Counselling. Following this, was put forward in an objective way the role that Family Counselling plays in the improvement of Health-Care and raised up knowledgeable experts on Family Counselling.

**Results:** On the axis of our country's needs, in the light of current knowledge, placing the understanding of family counselling in the discipline of Family Medicine, it was gained this point of view to develop Family Medicine expertise including this method of approach; on the axis of our country's needs, to do work and investigations on family counselling, publish the findings and make a contribution to science, and on the subject of family counselling to submit the necessary views and provide information.

**Conclusions:** After completing existing work, it was planned new work and making this project known on the website with the decisions of the Ethics Committee.

Disclosure: No conflict of interest declared

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**How many beers did you have yesterday?**

C. Baena

*Family Medicine, Hospital Virgen del Castillo, Yecla, Spain*

45 year old male consults the ED because of oppressive localised chest pain, palpitations and dyspnea after having a large amount of food and drink at a family dinner. Now the pain has remitted but the dyspnea persists. He has past history of hypertension, obesity (34.5 BMI), smokes 4-5 cigars a day and has a 55 year old brother who had a stroke. Physical exam was normal except for tachycardia of 150 bpm. ECG shows a supraventricular tachycardia, which turned to an atrial fibrillation after the second dose of adenosine. He was hospitalised with the diagnosis of first episode atrial fibrillation. Normal echocardiogram discarded differential diagnosis of structural heart disease. His blood tests eliminated hyperthyroidism, digoxine intoxication and electrolyte disbalance, the diagnosis left was alcoholism. This was a case of binge drinking. So a healthy heart, supraventricular tachycardia and binge drinking is called "The Holiday Heart Syndrome"

Even though this was first introduced by *Ettinger* in 1978 we still encounter a lot of these cases today. Understanding that the alcohol risk consumption defined by the WHO as 60gr of alcohol, equals more than 5 beers day, and alcoholism is the third in the list of cardiovascular risk factors in Europe. The worst part is that binge drinking is the favorite drinking pattern of adolescents of 15-18 years old in Spain and they also have the highest drinking rates. It is time to take binge drinking more seriously and ask our patients, for example, How many beers did you have yesterday?

Disclosure: No conflict of interest declared

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**Beck's depression scale as a screening tool in family medicine practice in Bosnia&Herzegovina**

A. Alić, S. Sarajlić-Spahić, S. Prasko, L. Gavran, S. Selmanović

*Primary Care, Family Medicine, Zenica, Bosnia-Herzegovina*

**Aim** to establish prevalence of newly founded, unknown cases of depressive disorder by screening with Beck's depression scale;

**Methodology** comparison with self known cases of depression in patients in the Family medicine practice (FMP); estimating importance of Beck's depression scale with Beck Depression Questionnaire-BDI screening tool in family medicine practice. Prospective research has been conducted with anonymous questionnaire with BDI and special short question papers. The research included 250 randomly selected patients 20 to 60 years of old in FMP Primary Care Zenica. Dismissing factor was previously diagnosed and psychological disorder treated. BDI comprises 21 parts. Responses on symptoms were ranged according to Likert responses scale from 0 to 4 (from none to very much).

**Results** In total 126 (51 men and 75 women) respond to BDI (response rate was 50.4%). Depression was recorded in 48% of the respondents comparing to 31% respondents who made self estimation as being depressed in their questionnaire papers. There is a negative trend in not recognising depression in 17% respondents (48-31). Depressions is statistically more present in unemployed than employed respondents (P=0,001). A leading symptom in both sexes is perception of lost hope (59% cases).

**Conclusion** Respondents questioned in the FMP in Primary Care Zenica showed a high percentage of newly founded previously not recognised depression. BDI is indeed a simple and effective screening instrument for disclosure and identification of people with depression symptoms in FMP.

**Key words:** depression, BDI screening, family medicine practice

Disclosure: No conflict of interest declared

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### Preferred place of terminal care and death in Taiwan : a comparison of general public and their family physicians

T.-Y. Chiu

Department of Family Medicine, College of Medicine and Hospital, National Taiwan University, Taipei, Taiwan., Taipei, Taiwan

**Introduction:** Being able to die in one's preferred place is an indicator of the quality of end-of-life care. The aim of this study was to explore general public's preferences for the place of terminal care and death, and to compare with the assumptions of their family physicians.

**Methods:** Using the stratified random sampling technique, a total 400 people and 200 their family physicians who joined the "Family doctors integrated care delivery system" were surveyed through a structured questionnaire. The four parts of the questionnaire included questions on demographic characteristics, ability in providing end-of-life care at home, preferred place of end-of-life care and death, and knowledge related to end-of-life care.

**Results:** Of the selected public, 314 people (response rate: 79%) and 177 physicians (response rate: 89%) responded. Most of the general public chose home as their preferred place of terminal care and death (59.5% and 65.2%, respectively), but their family physicians' assumption revealed a higher proportion (69.5% and 85.3%, respectively). The result of logistic regression analysis for the determinants of preferred place of death in general public showed that people with Chinese folk religion, younger than age 50 years and live in rural area had higher willingness to die at home.

**Conclusion:** There are discrepancies in the preferred place of terminal care and death between general public and their family physicians. Enhancing effective doctor-patient communication and insist the holistic care model in family medical should be addressed to allow more people die in their preferred place.

Disclosure: No conflict of interest declared

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### Audit of practice in patients with DM in family medicine teams

Azijada Beganlic<sup>1</sup>, Herenda Samira<sup>1</sup>, Brkovic Aida<sup>1</sup>, Batic-Mujanovic Olivera<sup>1</sup>, Albina Softic<sup>2</sup>

<sup>1</sup> Family medicine teaching center, Primary Health Care „dr M.Šehovic“, Tuzla, Bosnia-Herzegovina; <sup>2</sup> Family medicine, Primary Health Care Gracanica, Gracanica, Bosnia-Herzegovina

**Introduction:** Diabetes mellitus is a chronic progressive metabolic disease. Diabetes mellitus morbidity and mortality can be reduced by preventive measures, good metabolic control and control of diabetic complications.

**Objective:** to determine the quality of the care provided on the basis of a systematic review and evaluation of data from patient records. **Methods:** The cross-sectional study included 520 medical records of patients with DM treated by family medicine teams in Tuzla Canton, B&H. We used the following data from the medical record: age; gender; blood glucose (BG); blood pressure (BP); level of total cholesterol (TC); Body mass index (BMI); level glycosylated hemoglobin (HbA1C), foot examination; eye examination; uroanalysis. All data were entered into the form and analyzed in Excel program.

**Results:** Of the 520 of examined the medical records of patients suffering from DM, 63.45% were women. The most of them belonged to group  $\geq 60$  years. In 92.11% of medical records were written blood glucose level, of which only 25% of BG values were in the normal range. BP values were entered into 91.34% of medical records, and 18% of BP was controlled. In 75.57% of medical records were reported value TC, and only 5% of the value of TC was in normal limits. BMI values were entered in 61.92% of patients, and in 7% of patients were in the normal range. In less than half of the medical records were entered HbA1C value, and only 8% of patients achieved normal values. The feet examination was inscribed in 30% of patients, eye examination in 49.23% and the uroanalysis for protein was performed in 62.69% of patients. **Conclusion:** Results of this study showed that management of diabetes care was inadequate. We plan to repeat the audit for 6 months after the implementation changes we will make like as a team.

**Keywords:** audit, diabetes mellitus, family medicine team.

Disclosure: No conflict of interest declared



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**Screening for osteoporosis in women aged over 50 years**

S. Bosankic, S. Herenda, D. Becirovic, E. Karic

*Family medicine, Primary Health Care Center, Zivinice, Bosnia-Herzegovina*

**Introduction:** Osteoporosis is a systemic skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissue, leading to bone fragility and an increased risk for fractures. The prevalence of osteoporosis was 15% to 70% in women older than 50 years.

**Objective:** was to determine the prevalence of osteoporosis.

**Method:** The study included 100 women aged over 50 years. All the patients were sent to do the bone density by ultrasound densitometry and 82 (82%) patients did it. A total of 30 (36.5%) patients with findings of US densitometry which showed decrease in bone mineral density (T score lower than -1 SD) were sent to search Dual-energy X-ray absorptiometry (DXA).

**Results:** reduced bone density had 30 patients (36.5%), 15 (18.25%) had osteopenia and 15 (18.25%) osteoporosis. The average value of T score the vertebral spine was -3.05 SD and neck left femur -1.64 SD. The average age of respondents was 61.7 years. The average age of menopause onset 48.2 years, average duration postmenopause was 12 years. The average body weight of subjects was 84.7 kg and BMI 33.4 kg/m<sup>2</sup>. The most common risk factor was menopause in 13 patients (86.6%), and long-term use of corticosteroids in 2 patients (13.4%).

**Conclusion:** More than a third of the women had reduced bone density and nearly one in five of them had osteoporosis. The most common risk factor for osteoporosis was menopause.

Disclosure: No conflict of interest declared

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**Evaluation of ENT surgeries and tympanostomy tube treatment among children**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, O.Sari<sup>2</sup>, K.Saglam<sup>3</sup>*<sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;**<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey*

**Objective:** Surgical interventions of Ear-nose-throat (ENT) (tonsillectomy, adenoidectomy, tonsilloadenoidectomy) can be compulsory on some occasions during childhood. ENT surgeries and tympanostomy tube treatments during childhood were evaluated in this study.

**Methods:** 2314 students educating in 3 elementary school in Ankara province were accepted to study. Questionnaire forms were delivered to parents of students after taking written consent associated with study. Questionnaire form were including some informations about sociodemographic features, URTI (Upper Respiratory Tract Infection) and AOM (Acute Otitis Media) prevalence during a year, operation histories about ENT surgeries (tonsillectomi, adenoidectomi, tonsilloadenoidectomi).

**Results:** 7.56%(175) of all participants had ENT surgeries. While 57.1%(100) of these students were male, 42.9%(75) were female. Mean age of students had ENT surgeries was 9.42±1.94 (6-14). 1.51%(35) of all students had tympanostomy tube treatments. While 45.7%(16) of these students were male, 54.3%(19) were female. Mean age of students had tympanostomy tube treatments was 8.80± 1.77 (6-13). Correlations between ENT surgeries and URTI prevalences ( $r=0.060, p=0.004$ ); ENT surgeries and AOM prevalences ( $r=0.077, p<0.001$ ) were detected statistically. Correlations between tympanostomy tube treatments and URTI prevalences ( $r=0.063, p=0.002$ ); tympanostomy tube treatments and AOM prevalences ( $r=0.123, p<0.001$ ) were detected statistically.

**Conclusions:** As observing also in our study, selected recurrent URTI and AOM cases can require ENT surgeries and tympanostomy tube treatment. These treatment procedures can be alternative methods in patient resistance to medical treatment and in obligatory surgical indications.

**Key Words:** ENT surgeries, Tympanostomy tube treatment, URTI, AOM

Disclosure: No conflict of interest declared

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**ImageJ for visceral fat area measurement**

J.E. Han, J.W. Kim, S.Y. Lee, K.N. Kim

*Department of Family Medicine, Sanggye-Paik Hospital, Seoul, Korea*

**Objective:** Obesity, particularly visceral obesity, is an important risk factor for cardiovascular morbidity and mortality. So far, computed tomography (CT) has been accepted as a standard method of visceral fat measurement. However, visceral fat area (VFA) measurement by commercial CT-workstation is not cost-effective, and besides, little is written about image analysis methodology. We aimed to elaborate on the methodology of practical VFA measurement using ImageJ, a free, Java-based image-processing package (<http://rsb.info.nih.gov/ij/>), and evaluated the compatibility between Image J and CT-workstation.

**Methods:** CT images of one hundred and eight patients, 16 to 79 years of age (35 males, 73 females) from an obesity clinic were obtained between January 2011 and November 2012. CT scans taken at the patients' umbilicus level were analyzed for the assessment of VFA using ImageJ. The VFA, calculated by ImageJ, was compared to the measurements by CT-workstation.

**Results:** The VFA by ImageJ was highly correlated with measurements by CT-workstation ( $r = 0.9945$ ,  $P < 0.0001$ ) for all participants. Bland-Altman analysis confirmed that the 95% of the differences between estimated VFA by ImageJ and CT-workstation mostly lie between limits of agreement ( $-4.9$  and  $+19.0\text{cm}^2$ ).

**Conclusions:** ImageJ is an appropriate method for the evaluation of visceral fat area measurement.

Disclosure: No conflict of interest declared

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**Ankle brachial index using an automatic blood pressure device in primary care medicine and comparison with Framingham cardiovascular risk score**

F. Tufan, T. Karakuş

*family medicine, mihalıccık gun sazak ilce hastanesi, eskisehir, Turkey*

**Objective:** The aim of this study was to detect peripheral arterial disease (PAD) by the measurement of the ankle-brachial index (ABI) using an automatic blood pressure device in subjects seen for their routine examination by family physician and to compare the obtained ABI with the Framingham score.

**Methods:** This cross-sectional study included patients admitted to our hospital during May – July 2011. A measurement of ABI and Framingham risk score were performed. No patient were known to have arterial disease. Subjects aged between 50-89 years underwent a determination of ABI using an OMRON M2 device and the analysis of Framingham score. Other analysed variables were: sex, age, smoking habits, hypertension, diabetes, hypercholesterolemia, glycemia, total cholesterol, HDL and LDL cholesterol and triglycerides levels.

**Results:** ABI was measured in 150 patients. Mean age of subjects was 70,6 years and %48 were male. A low ABI ( $<0,9$ ) was found in 7 patients. PAD was diagnosed in 4,6% of the sample. Mean Framingham score was 13.9%. No relation was found between pathological ABI and Framingham score.

**Conclusions:** In conclusion, the incorporation of clinical markers of asymptomatic atherosclerosis such as ABI can improve prediction of healthy older individuals at risk of cardiovascular disease. Automatic ABI very easy and quick to determine provides, in addition to Framingham score, a simple and useful tool to detect subjects at high cardiovascular risk.

Disclosure: No conflict of interest declared

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**Anemia in patients with diabetic nephropathy**

R. Lečić, R. Petrovic-Segic

*Health Center Krusevac, Health Center Krusevac, Krusevac, Serbia*

**Background:**Anemia is a well-known consequence of chronic kidney disease.It is particularly pronounced in the etiology of diabetic kidney patients.

**The aim** is to timely detect impairment of renal function in patients with diabetes and attention to the possible existence of anemia in them.

**Method:**The degree of impairment of renal function was determined by calculating the size of the glomerular filtration rate(GFR) special calculator,using theMDRD formula on the basis that the impairment of renal function is divided into 5 phases.As a measure of anemia,were used for hemoglobin(Hb $\leq$ 11.5g/dl for women and $\leq$ 12.0/dl for men).

**Results:**Of 140 diabetic patients,there were 87 women(62.1%) and 53 men(37.9%),mean age $61.3\pm 12.4$  years.The mean GFR $68.7\pm 16.9$ ml/min/1,73m<sup>2</sup>.Normal values of GF had 15.7%The largest number had initial impairment of renal function(CKD stage II),even 57.1%.25% of diabetics had moderate impairment GF(CKD stageIII).2 patients(1.5%) had a significant reduction GF(stage IV),while 1 patient was on dialysis(CKD stage V).In relation to disease duration,63.3% of patients with normal GF have diabetes 1-5 years,while 60% of patients with stage IIIimpairment,as well as those in stage IV and V have a disease duration of more than 11 yearsAnemia was recorded in 21 women and 18 men,which makes a total of 27.8% of respondents.All patients with IV and V degree of renal impairment and 83.9% of diabetic patients with stage III CKD have anemia.In the stage II CKD,11% were anemic.Anemia is not in the group with normal GFR.

**Conclusion:**With the duration of diabetes increases the degree of impairment of renal function,and with it,and occurrence of anemia.

**Key words:**diabetes mellitus,diabetic nephropathy,glomerular filtration,anemia;

Disclosure: No conflict of interest declared

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**Prevalence and impact of urinary incontinence on quality of life of women**

A.I. Silva, C. Almeida, H. Aguiar, M. Neves, M.J. Teles

*Medicina Geral e Familiar, Unidade de Saúde Familiar Nova Salus, Vila Nova de Gaia, Portugal*

**Aims:** Urinary incontinence is a health problem with multidimensional effects that negatively affect the women's quality of life. Although prevalent, it is often underdiagnosed and untreated. It is intended to determine the prevalence of urinary incontinence, the impact of this disease on quality of life and possible association with epidemiological factors.

**Methods:** Analytical cross conducted between July 2011 and September 2012 in a sample of 1918 women, with more than 40 years. The variables studied were: age, marital status, education, body mass index, number of children, type of incontinence, duration, referral the problem to the doctor and their guidance. The impact on quality of life was assessed by questionnaire CONTILIFE<sup>®</sup>. The level of significance was set for  $p \leq 0.05$ .

**Results:** Of the 1291 women surveyed (mean age: 60 years), 23% had incontinence. This significantly affects the quality of life ( $p < 0.001$ ). Impact on quality of life increases ( $p \leq 0.05$ ) with illiteracy, body mass index and the number of births. 38% of women with urinary incontinence who have addressed this issue with your doctor, 66% had an orientation. The approach of the problem is associated with a greater impact ( $p < 0.001$ ) in quality of life compared to those who did not address.

**Conclusion:** This study demonstrates that, although having a high prevalence and significant impact on quality of life, only about one third of women with urinary incontinence addresses this problem with your doctor, and 2/3 get an orientation.

Disclosure: No conflict of interest declared

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**Assessment of enuresis nocturna in terms of gender**Y.C. Doganer<sup>1</sup>, U. Aydogan<sup>2</sup>, P. Nerkiz<sup>2</sup>, K. Saglam<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Several studies have reported that there are differences in prevalence of EN according to gender. The aim of this study was to evaluate primary school students, who have problem with EN, in terms of gender.

**Methods:** Our study was carried out at three elementary schools in Ankara from January 2011 to May 2011. 2314 students between the ages of 6-14 were planned to participate in study. A questionnaire aiming to evaluate the status and characteristics of the participants associated with the EN was distributed to parents. Participating students divided into 3 groups in terms of age groups; 6-8 years of age (n=958) Group I, 9-11 years of age (n=1014) Group II, and 12-14 years of age (n=342) Group III.

**Results:** The average age of 2314 students who was  $9.21 \pm 2.08$ . 48.5% (n=1123) of students were male, 51.5% (n=1191) were female. General EN prevalence was 9.9% (n=230). 52.2% (n=120) of the students who suffer from EN were boys, 47.8% (n=110) were girls, respectively. When the groups separated by age are examined; 43% (n=58) of students suffering from EN were female students, 57% (n=77) of were male students in group I. There is a statistically significant difference when age groups were compared in terms of gender in students with EN (p=0.048).

**Conclusions:** It was reported that extent and duration of nocturnal incontinence is more frequently in males than females. Researchers think that girl have problemless likely in this area, because the relationship between continence and developmental maturation is clear.

**Key words:** Enuresis nocturna, Gender, Primary School Students

Disclosure: No conflict of interest declared

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**Contra study: Improvement in the quality of contraception in diabetic and hypertensive women**

A.I. Silva, C. Almeida, H. Aguiar, M. Neves, M.J. Teles, T. Magalhaes

*Medicina Geral e Familiar, Unidade de Saúde Familiar Nova Salus, Vila Nova de Gaia, Portugal*

**Objective:** To assess and ensure the quality of contraceptive method registration and prescription in women with hypertension and/or diabetes with vascular complications or with more than 20 years of disease.

**Methods:** Retrospective evaluation, in four Portuguese health units. All women aged 15 to 54 years, followed by their Family Physician, under the conditions described above, were included and the contraceptive method used was identified. The data will be processed in Microsoft Excel®2007. Educational measures will be instituted, including the presentation of this data analysis, as well as educational pamphlets. After corrective measures, there will be a reassessment of data on contraceptive methods usage.

**Results:** In the first evaluation, 36.3% of women with hypertension only, with or without diabetes (n = 199) included, used a contraindicated contraceptive method. In the women with diabetes only, under the conditions described, 66% used a contraindicated method (n = 8). After 4 months of corrective measures, the reassessment showed that 27.5% (n = 161) of women in the first group used a contraindicated contraceptive, whereas this number remained similar in the second group.

**Conclusion:** There is a high percentage contraindicated contraceptives method usage in women with hypertension or diabetes with vascular injury. Simple and inexpensive educational measures can improve this practice. The short time for the implementation of corrective measures, as well as the exclusive reliance on hospital referral for the application of certain contraceptive methods may lead to an underestimation of the effect of the educational measures used in this study.

Disclosure: No conflict of interest declared

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**Tendinopathy by fluorquinolones**

R. Jurado, C. Fernández, X. Ferrer, A. Guarido, E. Abad  
CAP Terrassa Est, Consorci Sanitari de Terrassa, Terrassa, Spain

**Introduction:** The fluoroquinolones tendinosis is an adverse reaction with a prevalence of patients 20/100.000 specially affects men over age 60. The clinic may appear during treatment or months later. Appears specially too in cases of concomitant treatment with corticosteroids. The prognosis is favorable in 75% of cases and 49% may have ruptured tendons.

**Case:** 46 year old woman with bilateral knee pain of 3 weeks duration with intense pain in patellar tendons after treatment for 11 days with oral levofloxacin and corticosteroids for pneumonic process. Ultrasound shows a level enthesopathy inserting the patellar tendons.

**Discussion:** In this case, the concomitant use of levofloxacin and corticosteroids have been the cause of the appearance of bilateral patellar enthesopathy, that ultrasound confirmed. This adverse reaction has more to do with individual susceptibility to the drug dose.

Disclosure: No conflict of interest declared

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**Development and validation of the Korean version of schedule of fatigue and anergy/general physical questionnaire**

S. Kim<sup>1</sup>, W.K. Bae<sup>1</sup>, J.Y. Kim<sup>1</sup>, H.J. Soo<sup>1</sup>, J.H. Kim<sup>2</sup>, H.H. Noh<sup>1</sup>, M.J. Jang<sup>3</sup>  
<sup>1</sup> Family Medicine, Seoul National Univiersity Bundang Hospital, Seoul, Korea; <sup>2</sup> Psychiatry, Seoul National Univiersity Bundang Hospital, Seoul, Korea; <sup>3</sup> Family Medicine, Seoul National Univiersity Hospital, Seoul, Korea

**Objective:** The Schedule of Fatigue and Anergy/General Physician (SOFA/GP) is an instrument developed to screen for fatigue in the primary care setting. We aimed to evaluate the reliability and validity of the Korean version of SOFA/GP based on the original English version. Translation and back translation was performed, and after conducting a pilot study, the final version of the questionnaire was tested for its reliability and validity to be adapted in a Korean primary care setting.

**Method:** Two hundred patients visiting a health examination center in a university hospital completed the survey between September through November, 2012. Test-retest reliability was performed within 2 weeks of the primary survey.

**Results:** Concurrent validity was evaluated between the SOFA/GP score and the Fatigue Severity Scale (FSS) and Brief Fatigue Index (BFI) scores. The spearman correlation between SOFA/GP and FSS score was 0.71. Ordered logistic regression was performed between SOFA/GP and BFI (OR 5.95, CI 2.97-11.93,  $p < 0.001$ ). Internal consistency of SOFA/GP was observed (Cronbach's alpha=0.8153) and construct validity was confirmed by factor analysis. Test-retest reliability for each survey items were between 55.07-81.16%.

**Conclusion:** The Korean SOFA/GP is a valid and reliable questionnaire for screening fatigue in a primary care setting.

Disclosure: No conflict of interest declared

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### Assessment of family planning among reproductive aged married women in Turkey

S. Sayin<sup>1</sup>, R. Kutlu<sup>1</sup>, S. Civi<sup>1</sup>, M. Ucar<sup>2</sup>, R. Aslan<sup>3</sup>, O. Demirbas<sup>4</sup>

<sup>1</sup> Department of Family Physician, Medicine Faculty of Meram, University of Konya, TURKIYE, Konya, Turkey; <sup>2</sup> 48 No. Family Health Care Center, Ministry of Health, Konya, Turkey; <sup>3</sup> 52 No. Family Health Care Center, Ministry of Health, Konya, Turkey; <sup>4</sup> Tepekent Family Health Care Center, Ministry of Health, Konya, Turkey

**Objective:** The aim of this study was to evaluate the contraceptive use and affecting factors among reproductive aged women.

**Methods:** This descriptive study was carried out at three primary health care units in Konya. The universe of this study consisted of 416 reproductive aged women who applied to these primary health care units with any complaints during this study period. In a standardized questionnaire, their socio-demographic characteristics and experiences with contraceptives were asked.

**Results:** The participants had a mean age of 30.8 years (SD±6.9), 2.2 children (SD±1.4), 10.1 marriage duration (SD±7.2), and marriage age 20.6 (SD±2.5). Of the respondents, 11.1% were illiterate, 22.4% literate, 34.6% had primary school education, and only 42 (10.1%) had university degree, 60.6% (n=252) were living in the city, 80.8% were housewives and never employed and all of them were officially married. Of all the participants, 71.4% (n=297) were using a modern contraceptive method, 13.5% (n=56) natural family planning, 15.1% (n=63) were not using any contraceptive method, respectively. The most frequently used methods are condom (42.3%), RIA (17.1%), and pills (8.9%). Whilst having primary education or above, living in a city, husband's education significantly increased the use of effective methods (p<0.001), age, gravida, economic status, occupation, type of family, husband's occupation did not affect (p>0.05).

**Conclusion:** The rate of using family planning methods among the women was rather high. In order to increase the rate of efficient methods, the educational programs should be extended to all of those needing and should also be permanent.

Disclosure: No conflict of interest declared

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### The frequency, severity and risk factors of restless legs syndrome

R. Kutlu<sup>1</sup>, S. Civi<sup>1</sup>, S. Sayin<sup>1</sup>, MY. Selcuk<sup>2</sup>, S. Turk<sup>2</sup>, O. Kal<sup>3</sup>

<sup>1</sup> Department of Family Physician, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey; <sup>2</sup> Department of Nephrology, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey; <sup>3</sup> Department of Nephrology, Baskent University, Konya, Turkey

**Objective:** We aimed to evaluate the frequency, severity and risk factors of restless legs syndrome (RLS) in a special population: hemodialysis patients.

**Methods:** This descriptive study consisted of 237 hemodialysis patients who were treated at three hemodialysis centers. To assess the prevalence of RLS, we used the RLS Questionnaire (RLSQ). The International RLS (IRLSSG) rating scale was used to calculate RLS severity.

**Results:** The overall prevalence of RLS according to the four essential criteria in the all participants was 18.6% (n=44). According to the IRLSSG severity scale for RLS (IRLS), of the RLS positive patients, 22.7% was found as mild (n=10), 63.6% as moderate (n=28), 13.6% severe categories (n=6). Mean age was 59.8±14.3 years, 53.2% were males (n=126). Mean time since starting dialysis treatment was 5.4 ± 3.7 years (range:1–19 years). Age, gender, body mass index, blood pressure, education, smoking, some blood chemistry including full blood count, creatinine, urea, total cholesterol, HDL-c, LDL-c, TSH, calcium were not significantly related to RLS (p>0.05). Approximately, 63.6% of 44 RLS patients had the disturbance of sleep onset and maintenance of sleep. Roughly, a person with RLS is 32 times more likely to have insomnia than RLS negative patients [OR=32.025, %95CI; (13.223-77.561)], (p=0.000). RLS was associated with the presence of positive family history and fasting blood sugar (p>0.05).

**Conclusion:** None of the RLS-positive participants had been previously diagnosed or treated for RLS. The goal of treatment for RLS is to eliminate or minimize associated symptoms and increase normal functioning.

Disclosure: No conflict of interest declared

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**Healthcare record audit in a family medicine clinic in Hong Kong**

C.P. Lee, H.K. Cheung

*Family Medicine, Hospital Authority, Hong Kong, Hong Kong*

**Background:** To provide effective and safe medical care, it is essential that doctors keeping good healthcare records, documenting relevant clinical findings, investigations ordered, progress of patients, diagnostic impressions and any treatments provided.

**Objective:** To evaluate the quality of health care record by doctors in a family medicine clinic through an audit and provide feedback to doctors.

**Methods:** Randomly selected 100 health care records of all patients that visited a family medicine clinic from Jan 2012 – Jun 2012 were examined retrospectively by 2 individual auditors who are Family Medicine Specialists. Information that should be included were decided and agreed by the 2 auditors (including reason for consultation, relevant history of chief complaint, progress of previous problems or any prior investigation results, physical examination findings, clinical impression, treatment given and follow up plan). The names of attending doctors in record are blinded before the assessment. Then each health care record was assessed and rated, and the results from 2 auditors were compared to draw conclusion.

**Results:** Results of 2 auditors were similar and comparable, and the satisfactory rate was >80% for all criteria by both auditors. Drug compliance is one main area of deficiency found in cases with chronic illness, and when doctors encountering patients presenting with multiple complaints, some may not mention relevant clinical history, making the subsequent management to be less justified.

**Conclusions:** An ongoing audit and feedback system can be associated with improvements in keeping good medical record in order to provide safe and effective medical care.

Disclosure: No conflict of interest declared

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**Start absence crisis in adulthood**

A. Guarido, G. Lobaton, C. Fernandez, R. Baez

*CAP Terrassa Est, Consorci Sanitari de Terrassa, Terrassa, Spain*

**Background:** epilepsy is more common in extreme ages of life (childhood and older ages); in young adult might be necessary searching for malformations, trauma, infections and neoplasia.

**Case:** male, age 30, no relevant medical history, born in Ecuador, consults for switch-off episodes, about 3 seconds of duration, for the last 3 months. Physical examination was normal (including neurological). Initially orientated as absence crisis and it was requested complementary tests. MRI (magnetic resonance imaging): hyperintense left temporal lesion in T2, about 2.5x2x2 centimeters with mild mass effect in left ventricular system and virtually no peri lesional edema that captures contrast discreetly. Intraparenchymal lesion shows signs of bleeding in different chronological fase. Highly suggestive of cavernoma. No midline desviation. Valproate sodium treatment starts. He was referred to neurosurgery that opts by pterional (fronto-temporo-esphenoidal) craniotomy and excision of the cavernoma. Six months later, valproate was stopped without recurrence of crisis.

**Comment:** The cavernoma or angioma cavernous is a hamartoma of blood vessel that affects the 0.1-0.4% of the population. It occurs mostly in adults (40-60 years), but has also been observed in the childhood. There is a hereditary form most frequently observed in the Spanish-American population. The most common symptoms are convulsions, hemorrhage, focal neurological signs and cephalaea, although it can also be asymptomatic.

**Key words:** epilepsy, cavernoma, absence crisis.

Disclosure: No conflict of interest declared

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**The role of low power laser therapy L.L.L.T. associated with lumbar paravertebral steroid infiltrations in treatment of low back pain in family medicine.**

M.S. Iacob, S. Saftescu

*Family Medicine, „Advitam Medicis“ Medical Center, Timisoara, Romania*

In the GP practice we often face with low back pain, who make trouble both, patients by long periods of inactivity and suffering, and physicians regarding medical management of this complex pathology. We addressed in this study to medical management of all acute back pain syndromes of various causes such as: degenerative intervertebral joints, soft tissue, or lumbar discopathies.

We conducted a prospective study for a period of five years, on 750 patients, using two laser devices. Imaging (CT, MRI, x-ray), along with biomarkers were performed to make an accurate and fast diagnosis. In paravertebral extrasegmental infiltration we used Dexamethasone. This study aims to present the results of LLLT, with red and infrared emission with 1800mW.

Cases studied were divided into three groups: Group 1 includes patients who undergo classic analgesic and anti-inflammatory orally medication associated with physiotherapy, Group 2 included patients treated with only LLLT associated with orally medication, and Group 3 includes patients treated with steroid infiltrations associated with LLLT. Elements evaluated each patient was as follows: pain on a self scale of intensity, functional state, joint mobility, the quality of personal life scale, radiological changes. Our cure rates were: 60% in the first, 72% in second and 88% in third lot from patients, with appreciation of personal satisfaction between 7 and 10, and significant reduction of pain.

In conclusion join LLLT with steroid infiltrations significantly improved outcome with 28% from those treated conventional. Laser therapy treatment is non-invasive, repetitive, painless and shows excellent tolerance by the patient.

Disclosure: No conflict of interest declared

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**Study how patients feel about prohibition of driving after having suffered a stroke**

M.-L. Hänel Sandström

*Västra Götalandsregionen, Research and development organization, Borås, Sweden*

**Objective:** Stroke is the second major cause of death worldwide and the leading cause of long-term disability in adults.

In the world, there are approximately 80 million people living with stroke aftermath at any one time with approximately 13 million new cases every year.

About 30 000 persons is affected by stroke in Sweden every year and 80% of them are older than 65 years.

The principle in Sweden is that every patient gets a driving prohibition for at least one month after a stroke or TIA.

An important task for the physician is to decide if the patient is capable to drive the car again. There are several tests to try the patients eyesight, cognitive ability and strength. The purpose of the study is to develop an understanding how patients with an age above 65 years feel about prohibition of driving after having suffered a stroke.

**Methods:** As part of the study, 10 patients with a stroke or TIA diagnosis are interviewed during the winter 2012. Each patient has experienced a driving prohibition between 3 months and a year. As part of the interview, each patient will be questioned how he/she felt when receiving the information regarding prohibition of driving, how he/she felt during the prohibition and how he/she felt when receiving the information regarding revoke of prohibition of driving.

**Conclusion:** Get a deeper understanding how patients feel about prohibition of driving after having suffered a stroke.

Improving the consultation between the physician and patient in this delicate question.

Disclosure: No conflict of interest declared



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**Knowledge of and attitudes towards family medicine of Spanish medical students at the last year of the degree.**

M.C. Ayuso, F. Escobar, J. López-Torres, J. Montoya, J. Téllez  
*Family Medicine, SESCAM, Albacete, Spain*

**Aim:** To determine knowledge of and attitudes towards family medicine (FM) of medical students with and without previous curriculum in primary care (PC) or FM, in their last year of the degree.

**Design:** Cross-sectional study.

**Setting:** Spanish Medical Schools.

**Participants:** Two hundred and seven students at the end of the 6th year of the degree in 2011-2012 academic year.

**Main outcome measures:** They were asked to respond the brief CAMF, a questionnaire with 21 closed response items. Students from Albacete Medical School responded a "pencil and paper" format in classrooms and the others responded on line.

**Results:** The average age was 23.9 years (SD:2.0); 73.4% were women. Most of them (30.9%) were from Albacete, the rest belonging to other 13 medical schools; 62.3% of them took a course in primary care/family medicine. These students showed a significant higher level of agreement with "the family doctor provides healthcare at consultancy/home" ( $p=0.037$ ) versus those who had not studied it. Nevertheless the last ones showed a significant higher level of agreement with "potential of FM to improve community health" ( $p=0.007$ ); on the other hand they had a higher disagreement with the "FM is highly regarded within the Medical School" ( $p=0.003$ ). There were no differences for the other items; 52.2% of all students "would like to become a family doctor in the future", but only 14.7% considered "FM as their first career choice".

**Conclusion:** Medical students who take a course in PC/FM showed in general similar opinions towards them that those who do not.

Disclosure: No conflict of interest declared

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**The role of home visit to acknowledge social determinants of health and patient centered approach**

R.A. Werdhani  
*Community Medicine Department, Faculty of Medicine University of Indonesia, Jakarta, Indonesia*

**Objective:** Although social factors were important determinant of health, however they have not been elaborated much in medical education and patient's care. Thus home visit was initiated to improve patient's care management.

**Methods:** Final year medical students, supervised by their tutors, conducted home visit of their case study's patient to identify housing and family condition that can aggravate and/or support patient's care management. Students were asked to write reflection report shortly afterward.

**Results:** There were 20 reflection reports from 10 female and 10 male of 22-24 years old final year medical students. All cases were 50 years old and above patients who have chronic disease. Students considered that doing home visit as part of patient's care management was necessary because they can observe the surrounding environment, life style, culture, and socio-economic conditions which were related to the disease and treatment continuity. Moreover during home visit, students stated they could recognize perception and interaction between patient and their family. Besides, they can immediately get the pattern of patient's care at home. Students mentioned that practicing home visit was an opportunity to apply social and humanistic medicine which they learned less in medical textbook.

**Conclusions:** Home visit is necessary to be part of the learning process to cover the social determinants of health that play roles in patient's care management and to provide the more holistic and patient centered approach. Home visit is also important to improve knowledge of social medicine and humanity that has not been touched widely in medical textbook.

Disclosure: No conflict of interest declared

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**The effects of using the advice and drug management program on awareness of self-care and blood sugar levels in fasting muslim diabetic patients during the month of Ramadan**

Ch. Prataksitorn

*Community & Family Medicine Songkhla Hospital, MOPH, THAILAND, Amphor Moug, SONGKLHA, Thailand*

**Objective:** To study the effects of using the advice and drug management program on awareness of self-care and blood sugar levels in fasting Muslim diabetic patients during the Month of Ramadan (compare awareness of self-care and blood sugar levels in fasting Muslim diabetic patients during the month of Ramadan before and after receiving advice and dose adaptation)

**Research Method :** A quasi-experimental study on an advice and dose adaptation program for fasting Muslim diabetic patients during the month of Ramadan. The population consisted of 212 fasting Muslim diabetic patients during the month of Ramadan who received services at the Primary Care Unit. The data were collected from clinical records on blood sugar levels before and after the use of the program, and from a questionnaire about awareness of self-care. Data were analyzed using descriptive and paired t-test.

**Results:** It was found that the score for awareness of self-care of fasting Muslim diabetic patients during the month of Ramadan after the use of the advice and dose adaptation program was higher than that before the use of the program and the difference was statistically significant ( $p < .5$ ). It was also found that the blood sugar levels before and after the use of the program were significantly different ( $p < .5$ ).

**Conclusions:** The fasting Muslim diabetic patients during the month of Ramadan should receive special health examination and care, and therefore, an advice and dose adaptation program or service should be provided so that patients can control their own behavior and care for themselves.

Disclosure: No conflict of interest declared

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**Ultrasound in family medicine and in primary health care – how useful it is?**M. Mujcinagic Vrabac, S. Kreitmayer Pestic, O. Batic Mujanovic  
*General/Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina*

**Objective:** Ultrasound and its use and availability are becoming more widespread among family doctors and primary care physicians. The role of the examiner/family practitioner is to be able to detect pathological and carry out further actions where necessary.

**Methods:** To find and analyse the type of pathology and its frequency, by family doctors, using ultrasound as a diagnostic tool, including this method as a first line tool in primary care. This excluded cancer patients who are being sent to regular check-ups according to their oncological protocol.

**Results;** Available registers of ultrasound carried out by family doctors in Health Center Tuzla, with an attempt to distinguish 3 groups according to severity of processes found and frequency.

**Conclusions:** The most frequent reason for sending a patient to an ultrasound examination is abdominal pain and non-specific discomfort (up to 80 %). Increase in diagnostic capacity of physicians (cholecystitis, abdominal aortic aneurisms, intra abdominal masses, litiasis, intraabdominal cysts – in 10 – 15 %. Rapid detection of grave disorders and emergency situations up to 5%.

Disclosure: No conflict of interest declared

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**Rare conditions occur quite commonly**

T. Townsend

*Whangamata Medical Centre, General Practice, Whangamata, New Zealand*

**Objective:** To annotate and classify rare diseases presenting in one general practice in a finite period.

The literature has focussed on common diseases in general practice since the publication of John Fry's classic book, *Common Diseases: their nature, prevalence, and care* in 1922 and a Google search of common diseases lists more than 330 million results. Much less has been written about rare presentations in general practice.

**Method:** All new rare presentations diagnosed and/or managed over the past 12 years in a rural general practice of 4,300 registered patients have been recorded.

In Europe, a disease is considered rare when it affects 1 person per 2000 (Orphanet 2010). In the United States, the Rare Diseases Act of 2002, defines rare disease strictly according to prevalence, „any disease or condition that affects less than 200,000 persons in the United States,“ or about 1 in 1,500 people.

For this study, a rare presentation was defined as a disease or unusual presentation of a disease with an incidence of 2/100,000 or less. That approximates to any one full-time GP perhaps seeing that condition once in their practicing lifetime.

**Results:** Over the 12-year period more than 70 new rare presentations were recorded. Several of these presentations have been seen in more than one patient.

**Conclusions:** Rare presentations add excitement to general practice. On average, in any one year, a GP can expect to see at least three new rare presentations. They are therefore really quite common. Reasons for this apparent conundrum are discussed.

Disclosure: No conflict of interest declared

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**Smoking and depression symptoms among middle aged women in Tuzla Canton**

S. Kreitmayer Pestic, M. Mujcinagic Vrabac, O. Batic Mujanovic

*General / Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina*

**Objective:** To evaluate the relationship between smoking status and the prevalence of depression among middle aged women, and to investigate if there are differences in these factors between rural and urban area.

**Methods:** In this cross-sectional and descriptive research, a questionnaire to determine the socio-demographic features and smoking status and Beck Depression Inventory (BDI) for measuring depression level were applied to three groups of middle aged women, two in rural and one in urban area.

**Results:** The mean age of participants was 41.05years. Smoking prevalence was found as 38.9%. Smoking prevalence 42.3% was significantly higher in the group of urban women ( $p=.001$ ). BDI results were 17 and over in 18.5% of women. Analysing the total BDI scores according to all three groups, it was found that the frequency of depressive symptoms increased in urban population and decreased in rural. BDI symptomatology was 3.4 times higher among smokers than non-smokers ( $p=.000$ ).

**Conclusion:** Depressive symptomatology was 3.4 times higher among smokers than non-smokers. Giving psychosocial support and services to women by health professionals and related institutions, whose aims are to help them quit smoking and support them, will be beneficial in terms of having healthier elderly women population.

Disclosure: No conflict of interest declared

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**The results of early experience of medical students with family medicine residents in pontifical university catholic of goias – Brazil**

M.D. Ascençao, V.G. Ferreira, R. M. de Oliveira, J.S.D. e Moura  
*Medicine, PUC GOIAS, Goiânia, Brazil*

**Objective:** Present the experience of medical students with Family Medicine residents in the medical field.

**Methods:** In the Pontifical University Catholic of Goiás (PUC-Goiás) students are placed into contact with the community at the first semester of medicine graduation, but just in the third semester academics come into contact with the reality of the family medicine residents.

**Results:** This experience is enriching, because allows students a broader view and permit getting closer to the population, forming a professional able to work in primary care, bringing major benefits to population and to Public Health System.

The experience allows to students the expansion of clinical and scientific acquirements and higher knowledge of the community which they act, narrowing the doctor-patient relationship and providing a holistic view of primary care and the development of skills and attitudes. With these skills the students became capable to have effective educational strategies. The contact with residents serves as a bridge linking the academics to community, enabling to the future doctors a biopsychosocial perspective of patient and not just the disease.

**Conclusions:** Through the method adopted by our university, students can gradually adapt themselves with the experiences in the community, which transforms them into doctors prepared for the reality of the Unified Health System and increases the degree of satisfaction of users of services, which are seen in a holistic view.

Disclosure: No conflict of interest declared

897

**Still waiting for a reply to your referral letter....**

R.P.J. C. Ramanayaka, R.D.N. Sumanasekera, D.P. Perera, A.H.W. de Silva,  
L.A.C.L. Athukorala, K.A.T. Fernando  
*Department of Family Medicine, University of Kelaniya, Ragama, Sri Lanka*

**Background:** Referral and reply letters are an important means of communication between Family Physician and hospital doctors/specialists. Studies describe reply letters as the most neglected route of education for a General Practitioner. Sri Lanka has no standard referral/back-referral system. When we do refer patients, replies from specialists and hospitals are scarce.

**Methodology and Objectives:** Interventional study designed to identify the referral pattern and to improve the rate of reply for referrals. For six months the rate of response to the normal referral letters were looked at. During the next six months, a **structured reply letter** was sent to the hospital doctors/specialists attached to the referral letter. Patents were asked to return the reply letters to Family Physician.

**Results:** During the first phase, 92 patients were referred and there were no responses from the hospital doctors/specialists. During the second phase, a total of 80 patients were referred to hospital doctors/specialists using the structured referral letter with attached, structured reply form. Reply rate was 8.75%(n=7). This was an improvement compared to zero replies experienced previously.

**Discussion:** This was an attempt to improve communication between specialists/hospital doctors and general practitioners in Sri Lanka. Even though there was some improvement it was not satisfactory. Reasons for not replying should be explored broadly and remedial measures need to be taken. In countries without established referral systems, it is necessary that the communication between the primary care doctors and the secondary/tertiary care doctors are maintained in order to provide the optimum service to our patients.

Disclosure: No conflict of interest declared

926

**Violence against street residents of the city of Sao Paulo-Brazil**

C.S. Cardoso, Cavalcanti Myres, E.S. Costa, M. Moreira, J. Nascimento, M.I. Campos  
*Saúde da Família, Associação Saude da Família, São Paulo, Brazil*

**Introduction:** Violence is a phenomenon that has affected individuals mainly from big cities and in particular the population living in street situation; when notified is worrisome and mobilizes a series of reflections about it. Brazilian Government entities have articulated proposals for the construction of a Federal Pact around the National Policy to this thread. Only the joint actions of these organs will be sufficient to protect the lives and the dignity of people.

**Objective:** Identify the violence suffered by the population of the street from the central region of São Paulo, Brazil.

**Method:** Exploratory research conducted in the months of July and October 2012. 183 persons have participated and of this total, 34 did not suffer aggression. 03 guiding questions were used.

**Results:** The research was featured with a sample of 120 persons, 87.5% were male, 80% between 19 and 50 years and 70% of the black race. The violence practiced by the police was the most important (37%), followed by conflicts between the homeless (34%). The types of violence most suffered are beating and body and/or fight and theft with 32% and 21% respectively.

**Conclusion:** This study allows the analysis of the intentional use of physical force and power against homeless people and suggests the creation of better subsidies for the approach and the forwarding of these violated patients, besides encouraging the practice of registering the instances through Individual Violence Research Notification certificate existing in the health services.

Disclosure: No conflict of interest declared

939

**A Government Family Medicine Clinic significantly shorten waiting time of the Urology Specialist Outpatient Clinic**

K.W. Chung, C.L. Wong, K.W. Leung, A.T. Lam, P.K.T. Li  
*Department of Family Medicine & GOPC (NTEC), Hospital Authority, Hong Kong, China*

**Introduction:** In 2008, waiting time for new referral to Government Urology Specialist Outpatient Clinic (USOPC) was more than 200 weeks. A Family Medicine triage clinic (FMC-T), collaborated with urologists, was set up since February 2009 to manage new referrals on common urological conditions, in order to shorten the waiting time.

**Methodology:** This was a retrospective descriptive study. Patients attending FMC-T from February to December 2009 were included.

**Results:** 1602 patients attended. 1304 (81%) were male and 288 (18%) were female. Age ranged from seventeen to ninety-nine. 485 (30.3%) patients were less than 50, 881 (55%) patients were 50 to 75 and 236 (14.7%) patients were more than 76.

557 (65.4%) patients were managed within 3 visits, and 329 (20.5%) patients were discharged without need of further follow-up. 162 (10.1%) patients were referred to urologists for further evaluation. 161 (10%) patients were referred to government outpatient clinics for primary care, while 230 (14.4%) were followed up at FMC-T. Main reasons of referring to urologists were: abnormal investigation result, microscopic haematuria requiring cystoscopy and renal stone requiring operation. Overall waiting time at USOPD was reduced by 60%.

**Conclusions:** FMC-T is effective in reducing USOPD waiting time by holistic approach. Success of this model reflected importance of collaboration between primary, secondary and tertiary care. Similar models could be applied to other specialties for a more cost-effective healthcare system.

Disclosure: No conflict of interest declared

943

**How does dementia affect patients?**

P. Gonzales Flores, S. Sánchez Casco, M. Pedra Benaigues  
*Cap La Farigola, Primary Care, Barcelona, Spain*

**Objective:** Dementia alters many activities of daily living and consumes a large number of health resources. To analyze several sociodemographic variables and use of health services in patients with dementia of a Primary Care Centre.

**Material and methods:** Cross-sectional survey, March 2012. Review of computerised medical records. Variables: age, sex, main caregiver, residence, associated comorbidities, number of medicines, number of visits to the Primary Care Centre, to the hospital and home visits during the previous twelve months.

**Results :** 59 patients: 59% were women. Average age 81 years with standard deviation 6.7. 88% lived at home, 10% at residence and 2% went to the Day Centre. In 53% of cases sons were the main caregiver, in 32% of cases spouses, and in 15% other people. More common associated comorbidities: hypertension 61%, urinary incontinence 38,9%. Average of medicines 6.1, specific medication for dementia 35.5% of patients. Visits to the doctor 4.48, to the nurse 2.45, home 1.77 and hospitalizations 0.5.

**Conclusions:** Most patients are not institutionalized. The main caregiver is a first degree relative. Emphasizes the reduced consumption of anticholinergics and / or memantine. It is not observed a higher frequency at the time to go to the doctor, nurse or hospitalizations than the general population.

Disclosure: No conflict of interest declared

953

**The impact of psychiatric morbidity in the quality of life of primary care attenders in three cities in Brazil**

M. Campos<sup>1</sup>, F. Portugal<sup>1</sup>, S. Fortes<sup>2</sup>, J. Mari<sup>3</sup>, D. Gonçalves<sup>3</sup>

<sup>1</sup> ENSP, FIOCRUZ, Rio de Janeiro, Brazil; <sup>2</sup> Medical Sciences, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil; <sup>3</sup> Psychiatry, Universidade Federal de São Paulo, São Paulo, Brazil

**Introduction:** Patients in psychological distress show quality of life (QoL) scores lower than the general population, which is also affected by socioeconomic factors.

**Objective:** Identify the associations among QoL, social determinants and psychological distress in primary care in three municipalities in Brazil. **Methodology:** Multi-city cross-sectional study with 2,180 patients carried out in São Paulo and Rio de Janeiro from 2009 to 2010, and in Petrópolis in 2002. The statistical analysis used the t-test to compare the variables of interest.

**Results:** The prevalence of Common Mental Disorders (CMD), Severe form of CMD (CMD-S), anxiety and depression were 53.6%, 33%, 37% and 25.1% respectively. The presence of psychological distress resulted in the worst QoL among those studied. In the cases of CMD, those with higher educational level and income presented higher QoL in general domains. For anxiety and depression, income and educational levels behaved inversely in these same domains. Higher educational level showed worst QoL in terms of social relations for all types of distress. **Conclusion:** Psychological distress generated worse QoL among those studied and it was influenced by socioeconomic conditions. Therefore, it is important to structure patient-centered help, which also includes patients' social context.

Disclosure: No conflict of interest declared

1041

**Anticoagulation control of patients under warfarin therapy**A. Ebiloglu<sup>1</sup>, U. Aydogan<sup>1</sup>, O. Sari<sup>1</sup>, T. Cayci<sup>2</sup>, A. Sonmez<sup>3</sup><sup>1</sup> Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>2</sup> Biochemistry, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>3</sup> Endocrinology, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Warfarin's low therapeutic index may lead to bleeding complications. In our study we wanted to evaluate the anticoagulation control of patients under warfarin therapy and bleeding events.

**Methods:** Our study was performed on 126 patients under warfarin therapy, applied to provide blood sample for INR control, between August 2011 – March 2012 in Gulhane Military Medical Faculty, Department of Biochemistry. A questionnaire form was applied to participants about sociodemographic characteristics and bleeding complications. INR values of the patients were recorded. The participants' anticoagulation control and bleeding complications were evaluated.

**Results:** 55 patients' (43.7%) INR values were in therapeutic range. 23 patients' (18.3%) INR values were in supratherapeutic range. 42 patients (33.3%) had experienced bleeding complication. 15 patients had developed gum bleeding. 15 patients had developed epistaxis. 7 patients had developed gastro-intestinal bleeding. 5 patients had developed gross hematuria.

**Conclusions:** Anticoagulation control is so important to prevent bleeding events. Patients under warfarin therapy should be followed-up by their family physicians strictly.

Disclosure: No conflict of interest declared

1060

**A recruitment tool for rural family physicians: the community apgar project.**D. Schmitz<sup>1</sup>, T. Epperly<sup>1</sup>, B. Doty<sup>2</sup>, E. Baker<sup>3</sup><sup>1</sup> Family Medicine Residency of Idaho, Family Medicine Residency of Idaho, Boise, United States; <sup>2</sup> Solstice Family Care, Solstice Family Care, Wasilla, United States; <sup>3</sup> Center for Health Policy, Boise State University, Boise, United States

**Objective:** The Community Apgar Project objectives include the development of tools which assist recruitment and retention of family physicians to rural communities and providing an ongoing contribution to the knowledge regarding rural physician recruitment.

**Methods:** The Critical Access Hospital Community Apgar Questionnaire (CAH CAQ) was developed to help improve physician recruitment to communities with rural hospitals while a distinct tool for outpatient community health centers in rural communities was also developed (CHC CAQ).

After validation of these new instruments in Idaho, the project is now deployed in six states within the United States. This ongoing study has resulted in additional interpretable data for rural physician workforce analysis.

**Results:** Participation in the project may help rural communities to find improvement opportunities for physician recruitment and retention strategies. Strategic plan development can be based on findings which provide a contrasting picture of each individual community with tailored attention to gap analysis, sharing of best practices and obstacle elimination. Similarly, the aggregate results may assist policy makers to identify specific useful initiatives in a broader geographic context.

**Conclusions:** The development of an aggregate Community Apgar Project database composed of multiple state data sets allows for comparison and contrast of factors important to physician recruitment. The results of these studies could inform regional and national policy makers when addressing rural physician shortages. This presentation will discuss the results of an aggregate analysis and identify trends as advantages or barriers to physician recruitment in these six states.

Disclosure: No conflict of interest declared

1079

**Leading reasons for hospitalization in family medicine**M.Podzic<sup>1</sup>, N.Zejnilovic<sup>2</sup>, B.Zoljic<sup>1</sup><sup>1</sup> Family Medicine Clinic Novi grad, Public Institutional Medical Center of Sarajevo Canton, Sarajevo, Bosnia-Herzegovina; <sup>2</sup> Pfizer, d.o.o.Sarajevo, Pfizer BiH, Sarajevo, Bosnia-Herzegovina

**Introduction:** Chronic Mass Non-communicable Diseases (CMNCD) are leading cause of mortality and hospitalization in Bosnia and Herzegovina and its region. Even though patients are usually unwilling to accept hospitalization, it is sometimes inevitable, especially in patients with polymorbidity.

**Aim:** To analyze reasons for hospitalization in patients treated by one Family Medicine Team (FMT) during one year.

**Subjects and Method:** Sample consists of 1160 patients treated by one FMT aged 15-93. Research period is one year. Data were collected from medical charts and hospital discharge documents. Variables: age, sex, primary reason for hospitalization according to ICD-10, co-morbidity, number of hospitalizations per patient during the research period.

**Results:** 7.2% patients (44M and 40F, 57.1%>65y) were hospitalized 1-3 times during one year period. Total number of hospitalizations was 108. Hospitalized patients were aged 18-88, average age is 62.3y (SD18,7y). Leading reasons for hospitalization were cardiovascular diseases (CVD) 16.6%, diseases of the genitourinary system 15.2%, gastrointestinal conditions 13.1%, malignant diseases 12.1%, and mental disorder 11.1%. Leading co-morbidities were: CVD 40.1%, endocrine diseases, metabolic diseases 18.5%, gastrointestinal conditions 10.5%, diseases of the respiratory system 4.5%, diseases of the eye and neoplasms 4.9% each.

**Conclusion:** Leading reasons for hospitalization and co/morbidity in our patients are CVD. Hence community and FMT need to make an effort in order to promote healthy living as well as primary and secondary prevention of CVD and other CMNCDs. We find that these measures along with better cooperation between patients and FMT could help to avoid one part of hospitalizations.

Disclosure: No conflict of interest declared

1095

**Frequency of the chronic diseases exacerbations within field service**

M. Zoric, S. Conic, J. Topalovic, D. Melentijevic

Primary health center, PHC Dr Simo Milosevic, Belgrade, Serbia

**Introduction:** In our Primary Health Center exists an immediate help field service, organized specifically to respond to elderly people, semi-mobile or immobile patients, with the aim of providing them with medical care within their home. Most frequent chronic disease exacerbations for which we are receiving calls from patients are: arterial hypertension (HTA), ischemic heart disease (IHD), osteo-muscular syndrome (OMS) and chronic obstructive lung disease (COPD).

**The aim of our work:** Main aim of our service is to determine significance of level differences in the frequency of exacerbations in these diseases depending on the sex of patients and the period of the year.

**Materials and methods:** Retrospectively-based on medical documentation, we monitored the frequency of occurrence and the reasons patients in winter time (from 22.12.2011-28.02.2012) and during summer period (22.06.2012-30.08.2012).

Data were analyzed by methods of description and analytical statistics.

**Results and Discussion:** Research included 150 patients, with one of these four diseases. There were 60% of women and 40% men with age average of 71.26 ± 13.57. During the summer period, we had 45.3% of the calls and during the winter of 54.7%.

Diseases wise: HTA=37.3%, OMS=30.7%, COPD=24.7%, IHD=7.3%.

The description indicates that the exacerbation of COPD patients, even at 62.16%, occurs in the summer, while it is true for IBS in the winter 72.7%.

X<sup>2</sup> test (gender as the structural features) results were as followed: HTA X<sup>2</sup>=6.354, DF=1, p<0.05; COPD X<sup>2</sup>=12.652; DF=1, p<0.01;

**Conclusion:** There is a significant statistical difference between the frequency of exacerbations of COPD and hypertension between the sexes. Exacerbation of COPD is also associated with summer period, while the exacerbation of IBS can be expected more frequently in the winter.

**Keywords:** exacerbations, chronic disease

Disclosure: No conflict of interest declared



1099

**The management of elderly patients in primary care unit in Sao Paulo – Brazil**L.F. Benati, R.P. Santos, A.W. Lourenco, N.C. Costa, F.H. Benati  
*MEDICAL, SPDM – MEDICINA DA FAMILIA, SAO PAULO, Brazil*

**Objectives:** To analyze the number of elderly patients attending the unit of primary health care, their needs, their treatment, better identification of a multidisciplinary team to properly care for this population.

The elders are now 14.5million people, 8.6%of the total population, according to the Brazilian Institute of Geography and Statistics (IBGE), based on the 2000Census. The Institute believes that people aged 60 years or more, including age limit considered by the World Health Organization for developing countries.

**Results:** The survey showed that the most frequently mentioned pathologies agree with the literature.

Hypertension is the most common disease and affects about 47%of the population

Diabetes mellitus is second with 20%.

Obesity ranks third with 16%of the population.

Physical activity is performed in only 10%of the population.

75%of the population uses some form of medication.

65%of the population uses medical services BasicHealthUnit.

**Conclusions:** The aging population is a reflection of the increase in life expectancy due to advances in health and reduction in the birth rate. Proof of this is the involvement of people over 75 years of age in the total population – in 1991 were 2.4 million(1.6%) and in 2000, 3.6 million(2.1%).

The population today live on average 68.6 years, 2.5years longer than in the early 90s. It is estimated that by 2020 the population over 60 years in the country to reach 30 million people (13%), and life expectancy was 70.3 years.

The image is a picture of what happens to countries like Brazil, which is older still under development. Since developed countries have a longer period, a hundred years, to adapt.

Disclosure: No conflict of interest declared

1125

**Establishing family medicine based primary health care through empowering general practitioners in Indonesia: Recent initiatives towards the managed-care system with family practitioners as the gate keepers**M. Claramita<sup>1</sup>, A. Heru Sutomo<sup>2</sup>, O. Hilman Agrimon<sup>3</sup>, I. Ilmiati Fujiati<sup>4</sup>, D. Vidiawati<sup>5</sup>, S. Wonodirekso<sup>6</sup>, A. Nurdin<sup>7</sup>, A. Soedoko<sup>8</sup>, I. Yusuf<sup>9</sup>

<sup>1</sup> *Medical Education Faculty of Medicine Gadjah Mada University, Consortium of Family Medicine Indonesia, Yogyakarta, Indonesia;* <sup>2</sup> *Public Health Faculty of Medicine Gadjah Mada University, Consortium of Family Medicine Indonesia, Yogyakarta, Indonesia;* <sup>3</sup> *Family Medicine and Public Health, Faculty of Medicine and Health Sciences, University Muhammadiyah, Consortium of Family Medicine Indonesia, Yogyakarta, Indonesia;* <sup>4</sup> *Public Health and Community Medicine, Faculty of Medicine, University of North Sumatera, Consortium of Family Medicine Indonesia, Medan, Indonesia;* <sup>5</sup> *Public Health and Community Medicine, Faculty of Medicine, University of Indonesia, Consortium of Family Medicine Indonesia, Jakarta, Indonesia;* <sup>6</sup> *Dean, Faculty of Medicine University of Tanjung Pura, Kalimantan, Indonesian Association of Family Doctors, Pontianak, Indonesia;* <sup>7</sup> *Public Health and Community Medicine, Faculty of Medicine, University of Hassanuddin, Consortium of Family Medicine Indonesia, Makassar, Indonesia;* <sup>8</sup> *Directorate of Higher Education, Ministry of Education and Culture, Health Professional Education Quality Project, Jakarta, Indonesia;* <sup>9</sup> *Dean Faculty of Medicine, University of Hassanuddin, Indonesian Collegiums of Medical Doctors, Makassar, Indonesia*

**Objectives:** We aimed to share recent Indonesian initiatives towards high quality primary health care (PHC). Short-term goal is preparing the universal coverage insurance system in 2014; long-term goal is producing qualified family doctors. We need to gradually upgrade the current 90,000 general practitioners to family practitioners (FPs), to serve more than 240 million people in over 17,000 islands.

**Methods:** After decades of struggle with the health-care and health-education systems, recent family medicine movement pioneered by a group of medical teachers has been supported by the Ministry of Education and Culture. A snowball method was used to gather participants on series of national workshops.

In August 2012 we gathered ‘the champion’ of senior and younger academic, who summarized the community needs on PHC. In September, we declared the initiative to the public. In October, we directed family medicine into undergraduate, graduate studies and professional practices. November meeting was attended by deans, professional associations and collegiums. We distributed questionnaires to raise awareness on the needs of graduate programs in family medicine.

**Results:**Significance was an invitation to submit an academic paper of a new specialization in family medicine. Consequently, a department of family medicine in any faculty of medicine in Indonesia became essential. Ongoing, series of advocacy have been conducted with the National Health Insurance and Indonesian Parliament. A proposal of FPs’ role was requested.

**Conclusions:**Bringing together the issue with the Ministry of Health and international collaboration to continue the short-term to long-term goals are main challenges.

Disclosure: No conflict of interest declared

1160

**Investigation of long-term health problems in female infertility**

D. Isiklar-Ozberk, S. Civi, R. Kutlu

*Department of Family Physician, Meram Medical Faculty, University of Necmettin Erbakan Konya, TURKEY, Konya, Turkey*

**Objective:** Infertility is associated with some long-term chronic medical conditions (such as diabetes, thyroid dysfunction, hypertension, hyperlipidemia, anemia, obesity). We aimed to investigate long-term health problems in female infertility.

**Methods:** This descriptive study consisted of 606 infertile women aged 20-42 years who applied for investigation of infertility to the family physician outpatient clinic. Age, education, their own and husband's occupation, pregnancy history, general health and smoking status were examined.

**Results:** The participants had a mean age of 29.8±4.4 years, marriage age 22.0±4.1 years, marriage duration 7.5± 4.0 years. Of the respondents, 54.8% had primary school education, and only 17.3% had university degree, 82.2% housewives and 6.9% current smoker. Of the husbands, the mean age was 32.4±4.7 year and the rate of smoking was 49.3%. Only six cases were secondary infertility and 56.4% were overweight and obese. Brucella agglutination was positive in 20 women, 9 HBsAg positive, 13 (2.1%) diabetes mellitus, 16 (2.6%) hypertensive, 85 (14.0) impaired fasting glucose, 115 (19.0%) anemic, 8 (1.3%) hyperthyroidic, 11 (1.8%) hypothyroidic, 22.8% having ≥200 mg/dL total cholesterol, 17.7% ≥150 mg/dL TG, 55.8% ≥ 100 mg/dL LDL, 28.1% <40 mg/dL HDL, 7.9% high CRP.

**Conclusion:** Factors independently associated with infertility include obesity, a history of long-term health problems, smoking, some infectious diseases. These problems must be excluded before the infertility therapy. Healthy lifestyle habits can lower the risk of becoming obesity and developing related diseases.

Disclosure: No conflict of interest declared

1181

**Hypertension: Understanding the reasons for and against compliance with therapy**

A. Malik, F. Popoola, M. Sufian Butt

*Family Medicine, Medical University of Lodz, Lodz, Poland*

**Objective:** The goal of this study is to assess the compliance of hypertensive patients with their therapy. Our hypothesis is that hypertensive patients are unlikely to comply with their prescribed regimen because of the lack of physical symptoms. Hypertension is a disease that if left untreated can have a fatal outcome; but since the symptoms are not severe in the early course of the disease – patients are unlikely to comply.

**Methods:** A survey questionnaire will be conducted in Lodz, which is a city in the center of Poland. The surveys will be carried out through family physician clinics that manage hypertensive patients. This survey will include questions regarding the patient's adherence to therapy as well as lifestyle changes as advised by their doctor. The patients will also be questioned about factors affecting their decision.

**Results:** The data presented will be a collection of the results from the questionnaire for each individual patient that will have a diagnosis of hypertension confirmed by the doctor and were prescribed medication to treat the condition.

**Conclusion:** The results from the conducted survey are expected to support our hypothesis. This information will provide us guidance to better educate our patients about compliance and also encourage medical professionals to manage their patients. This study can further be compared with compliance in other chronic diseases like diabetes to illustrate a relationship between compliance and severity of symptoms.

Disclosure: No conflict of interest declared

1190

**Incidence of giardiasis in the Karaganda region.**

Y. Polyakova, G. Muldaeva, Sh. Kaliyeva, E. Yukhnevich-Nassonova  
*General Medicine, Karaganda State Medical University, Karaganda, Kazakhstan*

**Objective:** The aim of investigation was to evaluate territorial incidence of giardiasis in the Karaganda region for 2010-2011y. **Methods:** We conducted retrospective statistical population study by a selective method on the basis family medical clinics in Karaganda and the cities satellites. Epidemiological data for 2010-2011 was studied. Population examination on existence giardiasis was conducted at 12547 people. It were 39% (n=4991) patients between the ages of 3 to 14 years, 17% (n=2254) from 15 to 18 years, 44% (n=5302) of adults 19 to 62 years. For diagnosis statement were used microscopic examination of stool samples (n=12547) and detecting specific anti-Giardia antibodies by immunofluorescence assay (n=4232).

**Results:** Giardiasis was detect in 21% (n=2718) in coprograms. The incidence analysis on age showed that the greatest percent of giardiasis is registered at children's age and makes 45% (n=2286), that is 18.2% of the total number surveyed. The peak of incidence is in range from 32 to 48 years (42,4%) among adult population. Patients were distributed by sex as follows: women – 57,97%, men 42,03% of the total number of patients.

**Conclusion:** Due to the high prevalence of giardiasis it is necessary to conduct continuous monitoring of the development of the epidemic process in the region, to establish the causes rise, decline or absence of disease and to develop a long-term integrated plan of sanitary and epidemiological measures to reduce the incidence of giardiasis in the Karaganda region.

Disclosure: No conflict of interest declared

1193

**The questioning on the problem of addictions in general medical practice**

L. Matsiyevskaya, G. Muldaeva  
*General Medicine, Karaganda State Medical University, Karaganda, Kazakhstan*

**Objective** The problem of addictions dictates the need for an adequate model of prevention of addictive disorders. There are some difficulties in the field of clinical epidemiology of the various addictions, and therefore in primary health care proposed the use of family resources.

**Methods:** approbation of the questionnaire of addictions and the possibility of its use for the prevention of addictions. 100 visitors of the outpatient service filled in the questionnaire out of 10 issues, reflecting the prevalence of different types of addictions, and the opinion of the respondents about the causes and necessary correction of addictions.

**Results.** In the study sample, the presence of the respondents prevailed food and computer addiction. The closest relatives of the respondents with the addictions are brothers and sisters or parents. The leading problems of addicts are as behavioral and psychological. Over 40% of addicts do not want to solve their own problems, which, according to their families, associated with features of nature, the influence of society, vogue trends or wrong upbringing. Responsibility to correct of addictions 82,5% respondents impose on themselves addicts or their relatives, and also expect efficient help from private practitioners and psychologists.

**Conclusion.** The experience of the questioning provides a more accurate epidemiological showings on the prevalence of addictions, proves the need to achieve of compliance in this area of research.

Disclosure: No conflict of interest declared

1197

**Isn't it time to add spirituality to holistic biopsychosocial approach? An Opinion**

I. Kasim, I. Sencan, R. Kahveci, A. Ozkara

*Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey*

In modern medicine hardest opposition to biomedical approach was from Family Physicians who are frontiers of biopsychosocial approach to the patient. Human is not a biologic, psychologic and sociologic species only. Perhaps many species like apes, wolves, meerkats etc. have these specifications. Beyond these three specifications the human has beliefs, religions, ideologies, interactions with environment and world, sense and perception derived from these interactions. This would be called as spirituality; that would definitely affect sociologic and psychologic states; and probably biologic state as well.

Spirituality could be defined as „an entity that encompasses religion but expands as an understanding of answers to ultimate questions about life, meaning, and relationship to the sacred or transcendent“. It could be seen as “the integrating factor that holds the other domains (biological, psychological, and social domains) together making it essential to providing compassionate, holistic care for the dying”.

There is evidence about effects of spirituality on quality of life, morbidity and even mortality. Most of this evidence comes from family physicians that provide palliative care.

Spirituality and religion lectures were added to medical curricula in 1990's. In USA many medical schools have spirituality and religious issues in their curricula. Furthermore spirituality and religion found their places in psychiatry residency curricula too.

Because of all these phenomena, family physicians accepting bio-psycho-social approach should open up a new frontier to their patients, which would be spiritual approach.

Disclosure: No conflict of interest declared

1202

**Bell's palsy – the purpose of a clinical case**M. Teles<sup>1</sup>, J. Almeida<sup>1</sup>, F. Gomes<sup>2</sup><sup>1</sup> USF Camélias, USF Camélias, ACES Gaia, Vila Nova de Gaia, Portugal; <sup>2</sup> USF Anta, USF Anta, ACES Gaia / Espinho, Espinho, Portugal

**Introduction/** The term Bell's palsy is usually used to describe the facial nerve paralysis that occurs acutely, unilaterally and is idiopathic. Diagnosis is based on clinical history and physical examination. Spontaneous resolution is very widespread, so that there is controversy regarding the most appropriate treatment. Although has a favorable prognosis in most cases, in about 30% the recovery is not complete.

**Objective/**The aim of this study is to report a case of facial paralysis, stressing the importance of GP in appreciation of the signs and symptoms presented by users, to allow a diagnosis and an appropriate therapeutic approach.

**Description/** Male, 50 years old, Caucasian, married, 3 children, without relevant personal or family history. On March 7, 2012, he went to an urgency consultation from his GP presenting face and mouth asymmetry with about a week of evolution. He had initiated treatment in the last 2 days and had not improved. During this consultation, it was found that he was being treated with subtherapeutic doses of corticosteroids. Physical examination showed face and mouth asymmetry, with deviation to the left labial commissure and incomplete occlusion of the left eye. At this time he was treated with Prednisolone, oriented to Physiatry and advised to perform face massage, wear eye tear and protect the affected eye during the night rest.

**Conclusion/** This case study aims to demonstrate the importance of the family doctor in the evaluation of signs and symptoms presented by users, to allow a diagnosis and an appropriate therapeutic approach.

Disclosure: No conflict of interest declared

1224

**Buerger's disease and importance of smoking cessation**

E. Alves, A. Macedo

ACES Alto Ave, USF de Ronfe, Guimarães, Portugal

**Introduction:** Thromboangitis obliterans is a vasculitis that affects medium and small arteries, veins and nerves in the extremities. It is characterized by segmental inflammatory thrombotic vessel occlusions. Patients are predominantly young smokers who present with distal extremity ischemia, ischemic digital ulcers, or digit gangrene.

Although tobacco is important to the pathogenesis, the specific etiologic mechanism remains unknown. Inflammatory, immunologic, and endothelial factors play a role. Smoking cessation reduces symptom and decreases the risk for major amputation. Continued smoking is associated with an overall amputation rate of 40 to 50 percent.

**Methodology:** Consultation of the clinical process and bibliographical research.

**Case Report:** Male, 51 years old, with smoking habits (156 UMA), moderate COPD, Buerger's disease diagnosis since 2001, aseptic necrosis of femur in 2002 and left lower limb amputation above the knee in 2006. Since then the patient denied the disease and its impact on his life quality and refused smoking cessation, didn't meet the proposed therapeutic and didn't come to the medical consults.

He developed digital ulcers and paraesthesia on the right lower limb, and in March of 2012 he was submitted to right lower limb amputation.

**Discussion:** Patients with poor therapeutic adherence represent a challenge for health care professionals, particularly to the family doctor. Communication and education in order to extend patient comprehension on the disease, therapeutic options and follow-up are crucial to increase therapeutic adherence and life quality. Nevertheless, patient's freedom of choice should be respected and the role of family physician is decisive in supporting non-adherent patients.

Disclosure: No conflict of interest declared

1249

**Frequencies of vitamin D deficiency and insulin resistance in an obese population**U. Bilge<sup>1</sup>, M. Ipek<sup>1</sup>, O. Celer<sup>2</sup>, M. Unalacak<sup>1</sup>, A. Akalin<sup>2</sup><sup>1</sup> FAMILY MEDICINE, ESKISEHIR OSMANGAZI UNIVERSITY, ESKISEHIR, Turkey;<sup>2</sup> INTERNAL MEDICINE, ESKISEHIR OSMANGAZI UNIVERSITY, ESKISEHIR, Turkey

**Aim:** Our aims in this study are to evaluate the frequencies of vitamin D deficiency and insulin resistance and to identify the relationship between such parameters.

**Material and Method:** Obese subjects which have body mass indexes greater than 30 kg/m<sup>2</sup> were admitted to study. Homeostasis Model of Assessment – Insulin Resistance (HOMA-IR Formula =fasting Glucose(mg/dl) x fasting Insulin(μU/mL) / 405) was calculated and 1,25 dihydroxy-vitamin D levels were obtained for each subject. HOMA-IR values greater than 2,7 were accepted as insulin resistance. 1,25 dihydroxy-vitamin D values lower than 25 nmol/L were accepted as vitamin D deficiency.

**Results:** A total of 58 obese subjects (45 women, 13 men) with a mean age of 40.36 ± 12.70 were admitted to study. Mean BMI value is 36.07 ± 6.25 kg/m<sup>2</sup> and mean of 1,25 dihydroxy-vitamin D levels is 28,57 ± 13,72 nmol/L. Vitamin-D deficiency was found as %39.7 of the subjects and insulin resistance is found as %53.4. In the subjects which have vitamin-D deficiency the insulin resistance rate was %52.2 as insulin resistance was found as %54.3 in the subjects which do not have such deficiency. We did not find any significant correlations between vitamin D deficiency and insulin resistance.

**Conclusions:** In contrast with other studies we do not find any effect of vitamin-D deficiency on insulin resistance in obese subjects. This subject needs to be evaluated in further studies.

Disclosure: No conflict of interest declared

1250

**Evaluation of the core theoretical program of the family and medicine residence of the community health service – Brazil**

M. Diercks, R. Leite de Castro, N. Gyrao, F. Correa

*Serviço de Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil*

**Introduction:** The Community Health Service offers the Medical Residence Program in Family and Community Medicine (MRPFCM), developed on site and in theoretical-practical activities (TPAs). The MRPFCM theoretical program (TP-MRPFCM) is based on a methodology gathering elements of the problem-based learning and empowerment.

**Objectives:** To evaluate the TP-MRPFCM.

**Methodology:** The TP-MRPFCM evaluations are: process (individually and confidentially filled open questions questionnaire), content (reflexive text about clinical situations and approaching tools), and individual (within the small groups [SG]).

**Results:** Between 2007 and 2012, 78 residents (90% of a total of 86) replied. The critiques or suggested modifications aim to qualify the process in relation to the themes or the bibliography. The role of the facilitator and the SG meetings are considered essential for the learning. *It is a process of responsibility sharing aiming to offer tools to the resident, so that he/she develops certain skills and concepts.*

*I think that the bibliography is really good, supporting us for the reflection and being a very rich theoretical framework.*

*The SG enriches the process and should be kept, since it offers the opportunity to reflect to all, besides the deepening of the discussions. I think that the small group meetings are quite productive, promoting a larger learning.*

**Conclusions:** The pedagogical methodology gathering theory and practice and the presence of a facilitator in the SG was evaluated by the residents, showing that the themes and the objectives are approved by them, providing learning for a comprehensive care of the person.

Disclosure: No conflict of interest declared

1253

**Description of the theoretical program of the family and community medicine residence of the community health service (SSC) – Brazil**

M. Diercks, R. Leite de Castro, N. Gyrao, F. Correa

*Serviço de Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil*

**Introduction:** The Family and Community Medicine Residence Program is developed on site and in theoretical-practical activities (TPAs), named as Theoretical Program of the MRPFCM (TP-MRPFCM).

**Objectives:** To describe the TP-MRPFCM.

**Methodology:** The TP-MRPFCM is an innovative methodology gathering elements from the problem-based learning and empowerment. The residents are divided into small groups (SG) having a family doctor (FD) as a pedagogical facilitator to discuss clinical cases using the person-centered clinical method (PCCM), family approach (FA), some elements from occupational health (OH), and discussion of complex situations with the synthesis of several learned tools and preceptorship elements (one-minute preceptor). Besides, the residents are filmed in their offices and supervised under the preceptorship of peers. The TPAs happen weekly for two hours along three semesters. The evaluations are: process (evaluation of the pedagogical tool), content (reflexive text on clinical situations and approach tools according to the semester of the resident doctor [RD]), and individual evaluation of the RD in the SG.

**Results:** The TP-MRPFCM has been offered for 7 years. The methodology used fosters the learning, the discussion, and the exchange of experience in a critical way by all participants of the SG.

**Conclusions:** The pedagogic methodology that gathers theory and practice and the presence of a facilitator in the SG provides the learning of the RD for a comprehensive care of the person.

Disclosure: No conflict of interest declared

1279

**Prevalence of depression among general practitioners in Macedonia**

K. Stavric, L. Sukriev

*Center for family medicine Medical Faculty Skopje, R.Macedonia, AGPFMSEE, Skopje, Macedonia*

**Introduction:** Depression among general practitioners may influence his work and quality of patient care. The doctors who are exposed every day to stressful, risky work have a lot of psychosomatic diseases. In one study from Serbia 57,69% of doctors are depressed, while 36,11% of doctors had psychosomatic disorder.

**Aim:** To assess the prevalence of depression among general practitioners in Macedonia.

**METHODS:** This was a cross-sectional study conducted among general practitioners in period of November 2012. The Self Reporting Questionnaire for depression PHQ-9 was administered to a random sample of 107 general practitioners. Chi-square test was used for data analysis.

**Results:** 37 (34,58%) were male and 70 (65,42%) were female. 36 doctors were at age of 25-35 years while 32 doctors were age of 36-45 years old. According to the PHQ-9 questionnaire, 10 doctors were identified depressed with >10 points (9%), 26 doctors (24%) had between 5 and 9 points, while 58 doctors (54%) had between 1-4 points. 13 doctors (12%) had no positive answer.

**Conclusion:** It was found that 9% of general practitioners in Macedonia are suffering from depression. 26 doctors (24%) had higher probability of developing depression. Stressful work among general practitioners is an important risk factor. Eliminating the stress should be an important step towards doctor's wellbeing.

Disclosure: No conflict of interest declared

1306

**Resistant hypertension and hypokalemia: What should we do in primary care?**

S. Ören, A. Demirci, E. Yilmaz, C. Işık Sönmez, A. Baydar Artantaş, Y. Üstü

*Family Medicine, Ankara Atatürk Training and Research Hospital, Ankara, Turkey*

**Introduction:** Resistance to pharmacological therapy isn't uncommon at the management of hypertension. Unrecognized forms of secondary hypertension are common causes of resistant hypertension. Here we present a case to emphasize the importance of considering primary hyperaldosteronism (PA) in the differential diagnosis of secondary hypertension in primary care.

**Case report:** A 54-year-old man admitted to primary care office with fatigue and xerostomia. He had Parkinson's disease and 9-year history of hypertension which had become resistant to therapy with amlodipine (10mg), hydrochlorothiazide (12.5mg), telmisartan (80mg), atenolol (100mg) daily. He had a family history of essential hypertension. At admission physical examination revealed BMI: 30.5 kg/m<sup>2</sup>, blood pressure: 140/80 mmHg with heart rate of 72 bpm and minimal pretibial edema. Electrocardiography showed signs of left ventricular overloading and hypertrophy. Laboratory analysis revealed hypokalemia (K: 2.9 mmol/L), increased serum creatinine (Cr: 2.18 mg/dL) and metabolic alkalosis (pH: 7.47, HCO<sub>3</sub>: 33.3 mmol/L). In the illumination of all these findings, the patient was evaluated to have hyperaldosteronism and referred to an endocrinologist.

Further investigations revealed increased aldosterone-to-renin ratio: >30 and bilateral adrenal adenoma on non-contrast CT images; pituitary gland MRI imaging was normal. According to these findings he was diagnosed as PA.

**Discussion:** PA is thought to be a relatively common cause of hypertension. An aldosterone-producing adenoma is an important cause of PA. Surgery would be curative of PA and result in improvement or cure of hypertension and hypokalemia. US Endocrine Society guidelines recommend the case detection of PA in patients with drug-resistant hypertension. In primary care such patients with resistant hypertension and hypokalemia, PA should be considered as a differential diagnosis of secondary hypertension.

Disclosure: No conflict of interest declared

1307

**Factors associated with poor sleep quality in primary care**

J.A. Lee, Y.Z. Kim, S. Sunwoo, Y.S. Kim

*Department of family medicine, Asan medical center, Seoul, South Korea*

**Introduction:** Maintaining good sleep is an important part of health promotion, and affects the quality of life. Insomnia, one example of poor sleep, is very common in adults, and has been associated with several factors: women, old age, depression, and other chronic diseases. Meanwhile, studies on the factors associated with poor sleep quality in the patients of primary clinics have been scarcely performed. Therefore, we aimed to determine the factors associated with poor quality of sleep in patients visiting primary care clinics.

**Methods:** Patients who visited primary clinics were enrolled from March 1, 2009 to February 28, 2010. Participants were divided into two groups according to Pittsburg sleep quality index: group with good (score >), and group with poor (score <) quality of life. Demographic characteristics including age, sex, depressed mood, sleep disorder, and spouse depression were collected and analyzed.

**Result:** Among total 258 participants, 98 (38.0%) were classified as the group with poor quality of sleep. Chi-square analysis revealed that women, depression, and poor sleep quality of the spouse were associated with poor sleep quality. Multiple logistic regression showed that participants with depression had high risk of poor sleep quality (OR 7.775 95% CI 2.555-23.661), while patients with non-risky drinking had low risk (OR 0.343 95% CI 0.128-0.924).

**Conclusion:** More than a third of patients who visited primary clinics showed poor quality of sleep. Depression was independently associated with poor sleep quality.

Disclosure: No conflict of interest declared

1311

**Association of smoking with peripheral vascular disease in patients with “diabetic foot”.**I. Gkaitartzakis<sup>1</sup>, E. Linardoutsou<sup>1</sup>, C. Verras<sup>1</sup>, R. Papparigopoulos<sup>1</sup>, K. Botsios<sup>1</sup>, G. Tsilimidos<sup>1</sup>, E. Chelioti<sup>2</sup><sup>1</sup> *Department of General Medicine, General Hospital of Piraeus, Tzaneio, Piraeus, Greece;*<sup>2</sup> *Department of Nephrology and Renal Unit, Department of General Medicine, General Hospital of Piraeus, Tzaneio, Piraeus, Greece*

**Purpose:** Purpose of our study was to associate smoking with peripheral vascular disease (PVD) in patients with “diabetic foot”.

**Material and method:** We studied 147 patients with “diabetic foot”, 85 men (57,8%) and 62 women (42,2%). Ankle-brachial index was measured at rest. Parameters that were evaluated from the medical history of the patients were age (A), duration of smoking (DS), severity of smoking (SS), severity of PVD (SPVD), duration of the disease (DD), body mass index (BMI) and metabolic control (HbA1c).

**Results:** Of the 147 patients, with mean age 64±10 years old, 91 (61,9%) had a history of smoking. Of these 80 (87,9%) had diabetes mellitus type2 (DM2), and 11 DM1. The 21 patients (29,7%) had stopped smoking while 64 (70,3%) were active smokers. The duration of diabetes was 16,3±7,22 years and the mean value of HbA1c was 9,87±2,13%. The DS was 37±24 years with a daily consumption of cigarettes is 39±18. These patients had BMI 27,2±5,1. Positive correlation exists between the severity of lesions and the severity of smoking compared with non-smokers p=0,000.

**Conclusions:** The grade of PVD and the severity of the injury does not appear to be affected by stopping or continuing smoking. Contrary in our patients with “diabetic foot” lesions, the duration and severity of smoking have a dominant role in PVD.

Disclosure: No conflict of interest declared



1359

**Rare disease in the family**M. Cunha<sup>1</sup>, C. Silva<sup>2</sup><sup>1</sup> ACES ALTO AVE, USFO BASTO, CABECEIRAS DE BASTO, Portugal; <sup>2</sup> ACES ALTO AVE, USF S. NICOLAU, GUIMARAES, Portugal

Tuberous sclerosis (TS) is an inherited neurocutaneous disorder caused by a mutation in either the TSC1 or the TSC2 genes. TS exhibits an autosomal dominant inheritance pattern, its incidence is 1 in 5000 to 10,000 live births. TS is characterized by the development of multiple hamartomas of the brain, eyes, heart, lung, kidney, and skin. The disease's expression varies from dermatologic features only to the development of more serious neurologic or systemic manifestations.

The **objective** of this case is to demonstrate the role of the family physician (FP) in the presence of a rare disease.

**Methods:** Familiar interview, medical record and articles research in UpToDate, PubMed, Medscape.

**Results:** Male child, 7 months-old, Caucasian, brought by his mother to his FP for presenting rapid, tonic contraction of trunk and limb musculature (extension like self-hugging motion) lasting 1 to 5 minutes. Spasms occur in clusters, awakening or during sleep. Physical examination reveals hypopigmented macules and psychomotor development delay. Electroencephalography (generalized spike-wave abnormalities), brain MRI (cortical tubers, astrocytoma) and echocardiography (rhabdomyoma) confirm TS diagnosis. Personal history: 43 years-old mother, gestational diabetes, father died last month (accident).

**Conclusions:** Rare diseases are origin of significant morbidity for the patient and family, physically, economically, emotionally and socially. Towards a disease with serious complications, in which the intervention of the Secondary Health Care is unquestionable, FP offers a proximity medicine, assure that its effects are limited by anticipating cares/crisis, offering preventive and healing cares and orienting in a humanly and personalized form this child and his mother.

Disclosure: No conflict of interest declared

1512

**Applying the numerical pain scale in family medicine**

Z. Frasto, N. Ferizovic, M. Podzic

Department of Family Medical Sarajevo, Public Institutional Medical Centre of Sarajevo Canton, Sarajevo, Bosnia-Herzegovina

Applying the numerical pain scale in family medicine; Z. Frasto, N. Ferizovic, M. Podzic Public Institutional Medical Centre of Sarajevo Canton **Goal:** Test the usefulness of applying numerical pain scale in Family Medicine (FM) for the purpose of improved treatment of patients with chronic pain.

**Method:** Test subjects are 120 consecutive patients (37 male, 83 females) from one FM team, of 18 and above years of age with chronic pain syndrome. We used numerical scale from 1 to 10 and Self-Created Questionnaire containing 7 questions. Variables: age, gender, leading disease causing the chronic pain, rank for the intensity of pain while resting and while under burden, applied medicaments and/or physical therapy for pain. Upon collection, data have been processed statistically.

**Results:** Average age of test subjects is 66,14 years, SD 12,96 years. Leading diagnosis as a cause for the pain according to ICD-10 is: disease of muscular-skeleton system and connecting tissue 44(36,7%), neurological disorders 40(33,3%), neoplasm 20(16,7%), circulatory system disease 7(5,8%) and all other 9(7,5%). Ranking the intensity of pain while resting: 30(25%) patients experienced mild pain, 45(37,5%) patients moderate and 45(37,5%) patients experienced severe pain. Ranking the intensity of pain while under burden: 21(17,5%) patients experienced medium pain; 99(82,5%) patients experienced severe pain. All patients were prescribed medicaments, while 83(69,1%) patients were prescribed both medicaments and physical therapy.

**Conclusion:** Largest part of our test subjects has characterized their pain as medium and severe. Use of numerical pain scale in FM has been found as very useful because it provides assistance in proper treatment of the pain and possibly adjusts the already prescribed treatment.

Disclosure: No conflict of interest declared

1564

### Frequencies of allergic symptoms and cigarette smoking in health care staff and general population. Providing health is allergic

U. Bilge<sup>1</sup>, I. Unluoglu<sup>1</sup>, N Son<sup>2</sup>, A Keskin<sup>3</sup>, Y Korkur Turmen<sup>4</sup>

<sup>1</sup> FAMILY PHYSICIAN, ESKISEHIR OSMANGAZI UNIVERSITY FACULTY OF MEDICINE, ESKISEHIR, Turkey; <sup>2</sup> DIETICIAN, ESKISEHIR OSMANGAZI UNIVERSITY FACULTY OF MEDICINE, ESKISEHIR, Turkey; <sup>3</sup> FAMILY PHYSICIAN, CANKAYA 4TH PRIMARY CARE UNIT, ANKARA, Turkey; <sup>4</sup> FAMILY PHYSICIAN, DUMLUPINAR UNIVERSITY, FACULTY OF MEDICINE, KUTAHYA, Turkey

**Aim:** The purpose of this study is to evaluate the rates of allergic symptoms between general population and health care staff.

**Method:** ECRHS (European Community Respiratory Health Survey) questionnaire was applied and cigarette smoking history was evaluated in a both groups. Patients' history of upper respiratory tract infection in a year was evaluated retrospectively. A median of upper respiratory tract infection (URI) which is equal to 2/year was calculated and comparisons between two groups were performed statistically. All statistical analyzes were performed by using IBM SPSS 20 software.

**Results:** Total of 207 adult patients (108 female, 99 male, aged 33,18 ± 9,32 (median± std.dev) years) were included to study. When the health care staff group was compared with general population, significantly higher rates of non- infectious (allergic) rhinitis (60.6% vs 35.9%; p<0.001), current asthma (9.6% vs 2.9%; p<0.05) were found. Also health care staff group has significantly higher risk of having 2 and more upper respiratory infection in a year (66.3% vs 50.5%; p <0.05). Cigarette smoking was lower in the health care group (26.0% vs 34.0%).

**Discussion:** Occupational respiratory diseases are usually underestimated. Health care providers should pay attention to become familiar with the workplace environment and the environmental causes of occupational rhinitis and asthma.

Disclosure: No conflict of interest declared

1583

### Descriptive analysis of the intensity of 78,165 diabetes control in a population of 1 million inhabitants

J. Fernandez RodriguezLacin<sup>1</sup>, F. Alvarez Guisasola<sup>1</sup>, A. Ruiz Tellez<sup>2</sup>

<sup>1</sup> Medicina de Familia, SESPA, Gijón, Spain; <sup>2</sup> ISIS MANAGER, CYMAP S.L., Barcelona, Spain

**Background and aims:** Importance of computerized medical history records that allow the analysis of information. The results of this analysis allow estimation of the actual situation of diabetic patients and implement corrective measures.

**Materials and methods:** Descriptive retrospective analysis of medical history information recorded in computer 100% of diabetic population served, 78,165 patients, 718 family physicians from 99 health centers, in 2011, the population of Asturias, of 963,466 inhabitants.

**Results:** We found 8.11% of the general population with diabetes. Diabetes + hypertension in 57.27%, Diabetes & Dyslipidemia, 39.17%; Chronic Ischemic Heart Disease Diabetes + 18.67%, Diabetes & Obesity, 14.40%; Diabetes + 5.88% Heart Failure, Diabetes and tobacco + 3.99%. Blood Pressure Control in 75.65% patients. 41,790 available patients with HbA1c recorded (53.46%). 20.49% HbA1c > 8%. Between 7.5 to 8% HbA1c 9.08%. Between 7 to 7.5% 13.49% HbA1c. Between 6.5 to 7% 18.58% HbA1c. Glycemic Control, 61,360 patients with at least one figure or capillary plasma glucose (78.50%). Total cholesterol and LDL cholesterol and an 60.48% 56.78%, respectively, 47,392 have two values. Coleterol Overall, the 59.30% scored <200mg/dl. LDL-cholesterol a 34.48% have values <100mg / dl. The Eye Fund is registered in 8,258 cases, 10.56%.

**Conclusion:** Great value of information in a large population. Reporting of information on tobacco and Fundus. Poor glycemic control with limited registration. It shows a good control of BP, total cholesterol and LDL cholesterol. Good control of HbA1c levels > or = 7.5 in 29.57% of patient.

Disclosure: No conflict of interest declared

1597

**Stress and pain**

S. Cantrak, D. Akulov, V. Savkov

*General Practice, Health Center „New Belgrade“, Belgrade, Serbia*

Stress has an important place in the category of risk factors for chronic diseases.

**Objective:** Presence of stress in patients with chronic diseases;

**Methods:** A formal questionnaire for measuring stress, amended with the general data and data from personal history was used. The presence of stress is graduated according to the responses into four categories. Each second examined person, that in the observed period reported doctor, has been tested.

**Results:** This study included 136 patients, of which 65% are females. The highest percentage is in the age group of 50 to 64 years (36.8%). The highest number of investigated persons (61%) show a moderate stress response. Respondents have several chronic diseases, (2.3 per person), and 25% have more than three diseases. The significant place have cardiovascular diseases (hypertension, ischemic heart diseases, heart failure)-58%. Hypertension is represented here in 43%, with 70% of men and 51% women. The largest number of cardiovascular diseases (68%) is recorded in a category that was the most stress representative, with the dominant representation of hypertension. Hormonal disorders are present in 26% of patients and account for 11% of all diseases.

**Conclusions:** Cardiovascular diseases are the most common in this study. Continuity of health care, involves the continuous monitoring and health education, for modification of risk factors, including stress, although stress is sometimes ignored, because it is difficult to quantify and eliminate. Application of simple questionnaires facilitates the stress detection, and techniques for its elimination can be planned.

**Keywords:** stress, chronic diseases.

Disclosure: No conflict of interest declared

1598

**The prevalence of common diseases in Korean cohort based on family communication.**

J. Han, J. Lee, W. Sun, Y. Kim

*Family Medicine, Asan Medical Center, Seoul, Korea*

**Objective:** To estimate the prevalence of common diseases in patients with good/poor family communication, and determine the disease which is highly associated with family communication.

**Methods:** As a part of the family cohort study in Korea, we performed a cross sectional analysis using the initial data of participants. We collected data from couples who visited 28 primary physicians and agreed on the study from August 2009 to May 2011. We investigated general characteristics of participants and family communication using FACES-IV. We compared the prevalence of chronic diseases based on family communication using chi-square tests and performed multiple logistic regression analyses after adjusting for age and sex.

**Results**

Total 1,111 participants were examined in this study; 854 with good communication and 257 with poor communication. Participants with poor family communication had more alcohol consumption, poor sleep quality, and poor quality of life. The prevalence of stroke and depression is higher in poor family communication group. Stroke has a statistically significant association after adjustment for age, sex, income status, and alcohol consumption on multivariate analysis. (OR 4.05 95%, CI 1.50 – 10.95)

**Conclusions:** Poor family communication seems to be highly associated with stroke. Even though the causal relationship is unclear, stroke is considered to have an effect on family communication. However, in this cohort, the participants with strokes have mild enough sequelae to visit outpatient clinics and be able to communicate. Therefore, the further study is needed to find the cause of poor family communication in these participants, and provide proper medical interventions.

Disclosure: No conflict of interest declared

1616

**Food Neophobia – important in clinical practice**

A. I. Silva

*Medicina Geral e Familiar, USF Nova Salus, Vila Nova de Gaia, Portugal*

**Objective:** To review the scientific evidence of the theme Food Neophobias (FN), focus on the most important aspects of their application in clinical practice.

**Review Methods:** A systematic review was performed for papers published between January 2001 to February 2012, in Portuguese/English, in the medical databases Medline/Pubmed, Cochrane Library, National Guideline Clearinghouse, evidence-based medicine sites and Physiology text books.

**Results:** The term FN is defined as a reluctant acceptance of new flavors.

The taste for certain foods is a complex process that begins in utero, breastfeeding continues and remains throughout life. Although there is influence of genetic factors, these can be contradicted by early and repeated exposure to different flavors, which will modulate the taste and will reduce the risk of future diseases, including childhood obesity.

As the window for habituation to new flavors is thin, the rejection of foods introduced after 4 years is higher. The acceptance of a new flavor up to five years often requires 10 to 15 repeated exposures.

Emotions, social aspects and digestive processes, are factors that influence the acquisition of taste.

The negative reinforcement, such pressures, should be avoided, and the positive reinforcement should be followed.

**Conclusions:** By giving the child some favorite foods with new foods and to stay calm for temporary neophobias, may be the key to the development of taste preferences. These preferences are very stable and can follow up lifelong and we should pay particular attention to children and parents in the „taste education“ process.

Disclosure: No conflict of interest declared

1617

**Pharmacological treatment of idiopathic facial nerve paralysis: What is the evidence?**

A. I. Silva, T. Magalhaes

*Medicina Geral e Familiar, USF Nova Salus, Vila Nova de Gaia, Portugal*

**Objective:** Determine, between the use of corticosteroids and/or antivirals, the most effective treatment for Bell's palsy.

**Methodology:** Electronic database search for clinical guidelines, systematic reviews and meta-analysis (MA), in Pubmed published between 01/2005 and 04/2012, in English and Portuguese. For assessment of level of evidence (LE) and strength of recommendations, the Strength of Recommendation Taxonomy (SORT) from American Family Physician was used.

**Results:** Of the 159 articles found, seven MA fulfilled inclusion criteria. Three MA support, consistently and significantly, the clinical benefit of corticosteroid versus placebo (LE 2). The use of antivirals was not better than placebo in two studies (LE 2). The corticosteroid and antiviral combination was similar to isolated corticosteroid in two studies and in four studies a benefit of the combination versus isolated corticosteroid was reported, though without statistical significance. This report benefit for the combination treatment was potentially more relevant in severe cases of paralysis (LE 2).

**Discussion:** Corticosteroids are still the best clinical evidence-based treatment (Rec B). There is no evidence of benefit for antivirals, isolated or in combination with corticosteroids, in the treatment of Bell's palsy (Rec B). In patients with severe paralysis, there may potentially be a small benefit in adding an antiviral to steroid therapy (Rec B). The numerous methodological limitations, as well as the heterogeneity between studies should be underlined. In the future, large scale, homogenous studies, with consistent methodologies, that study the use of recent antivirals such as valaciclovir and famciclovir and with a cost-benefit evaluation are needed.

Disclosure: No conflict of interest declared

1656

**Evaluation of the efficacy of “hypertonic’s school” in relation to characteristics of the adherence to the therapeutic regime in the patients with arterial hypertension**

O. Yusupov

*General practice training center No1, Tashkent Medical Academy, Tashkent, Uzbekistan*

The purpose of our investigation was to evaluate efficacy of “Hypertonic’s School” on the basis of characteristics of the adherence to the therapeutic regime in the patients with arterial hypertension.

There were presented 204 patients including 101 with arterial hypertension stage 1 and 103 patients with arterial hypertension, stage 2, who were studied on learning program “Hypertonic’s school” in the Family polyclinic N 37 in Tashkent. The initial level of the patient knowledge on the basis of the essential notions about arterial hypertension was evaluated with use of special questionnaires. Analysis of the regularity in receiving of antihypertensive preparations showed that after visiting of the educational program “Hypertonic’s school” the share of the patients receiving regularly antihypertensive preparations increased due to improvement of the adherence of the patients to the treatment recommendations. The learning of the patients with arterial hypertension in the “Hypertonic’s school” resulted in increase of the share of patients effectively controlling arterial hypertension.

Disclosure: No conflict of interest declared

1658

**Assessment of the efficacy of preparation enap-n in the patients with arterial hypertension under the conditions of polyclinics.**

D. Yarmukhamedova, O. Yusupov

*General Practice Training centre No1, Tashkent Medical Academy, Tashkent, Uzbekistan*

**Aim:** To study efficacy of combined preparation Enap-N in the patients with soft and moderate arterial hypertension under conditions of polyclinic.

**Material and methods:** There were studied 214 patients with mild and moderate arterial hypertension aged of 45-56 years (average age  $53 \pm 3,2$  years). Duration of arterial hypertension was  $9 \pm 7$  years. The first degree of arterial hypertension was revealed in 47% and II degree in 53% of patients. The patients were divided into the following groups: group I included 104 patients, receiving enalapryl of firm KRKA (Slovenia) in daily dose 10-20mg. Group II consisted of 110 patients who were prescribed preparation Enap-N of firm KRKA (Slovenia) containing fixed combination of enalapryl 10mg and hypothiaside 25mg in dose 1 x 3 times a day with possible increasing dose 2 times while requiring. The purpose of therapy was to achieve the target level of the arterial pressure (AP) –  $< 140/90$  MM Hg. There was used randomized open method. The duration of therapy was 8 weeks.

**Results:** The achievement of the target level of AP is the mandatory condition for adequate treatment of AP. The results of 8-week treatment with enalapryl showed reduction of the SAP level by 19,4% and DAP by 11,4%. The target level was achieved in 59% of patients. The results of 8-week therapy with ENAP-N showed reduction of the middle level of SAP by 23.4mm Hg, middle level of DAP – 13,6mm Hg. During combined treatment including Enap-N the target level of AP reduced in 79% of patients.

**Conclusion:** Thus, the fixed combination of enalapryl and hypothiasize-Enap-N was useful in single dose a day and provides achievement of the target level of arterial pressure in the patients with mild and moderate arterial hypertension.

Disclosure: No conflict of interest declared

1661

**Comparative 10-year study in a Regional Clinic of Crete**A.Nazeraj<sup>1</sup>, G.Tsachaki<sup>2</sup>, G.Papandroulidakis<sup>3</sup><sup>1</sup> *Economic Theory and Policy, Aristotle University of Thessaloniki, Thessaloniki, Greece EL;*<sup>2</sup> *Regional Clinic of Tylisos, Health Center of Agia Varvara, Heraklion, Crete, Greece EL;*<sup>3</sup> *Electrical and Computer Engineering, Democritus University of Thrace, Xanthi, Greece EL*

The aim of this study was the evaluation of the treatment over a decade of the most frequent diseases in elderly people in a rural area of Crete as well as the examination of the effects of the environment on morbidity of the same population due to industrial development. This study is effected after a comparative study was published 10 years ago. The data of 984 patients in the R.C. of Tylisos were recorded electronically out of which 490 were chosen based on their age (age $\geq$ 65). The study indicates that over the 10 years the development of a health network and the collaboration of the above mentioned R.C. under-study with health agencies brought results as it seems that treatment helped to a large degree the basic cause in the disability of elderly people, i.e. the arthritis cases which from top position (64,2%) dropped to third (18,57%). The collaboration of the R.C. with other health agencies led to a significant drop in patient numbers confined at home (25% $\rightarrow$ 2,04%) through the timely guidance as to the right diet and physical exercise, physiotherapy, medication and surgery. While hypertension, heart diseases and diabetes remain the most frequent diseases, it is worth noting the increase in patients with neoplasia (4,7% $\rightarrow$ 6,94%). The operation of an industrial zone in recent years is a factor affecting the environment and it is possible more measures are required to avoid negative consequences on local residents.

Keywords: Health Network, environment protection, development

Disclosure: No conflict of interest declared

1666

**Nonagenarians. How are they?**

R. Pinto, M. Muñoz, C. García, A. Martínez, A. Pérez, J. González, J. Espinasa, I. García

*Family Medicine, EAP Granollers 4 sud, Granollers, Spain*

**Objective:** Knowing the profile of our nonagenarian patients.

**Methods:** Cross sectional study conducted during the month of September 2012. Variables: gender, age, marital status. Features of the home: where you live, with whom he lives, primary caregiver, and if they have external caregiver. Barthel Index(BI): functional capacity for basic activities of daily living, ordinal scale which evaluates the different degrees of dependency: total(0-20), severe(21-40), moderate(41-60), mild(61-90) and independent(>90). The associated cardiovascular risk factors more prevalent and diagnosis of dementia. And if they have obtained home care, dependency law and telecare.

**Results:** N:66. Men 21(31.8%). Average age 92.3 years. 77.3% are widows, 21.2% married and 1.5% singles. 54.5% live with their sons/daughters, 19.7% with a partner, 18.3% alone and 4.5% with outsiders. The sons/daughters are the primary caregiver in 71.3%, the partner in 15.2% and the outsiders in 7.5% outsider. 74.2% have a foreign caregiver assistance. The Barthel average is 72. 21.2% are home care patients, 36.4% had obtained dependency law and 47% telecare. The most frequent cardiovascular risk factors are: Hypertension(91%), dyslipidemia(51.5%), chronic renal failure (40.9%), diabetes(31.8%), heart failure(15.1%), stroke(13.6%), ischemic heart disease(13.6%). 10.6% have dementia.

**Conclusions:** 77% of nonagenarians are widowed, living with their sons or daughters and these are the primary caregivers, and most have outside help from a professional caregiver.

The average is 72 IB(mild dependence).

Only 36% of them benefit from dependency law and half of them have telecare.

The most common cardiovascular risk factor in nonagenarians is hypertension followed by dyslipidemia and chronic renal failure.

Disclosure: No conflict of interest declared

1692

### General triplex ultrasound as a screening method of newborns and infants in the family doctor's office.

M. Sorin Iacob

*Advitam Medicis Medical Center, Family Medicine, Timisoara, Romania*

Newborn screening is a complex analysis of blood and complementary testing hearing, which aims to detect or rule out early in infants, more severe disease that is essential for the immediate commencement of treatment. Number of diseases included in screening varies from country to country, among 30 to 50, and this is done only in hospital.

The most important examples of diseases for which newborns are screened at birth: Hypothyroidism, adrenogenital syndrome (AGS), cystic fibrosis (CF), the deficit in biotinidase, galactosemia, phenylketonuria (PKU), hyperphenylalaninemia (HPA), maple syrup disease (MSUD), metabolic defects of fatty acids, carnitine cycle defects, glutaric aciduria type I, isovaleric acidemia.

Pulse oximetry screening is a simple procedure, non-invasive and painless, to diagnose since maternity, critical congenital heart defects.

A second important chapter, as potential pathology present in the newborn and infant are tumors, finally followed by infection. Liver tumors are number three in incidence in children, after Wilms' tumor and neuroblastoma.

Triplex Doppler ultrasound examination of the neonate and young infant is possible with current equipment performance and use of appropriate techniques explored segment.

We started the ultrasound examination of the abdominal region, of the right hypochondrium counterclockwise, on standard sections and plans, fast mode for each region.

Our prospective study was performed in the Clinic Advitam Medicis, for a period of ten years and includes several 800 apparently healthy newborns and infants.

We followed a protocol ultrasound, designed by us for all newborns and infants included,

identifying standard sections:

1. Abdominal ultrasound > liver, pancreas, kidney, spleen, adrenal glands, bladder, testis.
2. Cardiac ultrasound > section four rooms
3. Thyroid ultrasound > cross section and longitudinal
4. Head Ultrasound > coronal sections and sagittal sections.
5. Hip ultrasound at four months > section Graf.

Ultrasonography is an useful diagnostic method for investigating malformations and tumors, topography establishing, expanding, consistency and semiological elements related to their structure. Triplex Doppler sonography as a noninvasive diagnostic technique, extended in practice to study with small vessels.

This allowed us in this study, assessing vascular organs examined, assessing vascular diameter, variations in size relative to respiratory movements, presence and direction of blood flow, velocity change, Pourcelot resistance index, pulsatility index of Gosling and Moryasu congestion index, appearance of collateral circulation, installation and

location of stenosis, aneurysm, bleeding, thrombosis and other complications.

We identified in the malignant tumors, the emergence of a rich vasculature, vessel neof ormation, both the periphery and inside the node, vessels and their differentiation areas of necrosis and intratumoral hemorrhage.

Congenital malformations of newborns studied was 6.5%, with a significant increase of 20% over the past five years. The most common are vascular malformations (hemangiomas) followed by regression of the cardiac, renal, congenital dislocation of the hip, thyroid, genital and neurological.

Hypoxic ischemic encephalopathy is an entity becoming more common in infants 4% in varying degrees of severity.

Malignant tumors 0,5% account for about two thirds of all primary tumors in infants. Of these hepatoblastoma has a higher incidence in neonates and infants, depends on early detection and treatment, enlargement, tumor grading and especially the existence of vascular invasion.

Late diagnosis and lack of treatment can lead to organ dysfunction, physical and mental retardation and sometimes even death. Usually, babies with these disorders seem perfectly healthy in a routine clinical examination. Some of the diseases included in the screening can be kept under control by diet or by simple treatment.

In conclusion we mention that triplex Doppler sonography is useful in detection of congenital pathology, tumor and infectious and monitoring newborns and infants up to four months, allowing their enrollment in early diagnosis with definite prognostic value.

Disclosure: No conflict of interest declared

1711

**Multimorbidity in a university-based family practice**

Y.H. Jin, J.K. Lee, B.K. Kim, E.S. Kim

*Department of Family Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea*

**Objective:** Multimorbidity is common in aging society and it is recently issued in medical research. However, it is rarely studied in Korea. This study aimed to estimate prevalence of multimorbidity and identify common co-morbidity in primary care settings.

**Methods:** Study populations were all patients who visited outpatients department of family medicine during study periods (n=2284). Study was carried out in each one week of April, July, October in 2012 and January 2013. Multimorbidity was measured by counting number of health problems and severity was estimated with Cumulative Illness Rating Scale (CIRS). Multimorbidity was defined as two or more medical conditions at the same time.

**Results:** Participants consisted with 893(39.5%) male and 1370(60.5%) female, mean age was 53.6 in both male and female. Prevalence of multimorbidity in 15- to 40-year of age, 41- to 64- year of age, more than 65-year of age were 36.4%, 69.9%, 70.2% in male and 35.2%, 62.2%, 76.1% in female, respectively.

Mean number of health problems in 15- to 40-year, 41- to 64-year, 65-year and older were 1.43, 2.29, 2.75 in male and 1.34, 2.08, 2.66 in female. The 3 most common co-morbidity category were endocrine-metabolic, cardiac, musculoskeletal system.

**Conclusions:** Prevalence of multimorbidity is high and increased with age. The prevalence of patients with multimorbidity in aging society will be increased. In primary care settings physicians should be aware of these facts and be cautious in their practice.

Disclosure: No conflict of interest declared

1718

**Analysis of the coverage of the exam for preventing the cervical cancer in uterus in a health care unit in a city in mid-west Brazil**

S.R. Batista, V.L. Carneiro, L.C. Goulart, L.L.G. Silveira, F.R. Rodrigues,

L.Z.C. De Lima, P.A.C. Rodrigues, N.D.F. Almeida

*FACULDADE DE MEDICINA, UNIVERSIDADE FEDERAL DE GOIÁS, GOIANIA, Brazil*

**Objective:** Analyse the coverage of the exam for the prevention of cervical cancer in uterus (Papanicolaou) of a home visit team from the Unidade de Atenção Básica à Saúde da Família (UABSF) in the Setor Leste Universitário in Goiania. Goias, Brazil.

**Methods:** Data from the Sistema de Informação do Câncer de Colo de Útero (SISCOLO) of the team 1 from the UABSF – Leste Universitario was collected. Alongside, data was also collected from the directory of the health unity and from the nurses responsible for the teams. Those two data were confronted to determine the validity of the system and the coverage efficiency.

**Results:** With 764 women – between 15 and 60 – electible, in the determined area the team acts, 396 exams – on women between 11 and 78 – were performed in the period of 2009 to 2012. Among those, all that had expected conducts expressed in the SISCOLO (repeating the exam in a year, at maximum) did not return for a second Papanicolaou.

**Conclusions:** The coverage of the exam is deficient, once that 396 were performed within four years and the area holds 764 women and there have been no returns. There is also a lack of control, from the unity, on the number of women, observed though the difficulty to obtain precise and official data. The deficiency even worsens while people that undergo Papanicolaou do not return to claim the results of the exam, and are not contacted by the unity.

Disclosure: No conflict of interest declared



1735

### Tetavalent vaccine coverage in children under 1 year at Jardim Guanabara I neighborhood in Goiânia, Goiás

M. Meira, R. Castro, J. Oliveira, N. Lima, F. Barros, W. Rodrigues  
*Faculty of Medicine, Federal University of Goiás, Goiânia, Brazil*

**Objective:** Analyze, by sampling, the tetavalent vaccine (DTP + Hib) coverage in children younger than one year, at the Family Healthcare Unit (FHU), at Jardim Guanabara I neighborhood, in Goiânia, Goiás, from January 2009 to December 2011.

**Methods:** We used three different sources to collect data vaccine: 127 vaccination cards, 29 mirror cards from 4 different health agents and consolidated vaccines data from July 2010 to December 2011. The goals set by the Health Pact biennium 2010/2011 were compared with the unit's coverage. It was proposed an explanation for the lack of materials and data collected from FHU.

**Results:** 127 immunization cards were analyzed, considering that 118 had at least one tetavalent dose applied, and from those 7.62% received only one dose; 23.72% two doses, and 68.64%, all three vaccine doses. Regarding the term recommended by the National Immunization Program (NIP), 54.33% were in accordance with the dates set and 45.66% had some delay.

**Conclusion:** The data provided by the unit are not sufficient to analyze reliably the coverage of the tetavalent vaccine. The small sample is not in accordance with the goal in Brazil Health Pact, because 68.64% is shown by the coverage unit data and it recommends 95% of minimum coverage.

Disclosure: No conflict of interest declared

1742

### Comparing effectiveness of child health care before and after family medicine program in health district

H. Jabbari Bairami, Z. Khamnian, E. Kafili, J. Shahamfar, F. Bakhshian, F. Gorashian

**Introduction:** The Family medicine Program in Iran provided an opportunity for general practitioners to practice as regular primary care providers for designated rural populations, it is expected by performing this program, children healthiness indices would change. So the aim of this study to evaluate the effect of performing this program based on children healthiness & nutritional was planned and carried out.

**Methodology:** This study is Descriptive, Analytic and sectional study. Survey sample include 751 children born in 2008 to 2012 from 20 villages of Tabriz province (12% of total sample) in which the related data were collected from households healthiness files at the ages of 0, 6, 12, 18 month & were analyzed & performing family physicians using SPSS software.

**Finding:** Some of the elements of children's care as supplementation, first care beginning age, reference cases & hospitalizing after family physician presence showed recovery signs and usage duration of breast milk has showed lack of recovery ( $P < 0.05$ ). Also, entropometric changes of height & weight have not been confirmed as significant & certain changes of height & weight have not been confirmed as significant & certain changes along improvement indices & comparing number of surveillances since birth to 18 months is not reliable due to national directions & performing healthy child program in health care ministry.

In addition, examination of mortality cases of infants & neonatal has not showed any distinct result.

**Conclusion:** In general, physician & midwife presence had significant effect on some of care elements, but there have not been obtained firm evidences to confirm its influence on children healthiness indices, at least in this study, so reviewing family physician's responsibilities & planning & performing broad studies to evaluate program effectiveness more precisely on children healthiness (mortality & entropometric indices) is suggested.

Disclosure: No conflict of interest declared

1757

**Crohn's disease – the need for suspicion**

C. Pires, I. Coelho, M. Correia, P. Oliveira  
USG, Grão Vasco, Viseu, Portugal

**Introduction:** Crohn's disease (CD) is a chronic inflammatory bowel disease (IBD) affecting patients of any age, although most often between 15 and 30 years, with slight predominance in females. The broad-spectrum clinical manifestations sometimes make its diagnosis a challenge.

**Case presentation:** 19 year old, male, presents to his general practitioner (GP), complaining of diarrhea and abdominal cramps. Deparasitisation was prescribed for likely intestinal infection.

After 11 months the patient returns for an emergency appointment, complaining of Odynophagia. The physical exam was compatible with bacterial tonsillitis. Antibiotics were prescribed.

The following week the patient returns for another emergency appointment, complaining of diarrhea and abdominal cramps that started the 4th day of antibiotics. Established the diagnosis of secondary effect of antibiotics, a probiotic was prescribed. After two weeks the patient returns for another emergency appointment (by yet another doctor) indicating continuation of symptoms. Physical examination revealed pain in right lower quadrant. Otilonium bromide was prescribed. The patient was advised to make an appointment with his GP, which took place 10 days later. The patient maintained symptoms; his GP thought of a possible IBD and prescribed a colonoscopy, which revealed CD.

**Discussion:** Emergency appointments are important in primary health care as they increase patients' accessibility, but because the patients may be seen by different doctors each time, this can limit a holistic view. The first diagnosis may not be the key to solving the clinical case. Sometimes only the progression of symptoms and integration of information allows GP's to make a correct diagnosis.

Disclosure: No conflict of interest declared

1787

**Expectations of sample of physicians working in Erbil city/Iraq about the role of family medicine practice**

S. Ahmed<sup>1</sup>, S. Yacoub<sup>2</sup>

<sup>1</sup> Briaty Specialized Centre of Family Medicine, Ministry of Health, Erbil, Iraq; <sup>2</sup> Community Medicine, College of Medicine/Hawler Medical University/Ministry of Higher Education, Erbil, Iraq

**Objective:** To explore the expectations of sample of physicians working in Erbil city about the role of family medicine practice.

**Methods:** Across sectional study conducted from March to May 2012 involving Ten teaching and general hospitals, 19 primary health care centers, 9 specialized medical institutes, ministry of health and directorate of health . a sample of 256 physicians was selected A self-administered questionnaire, formulated to explore their different characteristics, 33 statements of the scope of family medicine practice. The expectations of the physicians reported as agreement rate and as positive, neutral or negative response utilizing Likert scale.

**Results:** The sample included 62.9% specialists, 20.7% practitioners of specific branches and only 16.4% general practitioners. The overall agreement rate was 75.7% with the lowest one related to the role of family physician in performing certain procedures and mental health care, 41.4% and 50% respectively. General practitioners showed lower agreement rate for mental (38.1%), adolescent (62%), elderly (64.3%) health care role, home visits (59.5%), rehabilitation health services (64.3%) and palliative services (47.6%). The overall percentage of positive response towards the competencies of family medicine practice found to be 84.4% with no statistically significant differences related to their different characteristics except that of discipline, being the lowest among community medicine specialist (p value 0.034)

**Conclusion :**More than two thirds of the physicians in Erbil city showed their agreement and positive response towards most of the activities could be achieved by family medicine practice except that of conducting certain procedures and mental health care

Disclosure: No conflict of interest declared

## 2.4. PRACTICE ORGANIZATION

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### Ethnographic study of how General Practices engage with clinical guidelines: emerging themes

B. Rushforth

*Academic Unit of Primary Care, University of Leeds, Leeds, United Kingdom*

**Objectives:** The aim of the study is to understand how general practices typically react to and engage with NICE (National Institute for Health and Clinical Excellence) clinical guidelines and supporting material. NICE promotes treatments of proven benefit and distributes its evidence-based guidance widely. However, primary care clinicians do not use evidence-based knowledge in a linear, rational manner; rather, social and cultural factors appear to play a key role, with decisions also mediated by organisational constraints. The gap between evidence and practice is strategically important because it limits the health, social and economic impacts of clinical research.

**Methods:** Ethnographic study. Direct observation has been selected as it allows the researcher to capture: verbal and non-verbal signals; explicit and implicit meanings within interactions; and, it provides evidence of what participants actually do in practice, rather than what they say that they do or what their intentions may be (Atkinson P et al (eds). Handbook of ethnography. London: Sage, 2001). In addition to being a 'participant observer' the researcher (BR) will undertake semi-structured interviews with key General Practice staff and conduct documentary analysis in 3 practices in West Yorkshire in the North of England over a 16 month period.

**Results:** Emerging themes from the research will be presented. The project will develop in-depth understanding of the contextual factors that influence guideline processing and operationalization within general practice. This will inform the continuing design of materials and tools used by NICE to support guideline implementation in general practice to improve patient care.

Disclosure: No conflict of interest declared

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### Improvement of primary health care quality in a Yaounde health care center by elaborating for the first time a protocol for diagnostic and therapeutic: example of cough.

H. Errami

*family medicine, university Paul Sabatier, Toulouse, France*

**Introduction:** Five nurses work in the center of health and social activities (CASS) in Yaounde. They take care of patients coming for various consultations motives such as cough.

Respiratory diseases are the third leading cause of death in Cameroon, after HIV and malaria, hence the need to develop a consensus for diagnostic and therapeutic in order to allow more precise targeting of high-risk situations and to behave uniformly.

**Materials and methods:** Drafting the protocol involved the five nurses, a biologist, two physiotherapist and three external doctors coming from France, Professor Berry, Doctor Challan Belval and myself.

We started by collecting practices on the diagnosis and treatment of cough in the CASS with writing in real time using a computer and a video projector.

Data were compared to European and international recommendations.

**Results:** In Cameroon there is no national recommendation about cough. It was therefore necessary to draw up a protocol to diagnose and treat this symptom.

It is specific to CASS as written by its general practitioners, biologist, and physical therapist, and in accordance with international recommendations.

The assistance provided by french doctors boils down to logistics and support provided by specialists infectious diseases eye.

However, it seems obvious and necessary for CASS general practitioners to contact the specialists of the university hospital in Yaounde to pursue writing protocols adapted to the reality of the Cameroonian patient.

**Conclusion:** In conclusion, protocols provide good primary care quality.

To be fully adapted to Cameroonian patients, university specialist from Yaounde should be involved.

Disclosure: No conflict of interest declared

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### Educational health activities developed by family health teams in Ribeirao Preto – Brazil

F. F. Quagliato<sup>1</sup>, A. R. Netto<sup>2</sup>, F. L. Santos<sup>3</sup>, S. C. Mazin<sup>4</sup>, P. C. Santos<sup>5</sup>

<sup>1</sup> Public Health, Centro Universitário Barão de Mauá, Ribeirão Preto, Brazil; <sup>2</sup> Social Medicine, Faculdade de Medicina de Ribeirão Preto – USP, Ribeirão Preto, Brazil; <sup>3</sup> Nursing department, Centro Universitário de Araraquara – UNIARA, Araraquara, Brazil; <sup>4</sup> Science and research, Centro Universitário Barão de Mauá, Ribeirão Preto, Brazil; <sup>5</sup> Head and neck surgery, Faculdade de Medicina de Ribeirão Preto – USP, Ribeirão Preto, Brazil

The activities for health education developed by different Family Health teams vary according to available resources, characteristics of the professionals and the acceptance of the population involved.

**Objective:** The aim of this study is to describe and evaluate the activities for health education developed by Family Health teams in Ribeirão Preto, SP, Brazil.

**Methods:** A questionnaire addressing health education issues was applied to Family Health teams in Ribeirão Preto, SP, Brazil.

**Results:** The interview was applied to 137 professionals, from 20 Family Health teams. All teams develop at least one health education activity for the population. The most cited were general health education groups (55%), crafts group for patients (20%), orientation for pregnant women (15%), dental hygiene (10%) and arterial hypertension and diabetes (10%). The grade achieved by the development of health education activities was 8.65 (1.45). The mean grade for the educational activities for patients and family to provide orientation for self care was 9.56 (0.77). The orientation about life style scored 9.48 (0.83). As for groups for the community about education for health, the grade was 8.58 (1.85), and the grades for the support of the family health team to enable the patients to self care achieved 9.52 (0.73).

**Conclusions:** The activities of health promotion achieved high grades. They are developed for the community, as well as for specific patients, in order to provide information for self care, contributing for autonomy, and better comprehension, collaboration and acceptance of the treatment and orientation given by the health team.

Disclosure: No conflict of interest declared

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### Image of faculty of medicine Chiang Mai University in perspective of graduates, parents and students

R. Uaphanthasath<sup>1</sup>, K. Srisongmueang<sup>2</sup>, N. Maneethorn<sup>3</sup>, P. Ruangkhunawut<sup>2</sup>, P. Chaiwong<sup>2</sup>

<sup>1</sup> Department of Family Medicine, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand; <sup>2</sup> Student Affairs Unit, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand; <sup>3</sup> Department of Psychiatry, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

This research of image of faculty of medicine Chiang Mai University has been conducted among medical graduates, parents of r medical students as well as Chiang Mai high school students. This research is classified into 5 categories: (1.) Management (2.) Knowledge distribution towards society (3.) Research (4.) Learning and Teaching (5.) Religion and culture

Comparison outcomes from point of views among graduates, parents and students towards the medicine school image have been found that the differences in knowledge distribution towards society, research, learning and teaching ( $p < 0.05$ ). By asking question “what does come to your mind when you think of Chiang Mai University?” to medical graduates, the results have been concluded to the percentage as follows: 14.4% think of Prince Mahidol Statue, 12.4% think of production of moral and ethical doctors and 11.6% think of proudness of graduation respectively. The same question has been asked to medical graduates’ parents, the results are as follow: 19.7% think of medical students, 18.6% think of Maharaj Nakorn Chiang Mai Hospital, and 16.6% think of professor competent staffs respectively. Nonetheless, 18.7% think of production of moral and ethical doctors, 15.6% think of Maharaj Nakorn Chiang Mai hospital and 8% think of doctors in the perspective of students.

All in all, the image of faculty of medicine Chiang Mai University has been found satisfactory and it is in harmony with the faculty’s vision stating that “The Faculty of Medicine, Chiang Mai University is committed to being a leading medical institution and to meeting the highest international standards.”

Disclosure: No conflict of interest declared

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**The evolution of managers' perception of their organization's culture in the context of the primary care reform in Portugal**

C. Leone, G. Dussault, L. Velez Lapao

*International Health and Biostatistics, Institute of Hygiene and Tropical Medicine, Lisbon, Portugal*

**Objective:** This study analyzes how the Executive Directors (ED) of Health Centers Groups (HCG) in Portugal perceive their organization's culture. This is used as a proxy to assess whether organizational culture changed in the context of a reform implying new governance structures and mechanisms, and new relationships between health organizations.

**Methods:** The target population was the 73 ED of the newly created HCG in Portugal. Data was collected by questionnaire repeated three times: when these managers took up their position, a year later after a management training program, and at the end of their three-year mandate. Response rates were 87.7%, 85% and 52.1% respectively. We applied a validated version of the "Competing Values Framework" of Cameron and Quinn (2006), which covers six dimensions allowing the characterization of the organizational culture in four types: clan, adhocracy, market and hierarchy.

**Results:** Scores for each type are obtained by calculating the average score attributed to the six dimensions. There was a continuing growth of the score of the perception of a "clan culture" which emphasizes flexibility, adaptation, values internal consensus and team work. There was a decline in the score of "hierarchical culture" in which formal structures and procedures dominate and stability is valued.

**Conclusions:** The "adhocratic" type score, which refers also to flexibility and openness to innovation increased after the management training, which may reflect the exposure to new management tools, but it slightly regressed after managers gained field experience.

Disclosure: No conflict of interest declared

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**Manchester risk classification: changes in the hospital reception in a Brazilian hilly region**

B. Guaitolini, V. Nogueira, R. Guimaraes, E. Pereira, V. Moraes, B. Simoes, B. Zanotti, B. Vasconcelos, W. Poton, A. Szpilman

*Medical School Department, Vila Velha University, Vila Velha, Brazil*

**Introduction:** the Manchester protocol risk rating is a stratification risk tool of individuals who seek care in urgency and emergency services. When looking for the health service, the patient is classified in colors based on the clinical situation presented, receiving a priority that determines the time target for medical care.

**Objective:** analyze the risk classification implementation in the emergency room at a hospital in the hilly region of *Espírito Santo* State, Brazil. **Methods:** descriptive observational study, using the information records contained in the medical records of 1.188 people served in the month of June/2012.

**Results:** the results demonstrated that 40.2% of the people served were rated green, 19.5% in yellow, 8.4% in orange, 4.6% in white and 3.5% in blue color. In relation to the period of the day, it was observed a predominance of care during the day shift (76,3%). The medical clinic attendance (67,8%) was superior than the pediatric service (32,2%). It was not observed a reduction in the urgency and emergency service with the implementation of the Manchester Protocol. There were changes in the work process and improvement in the patients' satisfaction. **Conclusion:** the Manchester risk rating implementation prioritized and organized the critically ill patient care flow. It is important to invest in health professionals' permanent education in order to assure the correct routing of patients, improve the population awareness to search the low complexity services and the importance of continuous care.

Disclosure: No conflict of interest declared

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**Estimating workforce and workload at outpatient group practice using FTE (full time equivalent).**

T. Okada, M. Suzuki, M. Kawashima

*Dept. of Family Medicine, Tessyoukai Kameda Family Clinic Tateyama, Tateyama, Japan*

**Introduction:** Kameda Family Clinic Tateyama (KFCT) is a primary care group practice offering Medical Home service including outpatient, hemodialysis, rehabilitation, and home care services. At KFCT, some physicians are residents (sometimes rotate in other hospitals) and some are part time. Although we know the number of physicians, they engage in several kinds of task in a day beside outpatient care. For example, some physicians work at outpatient unit for 4 days a week, while others for one day a week. Therefore, it is hard to estimate the amount of outpatient workforce accurately. This becomes a challenge when we plan adequate outpatient staffing. Also, we need the total number of patient visits and visits per patient per year in order to estimate how many patients in each physicians' panel. Our aim is to estimate the workforce and workload of outpatient unit at KFCT.

**Method:** We used data from the fiscal year of 2011 and defined FTE as 35 hours per week. Total outpatient workforce was hand counted from weekly work schedule. The total number of patient visits and the number of unique patients are derived from our electronic health record.

**Result:** At outpatient unit, the average FTE is 4.4, and the workload is 804.3 patients per FTE per month. The average number of visits per patient per year is 3.8.

**Discussion:** The workforce and workload at our institution become visible. The next steps are to calculate each physicians' FTE and appropriate number of patients for each physician as their patient panel.

Disclosure: No conflict of interest declared

1304

**Can we improve our health centres referral letters to the ophthalmologist mean monthly ratio?**E. Ros-Martínez<sup>1</sup>, B. Guerrero-Díaz<sup>1</sup>, J.M. Bueno-Ortiz<sup>2</sup>, R. Luquin-Martínez<sup>1</sup>, F. Ramírez-Espín<sup>1</sup>, R. Morales-López<sup>1</sup>, C. Alonso-García<sup>1</sup>, A. Piñana-López<sup>1</sup>, A.B. Salguero-Merino<sup>1</sup>, M.C. Font-Escoda<sup>1</sup><sup>1</sup> *Health Center Virgen de la Caridad, Murcia Health Service, Cartagena, Spain;* <sup>2</sup> *Health Center Fuente Álamo, Murcia Health Service, Cartagena, Spain*

**Objective:** To improve the mean monthly ratio (MR) of two Health Centres referral letters to the ophthalmologist (HCRLO).

**Method:** Spain has a National Health Service in which the Family Doctor (FD) is the gatekeeper. The HCRLO MR is 7,94 per 1000 patients (P), the highest HCRL to any specialist. **Assessment:** 01/01/2011 to 31/05/2011. **Improvement measures:** 01/06/2011 to 31/08/2011. **Re-assessment:** 01/09/2011 to 31/12/2011. **Place:** Two urban HC with 46392 registered P: 23963 HC-A, 22429 HC-B. **Variables:** (i) Total number HCRLO (FD own criteria referrals plus re-visits prescribed by O); (ii) MR-HCRLO per 1000 P (‰); (iii) HCRLO prescribed by FD; (iv) ‰; (v) HCRLO re-visits prescribed by O; (vi) ‰. **Improvement measures** (1) A HC meeting was held to inform each FD about their own data; (2) Each FD assessed his last HCRLO; (3) O-Department was asked to produce their own appointments if the P was due to be re-visited in less than 6 months time; (4) A referral guideline was produced after a meeting between FD, O and NHS-Management.

**Results: 1<sup>st</sup> Assessment/Re-Assessment:** HC-A (i): 862/539 \*; (ii): 7,194 ‰/5,623 ‰; (iii): 723/456 \*; (iv) 6,030 ‰/4,757 ‰; (v) 139/83 \*; (vi): 1,160 ‰/0,865 ‰ // HC-B (i) 781/448 \*; (ii) 8,705/4,993 ‰; (iii) 663/388 \*; (iv): 7,380 ‰/4,324 ‰; (v) 118/60; (vi): 1,315 ‰/0,668 ‰. \* = P < 0.05.

**Conclusions:** It was worthwhile to invest time in quality improvement. Both HCRL-O, FD own criteria and O prescribed, diminished significantly.

Disclosure: No conflict of interest declared

1355

**Study of non-attendance in primary health care**J. Santos<sup>1</sup>, L. Sousa<sup>2</sup>, M. Trovisqueira<sup>1</sup>, S. Moreira<sup>1</sup>, A. Sousa<sup>1</sup><sup>1</sup> USF Arco do Prado, ACeS Porto VII, Vila Nova de Gaia, Portugal; <sup>2</sup> UCSP Barão do Corvo, ACeS Porto VII, Vila Nova de Gaia, Portugal

**Objective:** Determine non-attendance's rate, characterize this population and identify absenteeism's reasons and follow-up after the absence, between March and June 2012 at two portuguese Health Units (HU).

**Methods:** Observational and descriptive study realized in October 2012 in two HU, including adult users who missed at least one medical visit between March and June 2012. Exclusion criteria: deaths and transferred. Of the 1624 absentees we selected a simple random sample of 292 users. Data were collected from the clinical process and telephone interview with a questionnaire developed by the authors, and processed using the software SPSS' 17.0.

**Results:** The overall non-attendance rate was 5.5% with a mean of 73 faults/month. The response rate was 62.3%, 127 females and 55 males, with a mean of 52 years. Of absentees users, only 34.6% completed basic education's first cycle and 62.1% were professionally not active. Adult Health's consultation had a higher rate of absences followed by Family Planning. The main reason of absenteeism was „forgetfulness“ (25.8%) followed by “don't remember/don't know” (23.6%). As the follow-up after the absence 31.3% scheduled a new consultation and 20.9% “don't remember/don't know”.

**Conclusions:** The non-attendance rate is slightly lower compared to other studies. In this study, absentees users are mostly women, with low education level and not professionally active. The response rate may be influenced by outdated contacts and some answers for a memory bias. Knowledge of absenteeism will allow us to adopt preventive strategies and organize the schedules in order to improve the quality of care.

Disclosure: No conflict of interest declared

1409

**Drug industry – physician relationship – an overview.**M.J. Sá<sup>1</sup>, R. Maltez<sup>2</sup>, R. Gonçalves<sup>3</sup><sup>1</sup> Family Medicine, USF (Family Health Unit) „Lidador“, Maia, Portugal; <sup>2</sup> Family Medicine, USF (Family Health Unit) „Pedras Rubras“, Maia, Portugal; <sup>3</sup> Family Medicine, USF (Family Health Unit) „Viver Mais“, Maia, Portugal

**Background:** The power and influence of the drug industry has raised concerns among health professionals and the wider community. Therefore, over the last years, it has come under close assessment by the public. The reality is that all of us depend on the industry to bring innovative new products to the market as well as to assist physicians in research and education, leaving them questioning what their relationship with the industry should be.

**Objective:** This review deals with this complex relationship, identifying ways that industry might affect clinical practice decisions, research and education; in addition, it highlights ethical purposes involved in those and presents the developed guidelines.

**Methods:** Studies were identified by searching PubMed using terms “drug industry” and “clinical practice”. Only papers published in English or Portuguese from 2002 to December 2012 were included.

**Results:** There is major evidence that advertising, contact with company representatives, sponsorship of meetings and other forms of promotion influence prescribing behavior. Although the health community may benefit financially and educationally from the drug industry, the risk of bias makes it also ethically challenging. In answer to these concerns a range of responses have been developed by professional societies striking for a delicate balance that aims to protect the interest of the patients, foster research, and ethical decision making among the various participants.

**Conclusions:** For providing the best medical care and preserve a full clinical practice, physicians should be aware of the complexity of this three party relationship – patient, physician and industry.

Disclosure: No conflict of interest declared

1532

**Primary care assessment tool validation in Uruguay. Adult consumers extended version (UR-PCAT-AE)**J. Ponzó<sup>1</sup>, M. Pizzanelli<sup>1</sup>, D. Márquez<sup>1</sup>, E. Harzheim<sup>2</sup>, L. Hauser<sup>2</sup><sup>1</sup> Family and Community Medicine, UDELAR, Montevideo, Uruguay; <sup>2</sup> Family and Community Medicine, UFRGS, Porto Alegre, Brazil

Consumers involvement is one of the most important elements of the health reform in Uruguay. During 2011 the last stage of validation PCAT Provider version with B.Starfield supervision was ended.

On 2012, with the purpose to validate PCAT for adult consumers the extended version and to determine the scores for PHC services, a collaborative initiative joined UDELAR (Uruguay) and UFRGS (Brazil) in the context cooperation and association of public universities in the Southern Cone. Protocol was developed to validate the adult version adult. The original questionnaire was adapted based on the validated form in Porto Alegre PCATool-Adult and the provider version validated in Uruguay.

At this moment we are applying 500 surveys in five primary care health centers in urban and suburban sites in the main city of the country (Montevideo) and other areas. Soon there will be quantified results.

**Methodology:** Cross-sectional, population. Population: Adults aged 18 years, 5 consumer in selected health services, Montevideo, Canelones and Florida (Uruguay). Instrument: UR-PCAT-AE, structured questionnaire based on the principal and complementary attributes of primary care. Randomized method is used to select interviewed. Likert scale of 1-5 represented with faces expressing degrees of satisfaction. The database will be generated by teleformer then be processed in SPSS to determine scores for each attribute and overall scores by provider.

**Results and conclusions:** will be available for presentation in Prague 2013.

Disclosure: No conflict of interest declared

1646

**Case report: the importance of list management and patient contacts.**T. Magalhães<sup>1</sup>, G. Ferreira<sup>2</sup>, J. Ferreira<sup>3</sup><sup>1</sup> Family Medicine, UCSP Oliveira do Douro, Vila Nova de Gaia, Portugal; <sup>2</sup> Family Medicine, USF BrasOleiro, Porto, Portugal; <sup>3</sup> Family Medicine, USF Novo Sentido, Porto, Portugal

**Objective:** Describe a case of AIDS diagnosis, and the importance of scheduling appointments for apparently healthy young women that are not regularly followed with their Family Physician.

**Methods:** In an effort to increase the number of women screened for cervical cancer, this patient was contacted and scheduled for a visit to her Family Physician. History, physical chart and literature review were performed.

**Results:** 31 year-old, Caucasian female. During the appointment, the patient complained of depressive symptoms after her father's death, associated with dysphagia, weight loss and anorexia, as well as concerns about poor healing of sutures after a breast reduction surgery. Inspection revealed a recent tattoo. Palpation showed soft, mobile, non tender, bilateral posterior cervical, inguinal and left axillary lymphadenopathies. Upper endoscopy, hemogram and viral markers showed esophageal candidiasis, anemia and HIV positivity, thus diagnosing AIDS.

**Discussion:** The differential diagnosis of generalized adenopathies in adults is broad and may include infectious diseases, immunological, endocrine and neoplastic conditions. The differential diagnosis of dysphagia includes: Zenker's diverticulum, myasthenia gravis, hyper/hypothyroidism, myotonic dystrophy, amyotrophic lateral sclerosis, multiple sclerosis, Parkinson's disease and stroke. Other conditions to be considered are achalasia, diffuse esophageal spasm and esophageal inflammation: herpes virus I and II, varicella zoster virus and CMV, particularly frequent in immunocompromised patients.

This case requires us to reflect on the need to be close to and try to contact all of our patients, so that we can act proactively and accompany them at different stages of their lives.

Disclosure: No conflict of interest declared



1670

**Starting from point zero, a gp's drama.**

F. Fragakoudi<sup>1</sup>, S. Kourtparasidou<sup>2</sup>, E. Aivazidou<sup>1</sup>, D. Chatziparaskeva<sup>1</sup>, K. Tsolaki<sup>3</sup>, M. Vakas<sup>4</sup>

<sup>1</sup> Primary Health Care Center of Prosotsani, General Hospital of Drama, Drama, Greece;

<sup>2</sup> Primary Health Care Center of Amyntaio, General Hospital of Florina, Florina, Greece;

<sup>3</sup> Primary Health Care Center of Sapes, General Hospital of Komotini, Komotini, Greece;

<sup>4</sup> University General Hospital of Alexandroupolis, University General Hospital of Alexandroupolis, Alexandroupolis, Greece

**Objective:** The identification and evaluation of pivotal issues that a recently appointed General Practitioner (GP) in a Greek rural area faces within the public health system of a country experiencing the deepest recession in Europe.

**Methods:** A questionnaire was used to assess a) the top ten issues GPs have encountered within the first two months of practicing in a rural Greek area; b) the suggestions proposed by the GPs as potential solutions to these issues.

**Results:** Surprisingly, though salary decrease was mentioned, it was of low priority. The key issue identified was the lack of appropriate infrastructure for utilization of the electronic prescription system, which is a daily requirement for the normal running of the practice. The shortage in medical supplies, including drugs and equipment was the second more often cited issue the complete. Additional issues included inappropriate facilities, lack of heating and ignorance of GPs abilities and knowledge. All GPs suggested numerous solutions such as addressing the local authorities for financial and practical support, exclusion of remote communities from the electronic prescription system and more.

**Conclusions:** The majority of newly appointed GPs in the Greek public health system are facing numerous obstacles in running their practice due to the severe economic crisis. GPs are struggling yet aim to maintain an acceptable quality level of services in primary health care centers, via sheer determination, hard work and imaginative solutions.

Disclosure: No conflict of interest declared

1745

**Evaluation of the quality of „chronic medication“ lists of patients'**

C. Pires, I. Coelho, A.M. Correia  
USF, USF Grão Vasco, Viseu, Portugal

**Objective:** Assess the quality of the „chronic medication“ lists of the patients in our Family Health Unit (FHU).

**Methods:**

Type of study: Observational, descriptive, cross-sectional.

Unit of study: random sample of patients from each physician in our FHU

Data: medical computerized records VitaCare® program

Parameters evaluated in „chronic medication list“:

>1 medication with same active substance;

Medication that's not normally associated with a chronic/active problem;

Chronic medication without chronic/active problem mentioned;

Active problem without chronic medication for this purpose

Chronic medication: medication one or more times per week for a period equal to or exceeding 3 months.

Standards and Compliance criteria: >60% sufficient, >80% good.

**Results:** We evaluated 396 medical computerized records:

12.6% had >1 medication with same active substance (good);

20.9% had a medication that's not normally associated with a chronic/active problem (sufficient);

24.7% had chronic medication without chronic/active problem (sufficient);

16.1% had active problem without chronic medication for this purpose (good).

**Conclusions:** The quality of the parameters evaluated was overall satisfactory. It's important that the „chronic medication“ list of patients is updated, so that family physicians (FP) know which medication their patients are taking, so that requests for medication renewal in non-present appointments are facilitated and so that in the absence of FP other physicians have an updated list of patients' medications.

These results were presented in our FHU staff meeting 14/12/2012. A reassessment of quality is scheduled for 03/06/2013 with further interpretation and communication of results in our staff meeting 26/07/2013, with possible proposal of eventual corrective measures.

Disclosure: No conflict of interest declared

## 2.5. CONSULTATION SKILLS

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### Paternalism or partnership: Physicians' views about Shared-Decision Making (SDM) in Turkey

A. Sattar Khan, T. Set, Y. Cayir, M. Isik  
Family Medicine, Ataturk University, Erzurum, Turkey

**Background:** Shared-decision making now is an essential part of every consultation however its acceptance is still debatable. Thus we carried out this survey to record the views of family and general practitioners regarding shared decision-making.

**Method:** This is a cross sectional study based on an online survey and we approached to 280 regular user of an assigned website for general practitioners and family physicians society. A validated questionnaire used to design an online survey and the link of survey sent to all practitioners who are member of society. The questionnaire was based on Lickert scales with six responses of agreement and consisted of 18 items.

**Results:** The response rate was 43.57%. The male (51.8%) and female (49.2%) ratio was almost 1:1, while 35.2% were GPs and 64.8% were family physicians have participated in the survey. Overall results showed that participants not in a favor of shared-decision making with patients for instance, 45% strongly agree that physical examination is more important in consultation and only around 20% agree that patients should be partner in management plan. While they strongly agree in a good percentage (45%) that only clinical skills are enough and almost 50% strongly disagree that patients' culture and background play important role in management. There were significant (<0.05) difference in between GPs and Family Physicians.

**Conclusion:** It is concluded that physicians are insufficient about shared-decision making approach in consultation. Therefore need to focus more in medical education and continuous professional development (CPD) training about shared-decision making approach.

Disclosure: No conflict of interest declared

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### "To improve attitude and counseling skills of family doctors"

S. Sonin<sup>1</sup>, N. Narangerel<sup>2</sup>, S. Khajidmaa<sup>1</sup>

<sup>1</sup> Management team, Mongolian Association of family medicine specialist, Ulaanbaatar, Mongolia;

<sup>2</sup> JFPR 9115-MON, Ministry of health, Ulaanbaatar, Mongolia

**Background:** According to the 2010 survey, discriminatory and bad attitudes of family doctors were one of the factors becoming a hurdle to improving access to healthcare services for disadvantaged groups. Accordingly, pilot project was implemented, focusing on this issue.

#### Implementation:

The following main activities have been implemented through the pilot project:

- Developed COPE guidelines
- Organized training
- Set up COPE consultant team
- Designated pathway work position
- Developed an integrated plan to change attitude and improve counseling skills of family doctors

**Results:** The majority of survey respondents (88.3%) were satisfied with Family Health Center's services, an increase of 15 points compared to the previous study.

As stated by the customer satisfaction survey, 68.8% of the total respondents answered that they observed improvements and changes in behavior and attitudes of their family doctors and health personnel.

The changes, which were made in the MNS5292:2011 standard of Family Health Center structure and operation, in the regulations of Family Health Center and in the Contract summarizing indicators were considered to be a significant initiative made under the project.

**Conclusion:** According the survey results, Family Health Centers meet the health needs of disadvantaged populations and offer all types of services they need. Furthermore, most clients are satisfied with services provided by Family Health Centers.

As for disadvantaged populations, one of challenges in receiving services from Family Health Center is bad attitude of family doctors and other health professionals, and more than half of survey respondents said that there had been improvement in this regard.

Disclosure: No conflict of interest declared

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**Clinical registration by two GP/FM files in central region of Portugal**

C. Matias, L. M. Santiago, R. Carvalho, P. Miranda, P. Botas, C. Pereira, A.R. Simoes  
 Centro de Saúde de Eiras, ARS Centro, Coimbra, Portugal

**Introduction:** Informatics' registration of individual/familiar background, family characterization, vaccine's and individual registration (IR) are very important in GP/FM because can improve care provided and constitutes studie's data source.

**Objective:** Study IR frequency in electronic file, verify specifically differences between patient's gender.

**Methods:** Observational, transversal, analytical study, descriptive, non-parametric statistics ( $\chi^2$ ). Random sample, in 3 sorted months at the 1<sup>st</sup> semester 2012, with 95% confidence interval and 6% error in 2 GP files (of GP training programe's tutors). Patients over 18 years.

Data collected: patient's and familiar pathological background, familiar characterization, vaccines and individual file's registration.

**Results:** 208 consultations studied, 94 (45,2%) male patients. Familiar pathological background registered: 116 (55,8%); familiar characterization: 167 (80,3%); actualized vaccines: 201 (96,6%); individual file's registration: 169 (81,3%); individual pathological background: 203 (97,6%).

Comparing male *vs* female:

- familiar pathological background: 39(41,5%) *vs* 77(67,5%)  $p < 0,001$

- familiar characterization: 74(78,7%) *vs* 93(81,6%)  $p = 0,366$

- actualized vaccines: 90(95,7%) *vs* 111(97,4%)  $p = 0,374$

- individual file's registration: 71(75,5%) *vs* 98(86%)  $p = 0,041$

- individual pathological background: 91(96,8%) *vs* 112(98,2%)  $p = 0,410$

**Discussion:** No similar studies in Portugal, to compare with our results.

Sample size limited, but randomized, with important variables of GP/FM working field.

Need to improve doctor's registration: individual file, familiar characterization, pathological familiar background.

Gender differences: male registrations should be improved, but traditionally they don't go to consultations as much as females. Need to amplify collecting data period.

GP files used-studied by GP training programe's tutors-might have been better studied than other possible files considered.

Disclosure: No conflict of interest declared

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**Balint methodology and development of patient-doctor relationship in pontifical university catholic of goias – brazil**

M.D. Ascençao, J.S.D e Moura, R.M. de Oliveira, V.G. Ferreira  
 Medicine, PUC GOIAS, Goiânia, Brazil

**Objective:** Present the Balint methodology in developing skills in medical care.

**Method:** The study of Balint methodology is a reality for medical students at Pontifical Catholic University of Goiás (PUC-GOIAS). The methodology is presented for students at the third semester of graduation and aims to provide academic help and strategies to improve the doctor-patient relationship. The students come in contact with Balint theory in weekly meetings, where they can discuss the Michel Balint categories; doctor as a drug, organization and delivery of disease, transference and counter-transference, among other related clinical cases exposed by academics.

**Results:** Knowledge of Balint's theory is important in consolidating the doctor-patient relationship. Through this study, the students realize their importance in patient adherence to treatment and develop the skills learned during the consultation. After they are presented to the methodology it's possible to observe the academics improve in dealing with difficult issues related to the patient, in addition to improve physician-patient relationship. They understand the academic skills and attitudes influence the treatment quality.

**Conclusion:** The study of Balint's theory is important for medical education because it allows knowing the real role of physician and medical student. Using this practice, the student understand that attitudes during the consultation influence both positively and negatively in treatment adherence, as well as resolution of patient's pathology. Contributes to understanding influences of health-disease processes and biopsychosocial organization involved, which enhances the doctor patient relationship and also the satisfaction of patients treated during graduation.

Disclosure: No conflict of interest declared

947

**The attitudes of patients' toward the disclosure of the cancer**

T. Dener, G. Sahin, MK. Sahin, F.A. Artiran Igde

<sup>1</sup> Family Medicine, Omurevleri Family Health Center, Samsun, Turkey; <sup>2</sup> Family Medicine, Ondokuz Mayıs University School of Medicine, Samsun, Turkey

**Objective:** When patients' are diagnosed with cancer, their relatives don't want to say the diagnosis. Some physicians think also that cancer diagnosis has a negative impact on the patient's emotional state and the prognosis can be worse. In this study we aimed to investigate patients' views about disclosure of the cancer.

**Methods:** A questionnaire containing sociodemographic data and 11 questions about disclosure of the cancer and patient's expectations and applied to patients admitted to the family medicine outpatient clinic between September and November 2012.

**Results:** 79 participants filled the questionnaire, 49(62%) of them were female, 30(38%) were male and the mean age was  $32.25 \pm 11.2$  (18–65) years. 24(30.4%) of the participants were students, 22(27.8%) were housewife, 13(16.5%) public servant, 12(15.2%) worker, 8(10.1%) retired. For the statement "if you have a cancer, would you like to know?" 67(84.4%) of them answered as yes, 5(6.3%) as no and 7(8.9%) of them were undecided. Among the participants who want to know the diagnosis, 59(88.1%) wanted to hear bad news from their oncologist, 4(6%) from their family physician and 4(6%) from their family. While 47(70%) of patients wanted be with their family when they're informed, 19(28.4%) wanted to be alone. For the question "Who should play the main role in the treatment plan" 13(19, 4%) of them answered as "I must decide myself", 52(77, 6%) of them as "the doctor must decide and I must confirm".

**Conclusions:** Most cancer patients decide to be informed about their illness and physicians should organize their attitude toward such a situation.

Disclosure: No conflict of interest declared

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**Neuro-linguistic programming for successful general practice**

L. Moran

General Practice, RCGP, London, United Kingdom

Neuro Linguistic Programming (NLP) is a powerful approach to changing behaviour. It is helpful for stress management, developing self-belief, assertiveness and confidence. NLP has many beneficial uses for self-development and in business; for example it enables better communications in customer service, self-control and teaches how to motivate change. For doctors it improves one-to-one communication for better rapport in consultations. Programmes and workshops are established with GP's looking at the science of NLP and how it can be used to improve the effectiveness of GP consultations. By learning how to improve communication and talk the patients "language", NLP enhances the consultation process making it more rewarding and informative to both GP and Patient. Effective communication makes a rewarding and informative consultation for GP and Patient. To "read" the patient is a science and altering communication tactics as per a patients programmed operative methods aids the consultation. This will make general practice more successful, as the resulting consultations build rapport, dissect clearer information, set well formed outcomes and ultimately establish GP/Patient trust.

This poster looks at the theory of NLP and how it can be used in the general practice consultation to benefit the doctor-patient relationship.

Disclosure: No conflict of interest declared

1266

**Importance of studying sexuality during the medical course: an experience report**

M.D. Ascençao, T.E.D. Santos, J. S. Almeida, G.C.F. Cantarelli

*Departamento de Medicina, Pontifícia Universidade Católica de Goiás, Goiânia, Brazil***Objective:** Show the importance of studying sexuality during the medical course.**Methods:** Experience report of PUC-Goiás' medical students.**Results:** The difficulty in approaching issues related to sexuality of patients is a reality for both medical students and to physicians with years of professional experience. The convictions and prejudices are reflected in management of consulting, which can compromise it's quality. In order to minimize the possible biases, the study of sexuality is an important ally to the medical students, who will be able to use in their practical actuation experiences acquired over the course, improving and consolidating the doctor-patient relationship.

In-PUC Goiás, the study of sexuality integrates the curricular basis of the 5th module of the medical course, a differential in relation to most medical schools in the country. The students are able to deeply study the subject in several areas: adolescent sexuality, adult, elderly patients, homosexuals, among others.

This study reflects positively on how the students handle their patients, being receptive to questions and issues of sexuality during the consultation. Furthermore, due to the experiences acquired during classes, they are able to address issues with which they didn't experience in their personal lives, meeting the expectations of the patient.

**Conclusions:** It can be observed that the study of sexuality during the medical course provides the students tools to approach the topic in the office. This knowledge is not only important on the diagnosis of diseases related to sexuality, but also in establishing a good bond with the patient.

Disclosure: No conflict of interest declared

1635

**How to use neuro linguistic programming (NLP) in general practice**

B. Grace

*Training, OzMeducation, Melbourne, Australia***Objective:** To assist General Practitioners (GPs) develop advanced consulting and counselling skills to help manage patients' everyday problems of living using Neuro Linguistic Programming (NLP) techniques.While no-one is born with a pre-installed program for managing the mind, NLP can assist people achieve optimal health and wellbeing by managing their mindset (**Neuro**), learning communication patterns (**Linguistic**) and strengthening thinking processes (**Programming**) which determine behaviour.

NLP techniques are well-suited for GPs to achieve brief solutions-focused outcomes and motivate patients towards change.

**Methods:** Doctors with NLP skills can show patients how to create outcomes that are self-initiated and maintained, ecologically grounded, aligned with personal values and linked to a higher purpose beyond self.

Training in NLP can identify patients' language patterns that indicate limiting beliefs and assist patients choose resourceful emotional states leading to positive behavioural outcomes. Patients can be taught these strategies.

Delivered online and in workshops with a GP involved (currently in Australia), GPs can access learning videos, documents, questionnaires and patient handouts.

**Results:** The program teaches doctors how to help patients help themselves. From this intervention, patients can choose their emotional states, set well-formed outcomes, identify personal values, develop more strategic thinking skills and model excellence.**Conclusion:** The program moves beyond the CBT model to elevate the patient's mindset to a higher level of thinking through practical skills they can then share with others.

NLP is not traditionally taught in Medical Schools, but a growing body of evidence is available supporting its benefit in medical practice.

Disclosure: No conflict of interest declared

## 2.6. INTERDISCIPLINARY COOPERATION

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### Shunt failure secondary to a mild head trauma. One case and a differential diagnosis algorithm.

L. González-García<sup>1</sup>, V. Parent-Mathias<sup>2</sup>, M. Domínguez-Páez<sup>1</sup>, F. Rojas<sup>3</sup>, E. García-Requena<sup>4</sup>, M.A. Arráez-Sánchez<sup>1</sup>, B. Ros-López<sup>1</sup>

<sup>1</sup> Neurosurgery Department, Carlos Haya University Hospital, Málaga, Spain; <sup>2</sup> Family Medicine and Emergencies Department, Carlos Haya University Hospital, Málaga, Spain; <sup>3</sup> Traumatology and Orthopaedics Department, Carlos Haya University Hospital, Málaga, Spain; <sup>4</sup> Family Medicine and Emergencies Department, Carlos Haya Children´s Hospital, Málaga, Spain

**Objective:** Currently, most patients with hydrocephalus require a cerebrospinal fluid shunt. These mechanical devices present common complications such as obstruction or infection. We conduct a clinical practice algorithm for family medicine physicians with the aim of encouraging interdisciplinary communication.

**Methods:** We report the case of a 3 year-old male with a history of neonatal meningitis and a multiloculated secondary hydrocephalus. Ventriculoperitoneal programmable shunt was required. The family referred a mild head trauma 48 hours before the start of a picture of decay, vomiting and Parinaud. A gait disorder was observed in the last hours, whereby they consulted at the Children´s Hospital.

Cranial tomography was performed showing an increased ventricular size when compared with a previous study 7 months ago; where a striking ventricular collapse was observed. The proximal catheter was located in an optimal position.

**Results:** In our patient, the clinical suspicion of shunt failure was performed in the emergency room, since it was considered a mild head injury and was ruled out as the cause of neurological impairment. Subsequently, the diagnosis was confirmed by imaging tests and the patient underwent urgent replacement of the proximal catheter.

**Conclusions:** A head injury is an infrequent cause of proximal catheter obstruction. Nevertheless, any patient presenting with the mentioned symptoms deserves an accurate differential diagnosis.

The correct knowledge and evaluation of a shunt failure suspicion in the emergency department are essential for a quick and correct orientation of these patients.

Disclosure: No conflict of interest declared

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### A rare case: Hydatid cyst of thigh

A. Parlak<sup>1</sup>, A. Aytekin<sup>2</sup>, S. Develi<sup>3</sup>, S. Budak<sup>4</sup>

<sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Infectious Diseases, Agri Military Hospital, Agri, Turkey

58 years old male patient was admitted to our outpatient clinic with complaint of swelling and pain in the right thigh three months ago. In physical examination a mass approximately in 25 cm diameters in the right thigh detected at deep palpation. Outside of the higher sedimentation (40 mm / h) no abnormality was noticed in laboratory examinations. Superficial ultrasound (USG) was performed in order to detect the mass is suitable for identification and sampling. Magnetic resonance imaging (MRI) is taken since ultrasonography revealed a multilocular cystic lesion. In MRI, compared to the left, diameter of the right thigh found to be increased, multilocular cystic lesion approximately 24cm observed in anteromedial aspect of the right thigh in adductor muscle group, especially involving adductor magnus muscle. Multiple cystic lesions detected, in millimeter size consistent with daughter vesicles. Cysts were hypointense on T1 weighted sequences and hyperintense in T2-weighted sequences, high signal in T2 sections considered to be depending on the content of proteinaceous cysts. Interrogation of the patient revealed that he was breeding cat at home. Hydatid cyst indirect hemagglutination (IHA) test was performed due to the cystic appearance of the lesion in a patient with a history of contact with animals. IHA test resulted positive. The patient's chest X-ray and abdominal ultrasound were normal. Skeletal muscle involvement cases of hydatid cyst is which can involve many organs in the body, especially the liver and lungs. This is a very rare case shared with readers.

Disclosure: No conflict of interest declared

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**Diabetes and HbA1c does not affect the incidence and the course of ventilator-associated pneumonia and other infections in critically ill patients**E. Tsakiridou<sup>1</sup>, D. Makris<sup>1</sup>, V. Chatzipantazi<sup>2</sup>, O. Vlachos<sup>2</sup>, G. Xydopoulos<sup>2</sup>, O. Charalampidou<sup>2</sup>, K. Argyriou<sup>1</sup>, G. Moraitis<sup>3</sup>, E. Zakynthinos<sup>1</sup><sup>1</sup> School of Medicine, University of Thessaly, Larisa, Greece; <sup>2</sup> Intensive Care Unit, General Hospital of Serres, Serres, Greece; <sup>3</sup> Hematology Laboratory, General Hospital of Serres, Serres, Greece

**Objective:** Diabetes mellitus (DM) and its poor control have been linked with immune dysfunction. However, it is not clear whether DM predisposes to infections such as Ventilator-Associated Pneumonia (VAP). We aimed to evaluate if DM and HbA1c levels are associated with increased VAP frequency.

**Methods:** This was a prospective observational study. 184 consecutive patients hospitalized in a district hospital were screened between 2010 and 2012. Arterial blood glucose specimen was taken for each patient on ICU admission for HbA1c measurement. Patients were enrolled if they needed mechanical ventilation for >48 hours and classified as non diabetics, diabetics with HbA1c $\geq$ 7% and diabetics with HbA1c<7%. The incidence of VAP and related risk factors were assessed as primary outcomes. Secondary outcomes were length of hospital stay, incidence of urinary tract infection, of central venous catheter-related infection, of bacteremia and of sepsis.

**Results:** 129 patients were included. The overall incidence of VAP was 31,8%; in diabetics and non-diabetics was 34% and 30% (p=0,667) respectively. There was no difference regarding VAP between patients with HbA1c $\geq$ 7% and HbA1c<7% (32,3% vs 36,8% p=0,74). Enteral feeding was the only independent risk factor for VAP (p=0,022). Moreover, independent risk factors for VAP in diabetics were anemia requiring blood transfusion (p=0,013) and bacteremia on admission (p=0,033). There was no difference between diabetics and non-diabetics or between the three analyzed groups of patients regarding length of hospital stay, sepsis, bacteremia and other kind of infections.

**Conclusions:** The history of DM and glycoregulation before ICU admission were not related with VAP.

Disclosure: No conflict of interest declared

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**Patient-centered collaboration; Development of a questionnaire to collaborate between physicians and persons surrounding patients**

H. Yoshimoto, K. Ie, M. Kitamura, T. Taguchi, S. Kojima, M. Tobimatsu, M. Yamamoto, M. Goto, S. Araki, Y. Takemura

Department of Family Medicine, Mie University School of Medicine &amp; Graduate School of Medicine, Tsu City, Mie Prefecture, Japan

**Objective:** For high quality health care, collaboration is very important. Various questionnaires to measure inter-professional collaboration were developed. However, there are few questionnaires focused on relationships between physicians and medical staffs and furthermore, physicians and persons surrounding patients; for example, family members, neighbors and so on. So we develop a questionnaire showing the extent of collaboration between physicians and persons surrounding patients in the primary care setting.

**Methods:** We identified all medical personnel and persons who exchange information for patients with physicians using qualitative method. A review of the medical literature and interviews with six general practitioners contributed to create question items. Then, using the questionnaire, we asked 159 physicians whether they had any medical personnel or persons surrounding patients to consult or discuss if needed in practice and let them answer in the alternative fashion. A test of internal consistency was assessed. This study had ethics committee approval of Mie University.

**Results:** Twenty eight items were identified by the qualitative method. Factor analysis revealed nine subscales. Analysis showed satisfactory internal consistency (Cronbach's alpha coefficient = 0.86).

**Conclusions:** We have developed a self-administered questionnaire for physician's collaboration applicable in the primary care setting in Japan, with acceptable validity and reliability. This questionnaire may contribute to conducting further studies related to measure quality of care, satisfaction of clinicians, patients, and medical personnel in Japanese medical settings.

Disclosure: No conflict of interest declared

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**The important role of early intervention teams in Portugal: a case report**

A. Cruz-Ferreira, E. Loureiro, I. Pimentel

*Primary Care Unit of Mealhada, ACES Baixo Mondego, Mealhada, Portugal*

**Objective:** Early Intervention teams(EIT) provide a valuable service to children in pre-school age and their families, when psychomotor development, biological or environmental challenges are detected. In Portugal, since 2009 and empowered by government law, these teams are locally constituted and have interdisciplinary collaboration of professionals from education, health and social services. Existence of EIT should encourage family doctors to immediately trigger, when adequate, these resources in order to increase the chances of success, as witnessed in the case herein described.

**Case report:** We report the case of a 4 months infant, second son of a blended, functional, lower middle class family. He attended our Primary Care Unit since the first week of life. At the age of three months we identified an overall decrease in tone and difficulty in fixing his gaze. He was then referred to the Neurology Department of our Local Children's Hospital where, at the age of 5 months, a global developmental delay was detected. EIT support was requested, and a Kindergarten teacher was assigned to his home until his 15 months. At the 18 months surveillance consultation his development was adequate to age and no delay was then observed.

**Conclusions:** This is an important case report that enforces the advantages of scrupulous compliance to the existing monitoring programs, as well as adequate communication between health institutions and protective services. This also reinforces the significant role that EIT may have, when articulated with family doctors, improving children quality of life and minimizing the impact on the family unit.

Disclosure: No conflict of interest declared

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**Decreasing the percentage of asthma defaulters in jurong polyclinic**

B. Santiago

*Medical, National Healthcare Group Polyclinic, Singapore, Singapore*

**Objective:** to decrease the Asthma defaulters of post-nebulization follow-up from 50% to 0% in six months.

**Methods:** Patients diagnosed with Asthma with acute attacks and was nebulized on visit and follow-up only with the Jurong Polyclinic, from January to April 2008, were included in the study and excluded were those diagnosed with Asthma with acute attacks on visit but on follow-up with hospitals and private clinics and with comorbidities such as COPD. One week appointment was given to follow up assessment of condition by doctors according to the written Asthma Action Plan. Defaulters will be called by nurses via the telephone, a memo reminder by health care assistant will be sent if no reply.

**Result:** The increasing trend in the number of Asthma defaulters of one week post-nebulization from October 2007 to December 2007 (45.7%, 50.4%, and 54.7%). Thus, there is an increase in the frequency of visits of same patients (from database of billing system) for nebulization – a clear indication of poorly controlled asthma. The trend changed after the intervention made from January to April 2008 (32%, 31%, 30%, and 31%). The three most common reasons for defaulting were 1. Patient come only when sick. 2. Confused with the instruction 3. No time.

**Conclusion:** stress the importance of making the follow-up appointment at the time of visit and be prudent on telephone consult and memo reminder. Reorientation and reinforcement of the process for our staffs was necessary to answer questions and improve the practical implementation of the process.

Disclosure: No conflict of interest declared



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### What health professionals need to prioritize for a good coordination between levels of care?

E. Díaz-Salcedo<sup>1</sup>, M. Torremorell-Núñez<sup>1</sup>, C. Gallardo-Sánchez<sup>1</sup>, G. Puig-Ponsico<sup>1</sup>, M. Perona-Pagán<sup>2</sup>, A. Allepuz<sup>2</sup>, R. Anguix<sup>2</sup>, J. Torne<sup>3</sup>

<sup>1</sup> Primary Care, Institut Català de la Salut, Cunit, Spain; <sup>2</sup> Primary Care, Institut Català de la Salut, Vilanova i la Geltrú, Spain; <sup>3</sup> Internal Medicine, Consorci Sanitari del Garraf, Sant Pere de Ribes (Barcelona), Spain

**Objective:** Get the opinion of health professionals in priority areas to ensure proper coordination between levels of care (LC)

**Population and method:** A survey conducted by „Survey Monkey“ online application asking the professionals and suppliers of different areas of care within a region, those aspects to consider as relevant to the coordination between LC. Two researchers coded responses independently from the issues identified and agreed following an initial review of the information collected. We performed a descriptive analysis of the categories with which each response was coded globally and by supplier.

**Results:** The participation rate was 32.9% (127 responses) (specialized care 27.6%, 50.2% primary care, mental health, 22%). The total number of aspects considered relevant for coordination was 369 that were encoded with 441 different codes. The most common theme was the „professional communication“ (41.3% of the codes used), followed by „information sharing between LC“ (17.9%), „administrative aspects“ (14.7%) and „objectives common LC“ (14.5%). From the aspects included in the „communication professionals“ 9.1% were „professional meetings“. In the „administrative aspects“ was the most frequent category „technology to improve communication between LC.“ There were no significant differences between providers.

**Conclusions:** The most important aspect considered for coordination between LC, with no differences between suppliers, was communication between professionals. Although it seems a staple for any project to improve coordination between LC, there appears to be satisfactorily resolved at that efforts should be directed primarily to ensure good communication between professionals.

Disclosure: No conflict of interest declared

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### Communication between primary and secondary care

A. Russell, M. O'Mahony, M. Cleary, B. Crowley, C. Kenny, A. O'Regan  
Southwest General Practice Training Scheme, SWGPT, Tralee, Kerry, Ireland

**Background:** The Irish healthcare system is currently being reconfigured with a shift towards community based care. Good, effective, efficient communication between primary and secondary care services are essential. This is paramount to effective and satisfactory patient care. Recently breakdowns in communication between services have been highlighted in the media. The aim of this study was to assess the current communication between primary and secondary care

**Method:** Over a four week period all written communication between primary care (referral letters) and secondary care (discharge letters and prescriptions) were collected in 6 GP training practices in Southwest Ireland. They were analysed according to current published recommended guidelines and entered into an excel. Data was then transferred for non parametric statistical analysis to SPSS 18.0.

**Results:** 391 referral letters and 1472 discharge letters were collected over the 4 week period. Referral letters from primary care adhered more closely to the guidelines than secondary care letters (p < .009). There was poor documentation of urgency (25%) and allergies (29%) in referral letters. There was little difference in the quality of referral letters between public and private systems.

**Conclusions:** Primary care letters adhere to more of the guidelines than secondary care letters. However, there are deficits in communication on both sides. The biggest deficit is within the clinical details documented and this has the biggest economic impact and impact on patient care. Findings from this study should be highlighted to doctors within both the primary and secondary care systems.

Disclosure: No conflict of interest declared

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**Primary care group psychoeducation for family carers of people with dementia**

S. Cadoo

*Occupational Therapy, Mallow Primary Healthcare Centre, Cork, Ireland*

**Objectives:** The number of people in Ireland being diagnosed with dementia is increasing. The majority live with family carers in the community though two thirds of family caregivers are 'completely overwhelmed by caring' (O'Shea, 2003) Psychoeducation is recommended to support carers of people with dementia (NICE clinical guidelines for dementia care, 2006, Dementia Manifesto, 2007)

**Methods/intervention:** Four six week training courses have been facilitated in Mallow Primary Healthcare Centre since May 2011. The aim of this training was to provide family carers with further education, skills and support to help them in their caregiving journey. This was a joint initiative between a primary care occupational therapist in a dementia role, the local service manager of the Alzheimer Society of Ireland and a clinical psychologist. The Zarit Burden Interview was used to measure carer burden and non standardised measurements of confidence and knowledge were used. Qualitative information was also gathered.

**Results:** 67 family carers completed the six week training. Increases in confidence and knowledge were shown and burden scores decreased.

**Conclusions:** Carer training has given further insight into the impact of dementia on the lives of families which is invaluable when planning of new initiatives. On completion of training, carers reported they wanted to continue meeting so follow up sessions are being facilitated. This provides carers with ongoing access to support, education and services.

Disclosure: No conflict of interest declared

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**Who do we send to the hospital urgently and why?**

J.A. Pascual López, A. Pérez Carrillo, C. Martínez Delgado, F. Hernández Benítez, Y. Mejía Alvarez, D. López Giraldo, A. Corbalán Hernández, P. M. Martínez Lopez, I. Gómez Gómez, J. Aracil Fernández

<sup>1</sup> CENTRO DE SALUD DE CALASPARRA, SERVICIO MURCIANO DE SALUD, CALASPARRA, Spain; <sup>2</sup> SERVICIO DE URGENCIAS DE SAN ANDRES, SERVICIO MURCIANO DE SALUD, MURCIA, Spain; <sup>3</sup> UNIDAD DOCENTE DE LORCA, SERVICIO MURCIANO DE SALUD, CALASPARRA, Spain; <sup>4</sup> SERVICIO DE FISIOTERAPIA, SERVICIO MURCIANO DE SALUD, LA UNION, Spain

**Objective:** Find out the patient referred urgently (RU) to the hospital. What happened to them, why were they referred and did they get the proper results for why they were referred.

**Method:** A descriptive study whose ambition is the continued point of attention (CPA) in which assistance is provided for 24 hours by the primary care team. The study was performed on the subjects referred urgently to the hospital during one month. We obtain the hour, the place (consultancy, home, A&E), the reason for the consultation according to CIAP-2 and the reason for the referral (analysis, observation, hospitalization, X Ray, treatment and own request).

On their return to the consultancy they received their clinical report, if they were happy with the diagnosis and if they were satisfied with the reasons for the referral.

**Results:** The frequency of RU decreases without exception throughout the day. The source is: Consultancy (56%), A&E (32.5%) and home (11%). 59% of the patients are men and the largest group are aged between 40 and 65 years. The most popular RUs are for pathology of the musculoskeletal system and the most frequent motive is X-Ray (61%) and analysis (44%). The agreement of the diagnosis is 74% and 70.5% were satisfied with the reasons for referral.

**Conclusions:** The majority of the RUs were for complementary examinations. The diagnostic agreement in spite of the lack of this is high. Count on X-Rays and analysis

Disclosure: No conflict of interest declared

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**Application of breakthrough series (BTS) model in pediatrics ward**M.T. Lee<sup>1</sup>, T.H. Tsao<sup>2</sup>, Y.X. Jiang<sup>2</sup>, Y.Y. Yu<sup>3</sup>, P.C. Hsu<sup>2</sup>, C.Y. Hsu<sup>4</sup><sup>1</sup> Department of Pediatrics, Puli Christian Hospital, Puli, Taiwan; <sup>2</sup> Department of Nursing, Puli Christian Hospital, Puli, Taiwan; <sup>3</sup> Department of Quality Management, Puli Christian Hospital, Puli, Taiwan; <sup>4</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan

**Objective:** Breakthrough series (BTS) model was established in 1994. It can be improve the quality of health care. The objective of this study is to determine whether unexpected admission rate can be decreased in pediatrics ward by application of BTS.

**Method:** Unexpected admission within 14 days after discharge in pediatrics ward was high in our hospital. It was 6.6% in August 2012. We identified 2 risk factors (aborigines, private insurance) and applied BTS in pediatrics ward since August 2012. The patient's parents, if they were aborigines or had private insurance, health care education were emphasized before discharge by a case manager who is a nursing educator. Fever management, nursing care and washing hands were included in health care education.

**Result:** After application of BTS, the unexpected admission rate within 14 days after discharge was significantly decreased in pediatrics ward. The unexpected admission rate was 6.2%, 6.2% and 4.0% in September, October and November 2012.

**Conclusion**

Application of BTS can decrease the unexpected admission rate within 14 days in pediatrics ward. Furthermore, the case manager may also play an important role in health care.

Disclosure: No conflict of interest declared

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**Interdisciplinary grand rounds – interactive learning to foster enhanced patient care**

T. Iroku-Malize, P. Farrell, V. Thiyagarajan

Family Medicine, Southside Hospital – Hofstra North Shore-LIJ SOM; NSLIJ Health System, Long Island, United States

**Objective:** To create a forum whereby various health care professionals could interact in a non-threatening environment and learn lessons related to patient care.

**Methods:** In the summer of 2012, the Family Medicine Residency Program at Southside Hospital created an interdisciplinary grand rounds session. The sessions are held once a month for an hour on a predetermined topic.

A case is chosen from within the last 6 months. The medical team (family medicine resident, admitting nurse or supervisor, emergency department clinician, pharmacist, specialist or content expert, etc.) review the chart and each prepare 2-3 powerpoint slides that describe their interaction with the patient. The specialist or content expert prepares 4-6 slides outlining learning points. The program director of the family medicine residency program then combines them and inserts slides with questions in a multiple choice or true/false format. The entire presentation is then converted to an audience response program (ARP).

At the interdisciplinary grand rounds, the participants are given ARP devices to respond to questions anonymously and to allow the presenters to clarify concepts. Participants are encouraged to have discussions and debate regarding the management of the case.

**Results:** To date there have been sessions on Alcohol Withdrawal, Diabetes and Hospice & Palliative Medicine.

Participants have evaluated the program favorably. The data is currently being statistically evaluated.

**Conclusion:** Interactive interdisciplinary grand rounds are a viable method for discussing cases and learning methods to optimize patient care.

Disclosure: No conflict of interest declared

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**Patient admissions from Health Centers as an indicator of their functionality.**V. G. Bampalis<sup>1</sup>, G. Mantzouranis<sup>2,1</sup>, E. Klinis<sup>1</sup>, C. Sambazioti<sup>3</sup>, P. Drakoulakou<sup>4</sup>, I. Abatzidis<sup>4</sup>, G. Barakos<sup>4</sup>, A. Bitas<sup>5</sup>, J. Lentzas<sup>6</sup><sup>1</sup> Department of General Medicine, University Hospital of Patras, Patras, Greece; <sup>2</sup> Health Unit Evinoxoriou, General Hospital of Mesologgi, Mesologgi, Greece; <sup>3</sup> Health Unit Kalanou, General Hospital of Patras, Patras, Greece; <sup>4</sup> EKAV-3, Patras, National Instant Aid Center (EKAV), Patras, Greece; <sup>5</sup> Health Unit Eleona, General Hospital of Aigio, Aigio, Greece; <sup>6</sup> Health Center of Simopoulo, General Hospital of Amaliada, Amaliada, Greece**Objective:** The number of admissions from a healthcare unit, according to international literature, characterizes the completeness of the provided services from Health Centers (HC) in a modern healthcare system. The study aims for evaluation of admissions of HCs to the hospitals of Patras as a functionality indicator of the former.**Methods:** All the patient admissions from HCs to the hospitals of Patras were recorded for a one-year period (1/1/2010 to 31/12/2010) as archived in the National Instant Aid Center (EKAV-3, Patras). The demographic characteristics of the patients, distribution in time, cause, origin of each admission and the possible correlations or differences were analyzed with SPSS v. 17.0.**Results:** 1109 admissions were recorded, 61.05% of patients being men. Statistical significant differences between different hours of the day ( $p < 0.001$ ) and months ( $p < 0.001$ ), as well as a correlation between time and month distribution of admissions ( $p < 0.001$ ) were observed. No difference between different days was present ( $p = 0.734$ ). Patients were most commonly admitted with cardiological symptoms, followed by patients with internistic, surgical and orthopedic symptoms, as ordered. Traffic accidents were responsible for 9.47% of admissions; such admissions were unevenly distributed between different hours of the day ( $p < 0.001$ ) and between different days ( $p = 0.038$ ).**Conclusions:** Insufficient human, material and technical resources of primary care units are decisive factors affecting patient admission rates. Expansion of HC services may reduce the hospital burden, thus increasing the availability of hospital resources to more serious health incidents.

Disclosure: No conflict of interest declared

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**Dynamic of interdisciplinary cooperation in family and community health medicine in pontifical university catholic of goias – brazil**R.M. de Oliveira, M.D. Ascencao, V.G. Ferreira, J.S.D. e Moura  
Medicine, PUC GOIAS, Goiânia, Brazil**Objective:** Present the initiation in interdisciplinary cooperation of medical students from Pontifical University Catholic of Goiás (PUC-Goiás) in a Family Medicine Scholarship Unit (FMSU).**Methods:** In the first semester of the medicine course the students are inserted into a FMSU, where they become familiar with the interdisciplinary dynamics and from the second semester, are tasked to actively participate in this dynamic.**Results:** Medical students from the second semester of the course work in hospital field, actively interacting with users and health professionals, including social workers, technical nurses, nurses, dentists, nutritionists and psychologists, and doctors with various specialties. This interaction takes place according to the degree of autonomy acquired every period of the course, which allows knowledge and experience of the practices, organization and multidisciplinary teamwork; and the development, by dealing with problems and real cases, of responsibilities as a caregiver agent and an overview of the social interaction of the health-disease process.**Conclusions:** The early inclusion of students in practical activities, with integration and interdisciplinarity, aiming the integration of biological, psychological, social and environmental dimensions, allows them to know and live the experience of real situations of the organization, practice and professional teamwork, relevant both for his medical training as to increase the degree of satisfaction of users of the Unified Health System in Brazil.

Disclosure: No conflict of interest declared

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### Arguments to holistic approach for oncology patient in family medicine practice. Clinical trial between 2002-2012.

V. Herdea, L. Comnea, L. Soldea, A. D. Herdea, T. Herdea  
CMI Dr Herdea Valeria, National Society of Family Medicine, Bucharest, Romania

The purpose of this work is to evidence the role of holistic approach in improving the quality of life and longevity increasing for oncology patients in GP's practice.

#### Objectives:

1. Oncology patients issues in GP's practice
2. Holistic medicine arguments for increasing quality of life and longevity.
3. Protection mechanisms against trauma for all „actors“ involved in oncological drama: patients, caregivers, physicians
4. Legislative proposals for “support group” in patients care in Romania.

**Design:** Between 2002-2012 we followed 170 oncology patients – 5.15% of the 3300 our patients, monitoring criteria of: age, sex, education, socio-economic status, genetics, lifestyle, addictions, co- morbidity, disease stage at presentation, therapies / treatments used, side-effects, survival, spiritual concerns, caregivers, community, medical staff.

#### Results, Conclusions:

##### 1. GP's :

To do:

- GP's team-nurse, resident, former patients, family.
- Modern equipment, competencies, EMC.

Argument: improving quality of services provided

##### 2. Holistic medicine

To do: Complex new type education

- Body= complex of structures: physical, biosic -mind and conscience and noesic -the soul, the deep-inside
- Risk communication, trauma management

**Argument:** The patient has the right to receive care by all known methods based on clinical evidence

##### 3. Legislation

To do:

- Measures :

a- developing interdisciplinary teams for patients care (GP, oncologist, surgeon, gynecologist...psychologist, alternative medicine therapist, priest-according to patient profile and beliefs).

b- Cost-effectiveness criteria

-developing prevention (GP), reducing costs by externalization, patients home surveillance, offering psychical and financial support for patient family, avoiding burn-out syndrome for medical team.

**Argument:** Prolonged patient's life by an average of 30% compared to similar patients without support

Disclosure: No conflict of interest declared

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### Case conferences between general practitioners and specialist teams as a means of improving patient outcomes at the end of life.

G. Mitchell<sup>1</sup>, L. Burrige<sup>1</sup>, J. Zhang<sup>1</sup>, E. Miller<sup>1</sup>, S. Hollingworth<sup>2</sup>, M. Foster<sup>3</sup>, C. Jackson<sup>1</sup>, F. Hollis-Novak<sup>4</sup>

<sup>1</sup> Discipline of General Practice, University of Queensland, Ipswich, Australia; <sup>2</sup> School of Pharmacy, University of Queensland, Brisbane, Australia; <sup>3</sup> School of Social Work and Social Policy, University of Queensland, Brisbane, Australia; <sup>4</sup> Community Health, West Moreton Hospital and Health Authority, Ipswich, Australia

**Objective:** Chronic non-malignant disease is the main cause of dying in the community. Their care is shared between general practitioners (GPs), and specialist medical and nursing staff, but communication can be compromised. Comprehensive care plans should improve patient and carer outcomes. We aimed to develop a process of systematic care plan development using case conferences between general practitioners (GPs), community nurses (CN) and a palliative medicine (PM) specialist physician.

**Methods:** Identified patients suffered advanced heart failure or lung disease, entering the final phase of their life. A case conference between the PM specialist, CN and GP was conducted face to face in the GP's surgery, using a purpose-designed proforma to identify actual and potential problems across physical, psychological, spiritual and practical issues. Responsibilities were allocated between the parties. The proposed plan was then discussed with the patient

**Results:** Twenty-one case conferences have been conducted. Physical symptoms predominated the discussions, followed by psychosocial concerns. CCs facilitated personal links between the patient's GP and community nurses, with mutual learning of the skills and capacities of each other. Acceptance among all participants was high.

**Conclusion:** The workload posed by advanced disease will escalate rapidly in the face of an ageing population, and should be most efficient when the patient care face to face case conferences appear effective and efficient. A trial that assesses their benefit in minimising unnecessary admissions to hospital is being developed.

Disclosure: No conflict of interest declared

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**The person behind the problem -the importance of communication between health services**M. Neves<sup>1</sup>, C. Jorge<sup>1</sup>, N. André<sup>2</sup><sup>1</sup> General Practice, USF Serpa Pinto, Porto, Portugal; <sup>2</sup> General Practice, USF Escariz, Arouca, Portugal

**Introduction:** In Portugal, addiction management services tend to not communicate regularly with other health services, which can lead to loss on information that could be important for the health care of the patient.

**Case report:** We describe a case of a 42 year old male, with Crohn disease and a past history of heroin and cocaine addiction being now on opioid substitution treatment with methadone, abstemious from illicit drugs for the past 18 months. Four months after the first appointment in Primary Care, he complained about a cough and right superior back pain with anterior irradiation, especially in the morning and with deep respiratory movements. He denied fever or any relation of the pain with physical efforts. These symptoms had been present for the last few months and they were referred at the appointments at the addiction services, where he was given pain killers. The electrocardiogram was normal and a chest radiography showed a rounded opacity in the right superior lobe of the lung. On the tomography, it was identified a nodular lesion in the periphery of the posterior segment of the superior right lobe, with irregular borders and spikes affecting the pleura. In the mediastinum, there was a paratracheal adenopathic nodules conglomerate with tracheal compression and deformation. After biopsy, a lung adenocarcinoma was diagnosed.

**Conclusion:** This clinical case shows how important it is to keep a constant communication between health services and to look at the addiction patient seeing the person behind the addiction.

Disclosure: No conflict of interest declared

1537

**Interdisciplinary teams working to improve population health, the Duke experience**V. Martinez-Bianchi, B. Sheline, B Halstater, J. Ragsdale, G. Trujillo  
Community and Family Medicine, Duke University, Durham, United States

Well organized interdisciplinary team care is paramount to an active, successful and sustainable Patient Centered Medical Home practice. This presentation will discuss the Duke Department of Community and Family Medicine's experience in creating multiple interdisciplinary teams that provide the backdrop to the patient-centered medical home that cares for generations.

The lectures will share examples and inform how teams can be organized not only around the individual patient -such as in direct and indirect patient care, and chronic disease management; but also around the management of populations through tracking health care outcomes of the practice and community; evaluating the practice's metrics, and looking at the community's assets and needs to improve population health.

**Goals and Objectives:** at the end of the presentation attendees will be able to:

- Describe the Patient- Centered Medical Home
- Describe a diversity of team structures for a successful Patient Centered Medical Home.
- Describe the tools of communication necessary for efficient team implementation
- Describe team-building activities that are important for team productivity, promoting leadership, and advocating for patients.
- Describe how a team can approach the practice-based and community-based care of a population.

Disclosure: No conflict of interest declared

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**Investigation of the potential impact of enhanced integration between a suburban university teaching hospital emergency department and a nearby primary care extended hours service**

T. Mac Mahon

*UCD/HSE Dublin Mid Leinster Specialist Training Programme in General Practice, Irish College of General Practitioners, Dublin, Ireland*

**Objectives:** To retrospectively estimate the general practice workload of a suburban university teaching hospital emergency department (ED) over a three-week pilot period;

To assess the usage rates, spare capacity and potential for collaboration of a nearby extended hours GP service over the same period.

**Methods:** Records of all attendances at the ED of adult patients in Manchester triage categories 4 or 5 over three non-consecutive weeks in 2012 were retrospectively reviewed. The product of the total self-referred presentations for triage categories 4 and 5, and the difference between the self-referred and GP-referred discharge rates from the ED was calculated (after Sprivulis, 2003), and compared to the expected results analysing the data by the Sheffield Process Definition (after Lowy et al., 1994). Usage rates were also calculated of the nearby extended hours GP service for the same period to determine its capacity to respond to patient redirection.

Results:

Potential primary care patients represented between 0.7% (Sprivulis method) and 2% (Sheffield Process Definition) of total ED workload. The nearby extended hours GP service had the capacity to easily offer appointments to these patients during its hours of operations, but this would make negligible difference to the overall ED workload.

**Conclusions:** Despite the perception that potential primary care type patient presentations are a significant burden on EDs, this does not seem to be the case. Hence, resourcing primary care, specifically in the out of hours setting, is unlikely to ease the workload burden in Irish emergency departments.

Disclosure: No conflict of interest declared

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**Interdisciplinary geriatric team work and role of family physician**

N. Tekin

*Family Medicine, Narlidere Geriatric Care Center and Residential Home, Izmir, Turkey*

**Objective:** In this study, interdisciplinary geriatric team practices and the role of family physician in these practices were discussed.

**Methods:** The articles analyzing the definition of interdisciplinary geriatric team practices and practice examples and the role of family physician in the practice were evaluated.

**Results:** It is clear that a team working for geriatric patients with complex health and social requirements can evaluate the patient requirements better and can prepare a better care plan than a professional working alone. The primary target of geriatric interdisciplinary team work that healthcare and social service providers work together is to meet requirements of elderly, family and society by combining knowledge, skill and experiences of relevant members of profession with the concept of team work. In developed Western states the fact that social workers should participate in the teams playing a part in primary health care service delivery in addition to family physicians and nurses so traditional core geriatric teams would be formed was brought forward long years ago. It was reported that involvement of family physician in the core geriatric teams in primary practice area was practical, feasible and should be supported.

**Conclusions:** Family physicians are the first contact physicians of the elderly living at home or at corporate care centers. The core geriatric interdisciplinary team to evaluate the old patients with extensive and integrated approach can comprise of family physicians, nurses and social workers in the primary implementation area, geriatrists can take place as consultant physician if necessary.

Disclosure: No conflict of interest declared

## 2.7. RESEARCH IN GENERAL PRACTICE

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### Determination of lipid profile and oxidative stress status in patients with subclinical hypothyroidism

A. Parlak<sup>1</sup>, S. Mutlu<sup>2</sup>, U. Aydogan<sup>2</sup>, O.Sari<sup>2</sup>, K.Saglam<sup>3</sup>

<sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey; <sup>3</sup> Internal Medicine, Gulhane School of Medicine, Ankara, Turkey

**Objective:** The aim of this study is to determine the lipid profile and oxidative stress parameters, in patients with subclinical hypothyroidism.

**Methods:** 30 patients recently diagnosed with subclinical hypothyroid (SH) and 30 healthy volunteers (euthyroid) are included in the study. Blood samples are collected from all patients in order to detect oxidative stress (superoxide dismutase (SOD) and catalase (CAT)), lipid profile and biochemical analyses.

**Results:** Statistically significant difference was found in terms of TSH values between subclinical hypothyroid and control groups while there was no difference in terms of free T3 and free T4 levels (TSH values are  $8.30 \pm 1.78$  mIU/mL,  $2.70 \pm 0.99$  mIU/mL in subclinical hypothyroidism and control groups, respectively,  $p < 0.0001$ ). No difference detected between subclinical hypothyroidism and euthyroid groups in terms of LDL, HDL, triglycerides and total cholesterol levels. Statistically significant difference has been observed between subclinical hypothyroidism and control groups in terms of SOD (patient and control group values are  $669.89 \pm 192.44$  kU/ml and  $328.80 \pm 52.51$  kU/mL, respectively,  $p < 0.0001$ ) while no difference found in terms of CAT.

**Conclusions:** An oxidative stress parameter, SOD levels was detected to be higher in patients with subclinical hypothyroidism than euthyroid group but the lipid profiles did not differ.

Disclosure: No conflict of interest declared

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### Importance of plasma sodium

G. Fioretos, G. Stratiotis, M. Sotiraki, E. Euthimiou, E. Gkalitsiou, S. Giannakaki  
GENERAL MEDICINE, HOSPITAL, PIREAS, Greece

Dietary salt is the major cause of the rise in blood pressure (BP) with age. However the mechanism is unclear. Much evidence suggests that in those who develop high BP there is an underlying defect in the kidney's ability to excrete salt. It has been suggested that these results in a great tendency to retain sodium and an increased compensatory response which is responsible for the rise in BP. However the potential role of small changes in plasma sodium has rarely been considered. To look at this further we studied closely the correlation between BP and different amounts of salt intake. An acute increase or decrease in salt intake caused parallel changes in plasma sodium in normotensive and hypertensives.

In our study we included 54 untreated patients and we reduced their salt intake from 170mmol/day to 100mmol/day for one month, this caused a decrease in plasma sodium of 0.4-0.2mmol/L ( $P=0.018$ ), which was significantly correlated with the fall in systolic BP ( $r=0.09$ ,  $P=0.027$ ).

Our study demonstrates that changing salt intake causes changes in plasma sodium. Small changes in plasma sodium are the immediate drive to the changes in extracellular volume. There is now evidence that small changes in plasma sodium may affect the hypothalamus, the local renin-angiotensin system, the heart and vasculature, all which may play a role in changing BP independent of and additive to that which occurs with the tendency for the changes in extracellular volume. In hypertension, a defect in kidney's ability to excrete salt is likely to cause a greater increase in plasma sodium for given salt intake. Treating hypertension by lowering salt intake is therapeutic.

Disclosure: No conflict of interest declared



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**Project INTERVOB. Study of a community intervention program on physical activity in obese and overweight patients**

P. Rodríguez-Casal, B. Piñón-Gamallo, C. Abeledo, C. Villoslada  
Primary Care Management, SERGAS, Pontevedra, Spain

**Objectives:** To evaluate the association between regular physical exercise through a community intervention program and health status in obese and overweight patients in the Northern Area of Pontevedra.

**Methods:** We use traditional methods of assessing physical activity (IPAQ questionnaire and accelerometer) and most common clinical parameters (weight, height, BMI). There will be a descriptive analysis and linear correlation analysis.

**Results:** The results obtained in this study show that intervention in the community achieved a significant reduction in weight ( $p$  0.0023), BMI ( $p$  0.002) and AC ( $p$  0.0015). The accelerometers reveal that there was a significant decrease ( $p$  0.0199) in terms of the steps / week ( $p$  /s). The IPAQ-L was stated that the perception of its PA patients during the study decreases, perceiving the beginning 9553.76 ( $\pm$  2287) METS and at study end 8736.34 ( $\pm$  1695.39) METS. In the correlation analysis between AF measurements and anthropometric measurements are close to 0, i.e., there is no linear relationship.

**Conclusions:** Obesity in Spain is a social problem that requires emergent response and intervention strategies designed for this purpose. An intervention on the community to seek a change of healthier habits positively influences it, profiting both cardiovascular risk and an improvement in the anthropometric measurements of these individuals is necessary. For this the roles of health personnel is shown as a key element in the prevention and keep up the health of this population.

Disclosure: No conflict of interest declared

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**Why do African immigrants come to our health centres?**

A Perez<sup>1</sup>, MJ Agüeros<sup>1</sup>, M Gago<sup>1</sup>, B Bermejo<sup>1</sup>, JR Lopez<sup>1</sup>, VJ Ovejero<sup>2</sup>, A Avellaneda<sup>3</sup>, M Izquierdo<sup>3</sup>, AI Cano<sup>1</sup>, M Gomez<sup>1</sup>

<sup>1</sup> Primary Health, Servicio Cantabro Salud, Santander, Spain; <sup>2</sup> Hospital Sierrallana, Servicio Cantabro Salud, Torrelavega, Spain; <sup>3</sup> Primary Health, Servicio Madrileño Salud, Madrid, Spain

**Objective:** To study the causes and needs which arise from attending African immigrants in an urban primary care health centre.

**Methods:** A descriptive transversal study of African immigrants receiving medical attention for whatever reason over six months (January–June) 2012.

**Results:** There were 48 medical assistances, which is 5.41% of the total of immigrants attended to. The average age was 31.3 years (DE7.6) and they were mainly women (79.2%). The assistances occurred predominantly on Tuesday (33.3%); none were home visits, the average number of reasons for assistance was 1.33; on 29.9% further tests or courses of action, mainly sick leave (42.9%), clinical analysis (28.6%) or referral to another specialist (28.6%), mainly pneumology (40%) and gynecology (32%). Classifying the causes by CIPSAP-2, we obtained “X genitourinary illnesses” (33.3%), “I infectious and parasitic illnesses” (20.8%), and “VI illnesses of the nervous system and sensory organs” (16.7%), and by specialities: pneumology (25%), gynecology/obstetrics (25%) and traumatology (16.7%). 58.3% were given prescriptions for acute disorders (anti-inflammatory drug (54.2%), antibiotics (25%)), and 12.5% for chronic disorders (pregnancy supplements (33.3%), contraceptives (25.2%)).

**Conclusions:** Attending the African immigrant population represents a small percentage of the total. The profile of the typical patient is a young woman, who mainly receives medical attention for pneumological or gynecological reasons. There are no home medical visits. Less than one third require further medical tests or courses of action, the main one being sick leave. They are usually acute causes, requiring little chronic medication or follow-up medical checks

Disclosure: No conflict of interest declared

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### The association of cardiovascular risk factors with non-alcoholic and alcoholic fatty liver

S. Shin, A. Han, Y. Kim, B. Koo, H. Park  
family medicine, Wonkwang University, Iksan, Korea

**Objective:** A association between non-alcoholic fatty (NAFL) liver and cardiovascular risk factors has been widely addressed. But the studies on alcoholic fatty liver (AFL) associated with cardiovascular risk factors are not sufficient. This study aims to identify association of cardiovascular risk factors with non-alcoholic fatty livers and alcoholic fatty livers

**Methods:** We categorized 838 patients into three groups: Normal group-normal ultrasonography with less than 40g of alcohol per week, AFL group— fatty liver with more than 40g of alcohol per week, NAFL group-fatty liver with less than 40g of alcohol per week. We surveyed smoking, exercise frequency, liver function tests, waist circumference, and body mass index of each individuals. The data of cardiovascular risk factors such as total cholesterol, HDL-cholesterol, TG, LDL-cholesterol, hs-CRP were collected by retrospective review. The mean differences between groups were analyzed by ANCOVA.

**Results :** Normal group showed lower BMI and waist circumference than the other groups. AST, ALT and  $\gamma$ -GT were the highest in AFL group and NAFL showed higher in AST, ALT than normal group but no difference was found in  $\gamma$ -GT. NAFL and AFL groups had higher values than normal group in diastolic BP, fasting serum glucose, total cholesterol, TG and hs-CRP. The value of HDL-cholesterol was the lowest in NAFL group and no differences showed between the other two groups.

**Conclusion :** Both NAFL and AFL group showed high level in cardiovascular risk factors. Regardless of the type of fatty liver, more active prevention and treatment of fatty liver are required.

Disclosure: No conflict of interest declared

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### Application of non-pharmacological treatment of arterial hypertension in inhabitants in the urban environment

M. Zelic<sup>1</sup>, V. Zivadinovic<sup>2</sup>

<sup>1</sup> GP, Health Center «Vracar», Belgrade, Serbia; <sup>2</sup> PE, «Srbijasume», Belgrade, Serbia

**Objective:** Arterial hypertension is one of the most common non-infective diseases in Belgrade. Arterial-hypertension appears in people with increased-body-mass, they are-physically-inactive, although living in metropolis with 11 urban-forest. Surface-pulmonary alveoli-grown-man is approximately equal to the-surface of leaf-grown-tree. Number of parks and forests affects the quality of urban-environment. The research-aim of study is determining the effectiveness of non-pharmacological-treatment: strict-application of hygienic-dietary-programs in patients with newly-detected-hypertension, for further disease-progression: blood-pressure values.

**Methods:** Investigation 178-patients:109 women and 69 men: 30-39 years. All-overweight, have increased systolic-diastolic-pressure. Patients are employed, not-smoke, not-drink, physically-inactive with newly-detected-hypertension. Laboratory analyses were done in all-patients (blood picture, glycemia, lipid status, creatinin, urine), body-mass-index (BMI), electrocardiogram, ecotomography-of-kidneys. Men-BMI(28-30)kg/m<sup>2</sup> and pressure (140-159/90-99) mmHg; Women-BMI (27-30) kg/m<sup>2</sup> and pressure (145-150/90-95) mmHg. All other analyses were normal. This was first-physical-examination. Every-patient got advices: 60minutes daily-walking, daily-intake only 1500 kcal, (1kcal = 4,18kJ), salt-intake less than 5g/day. Study lasted 9-months with physical-examination every-3-months.

**Results:** 109 women and 69 men were fully-adopted all of the recommendations on lifestyle changes. Physical-examination 3 months-after: Men-BMI (27,25-29) kg/m<sup>2</sup> and pressure (132-149/85-94) mmHg; BMI-reduced (2,68-3,33)%, pressure-reduced (5,71-6,29/5,05-5,55)%. Women-BMI (25,79-28,71) kg/m<sup>2</sup> and pressure (135-140/85-94) mmHg; BMI-reduced (4,30-4,48)%, pressure-reduced (6,67-6,89/1,05-5,55)%. Physical-examination 6 months-after: Men-BMI (26,43-28,09) kg/m<sup>2</sup> and pressure (130-140/80-90) mmHg; BMI-reduced (5,61-6,37)%, pressure-reduced (7,14-11,95/9,09-11,11)%. Women-BMI (24,72-27,54) kg/m<sup>2</sup> and pressure (130-135/80-85) mmHg; BMI-reduced (8,20-8,44)%, pressure-reduced (10-10,34/10,53-11,11)%. Physical-examination 9 months-after: Men-BMI (25,48-27,12) kg/m<sup>2</sup> and pressure (125-130/75-77) mmHg; BMI-reduced (9-9,6)%, pressure-reduced (10,71-18,24/16,67-22,22)%. Women-BMI (23,62-26,4) kg/m<sup>2</sup> and pressure (125-130/75-80) mmHg; BMI-reduced (12-12,52)%, pressure-reduced (13,33-13,79/15,79-16,67)%. All are shown in relation to the first physical-examination.

**Conclusions:** 178 patients were fully-adopted all of the recommendations on lifestyle changes. Good results-achieved. Comparing observed-values before and after implementation of non-pharmacological-treatment, we conclude that changing-lifestyle reduced BMI in men for (9-9,6)%, in women for (12-12,52)%, and reduced pressure in men for (10,71-18,24/16,67-22,22)%, in women for (13,33-13,79/15,79-16,67)% in 9-month period-expressed in relation to the first physical-examination. Therefore, employed urban-population must continue to hygienic-dietary-programs to achieve ideal-values BMI and blood-pressure.

**Keywords:** Newly-detected-hypertension, non-pharmacological-treatment

Disclosure: No conflict of interest declared

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### Effects of original awareness of hypertension on salt intake in patients who undergo a test for genetic susceptibility to hypertension

J.-ichi Murakami<sup>1</sup>, M. Okayama<sup>2</sup>, T. Takeshima<sup>2</sup>, K. Takamura<sup>3</sup>, M. Harada<sup>4</sup>, M. Kumada<sup>5</sup>, E. Kajii<sup>2</sup>

<sup>1</sup> Department of Internal Medicine, Mine City Hospital, Mine, Japan; <sup>2</sup> Division of Community and Family Medicine, Center for Community Medicine, Jichi Medical University, Shimotsuke, Japan; <sup>3</sup> Department of General Practice, Nishimera Municipal Clinic, Nishimera, Japan;

<sup>4</sup> Department for Support of Rural Medicine, Yamaguchi Grand Medical Center, Hofu, Japan;

<sup>5</sup> Division of Project for Integration of Community Health, Center for Community Medicine, Jichi Medical University, Shimotsuke, Japan

**Objective:** Genetics-related knowledge contributes to improved management of a disease. This study evaluated the effects of original awareness of hypertension on salt intake in outpatients who underwent genetic susceptibility testing.

**Methods:** Total 735 outpatients (299 males) who were tested for a polymorphism in the G-protein  $\beta 3$  subunit gene 825C/T in a Japanese primary care setting were included. Evaluated data included original awareness of hypertension using visual analogue scale (0-10), behavior modification in terms of salt intake, and daily salt intake estimated by a spot urine test. We analyzed the relationship of original awareness of hypertension with behavioral changes and daily salt intake variations 1 year after notifying the patient about their test results.

**Results:** With regard to original awareness of hypertension, scores for “anxiety regarding onset,” “involvement of hereditary factors,” “correlation with lifestyle,” and “prevention” were  $6.5 \pm 3.7$ ,  $6.9 \pm 3.5$ ,  $8.0 \pm 3.0$ , and  $8.4 \pm 2.4$ , respectively. Among all patients, 55% had positively changed their behavior with regard to salt intake 1 year later. Estimated daily salt intake before and after notification of test results was  $11.7 \pm 3.6$ g and  $11.7 \pm 3.7$ g, respectively. In all patients, including the subgroup with the T allele, none of the four original awareness aspects were related to positive behavioral change or daily salt intake variation. Daily salt intake variation was comparable between patients with positive and negative behavior change.

**Conclusions:** In patients who undergo testing for genetic susceptibility to hypertension, original awareness of hypertension may not affect salt intake.

Disclosure: No conflict of interest declared

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### A qualitative study of older Irish adults' experiences of cognitive screening tools in a primary care setting

C Sheehan<sup>1</sup>, S Cadoo<sup>2</sup>, A Russell<sup>1</sup>

<sup>1</sup> General Practice, UCC, Cork, Ireland; <sup>2</sup> OT, HSE, Mallow, Ireland

In 2010, there was an estimated 36 million people living with dementia worldwide, with an anticipated doubling of this figure every twenty years (2030- 65.7 million, 2050-115.4 million). Cognitive screening is an initial step in the pathway to MCI and dementia diagnosis, and the MMSE remains the most frequently used cognitive screen, although there are several others; Mini-Cog, MIS, GPCOG, CDT, MoCA, and RUDAS for example. Knowledge is scant about the pathways to diagnoses of dementia/MCI, and there is evidence to suggest that GP's are reluctant to diagnose patients with dementia/MCI due to the stigma, work load, and therapeutic nihilism, however, cognitive screening tools are recommended best practice for dealing with suspected cases and treatment of dementia/MCI. There is a dearth of knowledge from a patient's perspective on the completion of cognitive screening tools in a hospital or primary care setting (Krehone et al: 2011). This presentation is based on original research in a primary care setting in Ireland. Patients with subjective memory loss were invited to attend for cognitive screening (MMSE and MoCA), and 11 patients were followed up with semi-structured interviews. This presentation outlines the key findings and examines the experiences of the patients in the context of the increasing need for cognitive assessments in primary care and concomitant increasing global rates of dementia. This presentation explores the patients experiences, and discusses such issues as ‘failure’, ‘fear of dementia’, ‘personal and familial meaning’, ‘the acceptance of memory loss’ and ‘the elementary nature’ of the cognitive screening tools.

Disclosure: No conflict of interest declared

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**Application of mini mental state examination test in general practitioner's office**

D. Spasic, K. Vilic Brajic, M. Milovanovic

*general practice, Health centre „Novi beograd“, Belgrade, Serbia*

**Objective:** How to recognize the demented patients in general practitioner's office, refferal them to neurologist and start medical treatment on time.

**Methods:** Use of MMSe test. From September 2010 to September 2011 fifty problematic patients filled in the test. To an age group of persons aged over 65 belonged 95% of patients, while 6% belonged to a group of patients aged 50 to 65. Whole group of tested people consisted of 68% of female and 32% male patints.

**Results:** We haven't noticed any difference that could depend on education level. Most patients were in the category of moderate dementia (42%) and milld demented was 6% of examinees. None of patients had severe dementia. As for orientation, 70% of patients answered correctly to more than 50% of questions, and 96% of them had the maximal number of points in the study of their memory. The greatest difficulty they had answering the questions about the attention and recall: 62% of them had attention of less than 50%, while as for recall 60% of examinees had zero response. In connection with speech tests 92% of respondents had more than 50% of correct answers and 58% of them succeeded to draw two intersecting pentagons.

**Conclusions:** If the patient or his family complain about fallen concentration or that he can't remember anything, we suspect dementia and do MMSE test. Depending on results, doctor will decide what must be done in addition. All patients who filled in MMSe test were further examined neurologically and received appropriate therapy.

Disclosure: No conflict of interest declared

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**Difficult to treat depression. A clinical audit in General Practice.**

L. Piterman, K. Jones, R. Biezen

*General Practice, Monash University, Melbourne, Australia*

**Introduction:** General practitioners are at the forefront of managing a range of mental illnesses, most commonly depression and anxiety. They are also involved in shared care of patients with severe and chronic mental illnesses. Whilst many cases of depression presenting to GPs may be classified as mild and include adjustment disorders, a proportion are more severe and difficult to treat.

**Methods:** Following a qualitative study undertaken by the authors with GPs to clarify the construct "difficult to treat depression-DTTD" (Jones, Castle, Curran, Piterman 2012), 63 GPs completed a clinical audit of 5 patients they identified as fitting the description of DTTD.

**Results:** Of the 312 eligible patients 66% were female and 64% were aged over 40. Physical co-morbidity was common. Psychiatric co-morbidity was present in 32%. Major Depression was present in 25% based on clinical grounds alone (46%) and aided by diagnostic tools (usually K-10) in 50%. DTTD had been present for more than 3 years in 55% of the sample. 94% were on medication and 72% were also receiving psychotherapy. The most commonly prescribed medications were SNRIs (38%), SSRIs (36%), Benzodiazepines (29%), Atypical antipsychotics (21%). Problems encountered in management were non-response or poor response (67%), intolerable side effects (34%), non compliance (19%). GPs identified major difficulties in ensuring adequate dose (84%), adequate duration (74%), optimizing adherence (50%) and reviewing interactions with other drugs (45%).

**Conclusion:** The audit revealed major challenges in managing depression in GP settings.

Disclosure: This study was funded by a grant from AstraZeneca

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**Analysis of the demand of immigrant patients in a primary care health center**M.J. Agüeros<sup>1</sup>, A. Perez<sup>2</sup>, J.R. Lopez<sup>2</sup>, V.J. Ovejero<sup>3</sup>, C. Traspuesto<sup>2</sup>, I. Muñoz<sup>2</sup>, M.T. Garcia<sup>2</sup>, A. Alonso<sup>2</sup>, A.I. Cano<sup>1</sup>, B. Casanueva<sup>4</sup><sup>1</sup> CS Zapaton, Servicio Cantabro Salud, Torrelavega, Spain; <sup>2</sup> CS Centro, Servicio Cantabro Salud, Santander, Spain; <sup>3</sup> Hospital Sierrallana, Servicio Cantabro Salud, Torrelavega, Spain;<sup>4</sup> CS Solares, Servicio Cantabro Salud, Solares, Spain**Objective:** To study the characteristics of the medical attention given to immigrants in a primary care health centre.**Methods:** A transversal descriptive study of immigrants treated for whatever reason, in an urban primary care health centre, over six months in 2012.**Results:** 443 medical assistances were carried out (12.3% of the total), with an average age of 37.53years (DE12.09) and mainly female(79.5%); mainly of South American origin(67.3%) followed by East European nationals(25.1%) and Africans(5.4%); medical assistance was mainly on a Friday (23.9%); none were home visits, the average number of reasons for attending was 1.42; in 38.8% further tests or courses of action were carried out, mainly referral to another speciality (33.3%) (ophthalmology(19.4%) and traumatology(16.1%)), analysis(31%) and cytology(13.5%). Classifying the reasons using CIPSAP-2, what was obtained was "X genitourinary illnesses"(29.9%), "XIII bone and joint disorders and those of the connective tissue"(18.1%), and by specialities, gynecology/obstetrics(23.7%), traumatology(17.4%) and pneumology(13.1%). 56.1% received a prescription for an acute disorder (anti-inflammatory(68.4%), antibiotics(7.3%)) and 15.9% for chronic disorder (pregnancy supplements(15.7%), oral contraceptives(12.9%))**Conclusions:** Attending the immigrant population represents a small percentage of the total number of medical assistances. The profile of the typical patient is of a young woman, of South American origin, receiving medical attention mainly for gynecological or traumatology motives. There were no home visits. More than one third requires a further course of action or test, mainly referral to another speciality or analysis. The motives for visiting the health centre is for acute disorders, requiring little chronic medicine or follow-up consultations.

Disclosure: No conflict of interest declared

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**Patients' subjective concepts about primary health care utilization: Study protocol of a qualitative comparative study between Norway and Germany**W. J. Herrmann<sup>1</sup>, A. Haarmann<sup>1</sup>, A. Bærheim<sup>2</sup>, U. Flick<sup>1</sup>, T. Lichte<sup>1</sup>, M. Herrmann<sup>1</sup><sup>1</sup> Institute of General Practice and Family Medicine, Otto-von-Guericke-University of Magdeburg, Magdeburg, Germany; <sup>2</sup> Department of Public Health and Primary Health Care, University of Bergen, Bergen, Norway**Background:** In Germany, utilization of ambulatory healthcare services is comparatively high: An average of 17.1 physician-patient contacts per year compares to about 5 in Norway.

Neither the usual models of healthcare utilization, such as Rosenstock's Health Belief Model and Andersen's Behavioral Model, nor organizational factors of the healthcare system, such as gatekeeping, can explain these differences adequately. Our hypothesis is that patients' subjective concepts about primary healthcare play a major role in explaining different healthcare utilization across countries.

**Objective:** To explore these subjective concepts comparatively, exemplary between Germany and Norway.**Methods:** A comparative qualitative study design. In Norway and Germany, we are going to interview 20 patients each with episodic interviews. In addition, we are going to conduct participant observation in four German and four Norwegian primary care practices. The data is going to be analyzed by thematic coding. As a final step, we are going to develop a map of similarities and differences between the subjective concepts regarding primary healthcare utilization in Germany and Norway.**Results:** At the conference, we are going to discuss several challenges in comparative qualitative studies: As qualitative research is language sensitive, conducting research in different languages is a major challenge. Good knowledge of both languages of the researchers involved is essential. To obtain funding for comparative research is difficult as national grant agencies usually do not only fund personnel abroad.**Conclusion:** It is necessary to ask for the causes of differences in healthcare figures. However, design and conduction of comparative qualitative studies are challenging.

Disclosure: No conflict of interest declared

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**The development of the physician satisfaction questionnaire in the Primary Care Outpatient Setting**

M. Kitamura, Y. Takemura

Department of Family Medicine, Mie University Graduate School of Medicine, Tsu city, Mie, Japan

**Objective:** Although family physician (FPs) / primary care physician (PCs) satisfaction has a relationship with service quality, there was no measure to assess physician satisfaction in outpatient setting. Last year we presented the components of job satisfaction for Japanese FP / PC physicians working in the outpatient setting.

This research aims to develop the physician satisfaction questionnaire for Japanese FPs / PCs in the primary care outpatient setting with acceptable validity and reliability.

**Methods:** A quantitative study. The components of job satisfaction in outpatient setting were analyzed using the factor analysis and revised content-valid question items of the questionnaire. A test of internal consistency was also assessed. The validity was assessed to evaluate the association between these scores and the job satisfaction of the visual analogue scale. To evaluate the test-retest reliability of each question item, we asked the same questionnaire again at least 30 minutes after answering the questionnaire.

**Results:** Through focus group interviews and qualitative analysis, we found the 64 components. To estimate these components quantitatively, we consulted this to over 120 Japanese FPs / PCs. we picked up 6 subscales among 26 components questionnaire via Factor analysis with the use of a Promax rotation: "the circumstances", "finding common grounds", "the colleagues", "the flow of outpatient setting", "good reputation" and "snuggling to the patient's difficulty". These results revealed satisfactory validity, including the validity, internal consistency, and reliability.

**Conclusions:** We have developed a self-administered physician satisfaction questionnaire applicable in Japanese FP / PC outpatient settings.

Disclosure: No conflict of interest declared

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**The role of physician's empathy in supporting compliance and successful long-term treatment**

M. Hanževački

Family-general medicine, Health Care Centre Zagreb zapad, Zagreb, Croatia

**Objective:** Present the importance and the ways to improve physician's empathy as the tool to enhance patient compliance with therapy

**Methods:** Literature search, evaluation

**Results:** Compliance is critical component in successful treatment of chronic diseases. For practicing physicians it is frustrating when patients do not follow recommendations. We expect their compliance, even though there is clear evidence from clinical studies that we shouldn't.

Managed care organizations are increasingly focused on empowering their members with information and self-care skills in order to help them become "better" utilizers of health care resources. Communication technologies make more and more information available. Depending on where we practice, active and informed patients may comprise the majority of our patients.

In this era of empowered patient, it is time to think about compliance in a different way. Compliance implies an involuntary act of submission to authority, whereas *adherence* refers to a voluntary act of subscribing to a point of view. The difference is not just semantic; it goes right to the heart of our relationship with patient. We need to influence them to remain adherents to good self-care. We need to establish three key conditions in our communication with patients: shared values, shared language, and mutual respect.

**Conclusion:** Listening patients' meanings and values becomes the starting point for gaining patients' adherence. Working with the patients to reach agreement on a treatment plan that makes sense in the context of their lives facilitate their adherence to self-management when they leave our office and resume their day-to-day lives.

Disclosure: No conflict of interest declared

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**Study of the agreements with the surgeon regarding the referrals from primary care**

A. Perez<sup>1</sup>, V.J. Ovejero<sup>2</sup>, M.J. Agueros<sup>3</sup>, J.R. Lopez<sup>1</sup>, L. Rioja<sup>4</sup>, M.A. Pereda<sup>3</sup>, A. Avellaneda<sup>5</sup>, M. Gago<sup>1</sup>, B. Bermejo<sup>3</sup>, B. Gonzalez<sup>1</sup>

<sup>1</sup> CS Centro, Servicio Cantabro Salud, Santander, Spain; <sup>2</sup> Hospital Sierrallana, Servicio Cantabro Salud, Torrelavega, Spain; <sup>3</sup> CS Zapaton, Servicio Cantabro Salud, Torrelavega, Spain; <sup>4</sup> Gerencia Atencion Primaria Santander, Servicio Cantabro Salud, Santander, Spain; <sup>5</sup> CS Carmenes, Servicio Madrileño Salud, Madrid, Spain

**Objective:** To analyse the characteristics of referrals made to surgeons from primary care, and agreements in the diagnoses.

**Methods:** Analysis of the patients referred to general surgery from an urban primary care health centre over the period January to June 2012.

**Results:** 98 referrals were made. The average age was 54.53 years (DE 17.8), predominantly male (54.1%); the main reasons were inguinal hernia (23.5%), varicose veins in lower limbs (14.3%) and skin cysts (12.2%). 64.3% were referred after the first consultation; 5.1% had a diagnosis test, mainly ultrasound scans (80%). In general surgery, 41.8% of patients had a surgical operation of some kind and 56.4% received some type of treatment. As far as the filling in of the medical referral slip is concerned, in primary care the pathology was well described in 46.9% and in 52% at hospital level; the medical record was later completed in 37.8%. The Kappa index of agreement in the diagnosis between levels was 0.74, which is considered to be good according to Landis and Koch classification.

**Conclusions:** Agreement in diagnosis between levels is high, which means efficiency. It should be pointed out that there is a poor description of the pathology on the referral slip and in the response, and also the answer in the medical records is not computerized. Little use of diagnosis tests or prior treatments is made in primary care. In almost half of the referrals, surgical operations were carried out. It is necessary that both levels are made aware of the need to correctly record the information on the medical records.

Disclosure: No conflict of interest declared

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**Patients' views on discussing organ donation in the primary care setting**

J. Rea, R. Meakin, G. Rait

Primary Care and Population Science, Royal Free Hospital, London, United Kingdom

**Background:** Shortage of organ donation limits transplantation as a treatment for end-organ failure. More people need to be encouraged to register as donors in the UK. Currently General Practice passively promotes organ donation by posters/leaflets in surgeries, but there is no routine discussion. Little research is available about active promotion techniques – such as discussion or how patients would respond to this method in Primary Care.

**Objective:** To discover patients' views on discussing organ donation in the Primary Care Setting and to assess their expectations of what role Primary Care should play in recruiting donors.

**Methods:** A qualitative study design used individual, face-to-face interviews with a consented, purposive sample of 17 patients, recruited from a Northwest London General Practice. Framework thematic analysis was used to identify trends within data collected.

**Results:** Seven key themes emerged from interview analysis: poor awareness of organ donation; lack of impetus to donate; expectation that reliable subject information would be available in General Practice; discovery of positive/negative media influence on patient views; education appeared a means to ameliorate patients' donation concerns; discussion considered important for interactive learning; preference that healthcare professionals should lead discussions.

**Comments:** This study uncovered a need to improve patient education about organ donation and to better motivate patients to donate. Patients expected to find donor information at their General Practice suggesting an educational opportunity within primary care for interactive discussion. Patients preferred such discussion to be optional and initiated by an informed, familiar, and impartial member of their Primary Care team.

Disclosure: No conflict of interest declared

921

**Primary Care Assessment Tool (PCAT) validation in Uruguay.**M. Pizzanelli<sup>1,2</sup>, J. Ponzo<sup>1,2,3</sup>, M. Buglioli<sup>4,1,2</sup>, A. Toledo<sup>1,4,2</sup>, M. Casinelli<sup>1,2</sup>, A. Gómez<sup>1,2</sup><sup>1</sup> Facultad de Medicina, Universidad de la República Oriental del Uruguay, Montevideo, Uruguay;<sup>2</sup> PCAT research, PCAT.uy Team, Florida, Uruguay; <sup>3</sup> Departamento de Medicina Familiar y Comunitaria, Facultad de Medicina, UDELAR, Montevideo, Uruguay; <sup>4</sup> Departamento de Medicina Preventiva y Social, Facultad de Medicina, UDELAR, Montevideo, Uruguay

Primary care proper development depends on the change of health model established in Uruguay since 2008 sustained by the National Integrated Health System.

PCAT.uy Team arises with the purpose to validate and apply PCAT a family of tools created for Barbra Starfield. The quality of the instrument and the extended use of PCAT in different continents confirm its powerful capacity to assess primary care attributes in services and health systems.

First stage objectives of the process include: 1) Validate PCAToll Provider version 2) Obtain Spanish version appropriate to cultural context and local care characteristics.

**Methodology:** Starfield recommendations were accomplished to achieve validation: 1) Literature review and exchange with research PCAT groups (1-5), (6-9), 10), 2) Expert Panel, 3) Direct translation, 4) Reverse translation, 5) Integration and synthesis, 6) Pilot application (public and private health services, urban and rural areas), 7) Analysis of the preliminary survey by Barbara Starfield and James Macinko (11), 8) Incorporation of modifications.

**Conclusions:** The result of this work is a validated version of PCAT Provider (PCAT-UR-PE) to be used in Uruguay. This resource will provide relevant data assessing and comparing services over time and geographic areas in order to monitor progress of the health reform and its outcomes. It will also allow international comparison.

Disclosure: No conflict of interest declared

931

**Aetiology of epilepsy**R. Njeri Mbugua<sup>1,2</sup><sup>1</sup> RESEARCH, KENYATTA NATIONAL HOSPITAL, NAIROBI, Kenya; <sup>2</sup> Research Care and Training Programme, Kenyatta National Hospital, NAIROBI, Kenya

**Objectives:** Electroencephalogram based studies done elsewhere suggest that epileptiform activity originates predominantly from the left cortical hemisphere. There is evidence that partial epilepsies (focal spike and wave epileptiform discharges on tracings) connotes focal; secondary structural cortical dysfunction. Studies seeking similar findings have not been done locally.

**Methods:** To review electroencephalograms (EEGs) done at Kenyatta National Hospital (KNH); looking for various types of epileptiform discharges and their cerebral cortex of origin.

**Results:** Retrospective observational study at Kenyatta National Hospital, Nairobi, Kenya--from January 2012 to June 2012. A total 10431 EEG records were reviewed. Ninety Eight percent of referrals for EEG evaluation was for clinical differential diagnosis of epilepsy. Abnormal EEGs comprised 32.2% of the study population. Epileptiform abnormalities (i.e. focal spike and wave, generalized spike and wave and 3Hz spike and wave) discharges accounted for 75.2% of all abnormal EEG waveform discharges. Of the epileptiform abnormalities, focal spike and wave discharges comprised 71%. Focal spike and wave discharge implies a possible secondary aetiology of epilepsy. The left cerebral hemisphere was the origin of 49.8% of focal spike and wave epileptiform EEG discharges. Multifocal loci in cerebral cortices (i.e. frontal, temporal and parietal) were the foci of origin of abnormal EEG waveforms in 69.9% of recordings.

**Conclusion:** Focal spike and wave epileptiform discharges, with attendant likely secondary aetiology of epilepsy is predominantly evident in this study. It contrasts findings from western literature. The left cerebral hemisphere is more epileptogenic as is noted in other studies.

Disclosure: No conflict of interest declared



956

**Evidence shortfalls in the NICE guidelines**

L. Moran

*General Practice, RCGP, London, United Kingdom*

The National Institute of Clinical Medicine is the UK benchmark for evidenced based medicine. Internationally it has high accolade with many countries following the recommendations. Funding follows these recommendations and clinicians can feel obliged to justify clinical deviation from them. Managers expect treatment based on the guidelines.

However, this situation is not crystal clear. Whilst NICE guidelines try to use best available evidence and work towards sensible practice in accordance with financial restraints, there are many areas where there is lack of good evidence, bias and ambiguity. You would hope to find many Grade A recommendations in the guidelines. Unfortunately the majority contain much Grade D evidence and whilst often logical suggestions, the evidence is not there to support them. This is especially true when comparing non-drug with drug treatments. This makes it difficult for primary care clinicians to be aware of the evidence with which they practice.

This talk focuses on the shortfalls in the NICE guidelines which we, as clinicians, need to be aware of. They are a great anchor for treating our patients but they have their limitations. With such international use we do greater service to our patients to highlight these shortfalls, opening our eyes to future evidence opportunities.

Disclosure: No conflict of interest declared

970

**Immunomodulation efficiency in pediatric practice of family physician. Clinical trial between 2009-2012**

L. Comnea, V. Herdea, L. Soldea, A. Herdea, T. Herdea

*Private practice Herdea Valeria, National Society of Family Medicine Romania, Bucharest, Romania*

The study aimed to reduce the frequency and severity of illness, in child population-6 months-3 years, applying adapted immunomodulation schedules (IMS) in a study group (LS), comparing to a control group (LC)

**Objectives:**

- Quantification of immunomodulation results obtained for LS (receiving IMS) and comparative analysis with LC (without IMS).
- Pursuing reduction for severity of symptoms and antibiotics use
- Comparative analysis of cost-effectiveness applying IMS.

**Design:** Between 01.2009 – 06.2012 (42 months), we conducted a study including 585 children (age between 6 months -3 years = 18, 28% from 3, 200 patients of our practice).

**A. LS-** 295 children have benefited IMS. **We use:** IMS with natural extracts – 100 children (sea buckthorn, hawthorn, propolis, blueberry, pollen, acacia honey, echinacea, black cumin, cranberry).

IMS with prebiotics, probiotics and IgG – 100 children (Starting idea- production of defense factors by stimulating Peyer plates- „Gut brain theory“)

Synthetic IMS – 95 children.

**B. LC-** 290 children- not received IMS from various reasons

Criteria for inclusion in the LS:

**A.** Clinically-high frequency and severe evolution of disease, increasingly needs for antibiotics

**B.** Laboratory criteria- Hgb <10, 5g% sideremia <35mg%, IgA decreased.

**Results. Discussion**

Best results were obtained using the combination of prebiotics+probiotics + Ig G and prepartes with C vitamin. The study present in percentage the obtained results.

Conclusions – the application of IMS have led to:

- 1.- Shortage, reduce frequency and severity of illness.
- 2.- Improvement of clinical and biological parameters in LS.
- 3.- Lower social costs of disease – eliminating or reducing medication costs and parental absenteeism.

Disclosure: No conflict of interest declared

980

**Referral from primary care to a child and adolescent psychiatry reference unit in the north of Portugal: a 2-year analysis**M. Araújo<sup>1</sup>, E. Gomes<sup>2</sup>, M. Fernandes<sup>2</sup><sup>1</sup> USF St. André de Canidelo, USF St. André de Canidelo, Vila Nova de Gaia, Portugal; <sup>2</sup> USF Nova Via, USF Nova Via, Vila Nova de Gaia, Portugal

**Objectives:** It is estimated that 10-20% of children have mental problems, although only one fifth of them receive adequate treatment. Referral from primary care to child and adolescent psychiatry centres is an important step in the management of these conditions. Our study aimed to characterize the population referenced to a child and adolescent psychiatry consultation by primary health care and to evaluate the quality of communication between these two levels of care.

**Methods:** Observational cross-sectional study. Our sample comprised all referrals from primary care to a child and adolescent psychiatry unit of a reference hospital in the north of Portugal in 2010/2011. Descriptive analyses were performed regarding gender, age, reason for referral, priority referral, priority given by the psychiatrist, reason for refusal/return of referral and quality of referral letter.

**Results:** Our analysis was based in 980 referrals (62% male). Patients aged 6-10 years were the most commonly referenced (41%). The most frequent reason for referral was "signs/symptoms of child behavior" (32%). Of all referrals, 17% were considered urgent by the family doctor. Of these, 10% were considered priorities by the psychiatrist. Eleven percent of all referrals was refused/returned, mainly by insufficient information (36%). Fourteen percent of the referral letters were considered of poor quality.

**Conclusion:** Our results suggest that the articulation and communication between the family doctor and the child and adolescent psychiatrist is effective, although some aspects need improvement.

Disclosure: No conflict of interest declared

983

**Antibiotic resistance of Escherichia coli from community-acquired urinary tract infections**

M. Klačar, B. Pavković

General Medicine, Health Center Dr Simo Milosevic, Belgrade, Serbia

Urinary tract infections are the second most common type of infection in humans. Escherichia coli remains one of the most frequent causative agent of these infections. Increasing antimicrobial resistance in E. coli has been reported worldwide.

**Objective:** The aim of this study is the evaluation of resistance patterns of E. coli in community-acquired urinary tract infections.

**Methods:** The prospective, observational study involved 231 patients (204 women and 27 men) with symptomatic urinary tract infection who presented to Health Center<sup>2</sup> Dr Simo Milosevic<sup>2</sup> from september 2012 to december 2012. Clinical manifestations were analyzed using patients<sup>4</sup> medical records. Clean catch midstream urine samples were tested for urinalysis (UA) and culture and sensitivity. To determine the level of antibiotic resistance of the isolated bacteria populations multiple antimicrobial resistance index was used.

**Results:** Of 231 patients (204 women and 27 men) enrolled in the study, 222 grew >100,000 colonies/mL of E. coli. Eleven clinically relevant antibiotics were utilized for the antibiogram test. Ampicillin resistance was 94.80%, cephalexin 16.45%, cephtriaxon 12.55%, ceftazidime 4.76%, amikacin 5.63%, gentamicin 19.05%, trimethoprim-sulfamethoxazole 75.32%, pipemidic acid 3.90%, ciprofloxacin 9.09% and nitrofurantoin resistance was 1.30%. There was no resistance to meropenem. Bacteria isolates resistant to three or more of the antibiotics tested were designated as multiple antimicrobial resistant and this multiresistance ranged from 3 to 10 antibiotics. MAR index was 0.22.

**Conclusions:** Antimicrobial drugs are commonly used to treat UTIs empirically. MAR index >0.20 indicates high levels of antibiotics routinely used and should stimulate professional discussion on routine use of these drugs.

Disclosure: No conflict of interest declared

1033

**Primary care doctors factors influencing opinions on generic drugs – a logistic model**P. Lewek<sup>1</sup>, J. Smigielski<sup>2</sup>, P. Kardas<sup>1</sup><sup>1</sup> *The First Department of Family Medicine, Medical University of Lodz, Lodz, Poland;*<sup>2</sup> *Informatics and Statistical Medicine Department, Medical University of Lodz, Lodz, Poland*

**Objective.** According to our previous findings, 39% of primary care doctors of lodzkie voivodship (Poland) confirmed that generic drugs were worse than brand-names, although there was no convincing evidence confirming this suspicion. Such negative opinion on generics may increase drug expenses of patients due to higher out of pocket costs of brand-name drugs than generics. The aim of this study was to identify factors influencing primary care physicians opinions about generic drugs.

**Methods.** Especially prepared questionnaire was distributed among randomly chosen primary care doctors of lodzkie voivodship in Poland. Doctors were asked about their opinions on generic drugs, preferences of drugs for themselves (generics or brand-names) and other.

**Results.** The study was conducted in 170 primary care doctors (aged  $48 \pm 10$ , 71% female). A multivariate analysis with a use of logistic regression method returned two factors affecting physicians' opinions about effectiveness of generic drugs: choice of generic drugs for oneself (OR = 5.87; 95%CI 2.50-13.80;  $P < 0,001$ ) and doctors opinions about information received by patients from pharmacists (OR=0.16; 95%CI 0.03 – 0.84;  $P < 0.05$ ). According to our study physicians who chose generic drugs for themselves and who thought that pharmacists had informed their clients about generic drugs were statistically more eager to admit that generics were better or equally effective to brand name drugs.

**Conclusions.** Our study reveals two factors which correlate with primary care physicians opinions about generic drugs. If addressed, physicians may be more willing to prescribe generic drugs which may be more beneficial for every patients home budgets.

Disclosure: No conflict of interest declared

1035

**Primary care doctors preferences of generic drugs – a questionnaire based study**P. Lewek<sup>1</sup>, J. Smigielski<sup>2</sup>, P. Kardas<sup>1</sup><sup>1</sup> *The First Department of Family Medicine, Medical University of Lodz, Lodz, Poland;*<sup>2</sup> *Informatics and Statistical Medicine Department, Medical University of Lodz, Lodz, Poland*

**Objective.** According to our previous findings, 53.5% of primary care doctors of lodzkie voivodship (Poland) confirmed that generic drugs are equally effective to brand-name drugs. However, there is not much information about generic compounds which are preferred by physicians. The aim of this study was to find out which drugs are the most often prescribed in a sample of primary care physicians of lodzkie province.

**Methods.** This was a questionnaire-based study. Especially prepared questionnaire was distributed among randomly chosen primary care doctors of lodzkie voivodship in Poland. Doctors were asked to name three most often prescribed cheaper equivalents of brand-name drugs. It was an open question, and physicians could name from 1 to 3 most often prescribed generics.

**Results.** The study was conducted in 170 primary care doctors (71% female; age  $48 \pm 10$ ). Physicians provided 172 names of generic drugs. The most often prescribed drugs were Diuresin SR (generic indapamide SR; 11.2%), Polpril (generic ramipril; 8.2%) and Amlopin (generic amlodipine; 7.6%). The most often mentioned compounds were ramipril (27.6% of doctors provided it), amlodipine (15.9%), indapamide and simvastatin (15.3% each). Participants listed most often the generic brands of amlodipine (7), clarithromycin (7), ramipril (7) and simvastatin (7). In three cases physicians provided a brand-name drug name, instead of generic drug name.

**Conclusions.** The most often prescribed generic drugs were medications for cardiovascular diseases, mainly antihypertensives. Our study confirms that generic drugs are widely used by primary care doctors in Poland, and that physicians rely on generics in their daily clinical practice.

Disclosure: No conflict of interest declared

1069

### A survey of lesbian gay bisexual and transgender(LGBT) people's attitudes and experiences of primary care in Ireland

D. Murphy

GP registrar, UCD Mid Leinster GP training scheme, Dublin, Ireland

Lesbian, Gay, Bisexual and Transgender(LGBT) people have specific health needs and face barriers when accessing these. By understanding these health needs and barriers faced we can ensure we are providing adequate healthcare for this patient group. The aim of this study was to survey LGBT patients and to gain insight into their experiences in Primary care in Ireland. An anonymous online survey was created which consisted of 16 questions including patient demographics, sexual orientation/gender identity and experiences and attitudes of Primary care in Ireland. This survey was distributed to LGBT organizations nationally. It was circulated to members and links to the survey were placed on social media websites. The survey was accessible for 8 weeks. There were 82 respondents. Results showed 80% surveyed attended an urban GP practice and 20% rural. 35% identified as Gay, 48% as Lesbian, 10% bisexual and 12% transgender. 65% had disclosed their sexual orientation/gender identity to their GP. 70% felt comfortable discussing sexual orientation with GP. 30% had concealed their sexual orientation/gender identity from their GP. 80% felt GP's lacked adequate knowledge of LGBT issues. 62% felt Gp practice was inclusive to LGBT patients. In conclusion this study showed that 70% of LGBT patients feel comfortable discussing their sexual orientation/gender identity with their GP, but it was still felt that GP's lack adequate knowledge of health care issues affecting them.

Disclosure: No conflict of interest declared

1154

### What do migraine patients expect from attack medication? – Results of a Delphi study

A.F.H. Smelt<sup>1</sup>, M.A. Louter<sup>2,3</sup>, D.A. Kies<sup>2</sup>, J.W. Blom<sup>1</sup>, G.M.G. van der Heijden<sup>4</sup>, V. de Gucht<sup>5</sup>, G.M. Terwindt<sup>2</sup>, M.D. Ferrari<sup>2</sup>, W.J.J. Assendelft<sup>1</sup><sup>1</sup> Public health and Primary Care, Leiden University Medical Center, Leiden, Netherlands;<sup>2</sup> Neurology, Leiden University Medical Center, Leiden, Netherlands; <sup>3</sup> Psychiatry, Leiden University Medical Center, Leiden, Netherlands; <sup>4</sup> Department of Clinical Epidemiology,University Medical Centre, Utrecht, Netherlands; <sup>5</sup> Department of Social and Behavioural Sciences, Leiden University, Leiden, Netherlands

**Background:** We examined whether the current outcome measures reflect what is relevant to patients, as no patient-centred outcome measures have been developed for the evaluation of migraine treatment until now.

**Methods:** Our aim was to construct a short list of outcome measures that are most important to migraine patients. We performed an online Delphi procedure in three rounds. We randomly selected 150 males and 150 females from a large database of adult migraine patients.

First, we asked some questions about the patients' current headache status. Second, we asked two open questions:

1. What do you find most annoying about having a migraine attack?
2. If a new medicine were to be developed against migraine attacks, what do you wish in terms of effect?

In the second round the findings of the earlier round were presented and patients were asked to select the most relevant and important items. In the third round outcomes of the second round were confirmed.

**Results:** The response was 56% (N=169) in the first round, and 90% (N=152) in the second round. As could be expected, the most important aspect was that the headache would disappear. Other items in the top 5 concerned recurrence and functional status. The ranking of items was different between males and females.

**Conclusions:** This is the first study in which migraine patients were asked what they consider important in the evaluation of attack medication. We will provide a short list of items that should be considered in future research.

Disclosure: No conflict of interest declared

1199

**Weight gain in the early life decades increases the risk of metabolic diseases**

I. Rurik, E. Szigethy

*Family and Occupational Medicine, University of Debrecen, Debrecen, Hungary*

Patients with diabetes and hypertension represent a large proportion of primary care patients. Evaluation of their parameters usually requires medical setting, body weight and height can be measured by the patients themselves and this is often the case.

The **aim** of this retrospective study is to analyse and to compare the life-long data on weight and BMI of patients with diabetes and hypertension and those without these pathologic conditions.

Eventually selected 759 patients (337men, 422women) between 60 and 70years of age in different primary care settings were involved.

Retrospective and recent self-recorded data on weight and height in every decade since the age of 20y in both genders were collected. These were compared to the control group of persons free from diabetes and hypertension.

The current body weight and BMI were significantly higher in all groups than at 20y and less than their maximal values.

Patients with diabetes started at higher weights and their greatest gain was observed between 20-30y in men and between 30-40y in women, and in the last decade prior to diagnosis in both genders. Weight gain in the control group was steady at a lower rate.

Higher increases in body weight in the early youth decades were related to elevated hazard ratios for diabetes in men and for hypertension in women.

More research with standardized methodology is needed to explore this relationship better: meanwhile more contribution is expected from primary care physicians in the weight management of their younger patients.

Disclosure: No conflict of interest declared

1231

**Survey on body image's self perception**

M.J. Macedo

*ACES GUIMARÃES, VIZELA, FAFE, REGIÃO DE BASTO, USF RONFE, GUIMARÃES, Portugal*

**Objectives:** We create our identity through an image formed during our individual experience. It's a cognitive construction that reflects desires, emotions and interaction with others.

It was intended to analyze the relationship between self image perception and body mass index (BMI), and to establish the relationship between self-image and IMC, sex, age, level of schooling, exercise and the will to change the body image.

**Methods:** It was conducted a transversal and descriptive observational study. It was selected a random sample of 115 adult users of a Primary Health Care Centre. Surveys were applied and it was determined the height and weight of each participant. The data was analyzed with the SPSS® and Microsoft Office Excel 2007.

**Results:** Of the 115 respondents, 52.2% had a correct perception of self-image, revealing a tendency towards underestimation of real weight. Women had an awareness of their body image closely to the real BMI that was statistically significant. Young people had a higher percentage of individuals who evaluate correctly their body image (63.2%), as well as individuals with higher education levels (67.6%). Overweight individuals exercise less frequently (54.3%). Within each IMC group there was a correspondence between the will to change and the real need of weight readjustment.

**Conclusions:** In this sample there wasn't a sensible self-perception of body image. The groups that had the most distorted image were: men, elderly and individuals with lower educational levels.

Educational and screening programs should focus even more on these groups.

Disclosure: No conflict of interest declared

1265

**An audit of GP administrative records to verify official Irish GP consultation rates which are currently based on a survey and consequently may be affected by recall rates.**

W. Behan<sup>1</sup>, D. Moloney<sup>2</sup>

<sup>1</sup> *Walkinstown Primary Care Centre, 115 Cromwellsfort Road, Dublin 12, Ireland;* <sup>2</sup> *The Red House Family Practice, Mallow Primary Healthcare Centre, Mallow, Co.Cork., Ireland*

**Objective:** To determine if official Irish adult patient GP consultation rates are as low as estimated by the Central Statistics Office (CSO) survey whose figures which are based on responders recalling consultations over the previous year or are they more comparable to official UK patient GP consultation rates, which are either based on audit of administrative records or a survey of consultations over the previous 2 weeks.

**Methods:** An audit of the annual adult patient consultation rates in 2 practices which encompassed both urban and rural catchment areas of average social deprivation. Clinic contacts were directly calculated from the appointment list, telephone calls and domiciliary visits were calculated from estimation of the minimal rates. Patient contacts such as telephone calls looking for results, repeat prescriptions or other administration were not included.

**Results:** There was a total combined patient population of 11,372, of which 37.2% were Public Patients (national ratio 41.9%) who are entitled to free GP consultations.

Our all patient consultation rate was 4.5 per patient per year (2010 CSO 3.2, 2007 CSO 2.8, UK QRESEARCH rate 5.1).

Total private patient contact rate was 2.7 (2010 CSO 2.1) and the total public patient contact rate was 7.3 per patient (2010 CSO 5.2).

The rate of all annual consultations for our public over-70s, and 95 per cent of that population is public, is 9.4 versus the 10.6 annual attendances in the UK over-70s population.

**Conclusions:** This all suggests that CSO data underestimates Irish general practice workload and by about 30%.

Disclosure: No conflict of interest declared

1328

**Family practice: A bibliometric study**

H. Wang<sup>1,2</sup>, C. Wang<sup>1</sup>, L. Zhang<sup>1</sup>

<sup>1</sup> *Family Medicine, Shanghai Tongji Hospital, Shanghai, China;* <sup>2</sup> *Medical School, Tongji University, Shanghai, China*

**Objective:** Quantitative survey of research articles, as an application of bibliometrics, is an effective tool for grasping overall trends in various medical research fields. This type of survey has been also applied to family practice research. The aim of this paper is to know the situation of published literature of family practice, analyze the reasons and explore the countermeasures.

**Methods:** All articles related to family practice from 1904 to 2012 were retried from the "PubMed". The bibliometric method was taken to statistically analyze the conditions of the articles by using PubMed retrieval system, "GoPubMed" web analysis system and the Endnote reference management analysis software.

**Results:** The number of articles about family practice increased significantly from 1904 to 2012. The total collected articles by "GoPubMed" were 127128 from the world. United States, United Kingdom and Australia were the first three countries which had the most citations. The journals that published the most articles ranked in order of BMJ, Aust Fam Physician and Can Fam Physician. The language in which articles were published, were English, German, French and Spanish.

**Conclusion:** The United States, United Kingdom and Australia were in the leading position in research achievements on family practice. However family medicine in P.R. China just twenty year and articles by China (not include Hong Kong and Taiwan) is in twenty-fifth position out of 180 countries or area, it is necessary for Chinese family doctors to strengthen scientific research on family practice.

Disclosure: No conflict of interest declared

1351

**Anticoagulation control in a portuguese familiar health unit – what are the results?**

A. Torres, C. Mendes

*Unidade de Saúde Familiar Salvador Machado, Administração Regional de Saúde do Norte, Oliveira de Azemeis, Portugal*

**Objective:** The aim of this study was to characterize the population under anticoagulation control in the Familiar Health Unit Salvador Machado (FHU-SM) and assess the quality of the control in this primary health care center of Portugal.

**Methods:** Transversal, analytic, observational study in the population of patients attending the anticoagulation control of the FHU-SM, in a 12 months period. By applying the exclusion criteria, it was obtained a sample of 86 patients from a total of 111 users. Data collection was made mainly by SAM® software. CHA2DS2VASc and HAS-BLED scores were applied in patients with atrial fibrillation (AF) and the respective antithrombotic prescription was analyzed. The collection INR values obtained in this period (n= 785) was made by TAONET® software. The Microsoft Excel 2007® was used for statistical analysis.

**Results and conclusions:** The users were mostly male (64%) and the mean age was 72,5 years. The top 3 reasons for anticoagulation were: AF (66,7%), heart valve prosthesis (10,8%) and stroke (8,8%), those were also stated in other studies. Respecting to the INR results, 55,8% of the total (n=785) where on the therapeutic target range. In the group of patients with AF 100% had a CHA2DS2VASc score  $\geq 1$ . The application of HAS-BLED score showed that 11,8% had a result  $\geq 3$ . This study allowed a better knowledge about the studied population and the relevance of this anticoagulation control made in FHU-SM was established by the obtained rate of INR values on the therapeutic range, which complies with similar previous studies.

Disclosure: No conflict of interest declared

1364

**Incidence of community acquired pneumonia (cap) and s. pneumoniae for patients with an age of 50 years and above in rural crete, greece**C. Lionis<sup>1</sup>, G. Duijker<sup>1</sup>, A. Bertias<sup>1</sup>, M. Galenianos<sup>1</sup>, S. Koumiotaki<sup>2</sup>, E. Lampiri<sup>3</sup>, V. Lemonichelaki<sup>4</sup>, P. Papadakokostakis<sup>5</sup>, N. Tsakountakis<sup>6</sup>, I. Tsiligianni<sup>7</sup>

<sup>1</sup> Clinic of Social and Family Medicine, University of Crete, Heraklion, Greece; <sup>2</sup> Pulmonology Clinic, Venizeleio-Pananeio General Hospital, Heraklion, Greece; <sup>3</sup> Pulmonology Clinic, University Hospital of Heraklion, Heraklion, Greece; <sup>4</sup> Health Centre of Charaka, Health Centre of Charaka, Charakas, Greece; <sup>5</sup> Health Centre of Arkalochori, Health Centre of Arkalochori, Arkalochori, Greece; <sup>6</sup> Health Centre of Kastelli, Health Centre of Kastelli, Kastelli, Greece; <sup>7</sup> Health Centre of Aghia Varvara, Health Centre of Aghia Varvara, Aghia Varvara, Greece

**Introduction:** An observational study to monitor the incidence of CAP in the primary care setting in rural Crete by utilising efforts and capacity of both, primary and secondary health services was designed and implemented. This paper reports on the CAP incidence, the underlying co-morbidities and the vaccination coverage of the affected patients.

**Methods:** Patients with an age of 50 years and above, residents of areas within the responsibility of all Health Centers of the province of Heraklion with signs and/or symptoms of lower respiratory tract infection and with a chest x-ray confirming pneumonia who visited the primary care services in this rural setting were eligible. Questionnaires with information related to demographic data, underlying diseases, immunization status and the clinical symptoms were completed. Urine samples were collected and analyzed for the detection of possible *S.Pneumoniae* invasive infection.

**Results:** Overall, 124 CAP cases were recorded, 40 (32.3%) of which were hospitalized. Standardized CAP incidence rate was 236.71 cases per 100.000inhabitants (95% C.I.: 195.05-278.38 cases/100.000inhabitants). Two patients (5%) died during hospitalization. Most common co-morbidities were cardiovascular disease (64.5%), COPD (32.3%), and diabetes mellitus (21%). Forty three patients (35.5%) were vaccinated against pneumococcus and 75 (61.5%) against influenza. Six cases (4.8%) were found positive for invasive *S.Pneumoniae* infection.

**Conclusion:** Among other interesting finding, one that requires an additional discussion is the low coverage of the pneumococcal vaccination particularly in a population assessed as high-risk. The results of this observational study may have a prognostic value to GPs who serve rural and isolated areas.

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1452

**The open consultation in the USF Freamunde on August**

M. Pereira, C. Carvalho, A.B. Antunes

ACES Tâmega III – Vale do Sousa Norte, USF Freamunde, Freamunde, Portugal

**Introduction:** The Open Consultation is an autonomous period of consultation, which is scheduled personally or by telephone, on the same day.

It is reserved for the patients that, in spite of not having urgent or emergent health problems, they present acute situations that require a prompt resolution.

On August, 40% of the doctors are traditionally on vacations, which may cause difficulties to the patients to access the consultation.

**Objectives:**

- Understand the accessibility to the consultation
- Describe the observed patients
- Know the main diagnosed problems

**Methodology:** It was set a survey of all the Open Consultations made in the USF between August 1<sup>st</sup> and 31<sup>st</sup> of 2011, as well as 2012.

It was counted the number of consultations: available, scheduled, performed, void and faults.

It was registered: the day of the week, patient's gender, age and main codified problems.

**Results:** From 2011 to 2012 the total amount of Open Consultations increased. The percentage of void consultations increased from 17.2% to 29.6%. The amount of faults remained similar.

50% of the observed patients belonged to the age group of 20-49 years old (2011) and to 30-59 years old (2012).

In 2011, 60% were females and 61% in 2012.

In both years, the main codified problems were: Respiratory, Musculoskeletal and Skin.

**Conclusion:** Is crucial to maintain an updated knowledge of patients' accessibility to the consultations and their main problems. This way we can adjust better the supply to the demand, improving the human resources management.

Disclosure: No conflict of interest declared

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**Depression, anxiety and stresslevels in Irish G.P 's and their association with burnout and job satisfaction and work practices in Ireland in 2013**

E. O'Shaughnessy

General Practice, Apt 6, 133 anglesea rd, dublin, Ireland

**Aims and objectives:** To evaluate the prevalence of depression and anxiety, evaluate stress levels and job satisfaction in Irish G.P's. With a changed economic environment and growing financial restriction on primary care provision this study aims

1. To evaluate G.P's current levels of depression, anxiety, burnout and job satisfaction.
2. To asses whether different working practices and lifestyle choices are associated with a higher prevalence of the above
3. To compare these outcomes in a number of different clinical scenarios eg: single-handed V's group practices, male V's female, fulltime v's part-time etc to asses the differences in groups.

**Methods:** A questionnaire was posted to 150 G.P's selected at random. All responses were fully anonymous. This questionnaire was composed of a brief review of the G.P's own demographics Included in this will be gender, type of practice, on-call practices, annual leave time, average hours worked, specialist interest and number of years practicing. Depression, anxiety, stress, burnout and job satisfaction were assessed using valid and reliable existing instruments, The DASS – 42 and the Maslach's Burnout Inventory (MBI) and a job satisfaction questionnaire adapted from the Minisota Job satisfaction questionnaire. These are quick tick response questionnaires which have been used in a wide variety of number of clinical scenarios and in normal individuals.

**Results:** The results highlight the different levels of depression, anxiety, stress and burnout in G.P's and the independant variables and work practices that lead to higher levels of these.

**Conclusion:** Changing economic enviroment for G.P's in Ireland have increased depression, anxiety and stress scores. Burnout rates are high and job satisfcation has diminished.

Disclosure: No conflict of interest declared



1726

**Keep in silence, save your heart**

A. Rodriguez-Guerrero, M. Fabregate, J. Saban-Ruiz, A. Bravo-Malo, M. Martinez-Abad

**Introduction:** With the use of a noninvasive automated blood-pressure device the doctor leaves out the stethoscope, so the silence is not a prerequisite for measuring blood pressure (BP). Many doctors and nurses talk with their patients in order to relax the patient to avoid the „white coat“ effect. Speech requires movement of vocal cords and a complex set of muscles, abdominal and intrathoracic pressure variation influences in the venous return and cardiac output.

**Objectives:**

1. To study how a conversation affects the blood pressure measurements.
2. To investigate if this phenomenon is described in clinical practice guidelines.
3. To assess if this phenomenon is known by professionals.

**Material and methods:**

N: 37 patients, aged 37-83,  $58.89 \pm 2.11$  (mean  $\pm$  standard error of the mean), 75.7% with hypertension. Blood pressure registration measured by a standardized method.

Review of the main guidelines (JNC 7, ESH/ESC-2010).

We interviewed 80 health professionals (54 doctors: 20 general practitioners, 34 specialists in hypertension) and 26 nurses.

**Results:**

1. None of the guidelines consulted expressly mention this phenomenon.
  2. A 16.9% of professionals talk with the patients (69.1% reassuring intention).
  3. Total studied population (talking versus in silence): systolic blood pressure ( $142.0 \pm 3.8$  vs.  $132.7 \pm 3.2$ ,  $P < 0.001$ , 95% confidence interval 6.7 to 11.9), the diastolic blood pressure ( $85.3 \pm 1.5$  vs.  $80.4 \pm 1.3$ ,  $p < 0.001$ , 95% CI 3.5 to 6.4) and heart rate ( $78.1 \pm 2.0$  vs.  $74.3 \pm 2.0$ , 95% CI 2.7 to 5.0  $p < 0.001$ ).
- 50% de los casos (56,8% para la TAS) (59,5% para la TAD)  $y \geq$  del 10% en el 32,“>4. The elevation of SBP and DBP was  $\geq 5\%$  in > 50% (56.8% SBP, 59.5% DBP) and  $\geq 10\%$  in 32, 4% SBP and 21.6% DBP.
5. 30.1% of professionals were not aware about this fact.

**Conclusions:**

1. SBP and DBP increased significantly when the patients talk (speech induced effect).
2. In normotensive subjects it could be responsible for „pseudohypertension“ and in hypertensive subjects for false „bad control“.

Disclosure: No conflict of interest declared

**2.8. EDUCATION AND PROFESSIONAL DEVELOPMENT**

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**FAME as a national strategy to improve access to care in Saudi Arabia**S. Ayed Alshammery, A. Alotibi, S. Ratnapalan  
*Family Medicine Training Center, MOH, Riyadh, Saudi Arabia*

**Background:** General practitioners and family physicians involved in primary care in Saudi Arabia, have different post graduate training and differ in the range of health care services they provide.

**Objectives:** To describe the development, implementation and initial evaluation of an educational program in family medicine for general practitioners in Saudi Arabia.

**Methods:** A continuing medical education(CME) program called Family Medicine Education( FAME) was developed with 7 modules each consisting of 12-14 hours teaching to be delivered in 3 day blocks, over 45 days. The modules discussed introduction and general concepts of family medicine, common problems in family medicine to cover chronic illnesses, communicable diseases in adults and children, neurological, musculoskeletal, mental health diseases, gynecological diseases and obstetric care and professional development in family medicine.

**Results:** FAME program was implemented in 2009 and has trained 2,761 (20% )of GPs in Saudi Arabia as of May 2012. Initial assessments shows more participants changing their attitudes to favour patient involvement in management plans, inter-professional care, comfort with diagnosis and management of chronic diseases, practice audits and quality control. The pretest and post test results show statistically significant improvement of knowledge after the course 2009 showed a significant improvement in knowledge with scores improving from a mean of 49% (std dev 22) for pretest results to a mean of 89% (Std Dev 13.5 ) for the post test results.

**Conclusion:**The initial evaluations show that the FAME program facilitates primary care physicians' knowledge acquisition and provides skills that can be applied in practice.

Disclosure: No conflict of interest declared

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### “Family medicine of the imss (social security mexican institute )and the meaning of his medical practice ”

D. Casas<sup>1,2</sup>, E. Jarillo<sup>3</sup>, A. Rodríguez<sup>4</sup>

<sup>1</sup> Family Medicine, Instituto Mexicano del Seguro Social, Nezahualcoyotl, Mexico; <sup>2</sup> Health Educational Department, Universidad Autónoma del Estado de México UAP-Nezahualcoyotl, Nezahualcoyotl, Mexico; <sup>3</sup> Department of Health Care, Universidad Autónoma Metropolitana, Distrito Federal, Mexico; <sup>4</sup> Family Medicine, Instituto Mexicano del Seguro Social, Chalco, Mexico

**Objectives:** Analyze the meaning of medical practice in the area of Family Medicine – Primary Care of the Mexican Social Security Institute.

**Materials and methods:** Observational descriptive and cross-sectional study. Structured interview was applied and an observation card: oriented search for meaning in the practice of family physicians from the reconstruction of reality given by symbolic interaction models and common meanings using the structural-functional theory.

**Results:** In search of an identity of family medicine, the interview showed descriptions without vitality, full of shadows and meanings minimally processed, reiterates the family as an object of study and practice without specifying the method and approach, its activity is characterized by time available for medical consultation in family medicine, time is short to assume care and medical practice limited time for consultation as part of the scheme of work within the IMSS. The values show that respect for the patient is implied by the family physician, but there is no clear understanding of the other (otherness).

**Conclusions :** Family medicine is devoid of identity, belonging and purpose as a group not as a doctrinal Institutional group that is limited to the healing and biomedical activity, their values are formed from basic academic training, and their power relations implied by an administrative Institutionally, the creation of this medical specialty is constituted by an order the „IMSS“ and decay when it considers obsolete or unusable for its institutional purposes, that’s why family medicine should have their own identity.

Disclosure: No conflict of interest declared

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### Professional learning during the transition from trainee to newly qualified family doctor

A. Shiner<sup>1</sup>, A. Howe<sup>2</sup>

<sup>1</sup> Lawson Road Surgery, Norfolk PCT, Norwich, United Kingdom; <sup>2</sup> Norwich Medical School, University of East Anglia, Norwich, United Kingdom

**Objective:** The transition from training to qualified practice is inherently challenging. The current climate of primary care places increasing demands on family doctors, particularly in the UK. Professional learning, and the transition to independent practice, may thus be problematic. This study aims to explore newly qualified GPs’ experiences of professional learning following transition into qualified practice.

**Methods:** This was a qualitative study of newly qualified GPs (within 5 years of qualification) working in the East of England. Data was collected through nine semi-structured interviews and a focus group, conducted between December 2010 and April 2011. Data collection, transcription and analysis were simultaneous, allowing iterative evolution of the topic guide to test emerging themes.

**Results:** New GPs wished to relinquish “dependency” and become self-directed learners, yet still wanted guidance when needed. They described a situated experience of learning, in which inclusion in a practice community afforded greater learning opportunities. Social interactions also affected the issue of constructing an independent professional identity; a transitional process through which new GPs could become self-aware “experts” with confidence in self-directed learning.

**Conclusions:** Potential harms of the transitional period may be mitigated by support, which needs to emphasise inclusion, validation, affirmation and the provision of feedback. Preferences for adult learning should be encouraged, but guidance needs to be available when requested. Although this study was conducted in the UK, the nature of the social constructs it describes are likely to be relevant to a variety of professional learning situations, including in other countries.

Disclosure: No conflict of interest declared

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**How the RCGP Southwest Thames faculty communicates and engages with newly qualified GPs in innovative ways.**

J. Grewal

GP, GP, London, United Kingdom

The Royal College of General practitioners is unique in comparison to the other Royal Colleges in the United Kingdom in having a federal structure which enhances engagement with members at a local level through a network of faculties. There are currently 32 faculties including one in Republic of Ireland and one dedicated to supporting international and overseas members. GP members and GP trainees (also known as Associates in training or AiTs) are automatically allocated to one of the 32 faculties on joining the College, based on their personal post code however one can choose which faculty one would like to be a member of. Each faculty is represented by a Faculty Board, made up of a number of dedicated GPs and lay representatives who work voluntarily towards the College's vision, purpose and priority goals. At least one representative from each faculty sits on the College Council to ensure local views and opinions are considered.

I am part of the RCGP Southwest Thames faculty (SWT) board and we are keen to support local AiTs, First5 (newly qualified GPs in the first 5 years post qualification) and GPs; we have over 1790 members covering the areas of Surrey, West Sussex and outer fringes of Southwest London. The RCGP SWT faculty board is keen to communicate and engage with GPs, First5 and AiTs in innovative ways and this will form the discussion of the poster.

Disclosure: No conflict of interest declared

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**Innovation of assisted models for practicing basic nursing skills**

P. Chotiban, K. Nawsuwan, T. Nontaput, J. Rodniam

Boromarajonani College of Nursing, MOPH, Songkhla, Thailand

**Objective:** The purposes of this research and development study aimed to create and develop a set of assisted models for practicing basic nursing skills and evaluate a satisfaction of nursing students toward the models.

**Methods:** The study was divided into two parts including 1) a creation and development process of the models; the cycles of action research has been utilized to plan, create, try out, reflect and develop the innovation, 2) The models' evaluation process; accidental sampling attracted 226 nursing students from 5 nursing colleges and 2 faculties of nursing in the southern part of Thailand

**Results:** 1. A set of the assisted model for practicing basic nursing skills included 1) a hand model for practicing intravenous injection, 2) a deltoid muscle model for practicing subcutaneous and muscular injection, 3) a mobile model for practicing female urethra catheter, and 4) a mobile model for practicing male urethra catheter. The models were made from Para rubber that was available and cheap. These innovative assisted models were shown to have many advantages for practicing basic nursing skills among nursing students (i.e. an appearance of the models, reducing cost, and suitability for self-study).

2. Overall mean scores of nursing students' satisfaction toward the models were at a high level in every part. The highest mean score was in the part of model application; convenience, self-study, maintenance and moving.

**Conclusion:** The administrator should promote using the assisted model that made by low cost domestic materials to improve nursing skills among nursing students.

Disclosure: No conflict of interest declared

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**Modification of health behavior of students with overweight in school with participation of health parties in tri-ngam community, Songkhla Municipality**

K. Nawsuwan, P. Chotiban, J. Bua-ngam, J. Rodniam, T. Kitrungrote, S. Nakaramontri  
*Boromarajonani College of Nursing, MOPH, SONGKHLA, Thailand*

**Objective:** The purposes of this action research were to study the health behavior of students with overweight in Tesaban 4 School, and the participation of health parties in Tri-ngam community, Songkhla municipality in modification of health behaviors of those overweight students.

**Methods:** The research was conducted in two parts: 1) an investigation of the health behavior of students with overweight in Tesaban 4 School (Wat Lham Tri). Purposive sampling was used; and 2) a study of the participation of the health parties in modification of health behaviors of those overweight students. The research process divided into four steps namely plan, action, observation and reflection were used. Samples included school teachers, parents/guardian, and village health volunteers, representatives from Songkhla municipality, nurse instructors, and nursing students. Research instruments used were questionnaires and structured questionnaire for conducting focus group. Descriptive statistic was used

**Results:** The results showed that;

1. Students with overweight who participated in project of health behaviors modification had slightly increasing of knowledge, attitudes and practices after project completion.
2. The participation of the health parties to modify the health behaviors of students with overweight was at a high level. Each part of the parties took part in planning, implementing, coordinating, facilitating and supporting personnel.

**Conclusion:** One of the best strategies to reduce childhood overweight/obesity is to improve the diet and exercise habits of children as well as empowerment. Schools should be aware of providing those activities to students with overweight/obesity with a collaboration of family and community.

Disclosure: No conflict of interest declared

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**The brazilian paradox**

A. Ciancio, B. Jack

*Family Medicine, Boston University School of Medicine, Boston, United States*

Brazil introduced the Family Health Strategy (FHS) to provide primary health care in 1994. The FHS team includes a physician generalist and community health workers and each team provides primary care services for 800-1000 families. Over 55% of the population, predominantly from the lower income class is covered by a FHS team. From 2000-2005, the FHS reduced national rates of infant mortality from diarrhea (31%), pneumonia (19%), and increased immunization rates, well-child and antenatal care visits. There is still lack of family medicine specialty training and there is widespread consensus that further improvement in national health indicators depends on additional specialty training for the generalist physician member of the team. The agenda for family medicine growth includes: (1) a career advancement plan, (2) an increase in student interest, (3) and well-trained faculty.

A coordinated national program to increase family medicine training and support for the FHS is needed in Brazil.

Disclosure: No conflict of interest declared

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**Developing knowledge sharing in home health care services of primary care providers network**

E. Chanwanpen, A. Wongworachart

*Family Medicine Department, Sichon Hospital, Nakhonsithammarat, Thailand*

**Background:** The concept of network sharing had been applied by recruiting primary care providers from 5 district health areas. The topic of home health care was the main issue in knowledge sharing process. The purpose was to determine the efficacy of knowledge sharing process for home health care program.

**Methods:** This was research and development study of 36 primary care providers between April and November 2011. Data collection included demographic data and synthesized the lessons from primary care providers. Knowledge management was applied by sharing and learning process. We organized three on-site visits of sharing experiences. A comparison of the results of practice before and after the use of this process was the outcome measured.

**Result:** The knowledge, attitude and practice of primary care providers increased to 91.13%, 86.48% and 88.51% respectively; moreover, they tended to participate more in taking care of their patients with holistic approach. Overall satisfaction rate was 87.35%. The first visit we found that the steps of home care were essential and should be used in every case. The second visit we focused on multidisciplinary teamwork that should be shared and learned each other. Reviewing the skill in nursing procedures was necessity. The third visit, we learned the experiences of community involvement and the participation of village health volunteer as a key factor for sustainment.

**Conclusion:** Knowledge sharing could apply in routine work for benchmarking good practice within primary care network. The core concepts of family medicine were essential and necessary for primary care workers.

Disclosure: No conflict of interest declared

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**How college students understand the metabolic syndrome?**C.Y. Hsu<sup>1,2,3,4,5,6,7</sup>, C.H. Hsieh<sup>2</sup>, H.C. Lin<sup>8</sup>, C.Y. Shu<sup>7,9</sup><sup>1</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan; <sup>2</sup> Department of General Education, National Taichung University of Science and Technology, Taichung, Taiwan;<sup>3</sup> Department of General Education, Chaoyang University of Technology, Taichung, Taiwan;<sup>4</sup> Department of General Education, National Chin-Yi University of Technology, Taichung, Taiwan; <sup>5</sup> Department of General Education, Central Taiwan University of Science and Technology, Taichung, Taiwan;<sup>6</sup> Department of General Education, Feng Chia University, Taichung, Taiwan; <sup>7</sup> Department of General Education, National Chi Nan University, Puli, Taiwan;<sup>8</sup> Medical Education Office, Cheng-Ching Hospital, Taichung, Taiwan; <sup>9</sup> Department of Optometry, Central Taiwan University of Science and Technology, Taichung, Taiwan

**Objective:** The prevalence of metabolic syndrome in Taiwan was increased from 13 to 25% in men and from 26 to 31% in women within 12 years. The objective of this study is to investigate how college students understand the metabolic syndrome.

**Method:** Between 2010 and 2011, 240 college students from 3 universities (two public, one private) were provided the questionnaires. The definition of metabolic syndrome was asked. There were 6 questions to be answered.

**Result:** The median age was 20. Seventy-four (30.8%) males and 166 (69.2%) females agreed to answer the questionnaire. One hundred and nine (45.4%) of the students were science majors and 131 (54.6%) were humanities major. One hundred and nine (45.4%) students heard the metabolic syndrome. One hundred and thirty (54.2%) students knew the definition of hypertension. However, only 54 (22.5%) students knew the definition of diabetes, and only 48 (20%) students understood the definition of hyperlipidemia.

**Conclusion:** Despite the government's intensive efforts to prevent metabolic syndrome, half of college student are unclear about metabolic syndrome. Health education is needed in university.

Disclosure: No conflict of interest declared

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**Increase in residency scholarly activity as a result of a resident-led initiative**

K. Hoedebecke, C. Rerucha, L. Runser

*Womack Family Medicine Residency, Womack Army Medical Center, Ft Bragg, North Carolina, United States*

**Objectives** – Scholarly activity is a fundamental component of Family Medicine residency training. Despite the flexibility and variety of options for scholarly activity that have been implemented, the output of resident presentations and publications is disappointingly low and many residents voice frustration with fulfilling the research requirements.

**Methods** – This project involves 1) increasing awareness of conferences for scholarly submission 2) assignment of research “champions” to head research efforts in each year group 3) pairing of interns/students with senior resident “mentors” with similar interests, 4) faculty to include 1 resident in all research projects, and 5) monthly resident research meetings to track research progress, share research ideas, and trouble-shoot areas of difficulty. The following goals were used to measure the project’s success: 1) Doubling the number of published articles by residents and 2) Doubling the number of scholarly presentations at regional, national, or international conferences by residents.

**Results** – Currently our residency has a 150% increase (from 2 last year to 5 this year) of the amount of scholarly publication acceptances and a 733% increase (from 3 last year to 25 this year) in scholarly presentations acceptances at regional, national, or international conferences. Even more impressive is that these results occurred within the first 6 months of this academic year.

**Conclusions** – The implementation of this resident-led initiative has vastly improved our residents’ scholarly footprint. The authors recommend that other residencies consider having more senior residents work in tandem with their junior colleagues in order to improve residency scholarly activity output.

Disclosure: No conflict of interest declared

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**Developing leadership among medical students: Taking care of people and coordinating team work.**L. Inada<sup>1</sup>, D. Careta<sup>1</sup>, D. Stábile<sup>1</sup>, A.C. Ribeiro<sup>1</sup>, E. Sasaki<sup>1</sup>, M. A. Janaudis<sup>1,2</sup>, S. Moraes<sup>1</sup>, P. González Blasco<sup>2</sup>, I. Passos Martins<sup>1</sup>, N. de Lima Froio<sup>1</sup><sup>1</sup> *Public Health, Jundiai Medical School, Jundiai, Brazil;* <sup>2</sup> *Family Medicine, Brazilian Society of Family Medicine, São Paulo, Brazil*

**Context:** The “Voices of the Street Project (VSP)”, is based on the Primary Care principles, and aims to bring medical students to the community needs, portraying the bio- psycho-social structure, and performing actions of health promotion. As the VSP is led entirely by medical students is a good scenario to consider leadership among them.

**Objective:** To understand the meaning of undergraduate students’ leadership while conducting social projects.

**Design:** A faculty member of the JMS (who also belongs to SOBRAMFA – Medical Education and Humanism Board) led some meetings with the VSP Students Board, for transforming their experience into knowledge and academics.

**Results:** To take care of people is always a challenge, since you need to deal with the unexpected. This is something students don’t learn in medical school; more focused in teaching the disease approach instead the illness reality, in which patients are always the main role. Beside this, to coordinate a bunch of students from different years and ages, with heterogeneous medical knowledge, and not always aware of what is Health Promotion is a bigger challenge. The leader requires flexibility to adapt for diversity, understanding all perspectives, and strength to be focused on patients’ needs without mistreating anyone who is involved in the project. The main outcome of this experience was the growing maturity of those who led the project which includes wisdom to deal with people and humanization for grounding their actions as futures physicians.

Disclosure: No conflict of interest declared

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**Global tract development in a family medicine residency**

J. Baumer, J. Gibson, D. Casey, D. McRay, L. Hadley

*Department of Family Medicine, JPS Health Network, UTSW School of Medicine, Fort Worth, / Dallas Texas, United States*

**Objective:** Develop a global tract in an American family medicine program to attract and retain a higher quality of physician applicants and production of a higher number of physician graduates working in global settings.

**Methods:** The faculty of a large department of family medicine developed an initiative to recruit faculty, residents and medical student applicants with an interest in global family medicine over a 5 year period of time by contacting alumni of the program who were serving in underserved and international communities. These contacts were invited to participate in the referral of interested candidates and development of curriculum. A curriculum was developed, a clinical setting at the residency for international patients was expanded and faculty and residents demonstrating a interest in global medicine were the target of focused recruitment.

**Results:** After 5 years the department had successfully recruited and retained a physician program director for global health, 4 additional faculty and converted 2 existing faculty to the global program (20% of the total faculty), a doubling of applications to the program, recruitment and retention of 34 resident physicians with participation in the global tract, (21.6% of the total residents) an increase of 100% of graduates in international practices, and an association of 10% increase of intraining exam scores of the residents and higher USMLE scores of applicants. **Conclusion:** A focused development plan to produce a global tract in a family medicine residency program resulted in better than expected outcomes and demonstrated significant enhancement to the entire program for all applicants, residents and faculty.

Disclosure: No conflict of interest declared

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**Relationship between patients' warfarin knowledge, sociodemographic characteristics and anticoagulation control**A. Ebiloglu<sup>1</sup>, U. Aydogan<sup>1</sup>, O. Sari<sup>1</sup>, T. Cayci<sup>2</sup>, A. Sonmez<sup>3</sup>*<sup>1</sup> Family Medicine, Gulhane Military Medical Academy, Ankara, Turkey; <sup>2</sup> Biochemistry, Gulhane Military Medical Academy, Ankara, Turkey; <sup>3</sup> Endocrinology, Gulhane Military Medical Academy, Ankara, Turkey*

**Objective:** Warfarin therapy is widely used for prevention and treatment of thromboembolic diseases. Purpose of this study is to investigate the relationship between sociodemographic characteristics, knowledge and anticoagulation control of patients under warfarin therapy for various indications.

**Methods:** Our study was performed on 126 patients under warfarin therapy, applied to provide blood sample for INR control, between August 2011 – March 2012 in Gulhane Military Medical Academy, Department of Biochemistry. A questionnaire form was applied to participants about sociodemographic characteristics, knowledge about treatment, adherence to treatment and quality of life. INR values of the patients were recorded. The participants' knowledge, anticoagulation control, adherence and quality of life were evaluated.

**Results:** Mean age of patients was 64.2±16.1. Patients in study were 50.8% (n=64) male, 49.2% (n=62) female. Patients education level in study were 7.9% (n=10) literate, 49.2% (n=62) primary school graduates, 20.6% (n=26) high school graduates, 22.2% (n=28) university graduates, respectively. The average level of patients' warfarin knowledge was found 0.51±0.24 (maximum: 1.00). 43.7% of patients' (n=55) INR values were in therapeutic range. 74.6% of patients' (n=94) adherence to treatment were adequate. Bad impact of warfarin therapy on quality of life was determined in 7.1% of patients (n=9).

**Conclusions:** It is seen that there are comprehensive education needs of patients under warfarin therapy about drug effects, side effects, drug and food interactions. INR values of patients with better knowledge were more frequently within the therapeutic range. Patients' age, education level and knowledge about warfarin therapy were associated with safe and effective anticoagulation control.

Disclosure: No conflict of interest declared

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**Does student's attitude toward community health care influence on an effect of a community-based clinical clerkship? – A cross sectional study.**

M. Okayama, E. Kajii

*Division of Community and Family Medicine, Center for Community Medicine, Jichi Medical University, Shimotsuke, Japan*

**Objective:** To clarify association between students' motivation to work in for community health care before the program and effects of the community-based clinical training.

**Method:** Self-administered pre- and post-program questionnaire surveys were given to 896 fifth-year medical students undertaking a 2-week clinical clerkship program. Students' evaluation of the program and their attitudes toward community health care were analyzed using a visual analogue scale. The students were divided into three groups based on scores in response to the attitudes for „I think practicing community health care is worthwhile“ („worthwhile“). Students' evaluation of the program („the program was a worthwhile learning experience“) and differences in attitudes toward community health care before and after the program were assessed.

**Results:** Overall, 833 students (93%) (640 males) completed the questionnaires. Scores for program evaluation and students' attitude for “worthwhile” after the program in the high, middle, and low groups (based on responses) were  $91.5 \pm 12.3$ ,  $88.6 \pm 14.3$ , and  $88.6 \pm 15.3$ , and  $87.4 \pm 13.5$ ,  $80.0 \pm 14.8$ , and  $71.6 \pm 20.2$ , respectively. Score for both parameters were higher in the high group than in the others groups. However, scores for differences in attitude before and after clerkship in the three groups were  $-4.9 \pm 13.4$ ,  $5.6 \pm 14.8$ , and  $19.0 \pm 19.6$ , respectively. Furthermore, scores for attitude were higher in low group than in the others.

**Conclusions:** Although motivation to work was low at community level, this community-based clinical training program had a positive effect on students' attitudes toward community health care.

Disclosure: No conflict of interest declared

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**Effectiveness of continuing medical education in increasing anaphylaxis knowledge among family medicine residents and other residents**B.E. Usta Guc<sup>1</sup>, F.G. Cihan<sup>2</sup>, N. Karsavuran<sup>2</sup>, S. Ecirli<sup>3</sup><sup>1</sup> *Pediatric Allergy and Immunology, MoH Konya Training and Research Hospital, Konya, Turkey;*<sup>2</sup> *Family Medicine, MoH Konya Training and Research Hospital, Konya, Turkey;* <sup>3</sup> *Internal Medicine, MoH Konya Training and Research Hospital, Konya, Turkey*

**Objective:** Early diagnosis and immediate management are very important to reduce mortality and morbidity of anaphylaxis. The aim of our study is to assess the level of knowledge about anaphylaxis among residents training in Konya Education and Research Hospital and also to assess the effectiveness of anaphylaxis lecture on their knowledge.

**Methods:** One group pretest-posttest design was used. A structured self administered questionnaire was prepared and administered as pretest. As a posttest the same questionnaire was re-administered. Pretest and post test knowledge scores were compared and the findings were analyzed statistically.

**Results:** 77 residents were included in the study. %25.6 was family medicine residents, %28.2 was working in internal medicine department and %44.9 was working in pediatric department. Pretest, post-test scores were not associated with the departments and the duration of residency. Pretest scores mean was 4,9 and posttest scores mean was 9. There was a significant difference between the results of pretest and posttest ( $p < 0.01$ ). The difference was due to the questions about “fatality risk factors in anaphylaxis, most common drugs causing anaphylaxis, first step adrenaline administration, drugs that should not be applied at initial treatment of anaphylaxis, what to do at first in case of anaphylaxis”.

**Conclusions:** Participation in CME increased resident's knowledge about anaphylaxis, as well as increasing likelihood for patients to receive evidence-based care from participating physicians. With focused educational interventions, physicians can make diagnostic and therapeutic choices that align more closely with current guidelines and clinical evidence in anaphylaxis management.

Disclosure: No conflict of interest declared



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**Medical student Spanish language improvement through implementation of a medical Spanish language course**K. Hoedebecke<sup>1</sup>, C. Brooks<sup>1</sup>, C. Childers<sup>2</sup><sup>1</sup> Department of Family Medicine, Womack Army Medical Center, Ft Bragg, NC, United States;<sup>2</sup> Wake Forest School of Medicine, Wake Forest School of Medicine, Winston-Salem, United States

**Objective:** In the US, limited patient English proficiency decreases medical comprehension and increases possible adverse medication reactions. Although professional interpreters are often available, evidence shows that they do not enable physicians to elicit patient information as well as their Spanish-speaking colleagues. Furthermore, physician self-rated language ability has been independently associated with improved patient care within this cohort.

**Methods:** A 4 month medical Spanish course was implemented at a local medical school for students with intermediate to advanced language proficiency. Participants underwent a baseline listening comprehension and medical vocabulary assessment consisting of 20 questions. Their initial comfort level with Spanish use in a medical setting was also measured on a 5 point scale (with 1 being extremely uncomfortable and 5 being extremely comfortable). A similar follow up assessment of the same data was performed upon course completion. The goal was to improve comfort levels using Spanish as well as improve overall Spanish language comprehension.

**Results:** The change in comfort levels using Spanish improved from 3.3 to 3.9 ( $p=0.051$ ) and the change in overall comprehension improved from 19.7 to 19.9 ( $p=0.22$ ).

**Conclusions:** Of the 24 initial students, only 10 students correctly filled out their testing information and finished the course. Though the results did not reach significance, there was a positive correlation between the course and improved Spanish comprehension as well as enhanced comfort levels with the language in clinical settings. By adding more data points with continued classes in the future, the results will likely reach significance.

Disclosure: No conflict of interest declared

666

**How get doctors interested and educated in health care management?**

H. Arwin

FoU-enheten, Västra Götalandsregionen, Borås, Sweden

**Objective:** Swedish healthcare needs more physicians interested in leadership. The purpose of the project is to increase the knowledge about how to inspire doctors in training to choose education in leadership and health care managing (HCM).

**Methods:** This project includes 16 doctors with various specializations. One of the doctors who participates in the project is under training to become a specialist in family medicine. To venture the leadership field her training period needs to be extended with one and a half year.

The doctors who are applying to the project are evaluated by an assessment centre of leadership. According to the results a personal development plan is presented, tailored by their interests in either project managing, science of pedagogy/coaching or chief/managing. The leadership education includes 45 ECTS or equivalent. The doctors have a personal mentor and obtain work experience in leadership while attending.

The intention of the project is that everyone develops a project, preferably a scientific research project in leadership. The author's research project aimed to evaluate: Why become a manager when you can work as a clinical doctor? In a cross-sectional study a self-administrated questionnaire is distributed to approximately 115 doctors asking them to describe the incentive and earlier chief experience before becoming managers in primary health care.

**Expected results:** While it is going on, this main project is expected to generate a lot of spin off projects. Moreover, this project will increase knowledge about key factors and facilitate development of strategies for inspiring doctors to get doctors interested and educated in HCM.

Disclosure: No conflict of interest declared

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**Impressions of community-based physicians among first-year Japanese medical students**

F. Shaku, S. Ozone, A. Takayashiki, T. Maeno  
General Medicine, University of Tsukuba, Tsukuba, Japan

**Objective:** Community medicine is increasing in importance in Japan, but the current number of community-based physicians is still not enough. Increasing the number of the physicians would contribute to improving medical systems and citizens' health. We constantly talk about the shortage of community-based physicians and the necessity of increasing their numbers with medical students. To motivate medical students to devote their efforts to the community, knowing the opinions of the students is essential. Senior students have opinions similar to those of physicians, whereas first-year medical students may have opinions similar to those of the non-medical population, such as patients. Therefore, the opinions of first-year medical students need to be collected and analyzed. We used open-ended questions in order to obtain fresh and original views by students.

**Methods:** We administered a questionnaire that asked about students' images of community-based physicians to first-year medical students 3 months after matriculation. We then categorized and coded the opinions.

**Results:** All of the distributed questionnaires (110) were returned. Seventy-three of the respondents were men, 36 were women, and 1 was of unknown gender. The most common image of a community-based physician is "too busy" (n = 30), followed by "general" (n = 25), and "kindness" (n = 18). Other opinions included "older physicians," "devoted," and "good communicative abilities."

**Conclusions:** Many of the obtained opinions have been obtained previously, but some opinions were interesting. We need to develop a medical education curriculum based on students' opinions.

Disclosure: No conflict of interest declared

670

**Does parent educational level influence choosing the faculty of medicine?**

Z. Cansever<sup>1</sup>, U. Zeynep Avsar<sup>1</sup>, H. Acemoglu<sup>1</sup>, Y. Cayir<sup>2</sup>  
<sup>1</sup> Ataturk University Faculty of Medicine, Department of Medical Education, Erzurum, Turkey;  
<sup>2</sup> Ataturk University Faculty of Medicine, Department of Family Medicine, Erzurum, Turkey

**Objective:** The aim of this study was to investigate whether parent education level influences choosing medical education and of the freshman students of medical school who enrolled in the academic year 2012-2013.

**Methods:** A questionnaire was given to the first year students, which consisted of questions socio-demographic characteristics and education level of parents. Some of questions were open-ended. The students responded to the survey on a voluntary basis.

**Results:** A total of 213 students participated in the study. The average age was 18.71 ± 1.32. From among all the students, 53.5% were female (n=114). Majority of the students' families live in the downtown (% 86.3). 44.8% of mothers were primary, 9.4% elementary, 25.0% high school, and 20.7% university degree. 15.1% of fathers were primary, 10.4% elementary, 24.5% high school, and 50.0% university degree. There was not significant statistical relationship between parental education and preferring medical education (respectively p=0.265, p=0.390).

**Conclusion:** Socio-demographic characteristics, and parental level of education may affect choosing a career. In this study we found that educational level of the parents does not influence children's preferring medical education. More research needed to investigate other factors that affecting students choosing the medical school.

Disclosure: No conflict of interest declared

700

**The egresses perspective in the evaluation of an Interprofessional Residency Program in Primary Health Care.**E. A. Demarco<sup>1,2</sup>, J. Baldisserotto<sup>1,2</sup>, C.F. Rocha<sup>2</sup>

<sup>1</sup> Center of Technical Education and Research in Health and Community Health Service, Grupo Hospitalar Conceição – Brazilian Ministry of Health, Porto Alegre, Brazil; <sup>2</sup> Epidemiology Posgraduation Program, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

**Objective:** To evaluate the adequacy of a Health Interprofessional Residency (HIR), emphasis in Family and Community Health, as a good technology to train health professionals in Primary Health Care in the context of Brazilian Health System.

**Methods:** The design is based on a descriptive study case, associating quantitative and qualitative methodologies. HIR program started in 2004 and has been offered by Grupo Hospitalar Conceição – and sponsored by the Brazilian Ministry of Health. All professionals (74) that concluded the program between 2005 and 2008 were selected to be included in the sample. The information was collected by a virtual mode with a semi structured and self-administered questionnaire.

**Results:** The response rate was 77%. The population was mainly composed by young individuals, predominantly females. These individuals perform their professional activities in 19 different cities, more than 50% located in the State capital city (Porto Alegre). 76% of the sample surveyed were public servants while 49% of these were working directly in Primary Health Care. Most of the participants stated that the training during Residency had significantly changed their view in relation to the reality in Primary Health Care, improving their skills and increasing their knowledge.

**Conclusion:** The findings from this study show that the Residency Program could be considered a good technology for training Primary Health Care professionals for the Brazilian Health System.

Disclosure: No conflict of interest declared

737

**Intervention in the primary school with sings tales of the human body to health promotion**

A. Canovas, R. Luquin, A. Piñana, J. Flores, E. Esparza, F. Guillen, R. Requena, S. Martin, M. Daniela-Graure, A. Claudiu-Coman  
Primary Health Centers Cartagena, Public Health Service Murcia, Cartagena. Murcia, Spain

**Objective:** The efficacy of the singing, as a vehicle to transmit messages and their effect on knowledge and attitudes is known. In addition, the voice as an instrument of the tale, motivates and emotionally involving children. Also, it favors an easy learning of messages and promotes active participation. Ultimately, the song is an instrument for learning. The objective is to use sings tales as a tool to bring children to the comprehensive knowledge of the human body.

**Methods and results:** Interventional and prospective study. Scope: Public colleges and two centers of health Cartagena Cartagena health Area concluded. Period of study from October 2012 to April 2013. Variables: Emotion, attention, learning, approach and stillness. „The intervention“ consists of 4 acts with supports disk, cutouts colored with watercolors and includes, at the end, a musical show and the songs. We evaluated (pre and post test) to children with a test adapted to the age and the taught content (3 Tests of knowledge. Statistical analysis: Chi square and frequency distribution by age and number of failures groups. Anova test (average failures per age group).

**Conclusions:** Understanding health and disease is part of the future of children as human beings. Children get excited singing the songs of the human body and learn the functions of vital organs. The song as extracurricular, parallel to teaching activity, stimulates children's knowledge.

Disclosure: No conflict of interest declared

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**The project of MUSH (Mie University Student Helpers)**

Y. Esumi, D. Ueda, R. Inoue, T. Nakanishi, K. Yamamoto

*Department of family medicine, Mie University, school of medicine, Tsu city, Japan*

**Objective:** It's one of major issues in Japan that ambulances are often sent from one hospital to another. In order to receive the ambulances at Mie University Hospital and to support the increasing nursing jobs, the medical students of Mie University functioned as an assistant nurse ER and ICU. The aim of this study is to examine whether this project has considerable effect on improving nursing jobs and encouraging students to understand nursing jobs.

**Methods:** Approximately 30 fifth and sixth grades medical students work as nurse assistant at ER and ICU with wage. Their job covers wide range of nursing activities, changing patient's position, changing diapers, observing unstable patients, helping feeding. We develop a questionnaire with Likart scale to evaluate effect on nursing job and the student understanding and asked students and nurses to answer it.

**Results:** The result was quite positive. Especially the score for students' understanding of nursing jobs, usefulness of the experience, the interest of emergency medicine, willingness for this project were very high, while the score for nurses of helpfulness of students work, willingness for this project were also very high.

**Conclusions:** The results might indicate that the project have good effect for both students and nurses. The medical students understand nursing jobs and feelings, and those experiences might be very useful for students to work together with co-medical staffs in the future. Actually the students belonging to MUSH are more active performance for patients than those who not in clinical placements. Also the nurses feels contented.

Disclosure: No conflict of interest declared

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**Tertiary nurse practitioners' new dimension to nursing services quality development in the community**J. Chantharasiri, K. Khotprathum, M. Phanthawasit, Y. Bunloy, B. Khamphithak  
*Nursing Affairs Group, Khon Kaen Hospital, MOPH, THAILAND, Hat Yai, Thailand*

**Objectives:** The objectives of this study were to participate in the community that owns the data in order to investigate the data that cover all dimensions related to community health, and to develop competency of tertiary nurse practitioners.

**Methods:** The RECAP or the Rapid Ethnography Community Assessment Process was employed. The target group consisted of 127 leaders from seven networks. Three steps were taken: 1) The preparation step consisting of preparation of the team, data, and area; 2) The operational step or the RECAP; and 3) The conclusion step consisting of conclusion, analysis, and return of the data to the community. Content analysis and timeline analysis were carried out, and the data were presented using mind maps

**Results:** 1) Tertiary nurse practitioners were developed by using community approach technique 2) The Local Administrative Organization have The Community Data at all health dimensions and use the data for designing health services appropriately up to health care demand of the people in the community. 3) The Collaborative Team for Health Services System in the Community consist of 4 organization : 1) Local Administrative organization 2) Health Personal Team 3) Leader of the community 4) Health Care Volunteer Team and orther sectors

**Conclusion:** This tool should be promoted for use in other studies on communities in other areas so as to obtain data necessary for designing health services that could solve problems and meet the needs of the community with sustainable participation of the community.

Disclosure: No conflict of interest declared

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**The effects of group dynamics and knowledge provision on attention and practice in preventing the spread of pulmonary tuberculosis**

N. Kiamkan, P. Wattanasoonthorn

*Infection Prevention and Control Unit of Songkhla Hospital, MOPH, THAILAND, Amphour Moung, Thailand*

**Objective:** To investigate the effects of group dynamics and knowledge provision on attention and practice in preventing the spread of pulmonary tuberculosis

**Methods:** This quasi-experimental study employed two groups of subjects for measurements before and after the experiment. The subjects were pulmonary tuberculosis patients at the Out-patient Department of Songkhla Hospital, Songkhla Province during August-November 2010. The data were analyzed using an independent t-test.

**Results:** After group dynamics and knowledge provision, the average score for attention on the practice in preventing the spread of pulmonary tuberculosis was 55.32 from the full score of 60; the standard deviation was 3.301. This score was higher than that of the control group which was 49.64 and the standard deviation was 5.663; the difference was statistically significant ( $p < .001$ ). The average score for the practice to prevent pulmonary tuberculosis was 28.56 from the full score of 30, and the standard deviation was 1.474. This was higher than that of the control group which was 26.56 and the standard deviation was 2.451; the difference was statistically significant ( $p < .01$ ).

**Conclusions:** The study showed that group dynamics and knowledge provision for pulmonary tuberculosis patients increased their levels of attention, and practice in preventing the spread of pulmonary tuberculosis. Thus, health personnel should use group dynamics and knowledge provision to prevent the spread of pulmonary tuberculosis.

Disclosure: No conflict of interest declared

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**The success of the RCGP First5 initiative**

L. Moran, J. Grewal

*First5, RCGP, London, United Kingdom*

In 2010 the UK RCGP launched the First5 Initiative to support new GPs in their first 5 years after qualification. New GPs face potential isolation in their professional practice and have been identified as a vulnerable group. Thus the First5 Committee was formed to support them.

Volunteers across the country have worked to promote 5 pillars central to the First5 initiative: 1. Connecting with the College, 2. Facilitating Networks, 3. Supporting Revalidation, Career Mentorship, 5 Continuing Professional Development (CPD).

Various methods have been used to implement the scheme including social media, teaching and networking events, socials and mentorship schemes. First5 now is starting to be implemented internationally too. So far the initiative has been a resounding success.

This talk will start with a short video highlighting the achievements of the scheme across the UK. A presentation will then follow discussing the pillars and how they are able to support new GPs in their first 5 years of working. This scheme has allowed GPs to establish local networks with their peers, to be more focused with their learning and to be connected with RCGP. It is a success we wish to share.

Disclosure: No conflict of interest declared

862

### The features of postgraduate education and creation of medico-technological documents in conditions of intensive primary care' reformation in Ukraine

G. Lysenko, V. Tkachenko

*Institute of Family Medicine, National Medical Academy of Postgraduate Education named after P.L. Shupik, Kiev, Ukraine*

**Objective:** The Ukrainian government conducts intensive primary care' reformation on principles of general practice (GP). New GP'centers and out-patient's clinics are opened, that needs increasing of educated GPs. Institute of family medicine (IFM) is the leading establishment of scientific and methodical accompaniment of family medicine' introduction in Ukraine.

**Methods:** Statistic analyses.

**Results:** According to Ukrainian Law the reformation is begun in 4 pilot regions with further distribution of the got experience on the country. The task of IFM is to increase the amount of educated GPs annually in 5-6 times for providing the staff for pilot regions. The Department of family medicine created the new program of GPs' education with full-time part and correspondence course with the elements of distance teaching. The thematic courses, monthly seminars and distance continuous education are conducted for providing the quality of education. IFM and Ukrainian association of family medicine (UAFM) publish the medical journal for GPs and conduct conferences. The legislative documents, clinical protocols and standards of management of widespread diseases and syndromes for effective primary care are actively prepared at the state level. The employees of IFM and UAFM take active part in their creation. More than 10 clinical protocols and standards are already created and ratified by Ukrainian Health Ministry. The GP'competencies, characteristics and detection of specialty are updated according to modern Wonca positions.

**Conclusions:** The reformation of primary care on family medicine principles will result in the decline of health system' expenses and improvement of primary care' quality.

Disclosure: No conflict of interest declared

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### Teaching residents preventive health: cancer screening, prevention and health promotion

J. Fowler<sup>1</sup>, L. Hadley<sup>1</sup>, B. Agofonov<sup>2</sup>, M. Rudenka<sup>2</sup>, N. Shevtsova<sup>2</sup>, S. Subramanian<sup>2</sup>

<sup>1</sup> Family Medicine, JPS Health Network, Fort Worth, TX, United States; <sup>2</sup> Family Medicine, Moniki, Moscow, Russian Federation

Cancer is the second leading cause of death in the population of targeted training programs. Despite availability of recommendations and guidelines, literature suggests that providers are not reviewing this information with patients<sup>[i]</sup>. Given recent development of family medicine training in Russia, baseline knowledge of guidelines is important to advancing communication. In training physicians who practice in underserved and low resource communities, it is important to move from treating disease to preventing disease.

**Objectives:** This study aims to assess level of training residents receive and the best method for delivering education.

**Methods:** A self-administered questionnaire adapted from the study done by Jonas in 1997<sup>[ii]</sup> and current guidelines was distributed to Family Medicine Residents and faculty in the programs. After a brief training on health promotion and cancer screening, 60 days of health alerts and a post-intervention survey, data was tabulated to assess the baseline level of training, change in knowledge post-intervention, and the resident's preference for learning.

**Results:** This study shows cultural similarities and differences in residents' training curricula. Some residents prefer health alerts for targeted education over didactic learning.

**Conclusions:** Cancer Screening, prevention and health promotion is important to improving cancer morbidity and mortality. Using health alerts to deliver concise targeted evidence based information may be a plausible way of delivering educational content.

<sup>[i]</sup> Fletcher RH, Fletcher SW. Teaching preventive medicine and health maintenance. *Ann Intern Med.* 1992 Jun 15; 116(12 Pt 2):1094-8.

<sup>[ii]</sup> Jonas WB. Physician health promotion training activities in primary care: a survey of the military residencies. *J Am Board Fam Pract.* 1997 Mar-Apr; 10(2):104-10.

Disclosure: No conflict of interest declared

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**Hippocrates: the european exchange programme for General Practice**S. Rigon<sup>1,2</sup>, C. Lygidakis<sup>1,3</sup>, P. Kallsetrup<sup>4</sup><sup>1</sup> *Medicina Generale ASL Bologna, Servizio Sanitario Regionale Emilia-Romagna, Bologna, Italy;* <sup>2</sup> *Exchange Group, Vasco Da Gama Movement, Bologna, Italy;* <sup>3</sup> *Chair, Vasco Da Gama Movement, Bologna, Italy;* <sup>4</sup> *Center for Global Health, Århus University, Århus, Denmark***Objective:** The main objective of this poster is to inform trainees and junior GPs about the Hippocrates Exchange programme and the way to take part.**Methods:** The poster presentation will offer: a description of the exchange programme and a step by step practical information on how to take part to the programme, an overview of exchange activity in Europe in 2011/12 and impact of the Leonardo European Commission Lifelong Learning Programme Mobility Project on the Hippocrates.**Results:** the Vasco da Gama Movement's exchange programme has grown greatly in the last few years and now offers placements in 24 different European Countries. The value of exchanges along with the European Commission Mobility Funds helped the programme expand.**Conclusions:** Viewers should be able to appreciate the value and practical framework of the exchange programme as well as understand how to take part should they wish to do so.

Disclosure: No conflict of interest declared

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**Distance education allows changes in the work of professionals in Family Health in the state of Mato Grosso do Sul / Brazil**M.L.M. Santos<sup>1</sup>, V.L.Kodjaoglanian<sup>2</sup>, A.D. Carli<sup>1</sup>, L.A. Bonilha<sup>1</sup>, G.M. Oliveira<sup>2</sup>, J. Fernandes<sup>1</sup>, V. Sanches<sup>1</sup>, A.P. Batiston<sup>1</sup><sup>1</sup> *Public Health, Federal University of Mato Grosso do Sul, Campo Grande, Brazil;* <sup>2</sup> *Education, Oswaldo Cruz Foundation, Campo Grande, Brazil***Objective:**Analyze the experiences of the Specialization Course in Family Health, in Distance Education, in the work of doctors, dentists, and nurses of the Family Health Strategy (FHS) in the state of Mato Grosso do Sul/Brazil.**Methods:**This is a cross-sectional, qualitative descriptive and exploratory study, conducted in a classroom meeting of the course, with the question: „Do you think the course is providing changes in its professional practices in the FHS? If so, discuss the major changes and major difficulties in implementing them“. A qualitative technique with roots in the Theory of Social Representations was held using the analysis of Discourse of the Collective-Subject.**Results:**Eight-hundred FHS professionals of the state performed the course and 338 of them participated in the research. All agreed that the course provided changes in their work at FHS. We identified five main categories, with the following Central Ideas(CI): CI1-The course provided a better understanding of Primary Health Care(PHC) and principles of Family Health(FH). CI2-The knowledge and insights provided changes in professional practices within the individual and team work. CI3-There was reorganization in work and routine of the team. CI4-There was optimization of systematized actions of health promotion and prevention. CI5-A lack of involvement and participation of health managers are the main obstacles to the implementation of changes at work.**Conclusions:**The course caused concrete changes in the work of doctors, dentists and nurses of FHS, consolidating the principles of PHC and FH. The involvement of management is considered important for the implementation of changes.

Disclosure: No conflict of interest declared

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**First5 – The story so far**

L. Moran, C. Taylor

*First5, RCGP, London, United Kingdom*

In 2010 the UK RCGP launched the First5 Initiative to support new GPs in their first 5 years after qualification. New GP's face potential isolation in their professional practice and have been identified as a vulnerable group. Thus the First5 Committee was formed to support them.

Volunteers across the country have worked to promote 5 pillars central to the First5 initiative: 1. Connecting with the College, 2. Facilitating Networks, 3. Supporting Revalidation, Career Mentorship, 5 Continuing Professional Development (CPD).

Various methods have been used to implement the scheme including social media, teaching and networking events, socials and mentorship schemes. First5 now is starting to be implemented internationally too. So far the initiative has been a resounding success.

This poster highlight the journey of the First5 initiative over the years, to its launch in 2010 to its present day activities. It is a success we wish to share.

Disclosure: No conflict of interest declared

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**The Success of RCGP Yorkshire's First5 roadshow in addressing the needs of new GP's**

L. Moran

*First5, RCGP, Leeds, United Kingdom*

In 2011 the UK RCGP Yorkshire Faculty held a First5 Roadshow to address the needs of new GP's across the area. Our aim was to adhere to the 5 pillars as set out by the RCGP initiative. We wanted to make the event locally applicable and address areas less well covered on the GP Speciality Training Schemes. Prior to holding the event, via our online network, we held scoping exercises to find out what information new GP's were keen to be taught. With the needs thus established, we invited many well known local expertise to talk on the subject. The areas covered included appraisal and revalidation, making a success of CPD groups, use of technology to aid CPD, networking, employment issues, differing GP Models such as partnership vs salaried, or locum vs chambers, commissioning, connecting with the College, leadership in general practice and practice management. To summarise we held a debate on the future of general practice. The event received great feedback and gaining on the accomplishment of the roadshow, the faculty members went on to write a book, "The new GP's handbook" due for publication later this year.

From the work done from the scoping, the roadshow and subsequent networking we hope we have a clear idea of what the needs of new GP's are and strategies and information to address those needs which will benefit our future work with the First 5 initiative.

We hope our success can now be transferable to other areas.

Disclosure: No conflict of interest declared



**1021****The Accountable GP: preparing for revalidation**

J. Grewal, L. Moran

*Primary care, NHS, London, United Kingdom*

Following confirmation from the Secretary of State for Health Revalidation, revalidation commenced on the 3rd of December 2012 in the United Kingdom, with the majority of licensed doctors will be revalidated for the first time by the end of March 2016.

Newly qualified GP's in UK are particularly keen to learn about the appraisal process, what is required of them and how to work towards a PDP each year. This session will focus on preparing new GPs both for their appraisal and thus the lead up to their revalidation. The emphasis for revalidation is to promote safe doctors, who are good for their patients, their team and their personal development. This session aims to show that by being an accountable GP you can strive to build an ambitious PDP to promote a gratifying career and end with discussion on revalidation in other countries.

Disclosure: No conflict of interest declared

**1022****The Accountable GP: preparing for revalidation in England**

J. Grewal

*Primary care, NHS, London, United Kingdom*

Following confirmation from the Secretary of State for Health Revalidation, revalidation commenced on the 3rd of December 2012 in the United Kingdom, with the majority of licensed doctors will be revalidated for the first time by the end of March 2016.

Newly qualified GP's in UK are particularly keen to learn about the appraisal process, what is required of them and how to work towards a PDP each year. This session will focus on preparing new GPs both for their appraisal and thus the lead up to their revalidation. The emphasis for revalidation is to promote safe doctors, who are good for their patients, their team and their personal development. This poster aims to show that by being an accountable GP you can strive to build an ambitious PDP to promote a gratifying carem

Disclosure: No conflict of interest declared



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**Novel family counseling training method: audiovisual supported seminar**H. Pizarro<sup>1,2</sup>, K. Villarroel<sup>1</sup><sup>1</sup> *Salud Pública, Cátedra de Medicina Familiar, Universidad de Valparaíso, Valparaíso, Chile;* <sup>2</sup> *Psiquiatría, Universidad de Valparaíso, Valparaíso, Chile***Objective:**

- Main objective is to design and implement a Family Counseling workshop for Family Medicine Residents, supported on audiovisual material extracted from Television shows and Cinema.
- Second objective is to evaluate the subjective appreciation of the participants of this novel teaching method.

**Methods:** The programme includes 5 once a week sessions, guided by a psychiatrist. Bibliography includes Theoretical and practical content regarding Systemic Theory, Interventive Interview and Family Counseling. In each session, the residents watched two of 9 episodes of the "Oliver" case, from the *HBO Television Serie "In Treatment", Second Season*. After each episode, analysis was made facilitating discussion and comments, as well as connecting elements observed in the fictitious case with those learned from previous readings, and promoting the development of practical skills, like interview strategies through role playing. Finally, a qualitative evaluation of the Seminar is performed by asking the participants to answer an anonymous survey.

**Results:**

- The Seminar's implementation was possible by counting with audiovisual means, adequate bibliography and above all, University's validation through providing Resident's availability and qualified teaching staff.
- The participant's appreciation of this Seminar was positive, as was measured by a Likert-type scale in the following items: content's clarity, clinical usefulness and pedagogic incentive.

**Conclusions:** The authors consider that this novel teaching method represents a useful, practical and entertaining pedagogic tool, easy to apply, and of great acceptance by teachers and students.

After this experience the method was incorporated within the formal curriculum of Family Medicine Scholarship in the University of Valparaíso, Chile.

Disclosure: No conflict of interest declared

1087

**Transforming general practitioners to become family physicians- The use of the SPICES curriculum in the Nigerian diploma in family medicine programme**V. Inem<sup>1</sup>, A.J. Ariba,<sup>1</sup> S. Osinowo<sup>2</sup>, P. Obiegbu,<sup>1</sup> L. Akin Moses<sup>1</sup>, S. Yohanna<sup>1</sup>, J. Arigbabowo<sup>2</sup><sup>1</sup> *Faculty of Family Medicine, National Postgraduate Medical College of Nigeria, Lagos, Nigeria;*<sup>2</sup> *DFM classof 2011/12, Association of General and Private Medical Practitioners of Nigeria, Lagos, Nigeria*

**Introduction:** There are over 20,000 untrained medical officers working in various areas of the Nigerian Health System. The residency in Family Medicine started over 30 years ago has produced just a little over 400 family physicians. The WHO resolution 62.2 of 2009 requires training of family physicians to take charge of Primary health care. In order to have a critical mass of family physicians, the National Postgraduate medical college of Nigeria started the diploma program in 2012.

The Diploma program uses the SPICES curriculum model in its implementation as opposed to traditional model of teaching.

The SPICES program modalities would be explained in detail and a SWOT analysis done.

Doctors have commended the program as one that gives capacity for them to become both managers and care providers of the health system in Nigeria.

**Lesson learnt:** Flexibility in the course outline has encouraged a larger number of medical officers to show interest as the next set expected has been oversubscribed.

**Recommendation:** Uploading lectures on the Moodle platform will enhance a better learning environment.

Disclosure: No conflict of interest declared

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**“The voices of the street project”, a model of interaction between primary care and university extension.**

I.S. Passos Martins Filho, N. de Lima Froio, L. Inada Braga, D. Careta do Carmo, S. Guimaraes Moraes, M.A. Janaudis, D. Stabile Amais, E. Sasaki, F. Renato Nadai  
*Collective Healthcare Department, Jundiaí Medical School, Jundiaí, Brazil*

**Context:** “The Voices of The Street Project (VSP)” was created as a means of students from the Jundiaí Medical School- JMS (São Paulo, Brazil) intervene in population health. It was through this university extension that the set of actions, which is now of great importance to communities of Jundiaí, came into being. Fully promoted and put into practice by students, “The Voices of The Street Project” is based on the principles of Primary Care and aims to put medical students in contact with the poorer city communities, performing actions in health promotion and disease prevention. Such actions and their guidelines meet the specific needs of each community, thanks to dialogue and interaction with Unified Health System (SUS- Sistema Único de Saúde) and Family Health Program (PSF – Programa de Saúde da Família).

**Objective:** To present a model of university extension that together with representatives of the health system and communities, can strengthen public health.

**Results:** How a group of 70 students could perform actions with concrete results? It was certainly a lot of work and effort. But what's more important is the power of university extension: to lead academic knowledge to the poorer and needy communities. The results become increasingly evident through the years, as the students become the bridge between knowledge and people, and the public health system become better and stronger.

Disclosure: No conflict of interest declared

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**Education for ASKES primary care provider**

Fajriadinur, C. Nurcahyo Utomo  
*Provider Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia*

A challenge for ASKES to provide a qualified health services for ASKES participants with reasonable cost in equity and portability paradigm, and also keeping a sustainability of the program as a priority, it caused by health care expenditure increasing every year an average rise of 20% per year (ASKES: chronic prevalence 69%, chronic financing 48%) ASKES optimizing a primary care provider as a gatekeeper and care coordinator. The services are offered through Primary Health Care Centers (PUSKESMAS) and physicians.

Askes provide specialized expertise and training on handling cases of diabetes mellitus, hypertension, and training as a family physician. It has been held since 2009 and has been implemented in 2000 from a total of 12 500 primary care provider Endocrine training by Indonesia professional association endocrine (PERKENI), nephrology and cardiology training by Indonesia Nefrolog (PERNEFRI) and Indonesian Cardiolog (PERKI), also training of family physicians by Indonesia physician professional (IDI)

Disclosure: No conflict of interest declared

1178

**Passing ratio at the final part of specialist's exam in General Practice: Croatian experience**

M. Vrcic-Keglevic

*Department of Family Medicine, «A Stampar» School of Public Health, Medical School University of Zagreb, Zagreb, Croatia*

**Introduction:** Vocational training in General Practice/Family Medicine (GP/FM) in Croatia lasts 3 years and finished with comprehensive specialist's exam. It consists of 2 parts. The preparatory part consists of portfolio, 8 written essays, trainer's assessment of clinical competence and trainer's progress report. The final part consists of written test, OSCE, and oral exam in front of three member's jury. After six years of experience we did the comprehensive evaluation of the exam. The aim of this report is to present the results of the final part of the exam.

**Methods:** A sample consists of the 675 candidates applied for the final part of the GP/FM specialist's exam. The results of the passing scores at the written, OSCE and oral part of the exam were recorded as well as a demographic data of the candidates.

**Results:** The overall passing ratio at the final part of the exam was 84.4%. 15.6% candidates failed and should repeat certain parts. The most of them failed at the written part (17.1%), followed by the failures at the oral part (3.8%). OSCE exam have to be repeated by the 2.1% candidates. There were no differences regarding the sociodemographic characteristics of the candidates.

**Conclusion:** Even we found high passing ratio, we considered that the failure at the exam is wasting the financial and human resources, therefore we have discussed this results with the trainers of those candidates who failed.

Disclosure: No conflict of interest declared

1194

**Curriculum of General Practitioners in Czech Republic**D. Halata<sup>1</sup>, N. Král<sup>1</sup>, Z. Vaněčková<sup>2</sup>, N. Šrámková<sup>1</sup>, J. Vojtíšková<sup>2</sup>, B. Seifert<sup>3</sup>, J. Štolfa<sup>4</sup>, P. Vychytil<sup>1</sup>*<sup>1</sup> Mladí praktici, Mladí Praktici, Prague, Czech Republic; <sup>2</sup> Lékařská ordinace Vyšehrad s.r.o., Lékařská ordinace Vyšehrad s.r.o., Prague, Czech Republic; <sup>3</sup> Department of General Practice, First Faculty of Prague, Charles University of Prague, Prague, Czech Republic; <sup>4</sup> Institute of Postgraduate Education, IPVZ, Prague, Czech Republic*

**Introduction:** General practice in the Czech Republic has undergone a number of changes. Training programme of GPs was changed and shortened. From the year 2009 is there a new program for GP trainees – Residential programme. Each resident (GP trainee) has supervisor and financial support is provided by the special Fund of the Ministry of Health (MoH). Our aim is to present during the conference WONCA 2013 Prague the carrier of GP in the Czech Republic.

**Methods:** We collected data from publicly available sources, especially from professional journals for practitioners, from the website of the Ministry of Health (MoH), the Institute of Postgraduate Education (IPVZ), Society of General Medicine (SVL CLS JEP), Society of General Practitioners (SPL) and Young Practitioners (MP).

**Results:** General practice is taught in all medical schools in the Czech Republic (8). Some faculties have separate Departments of General Practice (2). GP training is three years long, the common way how to be a GP is through the Residential programme. There is also possibility of retraining from the other disciplines. Within the system of lifelong learning is a GP obliged to learn and earn credits to maintain eligibility for the job.

**Conclusion:** Medical students find the field of general practice attractive. GP training is for three years and among other fields of medicine is the shortest. There is high interest in residential places, but there are differences regionally. Not only the educational process, but also a way how to obtain self-practice is a frequently discussed topic.

Disclosure: No conflict of interest declared

1205

**Use and importance of different learning tools in a course of specialization in family health – mode of distance education course**M.L.M. Santos<sup>1</sup>, V.L.Kodjaoglanian<sup>2</sup>, A.D. Carli<sup>1</sup>, G.M. Oliveira<sup>2</sup>, J.M. Fernandes<sup>1</sup>, V.S. Sanches<sup>1</sup>, A.P. Batiston<sup>1</sup><sup>1</sup> Public Health, Federal University of Mato Grosso do Sul, Campo Grande, Brazil; <sup>2</sup> Education, Oswaldo Cruz Foundation – Unit Cerrado Pantanal, Campo Grande, Brazil

**Objective:** Identify the learning tools most used and considered the most important for learning in the students' opinion of the Specialization Course in Family Health (Distance Education Course).

**Methods:** Eight-hundred health care professionals of the Family Health Strategy in the state of Mato Grosso do Sul/Brazil held that course. Of there, 333 professionals (doctors/nurses/dentists) answered questions regarding the use and importance of learning tools available on the course. We used seven tools: discussion forums modules, discussion forums with experts, virtual library, chats, video tutorials, diversified multimedia material and printed material (books of the modules and guide student). The survey employed 7-point Likert scales and multiple-choice questions, being „1“ the most widely used and important and „7“ the least used and important.

**Results:** 48% of the professionals indicated the printed material as the most important and used throughout the course, followed by discussion forums modules (43%). Virtual library, video tutorials and diversified multimedia material were scored by most respondents in score 4 and 5 of the scale. The chats and discussion forums with experts were identified as the least important and least used (score 7 of the scale) by 45% and 31% of respondents, respectively.

**Conclusions:** Although the Distance Education Course allows different interactive learning tools, printed material is still the most used, demonstrating the importance of offering this tool, even in courses with virtual environments and digitized materials. Discussion forums modules were also considered important for learning, indicating that collaborative learning and exchange of experiences provided by this tool are relevant to the construction of knowledge.

Disclosure: No conflict of interest declared

1228

**A cross-sectional study about physician perception of patients in Ankara province, Turkey**M. Heybet<sup>1</sup>, İ. Şencan<sup>1</sup>, G. Yarloğlu<sup>1</sup>, İ. Kasım<sup>1</sup>, İ. Yaşar<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Özkara<sup>2</sup><sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Turkey, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Recently increased incidence of workplace violence in health care, in Turkey, highlights the need for investigating the causes of such changes in clinical practice settings. The focus on the changes in attitudes of patients towards physicians let us wonder whether the physician perception of the patients has changed and what the current perception is. It is well-known that there are multiple aspects of changes in human behaviours; therefore linking the increased incidence with only “violence” would prevent understanding the several related aspects of the problem. The aim of this study was to evaluate patients' perceptions about physicians and to determine the sociological, psychological and medical reasons that make up the backgrounds of their perceptions.

**Methods:** We have planned to run a cross-sectional survey with 500 patients in Ankara province, that are above 18 years of age and who are willing to participate. The individuals are chosen by stratified sampling among registered patients of primary care centers that are randomly chosen. 500 individuals would be expected to represent the whole province. The survey basically involves questions about opinions about clinical setting, patient trust, effects of media on patient-doctor relationship, respect, communication skills and social tendencies.

**Results and Conclusions:** The analysis of findings is still in progress and is planned to be presented during the Wonca conference in Prague. The study is thought to help understand multiple aspects of patient-doctor relationship in primary care settings.

Disclosure: No conflict of interest declared

1241

**Identification of learning needs on systemic hypertension and diabetes mellitus by primary care health teams**S.Takeda<sup>1</sup>, M.Diercks<sup>1</sup>, C.Mendonça<sup>1,2</sup><sup>1</sup> Serviço de Saúde Comunitaria, Grupo Hospitalar Conceição, Porto Alegre, Brazil;<sup>2</sup> Departamento de Saúde Coletiva, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

**Introduction:** Identifying the educative needs of providers was part of the quality evaluation research in systemic hypertension and diabetes mellitus, funded by the Ministry of Health of Brazil. The baseline evaluated a set of health and individual/collective indicators developed by the health teams. The intervention consists of permanent education activities for the 329 staff of the 12 health care teams, responsible for 108,560 pop., estimated as 20,120 hypertensive and 6,190 diabetic patients.

**Objectives:** To suit the permanent education activities to the learning needs of interprofessional teams, identifying themes that are common to the whole team, as well as themes that are specific for each professional category.

**Methodology:** Three combined methods: individual filling of a questionnaire with one open question, identifying the professional category; learning needs, according to the service managers; needs according to the coordinators of the research, based on the results of morbidity and mortality indicators.

**Results:** 80% of the staff answered, presenting 646 answers, grouped into 30 categories of themes, next regrouped into large themes: *I need to learn more on...* “clinical update” (29%); “health promotion and disease prevention” (16%); “treatment compliance” (10%); “collective activities” (10%); “health education” (10%).

**Conclusions:** A simple, quick, and low-cost research pointed out the teaching-learning needs for teams to better approach these conditions and their prevention either in clinical situations or population-based approaches. The mentioned themes matched the opinion of the managers and the problems reflected by the health indicators. Essential for planning and execution of permanent education.

Disclosure: No conflict of interest declared

1248

**Problematization with the establishment of the Margueres's Arch: a successful experience in Pontifical Catholic University of Goiás**

T.E.D. Santos, M.D. Ascençao, J.S. Almeida, G.C.F. Cantarelli

Departamento de Medicina, Pontifícia Universidade Católica de Goiás, Goiânia, Brazil

**Objective:** Emphasize the importance of using active methods in the training of medical students, demonstrating success in fulfilling the Charles Margueres's Arch in academic practice.

**Method:** Experience report of academics and teacher of medical course at Pontifical Catholic University of Goiás (PUC-Goiás)

**Results:** The Problematization method is used in the curriculum of the medical course at PUC-Goiás, taking as reference the Charles Margueres's Arch. In the learning process, the students discuss situations identified by them in their experience as likely to be developed or improved. After observation and careful reading of reality, students choose a problem-case that caught their attention in community activities. Key points of the situation are identified, and then it's performed the theorization of the subject, so that students acquire knowledge that can generate action strategies. Then, possible solution hypotheses are developed for the case, with subsequent application to the same reality. Thus, the Charles Magueres's Arch 5 steps are accomplished, resulting in a feedback from the students for the community who incited the theme of reflection.

**Conclusion:** This practice is considered beneficial by the community and members of the engagement team responsible for the area, that notes the difference generated by the positive interventions of the students. The active method makes students critical and creative, provided with intellectual autonomy and competence to future situations similar to that theorized. In addition, they have the chance to structure increasingly knowledge throughout the course and can apply it effectively in the community.

Disclosure: No conflict of interest declared

1264

**The importance of early exposure to clinical cases: an experience report**

J.S. Almeida, M. D. Ascensão, T.E.D. Santos, G.C.F. Cantarelli

*Departamento de Medicina, Pontifícia Universidade Católica de Goiás, Goiânia, Brazil*

**Objective:** Point out the benefits of early exposure to clinical cases in medicine students' learning and its reflection on taking care of patients in the communities in which students are placed.

**Method:** Experience report of Pontifical Catholic university of Goiás (PUC-Goiás)' medical students, based on the exchange of experiences with students of universities that introduce contact with clinical cases later in their curricula.

**Results:** The students of the PUC-Goiás medical school, whose curriculum is based on Problem Based Learning (PBL), use clinical cases to guide the learning objectives for each week on the first three years of the course. Students which are presented to the clinical cases since the beginning of course report ease in establishing a line of reasoning that leads to the diagnosis of patients with whom they have contact. Also refer to feel trained to relate the symptoms initially in syndromic diagnoses, then to nominate possible nosological diagnoses, focusing on clinical reasoning and reducing the chance of mistakes.

**Conclusion:** It is observed that early contact with clinical cases provides the medical students increased security and ease in diagnostic reasoning. In addition, it's common the aid of fictitious clinical cases in the learning of several syndromes, which is also beneficial in the investigation of diseases. Such preparation is important in improving the quality of patient care in the communities in which students are placed.

Disclosure: No conflict of interest declared

1310

**A workshop to identify instructor style preferences**Z. Cansever<sup>1</sup>, Z. Akturk<sup>2</sup>, Y. Cayir<sup>2</sup><sup>1</sup> *Ataturk University Faculty of Medicine, Department of Medical Education, Erzurum, Turkey;*<sup>2</sup> *Ataturk University Faculty of Medicine, Department of Family Medicine, Erzurum, Turkey*

**Objective:** People learn all of the time especially not only students but also teachers. We want to identify teachers' instructor type by using the "Instructor Type Inventory" (ITI).

**Methods:** The ITI provides a self-assessment for teaching effectiveness, and determines personal characteristics of teachers. Each of the four instructional styles defined by the ITI is characterized by certain teaching approaches. Workshop participants will be asked to fill the ITI and a discussion will be facilitated in order to find out the strangeness and weaknesses of each style.

**Instructor types:** There are four instructor types: Listener (L), Director (D), Interpreter (I) and Coach (C). The listener reads nonverbal behavior, shows empathy, and appears relaxed and unhurried. The director takes charge, gives directions, and appears self-confident. The interpreter uses theory as a foundation, encourages generalizations and uses case studies, lectures and readings. The coach uses activities, projects, and problems based on real life, and puts students in touch with one another.

**Conclusion:** Knowing personal instructor style preferences will be beneficial for a more effective teaching. We believe that the teachers notice that this information is very useful for them and their students.

Disclosure: No conflict of interest declared

**1323****Learning experience: abdominal ultrasound exam in primary care**

S. Belinchón Moyano, P. Costa Zamora, J.A. Cortés Rubio, M. Canals Aracil, I. Herreros Herranz, A. Revuelta Alonso, D. Martín Acicoya, P. Kloppe Villegas, J. Gomez Marco, F.J. San Andrés Rebollo  
*General Practice, Las Calesas Health Center, Madrid, Spain*

**Objective:** To develop an Ultrasound workshop for the Continuing Professional Development Unit in Primary Care, in order to improve the knowledge and skills of the GP tutors and to start the GP trainees in the Ultrasound technique.

**Methods:**

1. Ultrasound scans were performed to health professionals, patients who had previous scans done, and patients who were referred to the radiologist for an ultrasound scan.
2. It was performed with the help of a second professional who was an observer during the technique.
3. Clinical teaching sessions were developed in order to solve doubts and to improve related knowledge.
4. Consisted on a 26 hours accredited theoretical and practical workshop.

**Results:** 852 ultrasound scans were performed between March 2011 and November 2012.

100% of the GP tutors of the Health Center started with the technique and all of them participated on the workshop as well as 7 GP trainees.

Trainees attended to most of the ultrasound examinations performed while their training period.

**Conclusions:** Ultrasound is a very useful tool in Primary Care, as it helps to focus and solve many health problems.

It would be desirable to include a basic training in ultrasound during the GP training. It is very important to keep developing the knowledge and skills of the GP tutors in this discipline. The self-teaching programs in health Centers are very useful for both GP tutors and trainees

Disclosure: No conflict of interest declared

**1381****The integration in education-service, reorientation of training for health professionals – family health program-PSF-UNASP**

C. Lisboa, E. Hollen, V. Biller, P. Branco, F. Albuquerque, H. Oliveira, C. Silva, R. Franca  
*Administração PSF UNASP, UNASP, São Paulo, Brazil*

The UNASP – University Center of São Paulo is a charity that works in education, in the south of São Paulo. Moreover, the UNASP has exercised its social responsibility through partnership that performs with the Municipal Health, acting as the institution responsible for the implementation of the Family Health Program in the catchment area in the region of Capão Redondo.

Since then it has been co-manager of health, accounting for 12 Health centers, with 75 family health teams, responsible for a population of 288,000 inhabitants. It has about 1100 professionals under management accounting for Primary Care in the local health system since 2001.

The PRO-HEALTH – National Reorientation of Vocational Training in Health – aims to integrate teaching and service, aimed at refocusing the training, ensuring a comprehensive approach to the disease process with an emphasis on primary care.

The PRO-HEALTH, with their axes and vectors, intends to strengthen this integration, coordinating existing services, having as counterpart quality training, integrated with the context of current health.

The Project Integrator is a curriculum that lets you practice processes and payment of interdisciplinary knowledge in the field of practice. The expectations of this new activity is to effect the promotion of integrative actions that interfere with the profile of future professionals, broadening their vision of multidisciplinary teamwork, consistent with curriculum guidelines, which besides being instituted, are defended by all who believe in formation facing the SUS.

Disclosure: No conflict of interest declared



1391

**Promotion to health: Empowering community health agents in the context of primary health.**

C. Lisboa, P.Branco, E. Hollen, V.Biller, C. Silva, A. Zorzin, R. Franca, F. Albuquerque, V. Quintana

*Administração PSF UNASP, UNASP, São Paulo, Brazil*

The promotion of health has been understood for decades as a way of coping effectively for different problems affecting the logic of the disease process. The work of the Community Health Agent in Brazil comes within the sphere of the Family Health Strategy, being the link between the health service and the community. This individual is a resident of the community and is in the process of monitoring the working families enrolled in the territory served by Basic Health Centers. His education level is the basic level, it is not a health technician.

**Objective:** The present work reports the strategies of continuing healthcare education for the transformation of this professional practice in 12 Basic Health Centers in a neighborhood of São Paulo.

**Methodology:** Bimonthly Forums are held last meeting is a competition is called *AgentShow*. The themes for 2012 were based on the Health Promotion Policy with emphasis on eight remedies from nature: Clean Air, Sunlight, Balance, Rest, Exercise, Nutrition, Water and Trust. In the last meeting are held competitive and cooperative games, where each activity teaches and evaluates on the subject.

**Result:** In each Forum was working two themes of health promotion. The Agent's Show, final event sealed the training setup playful, equipping to be Health Promoters in the context of Primary Health.

Disclosure: No conflict of interest declared

1401

**Forums professionals in primary health care: The constitution of collective spaces for the strengthening of professional Family Health Strategy.**

E. Hollen, C. Lisboa, V. Biller, P. Branco, C. Silva, F. Albuquerque, H. Oliveira, A. Zorzin, R. Santos, R. Franca

*Administração PSF UNASP, UNASP, São Paulo, Brazil*

This report describes the experience of Continuing Education in Health professions composed in the Family Health Strategy, in the southern city of São Paulo, Brazil. Through meetings monthly and bimonthly format professionals that make up the Health Teams, has guaranteed this collective space for development and technical staff. In 2012, 30 meetings were held with professionals of the Family Health Strategy. The institution has a UNASP PSF field coverage of approximately 300. 000 inhabitants in the neighborhood of Capão Redondo, with 12 basic health centers in this territory. To assist features 75 Family Health Teams, 23 Teams of Oral Health Support Centers and 5 (NASF) with experts. The total number of employees is 1200 people.

Monthly Forums	Total Participants	Bimonthly Forums	Total Participants
Oral Health Forum	43	Forum for Community Health Agents	450
NASF Fórum	49	Administrative Support Forum	30
Family Doctors Forum	75		
Nurses Forum	75		

The institutionalization Forums solidifies the teaching-learning space where categories is strengthening actions of primary health care. The Forum for systematic professional category is a model successful in our territory, because from it the needs of professionals, planning to arrive in a legitimate managers. Also delivering the reorganization of health practices and policies in place, among other skills.

Disclosure: No conflict of interest declared

1412

**Overview of continuing education as a tool in the conduct of the professional practice of health promotion.**

C. Lisboa, P.Branco, E. Hollen, V.Biller

*Administração PSF UNASP, UNASP, São Paulo, Brazil*

**Introduction:** The health promotion has been understood for decades as an effective way of coping for different problems that affect the logic of the health-disease process.

**Objective:** This research is a descriptive study from the search of references in the area of Continuing Education in Health and Health Promotion in the Virtual Health Library.

**Method:** Through the texts sought to identify experiences and strategies for Continuing Education the approach to the topic Health Promotion.

**Results:** We analyzed 27 articles published in the last 10 years. Among the articles selected for analysis, 10 articles were selected for meeting the proposed theme at work, and 8 items for discussion on the results of this work and 2.

**Talk:** Submissions were categorized into three topics: 1. Continuing Education and Continuing Education: Conceptual Differences 2. Continuing Education as a Strategy for Change Professional Practices 3. Tools Used in the Conduct of Continuing Education.

**Conclusions:** The studies can be seen see that health promotion has been little attention in the context of Continuing Education in Health. One sees the need for studies that show themes and tools for health promotion practice.

Disclosure: No conflict of interest declared

1414

**A multiprofessional residence in family health and the experience of reflective diaries in the training process**

S. Oliveira

*NATIONAL SCHOOL OF PUBLIC HEALTH, OSWALDO CRUZ FOUNDATION, RIO DE JANEIRO, Brazil*

This paper presents the instrument Reflective Diary Tool adopted at the Multiprofessional Residence in Family Health at the National School of Public Health/Oswaldo Cruz Foundation in Brazil. Throughout two years, we monitored a multiprofessional team of three residents acting in a Family Health Strategy team in Rio de Janeiro. We're seeking to understand the origins of this tool in the anthropology field diary and in the reflective portfolio of education. The Reflective Diary has show an to be an effective tool that enables monitoring practical activities and team operation. It provides subsidies to assess the students as a resource for retraining practice and mainly it provides development of ethical principles and the relation with individuals and communities. When the students face the challenge to confront reality, the daily life of the community and the Family Health Strategy team, their ways of seeing and feeling daily life, the importance of the Diary has been shown.

Disclosure: No conflict of interest declared

1432

**Evidence based medicine practice: results of a cross-sectional study**U. Zeynep Avsar<sup>1</sup>, U. Avsar<sup>2</sup>, Z. Cansaver<sup>1</sup>, H. Acemoğlu<sup>1</sup>, Y. Çayır<sup>2</sup>, A. Sattar Khan<sup>2</sup><sup>1</sup> Medical Education, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>2</sup> Family Medicine, Ataturk University Medical Faculty, Erzurum, Turkey

**Aim:** Evidence based medicine (EBM) is the approach which serves the most qualified health service with the light of most appropriate evidence found in literature, with the experience of physician and according to expectations of patients. In this study, we aimed to express the result of a study on the learning and teaching of EBM in Turkey.

**Materials and Methods:** This is a cross-sectional study conducted between March and October 2012 via an online questionnaire applied to medical doctors; consisting of questions about the knowledge, attitude and behavior on EBM. Seven questions of the questionnaire were pertaining to the learning of EBM, six were about teaching of EBM, and six were about the practice of EBM.

**Results:** The questionnaire was answered by 79 physicians. Out of the participants, 51.9% (n=41) were male and 72.2% (n=57) were academician. Only one participant attended at a course about EBM during undergraduate education. The proportion of the participants who attended at a course about EBM after graduation was 22.8% (n=19). Twenty-six academicians were teaching some concepts of EBM.(32.9%) and 21 of the academicians (26.6%) were giving some information about clinical guidelines. When we asked which section of a manuscript was most difficult to understand and evaluate most of the participants selected the methods section.

**Conclusion:** In this study it is found that learning and teaching of EBM among physicians were inadequate. EBM should be more emphasized in both pre and post-graduate curriculums. The link of the questionnaire is: <https://docs.google.com/spreadsheets/viewform?formkey=dDgzbeIxd0UOXORNdVRRMDlxVnJzaVE6MQ>

Disclosure: No conflict of interest declared

1440

**Orientation of class 1 medical students to the hospital: What they expected, what they found?**U. Avsar<sup>1</sup>, U. Zeynep Avsar<sup>2</sup>, Y. Çayır<sup>1</sup>, E. Ozyıldırım<sup>3</sup>, M. Gorgun<sup>1</sup>, T. Set<sup>1</sup><sup>1</sup> Family Medicine, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>2</sup> Medical Education, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>3</sup> Public Health, Ataturk University Medical Faculty, Erzurum, Turkey

**Aim:** Atatürk University Medical Faculty started a course aiming the early orientation of students to the teaching hospital. Our aim was to check for correlations of student expectations before the course and their opinions afterwards.

**Methods:** Atatürk University Medical Faculty enrolled 282 and 48 students to the Turkish and English sections respectively. Before and after sending the students to the teaching hospital a questionnaire with 14 items about student expectations together with some demographic information was applied. Results were analyzed with the Marginal Homogeneity test.

**Results:** From the Turkish section 172(72.2%) and from the English sections 45 (93.7%) students completed the pre-and post-tests.

Opinions didn't change in eight out of 14 areas, improved in one and worsened in 5 areas. There was statistically significant difference between the expectations and opinions of the following items: Expectation about quality of health services and facilities (mean ± SD before 2.81±0.7 after 2.69±0.6; p=0.041), I am worried about what I will encounter during the visit (mean ± SD before 1.89±0.7 after 1.73±0.7; p=0.016), I expect to find role model hospital staff (mean ± SD before 2.94 ± 0.7 after 2.65±0.9; p=0.00), I expect senior doctors to encourage me to become a doctor (mean ± SD before 2.57±0.8 after 2.37±0.9; p=0.005).

**Conclusion:** Introductory course for newcomer medical students is beneficial. However, hospital staff should receive a training to welcome students in their work areas in order to prevent adverse effects on students such as discouraging speeches and behaviors.

Disclosure: No conflict of interest declared

1444

**The effect of introduction the medical practice course on knowledge of fist year students about hospital clinics**U. Avsar<sup>1</sup>, U. Zeynep Avsar<sup>2</sup>, Y. Cayır<sup>1</sup>, E. Ozyıldırım<sup>3</sup>, M. Gorgun<sup>1</sup>, T. Set<sup>1</sup><sup>1</sup> Family Medicine, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>2</sup> Medical Education, Ataturk University Medical Faculty, Erzurum, Turkey; <sup>3</sup> Public Health, Ataturk University Medical Faculty, Erzurum, Turkey

**Aim:** Ataturk University Medical Faculty started a course aiming the early orientation of students to the teaching hospital. We aimed to investigate the effect of the introduction the medical practice course on knowledge of fist year students about hospital clinics.

**Methods:** Ataturk University Medical Faculty enrolled 282 and 48 students to the Turkish and English sections respectively. Before and after sending the students to the teaching hospital a questionnaire with 5 items about student knowledge together with some demographic information was applied. Every correct answer evaluated as 1 point. Results were analyzed.

**Results:** From the Turkish section 172(72.2%) and from the English sections 45 (93.7%) students completed the pre-and post-tests. Pretest score was 4.34±0.92, and posttest score was 4.62±0.76 (t=-3.702, p<0.001). Pretest scores were 4.30±0.93 and 4.48±0.84 for Turkish and English sections, respectively (p>0.05). Posttest scores were 4.56±0.80 and 4.84±0.52 for Turkish and English sections, respectively (t=-2.222, p=0.027). The question about "Definition of hospital services" was the lowest correct answered question (69.1%) in pretest. This ratio rose to 87.6% in posttest. Pretest scores were 4.67±0.47 and 4.29±0.96 for students who have doctors in their family and who haven't, respectively (t=2.186, p=0.030).

**Conclusion:** Students have high knowledge about the hospital and medical sciences at the beginning, especially the students who have doctors in their family. Nonetheless, introductory course for newcomer medical students is beneficial.

Disclosure: No conflict of interest declared

1446

**Establishment and development of the first family medicine program in the United Arab Emirates.**L.M. Baynouna, A.I. Shamsan, M.H. Al Kuwaiti, Al Naeema Al Reda Al Muhiri, M.M. Al Kuwaiti  
Ambulatory Health Care Services, Abu Dhabi Health Care Services, Abu Dhabi, United Arab Emirates

**Objectives:** In the UAE since 1994 residency training developed from a beginnings of limited support and doubts to resources rich international standards seeking. the experience could be informative and valuable to others.

**The beginning:** in 1994 in the department of family medicine in the faculty of medicine and health sciences started the residency program. Handful started in October. in 1997 The MOH appointed a program director and the faculty now was formed from western trained with strong academic credential caring for less than 15 residents.

In the primary health care centers the doctors were general practitioners long experience but lacked structured vocational training. Therefore, a new role model was formed in the region as the program faculty practice was seen as the updated higher quality practice. The program was accredited by the Arab board for medical specialization as a four years program with 2 years for hospital rotations and 2 years for primary health care. with sponsoring institution is primary care only residents train in different health facilities giving them wider experience and health care perspectives.

The Handover: In 2002 the program graduates were gradually invited to participate in educational and administrative duties and completely run by them since 2004.

**Conclusion:** With 63 graduated more than half of them are in leadership positions. The sponsoring institution was rewarded ACGME-I institutional accreditation (single program institution) and the program went through changes in structure and process to achieve program accreditation scheduled 2013. These milestones details fesibility and can be informative to others.

Disclosure: No conflict of interest declared

1472

**The Improvement of academic staff in family medicine as a relatively new discipline in Turkey**

I. Unluoglu

*Family Medicine, Eskisehir Osmangazi University, Eskisehir, Turkey*

It is difficult and takes long time to create and develop a new medical discipline and promotion of academic staff. In Turkey, the first regulation of Family Medicine specialization was in 1983 and training began in 1985. In the beginning, the education was based on the basis of the completion of the five main branches of rotations. During this period, the lack of academic support of the discipline was an important problem. Foundation of academic departments in universities, in 1993, was one of the milestones of this development. In 1994, the first family medicine specialist was assigned to the academic staff in university. Two years later the first associate professor of the discipline increased the motivation of those who were on this journey. In 2002 first family medicine specialist was appointed to full professor degree. As of December 31, 2012 number of associate professors of the discipline reached to 85 and 17 of them were assigned to professor degree. Sixtyfive of these 85 associate professors were in universities when they entered the exam and 13 were in Ministry of Health Education and Research Hospitals, and seven from the primary health care units. The standardization of associate professor examination juries had been discussed continuously during this journey. Up to the end of 2012, 33 members from public health department, 18 members from internal medicine and 15 members from departments of pediatrics took place in the juries. The number of family medicine professors who had taken place in juries was only fourteen.

Disclosure: No conflict of interest declared

1473

**Active learning methodology in the residences of family and community medicine residency and health integrated residency in family health emphasis/ GHC, Porto Alegre/RS.**

R. Pekelman, A. Celina de Souza, E. Vieira Rodrigues, F. Mattioni

*Hospital Nossa Senhora Conceição, Conceição Hospitalar Group, Porto Alegre, Brazil*

**Objectives:** To open up spaces for discussion, planning and implementation of policy proposition primary care through development of projects for the enhancement of work processes in the network of the Unified Health System (UHS) / Family Health Strategy (FHS) by Residencies Family Medicine and Community and multidisciplinary Integrated Health.

**Methods:** formation of multiprofessional groups for the construction of a project. The exercise of collective construction and consensus needed for the establishment of projects promoting the knowledge built horizontally, sometimes conflict between ideas, conceptions. The projects challenge and require the active participation of the resident, expose the contradictions of everyday life.

**Results:** The process allows the study and construction of knowledge about the transversal themes (funding, national primary care policy, networking and matricial support); health research in virtual platforms; dialogue with managers and employees about the logic of the model care and health care and the difficulties faced in managing networks; It is understood the preparation of this project as a synthesis of theoretical and practical contents studied in residences as well as an exercise in approximation with the issues inherent in health management.

**Conclusions:** The positive assessment of residents that highlight the opportunity for contact with reality and with the municipal FHS; lets understand the difficulties of changing the model of health care, the exercise of teamwork and interdisciplinary knowledge construction; boost challenges to be found in the work world.

Disclosure: No conflict of interest declared

1477

**Training of professionals for promotion of rational use of drugs in primary health care**L. Kopittke<sup>1</sup>, R.M.Pinheiro<sup>2</sup><sup>1</sup> community health service, GHC, Porto Alegre, Brazil; <sup>2</sup> Faculty of Pharmacy, University of Brasilia, Brasilia, Brazil

**Objectives:** training pharmacists to qualify pharmaceutical care for the rational use of medicines in primary health care (PHC).

**Methodology:** two experiences of in-service training activities with theoretical and practical problem-based and content of concepts and approaches to health and disease, health care policy and pharmaceutical assistance, planning and evaluation, recognition user in your relationship with family and community in a given territory and interdisciplinarity. Both territories cover approximately 100,000 users and occur in PHC teams. Training is done simultaneously intersectoral joints, to comply with the provision of drugs and sustainability of fundamental actions in ensuring access and rational use of medicines in the PHC. One of the experiments was in graduate level in the Integrated Health Residency in Porto Alegre and another degree in Pharmacy in the territory of the Federal District through the course of the internship program and AF-PET Health Ministries of Health and Education.

**Results:** It was possible to classify the AF, adjusting the physical space of pharmacies; storage of medicines; qualifying prescriptions using essential drugs lists of municipalities; programming through medicines needs of each territory; access to medication and proper guidance to their use.

**Conclusion:** rebuild or offer new alternatives to training professionals, unlike traditional hegemonic thinking and devoted to the technicality, has good results, with low-cost interventions, fostering partnerships between education and service that can produce successful experiences of performance of professional services health, with specific modifications in the field of public health that contribute to the promotion of rational use of medicines.

Disclosure: No conflict of interest declared

1520

**Teaching clinical microskills in Cambodia**J. Markuns<sup>1</sup>, D. Dararith<sup>2</sup>, T. Fassier<sup>3</sup>, S. Team<sup>2</sup>, M. Nun<sup>2</sup>, L. Goldman<sup>1</sup>, S. Cummings<sup>1</sup><sup>1</sup> Family Medicine, Boston University, Boston, United States; <sup>2</sup> Center for Educational Development of Health Professionals, University of Health Sciences, Phnom Penh, Cambodia; <sup>3</sup> The French Cooperation, University of Health Sciences, Phnom Penh, Cambodia

**Objective:** As part of early efforts to promote development of primary care training, a coalition of domestic and international partners formed towards promotion of improved medical education and clinical teaching in Cambodia through the Center for Education Development of Health Professionals (CEDHP). As part of this effort, a workshop was held to promote clinical teaching microskills at the bedside, adapting a common technique used in primary care teaching.

**Methods:** The workshop took place over four days in a two-step training of trainer model. Initial TOT lessons on learning climate, microskills, and feedback were delivered by faculty from Boston University over 2 days, coordinated by the French Cooperation, and supported by WHO, target to a group of core trainers from the CEDHP. The Cambodian CEDHP faculty then delivered a similar workshop with personally modified materials to other regional Cambodian medical faculty, with the support and guidance of the international faculty.

**Results:** Using anonymous audience response devices, the participants rated the program highly. Subsequent debriefing indicated some challenges in translation of the microskills into Khmer, as well as some transcultural gap in bedside teaching. The microskills questions were modified for future use. Follow up from additional workshops by trainers will be reviewed.

**Conclusions:** The clinical microskills workshop was a successful model for TOT in clinical teaching in Cambodia. This impressive coalition of domestic and international partners resulted in further workshops delivered primarily by Cambodian CEDHP faculty in Cambodian teaching hospitals with limited support from international faculty.

Disclosure: No conflict of interest declared

1521

### Third year family medicine medical residents ratings about his experiences in „giving bad news“

R. Luquin-Martínez<sup>1</sup>, R. Morales-López<sup>1</sup>, J. Saura-Llamas<sup>2</sup>, N. Luquin-Ciuró<sup>3</sup>, E. Ros-Martínez<sup>1</sup>, MB. Guerrero-Díaz<sup>1</sup>, A. Piñana-López<sup>1</sup>, C. Alonso-García<sup>1</sup>, A. Cánovas-Inglés<sup>4</sup>, M. Ciuró-Díaz<sup>5</sup>

<sup>1</sup> Health Center Virgen de la Caridad, Murcia Health Service, Cartagena, Spain; <sup>2</sup> Director of Studies Teaching Unit of Family Medicine and Community Areas V, VI and IX of Murcia, Murcia Health Service, Murcia, Spain; <sup>3</sup> Internal Medicine Service at the General University Hospital of Elche, Agencia Valenciana de Salud, Elche, Spain; <sup>4</sup> Health Center Cartagena-Casco, Murcia Health Service, Cartagena, Spain; <sup>5</sup> Nursing University General Hospital of Santa Lucia, Murcia Health Service, Cartagena, Spain

**Objectives:** Analyze personal valuations in „giving bad news“ of medical residents of 3rd year Family and Community Medicine (FCM).

**Method:** The Workshop „How to Give Bad News (BN)“ is an activity within the Training Programme for family medicine residents in the Essential Competencies section as indicated by the National Spanish Training Guide Specialty Programme. It was performed (10 hours-in 2days-) for 3rd year FCM residents (21) of a Health Area. One of the exercises explores personal valuations of „Give BN“ with 5 open questions: **1<sup>st</sup>.** Remember, if information „routinely“ turned out to be a „BN“ for the patient. **2<sup>nd</sup>.** Tell a BN-you often had to give. **3<sup>rd</sup>.** What you had in mind and what helps when giving a BN? **4<sup>th</sup>.** What difficulties did you find? **5<sup>th</sup>.** In patients with cancer. How did you acted?

**Results:** 21 residents-students (100%) answered. The information was grouped into categories according to the questions, which were ordered by the number of matches, with the results: **1<sup>st</sup> Question (Q):** Information about: a) The existence of a chronic disease: eight residents said (38.1%), b) Hospital admission by: (b.1) medical condition: 5 (23.8%), or (b.2) surgical process: 4 (19.1%), c) Pregnancy: 2 (9.5%), d) STD: 2 (9.5%). **2<sup>nd</sup> Q:** Have reported a BN of: a) Death: 10 (47.6%), b) Cancer: 7 (33.3%), c) Serious infectious diseases (HIV...): 4 (19.1%). **3<sup>rd</sup> Q:** Have had in mind: a) State of the patient and/or family: 13 (61.8%), b) Age-patient: 4 (19.1%), c) Environment: 4 (19.1%). It helps: a) Empathize: 14 (66.7%), b) Be assertive: 7 (33.3%). **4<sup>th</sup> Q:** Difficulties encountered by: a) Problems of approach: 12 (57.1%), b) Conflict with family: 6 (28.6%), c) Beliefs: 2 (9.6%), d) Language: 1 (4.7%). **5<sup>th</sup> Q:** Reporting act: a) first the patient: 17 (81%), b) the family first: 4 (19%).

**Conclusions:** The bad news most residents have faced, is to report on the death, taking into account, in particular, the state of the patient and / or family, helping to establish an empathic relationship.

Disclosure: No conflict of interest declared

1550

### Labor management and health education: the case of the health department of the state of Bahia, Brazil

M. Tayguara Cabral de Brito<sup>1</sup>, I. Cardoso de Matos Pinto<sup>2</sup>

<sup>1</sup> SAIS – Superintendence of Integrated Healthcare, Health Department of the State of Bahia, Brazil, Salvador, Brazil; <sup>2</sup> ISC – Collective Health Institute, UFBA – Federal University of Bahia, Brazil, Salvador, Brazil

The National Policy of Humanization, formulated and implemented within the framework of the Unified Health System since 2003, have aroused interest in researchers in the area with a view to the need to evaluate the possible effects on healthcare practices. With the objective of identify strategies and programs within these Humanization Policies to analyse from the point of view of the workers and students these programs effects with the intent to reduce the job stress. The research was conducted through semi-structured interviews with the unit workers and managers. By way of complement information was collected, from the vision of graduate students involved with the “Permanecer- SUS Program”, in order to assess the perception of these subjects on the researched reality. Within these Health Department’s framework has been possible to identify some actions based on the principles of that policy, the results may contribute not only to improve assistance to the user, but in the working conditions and consequently greater satisfaction of workers in the exercise of their functions.

Disclosure: No conflict of interest declared

1562

**The impact of the rondon project in the ethical and moral development of medical students**

I.S. Passos Martins Filho, N. de Lima Froio, L. Inada Braga, D. Careta do Carmo, F. Renato Nadai, M. Aurélio Janaudis, S. Guimaraes Moraes, B. Brandao, D. Alvarez  
*Collective Healthcare Department, Jundiaí Medical School, Jundiaí, Brazil*

**Context:** Rondon is a project that aims social integration and direct relationship with the community and the doubts and difficulties encountered in establishing a health system with full equality. It is based in boosting the communication between physicians (or future doctors) and patients, inserting them into the social context of each individual and stimulating a humanized medical care that offers not only a cure, but information and knowledge that may endure the whole life of each one. It is more than solving the problems of that community, is promoting health and empowering the population, so they could figure out the answers for their own. For of this matter, the focus of the project is to pass on the knowledge to those who multiply the information, including the specific demands of each place visited. The Jundiaí Medical School (JMS) sends its students periodically to volunteer for Rondon Project.

**Objective:** Using the “collective subject speech” tool, this study aims to identify the influence of Rondon Project in the academic life and future medical specialty of the (JMS) participants.

**Results:** In the final text of the “collective subject speech” we noticed that the most common words found in the testimonials were: “expectations”, “unexpected”, “military”, “disease”, “knowledge”, “needs” and “medical service”. We also noticed great influence in the choice of medical specialty: the Rondon Project participants were more likely to consider specialties related to public health.

Disclosure: No conflict of interest declared

1659

**Obas: medical students empower health workers**

T. Silva, F. Neman  
*Medicine, UNICID, São Paulo, Brazil*

Medical students develop learning activities in public health scenario in basic health units (BHU). Experiencing the professional formation on this scenario the workers of BHU made a request to be trained on topics important to the daily work. Students understand that they can learn the role of doctor in helping professionals who works in prevention and health promotion of that community.

**Object:** to understand on the perception of the worker of BHU, the effectiveness of the program “OBAS” and if we need to provide improvements.

**Methods:** The OBAS began in August 2011. For its evaluation we use an instrument with open questions seeking to know the opinion of the workers, who participated in at least 10 of the 18 hours of activity, as well as strengths and weaknesses and suggestions for improvement of the activities.

**Results:** Responses denoted that activity has contributed to the workers job in the BHU, having strengths as updates on health topics, greater understanding of the actions that they should develop in the community; integration with students who develop activities in the BHU and efficient communication that offers a better environment of work as quality on the job developed with the users of the BHU. As for suggestions, the most frequent was to maintain the activities.

**Conclusion:** The data analysis indicated that the activity developed by the students has been effective and created link with the workers of this scenario, which offers a higher quality professionals.

Disclosure: No conflict of interest declared



1673

**A study to explore the knowledge, skills and attitudes of GP trainees on the UCD GP training scheme towards continuing professional development**

L. Malone

*DML GP Specialist Training, Irish College of General Practitioners (ICGP), Dublin, Ireland*

**Objectives:** This study was designed to explore the knowledge, skills and attitudes of General Practice (GP) trainees in the University College Dublin (UCD) training scheme towards Continuing Professional Development (CPD) and to investigate how well placed the GP training scheme is to enhance these educational domains.

**Methods:** The method of data collection was via questionnaire including both qualitative and quantitative questions.

**Results:** The response rate was 88%. Overall 47% of UCD GP trainees felt they had a good level of awareness and understanding of the professional competence scheme with greater confidence in the latter stages of training. The most common source of their awareness was the ICGP (49%). The Professional Competence Scheme Framework was seen as a positive development in GP by the majority of trainees (98%). Respondents felt it encourages maintenance of knowledge and skills as well as encouraging evidence based practice. A number of barriers to participating in it were identified including time and financial constraints.

**Conclusions:** The researcher concluded that training schemes are well placed to prepare GP trainees for lifelong learning and participation in CPD, and the day release programme is an invaluable resource in this regard. Small group learning remains a popular environment within which GP trainees engage in adult learning. While trainees are well prepared for the process of audit within their training, there should be a greater focus on enhancing their skills in the process of journal critique. Reflective practice is a skill which is encouraged throughout all stages of GP training.

Disclosure: No conflict of interest declared

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**Factors affecting perception about PHC, cognitive distortion and expressed emotions cause long-term effects as a chain reaction in primary health care and overall health of the nation.**

M. Kozlovska, L. Kozlovska

*DEPARTMENT OF FAMILY MEDICINE, THE RIGA STRADINS UNIVERSITY, RIGA, Latvia*

**Introduction:** Discussions in publications and studies state there is an unanswered issue about GPs' residents education and common dissatisfaction with primary health care (PHC) provision.

**Objectives:** To explore influence of factors affecting perception about PHC, cognitive distortions, expressed emotions on education of GPs' residents and possible long term effects.

**Methods:** 44 abstracts about influence of cognitive distortions and 40 abstracts about education of GPs' residents were analyzed on PUBMED, COCHRANE Databases.

**Results:** We suggest that during medical training process of medical students and GPs' residents the neglected mechanism of providing objective information, involving subjective component, affect their future care and perception about themselves. During teaching process emotional aggravation may cause "hot thoughts" to occur in a trainer's head, followed by unintended expressions, characterized by cognitive distortion, which secondary influences medical students', resident's perception and thinking about PHC. Such cognitive fallacies like overgeneralization of PHC, emotional reasoning, prioritizing the truth over a GP's, "should" statements, labelling, jumping to conclusions, blaming, magnification, minimization and disqualifying positive are common, and leave indelible trace in medical students', residents' and future GPs' minds and personalities, inducing mistrust, dishonour and poorer collaboration between colleagues resulting in poorer health care.

**Conclusion:** Factors affecting perception about PHC, cognitive distortion and expressed emotions cause long term effects as a chain reaction in primary health care and overall health of the nation. Future studies are needed to recognize the problem globally, explore best ways of cognitive restructuring, strengthening respectful collaboration and trust among colleagues.

Disclosure: No conflict of interest declared

## 2.9. UNDERGRADUATE TEACHING

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### Structured training program model at primary health care centre (PHCC) for undergraduate

A.S. Khan, A. Ali, W. Suleman, T.M. Khan  
*Family & Community Medicine, College of Medicine, King Faisal University, Al-Hassa, Saudi Arabia*

Over the past decades it has been recognized by several researches that community orientation of medical undergraduate training and integration with health care system are essential part of medical training to produce community orientated physicians. Therefore we have developed a structured training program guideline that increasing more focus on primary health care and favors more generalist approach with setting goals related to comprehensive care. So far no such guidelines for undergraduate are available to be followed in Saudi Arabia. Our expectations are that at the end of the training to improve their knowledge, skills and attitudes on the definition and basic principles of family medicine, the approaches of primary care physicians in managing diseases, and basic methods of communicating with the patient. This guideline will provide responsibilities of different stakeholders participate in primary health care activities and define roles of patients and axillary staff.

Disclosure: No conflict of interest declared

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### To build primary care “oriented “ physician: is the community medicine phase I and II model in the clinical rotation the solution?

Oktarina<sup>1</sup>, M. Dwi Utami<sup>1</sup>, P. Aprilia<sup>2</sup>, A.Syafuruddin<sup>1</sup>

*<sup>1</sup> Medical Education, Medical Faculty of Muhammadiyah Jakarta University, Tangerang Selatan, Indonesia; <sup>2</sup> Community Medicine, Medical Faculty of Muhammadiyah Jakarta University, Tangerangng Selatan, Indonesia*

**Context:** One of Medical Faculty of Muhammadiyah Jakarta University/MFMJU's goals is to produce primary health care physicians regarding to meet the social demand. The curriculum is designed to reach the goal, i.e. community medicine should be basic of student's thinking orientation while developing medical knowledge. Work-based learning, experiential learning, and prior knowledge, are principles of meaningful learning which could be the best approaches during clinical year.

**Need for innovation:** Community medicine is given in either preclinical years or clinical years, but those have different weighing on learning principles. Work-based and experiential learning are better implemented in the clinical years. Starting the clinical years with hospital rotation could threat student's thinking orientation on primary health care.

**Description of innovation:** MFMJU has two phases of community medicine in the clerkship rotation. First is in the beginning of clerkship, before entering hospital rotation. It aimed for constructing perception on primary health care using family and community medicine approaches. Afterwards, students attend hospital rotation to strengthen medical knowledge based on departments and are expected to remain the orientation of their future role as primary health care physicians. The rotation is closed by community medicine phase two, which expects students performing medical and health services as the role of primary care physician as well as to manage the centre. Here, students are encouraged to combine orientation on primary health care and to implement medical competencies holistically.

**Lesson learn:** By understanding human learning process, formulating education program would be more appropriate and effective achieving the goal.

Disclosure: Hereby I declare that abstract I sent is free from commercial influence.

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**'To be or not to be, that is the question': A qualitative study on factors that influence medical students' decisions to become family physicians**O. Tanriover<sup>1</sup>, S. Hidiroglu<sup>2</sup>, H. Akan<sup>1</sup>, P. Ay<sup>2</sup>, Y. Erdogan<sup>3</sup>, M. Karavus<sup>2</sup>, A. Vitrinel<sup>4</sup><sup>1</sup> Family Medicine, Yeditepe University Faculty of Medicine, Istanbul, Turkey; <sup>2</sup> Public Health, Marmara University, Istanbul, Turkey; <sup>3</sup> Family Medicine, Bozok University Faculty of Medicine, YOZGAT, Turkey; <sup>4</sup> CHILD HEALTH AND PEDIATRICS, YEDITEPE UNIVERSITY FACULTY OF MEDICINE, ISTANBUL, Turkey

**Objective:** The relatively low number of the family medicine specialists and the lack of well-trained primary care staff is an ongoing problem. In this study our aim was to investigate the perspectives of medical students and understand the motivating or demotivating issues to choose family medicine speciality as a career option.

**Methods:** This qualitative study was performed with 48 last year medical students using maximum variation sample from two medical schools. 6 focus group discussions were held each including eight students. 3 focus groups were conducted in a foundation university and the other 3 were held in a state university.

**Results:** Although Family Medicine has been recognized as a field of specialization in Turkey since 1984, the Ministry of Health authorized the general practitioners who were already working in the field, to work as family physicians within the scope of Health Transformation Program due to inadequate number of the family medicine specialists. This was perceived by the medical students as an uncertainty in the future of family practice and they viewed family medicine as a back-up career. A very scarce number of students stated that Family Medicine could be among their choices for speciality.

**Conclusions:** In order to attract more medical school graduates to choose family medicine speciality, it is essential to restore the confidence in the primary health care system.

Disclosure: No conflict of interest declared

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**The general practice and family medicine rotation – Verification of student findings by the teaching physician**

S. Bösner, L. Roth, G. Duncan, E. Baum

Department of Family Medicine, University of Marburg, Marburg, Germany

**Objective:** Bedside teaching is only sparsely integrated in the daily routine of German medical schools. In family medicine a two-week rotation is mandatory. However, there is currently no data describing educational practices employed by teaching physicians in regard to the family medicine rotation in Germany. Whether and to what extent history taking and physical examination performed by students are verified by the teaching physician is as yet unknown.

**Methods:** From April through December 2012 two researchers collected structured field notes of over 360 individual patient consultations in twelve teaching practices associated with the Philipps University Marburg, Germany. Part of the consultations was also videotaped. Informed, written consent was provided by all participants. Data were analysed quantitatively using SPSS and qualitatively using content analysis.

**Results and Conclusions:** Data collection not yet finished; results and conclusions will be presented at the WONCA congress.

Disclosure: No conflict of interest declared

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**Exercise and college students**C.Y. Hsu<sup>1,2,3,4,5,6,7</sup>, C.H. Hsieh<sup>2</sup>, H.C. Lin<sup>8</sup>, C.Y. Shu<sup>7,9</sup><sup>1</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan; <sup>2</sup> Department of General Education, National Taichung University of Science and Technology, Taichung, Taiwan;<sup>3</sup> Department of General Education, Chaoyang University of Technology, Taichung, Taiwan;<sup>4</sup> Department of General Education, National Chin-Yi University of Technology, Taichung, Taiwan; <sup>5</sup> Department of General Education, Central Taiwan University of Science and Technology, Taichung, Taiwan;<sup>6</sup> Department of General Education, Feng Chia University, Taichung, Taiwan; <sup>7</sup> Department of General Education, National Chi Nan University, Puli, Taiwan;<sup>8</sup> Medical Education Office, Cheng-Ching Hospital, Taichung, Taiwan; <sup>9</sup> Department of Optometry, Central Taiwan University of Science and Technology, Taichung, Taiwan

**Objective:** Frequent exercise can promote health. “Three principles of exercise” was propagated by government for long time. It means at least 3 times of exercise in one week, at least 30 minutes every time and at least 130 heart beat per minutes during exercise. The objective of this study is to investigate how college students understand the “three principles of exercise”.

**Method:** Between 2010 and 2011, 240 college students from 3 universities (two public, one private) were provided the questionnaires. The definition of “three principles of exercise” was asked. There were 6 questions to be answered.

**Result:** The median age was 20. Seventy-four (30.8%) males and 166 (69.2%) females agreed to answer the questionnaire. One hundred and nine (45.4%) of the students were science majors and 131 (54.6%) were humanities major. Two hundred and four (85%) students heard the “three principles of exercise”. Two hundred and four (85%) students understood the definition of “three principles of exercise”. However, only few students followed the “three principles of exercise”.

**Conclusion:** In order to promote health, exercise is important. Majority of college students understand the importance of exercise, however only few students exercise frequently. Exercise education is needed in university.

Disclosure: No conflict of interest declared

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**Competences assessment in medical students during internship in primary care units**A. Silva<sup>1</sup>, T. Pessoa<sup>2</sup><sup>1</sup> Clinical Medicine Department, Fluminense Federal University, Niterói, Brazil; <sup>2</sup> Clinical Medicine Department (student), Fluminense Federal University, Niterói, Brazil

**Objective:** To measure competences in medicine students of third year during primary care internship.

**Methods:** Descriptive study of a formative evaluation used in an obligatory discipline of medical course of a public university of Brazil.

**Results:** The Fluminense Federal University (UFF) is a public university of Rio de Janeiro, Brazil. During the third year, students of medicine are linked to Supervised Work-Field III (TCS 3), a practical phase done at primary care units. We received 160 students per semester in 11 different units of Niterói city. Each five students are linked to one medical teacher and are evaluated by a tool called clinical case experienced. Students are encouraged, after one month in the unit, to prepare the case utilizing real experiences that he or she witnessed, in a primary care unit. Fundamental items to the case are: a clear identification of a problem, personal opinion about the case as well as the colleagues, proposal of a resolution of the problem. The case goes to coordinator that sends his observations and returns to the student to complement the case if it's necessary. Presentation is free and could be done like a portfolio. This tool evaluates seven competences during the internship: critical sense, reflection of diary practices, organization, work in groups, social awareness, attitude, leadership.

**Conclusion:** Clinical case experienced is a tool to standardize different practices in different places and enables to measure skills and competences in medicine students, considering different realities of learning.

Disclosure: No conflict of interest declared

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**Influence of primary care clerkship in rural areas for medical student's intention to work in a rural community.**

K. Abe, T. Ishii, J. Kashima, Y. Ueda, T. Noguchi, N. Shiraishi, E. Miyazaki, K. Ohashi  
*Center for Community of Medicine, Oita University Faculty of Medicine, Yufu-shi, Japan*

**Objected:** In Japan, the shortage of medical doctors in rural areas has become a serious social problem in last decade. The purpose of this study is to examine the efficacy of the community-based medical education for primary care practice in rural areas.

**Method:** Oita University Faculty of Medicine provided the primary care educational program for 6th grade medical students in 2011-2012. They stayed for 2 weeks in rural communities to practice at hospitals, clinics and nursing homes located in rural areas. We administered a questionnaire for 179 students including 111 males and 68 females before and after the practice to measure the intensity of interest and intension to work in rural areas by using visual analogue scale.

**Results:** The 100% response was obtained. There were statistically significant changes in preferred images and interest in community medicine and general medicine, and intention to work as a doctor in rural areas between before and after the practice. The students with urban backgrounds (n=94) showed more significant increase of intention to work in rural areas as compared with the students from rural backgrounds (n=85).

**Conclusion:** Primary care clerkship in rural communities has increased medical student's intention to practice and work in a rural community.

Disclosure: No conflict of interest declared

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**With open arms: Interns reception at the ambulatory care unit of a Family Medicine Department in Brazil**

A. Chazan, C. Favoreto, A. Castro, T. Yamamoto, C. Ramos, R. Bernardes, I. Anderson, R. Teixeira, R. Moura, F. Itikawa  
*Department of Family Medicine, UERJ, Rio de Janeiro, Brazil*

**Objectives:** to introduce and to integrate medical students and preceptors, to remember concepts and practices of family medicine and patient-centered medicine, as well as to present the learning objectives and evaluation methods for their one year internship at the ambulatory.

**Methodos:** Four groups of 25 students and 4 preceptors were formed. The learning process occurred in an active manner and followed some pedagogic strategies such as an overall situation analysis based on student's knowledge. The presentation of each student was made by their peers. A scene from the movie "Lorenzo's oil" was discussed over a group dynamic in which students were asked to give feedback about the scene. In addition, an interactive speech about the patient-centered approach was followed by a presentation of student's obligations and responsibilities and how they would be evaluated. Duration: 3h.

**Results:** The main concepts they remembered were: integrality, SUS (Brazilian national health system), resilience and health education. The main attributes seen in students by peer-assessment were: responsibility, communication skills, empathy and user embracement. The movie followed a great debate regarding the sharing of bad news as well as a reflection about privacy needs, styles and methods of approach (patient-centered or disease-centered), and the verbal and non-verbal communication used in these situations. Interns acknowledged the importance of remembering some concepts and revealed they had high expectations concerning the practical learning experience with patients.

**Conclusion:** The objectives were reached. In addition, the activity allowed the preceptors to gain better knowledge regarding their interns' learning capabilities and needs.

Disclosure: No conflict of interest declared

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**To poke or not to poke: Facebook in medical student teaching**

D. Tan

*Medical, National Healthcare Group Polyclinics, Singapore, Singapore*

**Background:** Medical students rotate through a public primary healthcare posting for 2 weeks in their 3<sup>rd</sup> year. In this posting, they are given a structured attachment to various services, and a chance to conduct patient consultations under supervision. They are encouraged to discuss their learning points and reflections at the end of each day.

**Aim:** The aim of this presentation is to describe the use of Facebook as a tool for learning in a Family Practice.

**Methods:** A private group was created on Facebook and medical students were invited to join. Students were encouraged to post on the “Wall” via their smartphones their own learning points and reflections, and comment on other students’ posts. Reading assignments and links to material were posted on the page, allowing students to comment on the topics while in the clinic or at home. An iPad was passed to those who did not have a smartphone. An end of posting survey was conducted to elicit their feedback on the use of this tool.

**Results:** Students gave good feedback on the use of Facebook. Most agreed that they enjoyed using Facebook as a tool for learning (100%) and reflection (92.3%), and all would like to see tutors in other disciplines engage students in social media.

**Conclusion:** Medical students are IT savvy and used to expressing their thoughts online. By using social media, tutors may be able to encourage better interaction, with traditional barriers being removed.

Disclosure: No conflict of interest declared

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**Promoting nutrition science in medical education: improving the primary care management of the epidemic of preventable chronic disease**E. Molodysky<sup>1</sup>, D. Fewtrell<sup>2</sup>, M. Woolhouse<sup>2</sup>, S. Penman<sup>3</sup><sup>1</sup> *Discipline of General Practice, Sydney Medical School, University of Sydney, Sydney, Australia;*<sup>2</sup> *Board of Management, ACNEM, Melbourne, Australia;* <sup>3</sup> *Centre for Complementary Medicine Research, University of Western Sydney, Penrith, Australia*

Chronic and largely preventable conditions represent 60% of deaths worldwide and over 70% of the global burden of illness[1]. If unchanged, health systems of the ‘western world’ will be unsustainable by 2020[2].

In Australia, 80% of the population visit a family doctor annually with an average of five visits per person per year[3]. Most conditions seen have a behavioural or social determinant underpinning them[4]. Therefore Primary Care is an essential intervention point for improving the health of a population.

Nutrition-related investigation and diagnosis is central to the management of chronic disease in Primary Care. However deficits in nutrition science teaching in medical undergraduate curricula are believed to account for general practitioners’ self-reported lack of confidence and proficiency in this area[5].

In the US, where more than half of the ten leading causes of death have been shown to relate to poor dietary practices[6], medical students still fail to receive the minimum 25 required hours of nutrition science set by the National Academy of Sciences in 1994[7].

Similarly, in Australia and New Zealand, where obesity has overtaken smoking as the leading cause of premature death and illness[8], medical students anecdotally receive ‘a few lectures’ on dietary requirements and deficiency states.

It is time for health policy makers and medical educators to ensure doctors are well-grounded to identify and address the underlying causes of the chronic and complex conditions commonly seen in primary care, both for improved patient outcomes and in support of public health policy.

Disclosure: No conflict of interest declared

1294

**Experience report – academic league of family medicine and community**

J. Ferreira, J. Constante, L. Assuncao, T. Whately, J. Rodrigues, M. Zampirolli, R. Silva, I. Ladeira, M. Anderson, R. Rodrigues

*Department of Family and Community Medicine, Institute of Medical Sciences, Rio de Janeiro State University, Rio de Janeiro, Brazil*

**Objectives:** Considering the need for a biopsychosocial approach on medical care and the poor training on managerial and entrepreneurial qualities during graduation, this paper presents an experience report of the Academic League of Family Medicine and Community, whose goals are to complement the theoretical and practical experience of the students of the Institute of Medical Sciences (FCM-UERJ) in the discipline of Family Medicine and Community (MFC) and develop fundamental skills in the formation of the professional.

**Methodology:** participation as a league member for a year and optional participation in management for over a year. In the first year, the student takes theoretical classes, participates in home visits, in extension projects, accompanies ambulatory consultations and knows Family Clinics. In the second year, as a management member, develops skills such as teamwork, public speaking, leadership and respect for others.

**Results:** It was possible to encourage the training of citizen-professionals, critical of the current health system; to stimulate care for others, allowing students to be health promoters. Within social realm, educational and health promotion activities were developed in schools, parks and squares. In the scientific realm, the League encouraged student participation in medical conferences with experiences reports, activity planning and roundtables presentation.

**Conclusion:** The league allows deepening the concepts taught during the course of MFC and increasing the contact with Primary Health Care, essential for the formation of a doctor aware of the importance of a holistic view of the patient and Primary Care as a foundation for an efficient health system.

Disclosure: No conflict of interest declared

1531

**Exploring holistic care in UK GP training schemes.**

T. Amarasinghe, R. Sadhra, J. Baldock, R. Hildreth  
*GP VTS, Milton Keynes General Hospital, Milton Keynes, United Kingdom*

**Objectives:** To explore and describe different ways that the patient's holistic needs are addressed in the UK GP training programme. To identify how much emphasis is put on compassion and holistic care in primary care practice, in the UK GP training schemes. To stimulate debate regarding the significance of holistic care and compassion in GP practice. To explore how these aspects of care are developed in the UK GP training scheme.

**Methods:** Feedback from questionnaires and interviews with GP trainees from different regions of the UK. Analysis of the weight of compassionate responses and holistic care in the assessment of GP trainees, in the UK.

**Results:** Compassion and holistic care are frequently referenced and assessed in the UK GP training scheme. UK GP trainees are frequently assessed on their ability to reflect on the 'whole' patient experience, and how this affects illness.

**Conclusions:** The importance of holistic care of patients is gaining greater importance in the UK GP training scheme. The emphasis on being a compassionate and reflective doctor is of primary importance in the UK training scheme.

Disclosure: No conflict of interest declared

1549

**Evaluating the efficacy of a public health and community medicine program at the University of Texas Southwestern Medical School**

N. Chandra Murthy, B. Patel, P. Pagels, S. Sharmin, N. Gimpel

*Department of Family and Community Medicine, University of Texas Southwestern Medical Center at Dallas, Dallas, United States*

**Objective:** Time devoted to public health education has been gradually decreasing in medical school curricula. In 2000, the CDC and the AAMC established the cooperative agreement calling for increased “collaboration between academic medicine and public health.” In 2005, the University of Texas Southwestern Medical School established the Community Action Research Track (CART), in order to address student interests in public health and community medicine. The specific aims of this study were to 1) evaluate the process and impact of the CART program; and 2) assess the student body’s interest in expanding public health education and community engagement at UT Southwestern.

**Methods:** This cross-sectional study analyzed interest in public health and community engagement among 690 medical students and among 35 CART students using two online surveys.

**Results:** 292/690 students responded to the All Students survey, with 50% of students expressing interest in an expanded program that incorporates public health and community medicine in the curriculum. 15/35 students responded to the CART Survey, with 60% of CART students expressing satisfaction with the program. Weaknesses in the CART program were attributable to a lack of sustainable funding.

**Conclusions:** Students are interested in incorporating public health and community medicine into the medical school curriculum. Recommendations include establishing an inter-professional collaboration between the UT Southwestern Medical School, the Dallas County Public Health Department, and the UT School of Public Health. Other recommendations include expanding the CART program by integrating core principles of public health and prevention, community based participatory research, and community service learning.

Disclosure: No conflict of interest declared

1571

**Assessment of health professional curricular focus on health promotion in India**S.Pati<sup>1</sup>, AS. Chauhan<sup>2</sup>, S.Pati<sup>3</sup>*<sup>1</sup> Indian Institute of Public Health- Bhubaneswar; Public Health Foundation of India, Odisha, India; <sup>2</sup> Team Leader, INCLEN Trust, New Delhi, India; <sup>3</sup> Unit 9 Urban Health Dispensary, Department of Health & FW, Bhubaneswar, Odisha, India*

**Objectives:** Health promotion plays an integral role in prevention and management of all major chronic diseases; however, commensurate attention for its appropriate education to future health care providers is far from desired. Several reports have highlighted the need for significant changes in health professional education so as to collaboratively accommodate nutrition, tobacco, physical activity. In western countries, efforts are already underway with gradual incorporation of these elements in health professional training. The same is yet to be initiated in India.

**Methodology:** Present work attempted to identify tobacco cessation, nutrition and physical activity related content in different health profession curricula in India and assess its competence. Curricula of medicine, dentistry, nursing, physiotherapy, occupational therapy and pharmacy were analyzed in detail to evaluate nutrition, physical activity and tobacco prevention teaching both in quality and quantity.

**Results:** The under graduate curriculum have few nutrition and tobacco related content primarily taught under basic medical sciences. These are limited to biomedical aspects with no teaching in the context of diseases prevention and health promotion. Focus on learning of nutritional or tobacco counseling skills is almost nonexistent.

**Conclusion:** Current health profession courses in India appear to be deficient in health promotion necessitating urgent academic intervention. Curriculum designers and respective national apex councils need to recognize the lacunae and proactively consider prioritizing these elements thus promoting a culture that builds competency in health promotion. This mapping of curricular components could provide inputs towards effective and efficient integration of health promotion in traditional health professional education.

Disclosure: No conflict of interest declared



1632

**How the presence of undergraduate medical students in the general practice setting in New Zealand impact on general practice**

T.A. Taylor

*General Practice, East Tamaki Healthcare Ltd, Auckland, New Zealand*

**Background:** Education programmes including the medical undergraduate programme consistently strive to improve both content and delivery from a students perspective. However, with the emerging of new concepts such as “Learning Environments” the emphasis is more broadly shared on the experience of both the student and the educator. To date the impact on the educator/teacher and business environment is less explored.

**Aims:** 1 – to ascertain the experience of patients in regard to their contact with medical students in the general practice setting [patient ‘satisfaction’ suggests a positive bias to their experience]

2 – to ascertain the impact on the GP – what are the positive and negative effects on them from the presence of medical students in their practice

3 – to ascertain the impact on other team members (nurses, admin staff) from the presence of medical students in their practice.

**Design:** Explorative qualitative study through semi-structured interviews.

Disclosure: No conflict of interest declared

1662

**Evaluation of new family medicine clerkship program from the perspectives of students in Faculty of Medicine Universitas Padjadjaran, Bandung Indonesia**

N. Arisanti

*Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Bandung, Indonesia*

Since 2005, the medical curriculum had been changed into competency-based curriculum. One of these competencies is apply principles of basic biomedical, clinical, behavioural sciences and epidemiology in the practice of family medicine. To achieve this competency, a rotation in family medicine had been inserted into medical curriculum.

**Objective:** The study objective was to evaluate the implementation of a new family medicine rotation’ curriculum in Faculty of Medicine, Universitas Padjadjaran.

**Method:** The study method was descriptive using questionnaires.

**Results:** The results of this study was

1. Most of respondent agreed that the Program objectives are met and the mode of delivery is suitable for improving and implementing the knowledge and skills.
2. Most of respondent stated that the worksheets are complicated, but the module is useful.
3. In term of evaluation methods, majority of respondent agreed that the tools are measurable and objective.
4. Impact of course on students was ability to implementing the concept of family medicine to real patient and more practicing their clinical skills.
5. Suggestion for improvement: placing the rotation at the end of the whole rotation and standardizing the practice setting.

**Conclusions:** The conclusions are the program achieved its objectives and necessary changes based on this study should be considered.

Disclosure: No conflict of interest declared

1723

### Increasing interest in general practice training among foreign students of 4th a 6th grade at First Medical Faculty of Charles University in Prague

J. Bednář, B. Seifert

Department of General Practice, First Faculty of Medicine, Charles University of Prague, Prague, Czech Republic

**Background:** Longterm objective of Institute of General Practice is to provide foreign students with attractive programme in teaching general practice. Beside Erasmus students Faculty of Medicine provides teaching to more than hundred foreign students yearly, from UK, Greece, Israel, Germany, Malaysia, Indonesia, Cyprus, UK and USA.

**Aim and methods:** The aim of the project was to improve teaching foreign students of 4th a 6th grade. Multiple teaching methods were employed: interactive seminars, clinical skills teaching in small groups, training in model practice and attachment to general practice in community. A guidance for teachers in skills lab and 20 GP trainers in community was developed according to EURACT teaching agenda.

**Results:** Since 1996 The Institute of General Practice has been given the possibility to give lectures to the 4th and 6th year students, both are extensively trained directly in general practice by experienced trainers.

The response of students to the offered syllabus was never so positive in past as it is now (2011-2012).

The reasons are: enthusiastic trainers and teachers, newly renewed settings within our institute: skill lab, lecture rooms, built up general practice within Institute, contact with enthusiastic, communicative and well motivated foreign students, increased time spent with patients; teaching clinical practice and skills; improved teaching and language skills among GP trainers.

**Conclusions:** Undergraduate training in general practice has been becoming increasingly popular among foreign students studying at First Medical Faculty of Charles University in Prague according to student's feedback received in past two years.

Disclosure: No conflict of interest declared

## 2.10. QUALITY AND SAFETY

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### Interactions between antibiotics and regular therapy at nursing home

N. Naskovska Ilievska, A. Gradišek, I. Švab

Family medicine, Faculty of Medicine, Ljubljana, Slovenia

**Objective:** Medicamentous therapy of elderly people is more complex due to modified response to drugs and multiple medical conditions that can require polypharmacy. The aim of the study is to determine presence, frequency and interaction of permanent therapy combined with antibiotics given to nursing home residents.

**Methods:** I analysed 100 prescriptions of antibiotics given to 55 nursing home residents. I have compared five most often prescribed antibiotics with ten most frequent classes of medications.

**Results:** The five most frequently prescribed antibiotics were amoxicillin/clavulanic acid (44.3%), ciprofloxacin (22.8%), trimethoprim/sulfamethoxazole (20.3%), cefuroxim (6.3%) and moxifloxacin (6.3%). The most frequent combination of amoxicilline or amoxicillin with clavulanic acid was with nonsteroidal anti-inflammatory drugs, plus paracetamol (24.4%). The least frequent combination was with warfarine (3.0%), which showed moderate interaction, and with antidiabetics (1.5%). The most important was the combination of ciprofloxacin with antipsychotics (8.2%) and warfarine (1.0%), which showed major interaction. Other significant combinations were trimethoprim/sulfamethoxazole with warfarin (1.1%), cefuroxim with proton pump inhibitors (10.5%) and moxifloxacin with antipsychotics (6.9%). Among uncommon combinations, few were important: ciprofloxacin with tizanidine or methylprednisolone, trimethoprim/sulfamethoxazole with tizanidine or salbutamol and moxifloxacin with lactulose.

**Conclusions:** I have concluded, that numerous interactions of antibiotics and long term drug therapy are being given to the nursing home residents, but few of them were significant. This finding emphasises the importance of knowledge about contraindications and major interactions in order to avoid possible complications

Disclosure: No conflict of interest declared

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**Health care evaluation and quality improvement: Radiology request at primary health care**J. Jiménez<sup>1</sup>, A. Menéndez<sup>1</sup>, D. Roldán<sup>1</sup>, L. De Castro<sup>2</sup>, C. Casas<sup>1</sup>, A. Muñoz<sup>3</sup><sup>1</sup> Health Center Mar Menor (El Algar), II Health Area (Cartagena), El Algar (Cartagena, Murcia), Spain; <sup>2</sup> Health Center Los Barreros, II Health Area Cartagena, Cartagena (Murcia), Spain;<sup>3</sup> Unidad Docente MFYC, II Health Area Cartagena, Cartagena (Murcia), Spain**Main objective:** To improve the radiology request quality in our Health Center.**Secondary objectives:**

- Improving the number of radiology request those fulfill the recommended requirements.
- Achieving a large rate of requests where the query reason is properly reflected.
- Managing to decrease the number of requests which result does not bring about a therapeutics change.
- Requesting urgent radiology research when it is indeed necessary.
- Achieving an improvement of the number of requests which result match up with the suspected diagnosis.

**Results indication:** Radiology request for over 14 ears old patients at Health Center.**Technical Scientific Quality:** Training and professional skills.**Service recipients:** over 14 years old patients.**Providers:** Medical Staff of Health Center.**Temporal Length:** May 2009 – September 2011.**Identification and Sampling of the cases:**

- Data source: Selection by random sampling according to OMI-AP clinical history.
- Total population to study: Over 14 years old attended.
- Sample: 100 patients.

**Assesment components**

- Relation between action and action evaluated: Retrospective.
- Kind of data: Result.
- Data source: clinical history.
- Revision: internal.
- Criteria: explicit normative.
- Corrective predicted measures: Assistance

**Results:** Results obtain in quality health care to the medical staff are transmitted, giving to clinical lessons is proposed as an improvement, and a contrast study before/after is made, finding an improvement in the fulfillment of criteria 1, and 95'8% of the requests fulfilled the indications ( $p < 0.001$ ).**Conclusion:** A statistically significant has not been found in the other criteria, which means that we cannot affirm that the radiology request characteristics just depends on the medical staff.

Disclosure: No conflict of interest declared

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**Cross-cultural adaptation of Slovenian version of quality improvement competencies self-assessment questionnaire for family doctors**Z. Klemenc-Ketis<sup>1,2</sup>, J. Kersnik<sup>1,2</sup>, P. Kuhar<sup>2</sup>, G. Burazeri<sup>3,4</sup>, K. Czabanowska<sup>3</sup><sup>1</sup> Department of family medicine, Medical School, University of Ljubljana, Ljubljana, Slovenia;<sup>2</sup> Department of family medicine, Medical School, University of Maribor, Maribor, Slovenia;<sup>3</sup> Department of International Health, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, Netherlands; <sup>4</sup> Faculty of Medicine, Tirana University, Tirana, Albania**Background:** A recent study on the quality improvement (QI) competencies for continuing professional development (CPD) for European family doctors (FDs) provided a QI competencies framework. This framework could serve as a useful tool in identifying gaps in knowledge of FDs in Europe.**Aim:** The aim of this study was to validate the QI Competencies Self-assessment Questionnaire for FDs (developed from the above mentioned framework) in Slovenian language.**Method:** This cross-sectional postal survey was conducted in Slovenia using a self-administered questionnaire. From the membership list of Slovenian Family Doctors Society, we randomly selected 398 FDs. The first round of questionnaires was sent at the beginning of May 2012 and the second round (to determine the test-retest reliability) was sent two weeks after the first round. The questionnaire consists of 37 items to be answered on a 5-point Likert scale with summary score of minimum 37 points and maximum 185 points.**Results:** There were 100 (25.1% response rate) FDs in a sample, out of which 71 (71.0%) were women. Mean age of the sample was  $43.3 \pm 9.6$  years. Mean score of the questionnaire was  $127.0 \pm 30.1$  points (first round) and  $127.8 \pm 30.6$  points (second round). Cronbach's alpha was 0.984 (first round) and 0.988 (second round). Spearman's rho was 0.829 with  $p < 0.001$ .**Conclusion:** The Slovenian version of the Quality Improvement Competencies Self-assessment Questionnaire for FDs is reliable and can be used in practice for self-assessment of the desired level of competencies.

Disclosure: No conflict of interest declared

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**Quality of diabetic care at a primary health facility: The way forward**

A. Saimen, E. Reji

*Department of Family Medicine, University of the Witwatersrand, Johannesburg, South Africa*

**Objectives:** To determine if the implementation of a diabetic follow-up chart and in-service training of nurses at an outpatient department in a primary health facility would improve the quality of diabetic care

**Methods:** A retrospective, descriptive study using hospital records pre and post intervention was undertaken at the outpatient department of Dr Yusuf Dadoo Hospital, South Africa. A baseline audit of the quality of diabetic care was performed in February 2012 by reviewing ninety-eight consecutive hospital files of patients who were 18 years or older. Interventions targeting performance of processes of care was commenced and reviewed in a post intervention audit of one hundred and eight consecutive files in July 2012. Each file was given a coded number for the audit process. Data was entered into Microsoft Excel and imported to the Stata 10 for statistical analysis. A comparison of the data from both the audits was then undertaken. Ethics clearance for this study was obtained by the Human Research Ethics Committee, University of the Witwatersrand. Certificate No. MM120443

**Results:** The process parameters showed an improvement, recording of weight/height increased from 1.0% to 50.9%, performance of u-dipstix increased from 45.9% to 73.2%. Performance of HbA1C increased from 8.2% to 34.3%, lipid profiles increased from 7.1% to 34.3%, serum Creatinine increased from 9.2% to 36.1% and dietician referrals increased from 11.2% to 34.3%.

**Conclusion:** The implementation of structured interventions, even over a short time frame, improved the quality of care offered to diabetic patients at the outpatients department.

Disclosure: No conflict of interest declared

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**Efficacy of an educational intervention on general practitioners about renal disease in polymedicated patients**R.A. Castelo Dominguez<sup>1</sup>, M. Fernández Silva<sup>2</sup>, S. Perez Cachafeiro<sup>3,4</sup>*<sup>1</sup> Ribeira Health Center, Xerencia Atención Primaria Santiago, Ribeira, Spain; <sup>2</sup> O Ventorrillo Health Center, Xerencia Atención Primaria A Coruña, A Coruña, Spain; <sup>3</sup> Cambados Health Center, Xerencia Integrada Pontevedra-Salnés, Cambados, Spain; <sup>4</sup> Research Unit, Fundación IDI-CHOP, Pontevedra, Spain*

**Objective:** To assess the efficacy of an educational intervention on GPs aimed to prevent iatrogenic therapies in polymedicated patients (PPs) with chronic or occult renal disease (CRD or ORD) in Galicia, Spain.

**Methods:** Before and after transversal study.

We defined CRD as high creatinine levels and low glomerular filtration (GF) using MDRD, and ORD as normal creatinine levels with low GF.

Our Pharmacists performed an intervention consisted on: firstly, giving clinical sessions aimed to update GPs on iatrogenic therapies according to *SEN-semFYC Consensus Document on chronic kidney disease*, and secondly, detecting CRD/ORD PPs and writing a record on their clinical history with therapy recommendations (it was the GP who finally decided to follow or not these recommendations).

We compared GF and prevalence of CRD/ORD globally and stratified by socioeconomical and clinical variables before and after this intervention using Stata 11<sup>®</sup> software.

**Results:** 148 PPs were included (70.95% women, mean age 70.84, median drug prescription 17/day). CRD prevalence was 47.30% (women 50.48%, men 39.53%). 23.81% of women had ORD. 17.69% of PPs had 2 or more daily NSAIDs. 23.53% of PPs had hyperkalemic therapies (58.97% having CRD).

After the intervention, CRD decreased by 4.27%, median drug prescription was 14/day. NSAIDs consumption diminished by 46.15%, decreasing CRD on these patients to 45.83%. Hyperkalemic therapies diminished by 37.50%.

**Conclusions:** Pharmacist intervention on GPs and PPs records was effective in terms of drug consumption and GF improvement. Integrating Pharmacists on the care of PPs may improve their quality of life and their clinical conditions.

Disclosure: No conflict of interest declared

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**Improving treatments adherence in immobilized patients receiving polypharmacy**

V.J. Gavara Palomar<sup>1</sup>, C. Ariza Copado<sup>1</sup>, M. Soto Martínez<sup>1</sup>, F. Agüera Mengual<sup>1</sup>, M.C. Juan Soriano<sup>1</sup>, A. Muñoz Ureña<sup>2</sup>, F. Alcázar Manzanera<sup>1</sup>, I. Egea Cegarra<sup>1</sup>, A. López Fernández<sup>1</sup>, L.M. Acosta Martínez<sup>1</sup>

<sup>1</sup> Primary Health Care Center Isaac Peral, (Area 2) Health Murcia Service, Cartagena, Spain;

<sup>2</sup> Teaching Unity, (Area 2) Health Murcia Service, Cartagena, Spain

**Objective:** To improve adherence to treatment regimes in immobilized patients receiving polypharmacy after a quality cycle.

**Methods:** This is a valuation and quality improvement cycle study. Subjects: immobilized patients receiving polypharmacy (>5 drugs of long-term use), with long-term care card (LTC). Sample: the entire population, 120 subjects. Location: Urban health area. Study period: initial evaluation May 2010. Application of corrector measures (nurses went to patients home and explain "writing personal treatment plan" and gave pillbox them) June 2010 to June 2011. Final evaluation July 2011 to July 2012. We lost 32 patients for death or change of residence. Were registered variables related to patients characteristics, drugs and previously defined quality criteria: C1-Concordance of drugs taken by the patient and those indicated in LTC; C2-Concordance of dosage in both study arms; C3-Degree of self-reported therapeutic adherence (Haynes-Sackett); and C4-Degree of therapeutic adherence based on pill count. Statistical and descriptive univariate analysis.

**Results:** In first evaluation 90 subjects were female (74.17%); the average age 81.24 years; drugs use/subject: 5-9 in 85 cases (70.83%), given by a health care provider (70.25%), and accumulation of drug cartons at home (44 subjects: 36.36%). Quality criteria adherence: C1- 88 patients (72.73%), C2-79 (65.29%), C3-95 (78.51%), C4-32 (30.76%).

**Conclusions:** More than ¾ of immobilized patients agree to adhere to their long-term treatment. However, pill count shows that only 1 patient out of 3 fulfills this criteria. A quality improvement cycle was carried out to increase adherence to treatment regimes. We are processing actually last fulfilment values and a few months will have final results and conclusions.

Disclosure: No conflict of interest declared

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**Usage profile of long-term drugs in immobilized patients after a quality improvement cycle**

V.J. Gavara Palomar<sup>1</sup>, C. Ariza Copado<sup>1</sup>, I. Egea Cegarra<sup>1</sup>, L.M. Acosta Martínez<sup>1</sup>, A. López Fernández<sup>1</sup>, M.C. Juan Soriano<sup>1</sup>, M. Soto López<sup>1</sup>, F. Agüera Mengual<sup>1</sup>, F. Alcázar Manzanera<sup>1</sup>, A. Muñoz Ureña<sup>2</sup>

<sup>1</sup> Health Primary Care Center: Isaac Peral, (Area 2) Health Murcia Service, Cartagena, Spain;

<sup>2</sup> Teaching Unity, (Area 2) Health Murcia Service, Caratagena, Spain

**Objective.** To identify the usage profile of long-term and frequently used drugs in immobilized patients receiving poly-pharmacy after a quality improvement cycle.

**Methods.** Quality improvement cycle study methodology. Subjects: 120 immobilized patients receiving poly-pharmacy (>5 drugs), with computer registration of long-term care card (LTC). Location: Urban health area. Study period: Initial valuation May 2010, application of corrector measures (nurses went to patients home and explain "writing personal treatment plan" and gave pillbox) June 2010 to June 2011. Final evaluation July 2011 to July 2012. We lost 32 patients for death or change of residence. Statistical and descriptive bivariate analysis.

**Results.** We analyzed 815 drugs for long-term use (LTC). Number of drugs/LTC subject: 5-7 (45.4%), 8-10 (33.8%) and >10 (20.6%); tablets (83.8%), sachets (3.3%), eye drops (2.3%), insulin (1.7%), solution (1.6%) and lotions (0.9%). Self-medication was reported in 29.7% of cases. 7% of drugs registered in LTD were not taken for patients, leading to home accumulation of these drugs (136 drugs, 14.2%). The average dose was 1,36 dose/drug. A 92.2% concordance of daily dose taken by the patient and dose indicated in LTC was reported. Concordance was lower than expected in lotions and sachets and higher than expected in minor doses ( $p < 0.01$ ).

**Conclusions:** Long-term registrations and treatment adherence valuation must be improved to ensure the correct use of drugs in immobilized patients. We are now processing last values after the application of corrector measures, and in a few time will have final results and conclusions.

Disclosure: No conflict of interest declared

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**Preventing medical incidents and errors: Patient Safety Walk rounds**

K.S. Tang, S.M. Cheung, B.C. Wong, J. Liang

*Department of Family Medicine and Primary Health Care, Yan Oi General Out Patient Clinic, NTWC, Hospital Authority, Hong Kong, Hong Kong*

**Objective:** Patient safety is of paramount importance in medical field. It is crucial to prevent avoidable incidence in the workplace and safeguard the patients. The Quality Assurance and Safety Division (QASD) of a regional hospital in Hong Kong organized the Patient Safety Walk Round (PSW) since 2009 in every clinical area to improve the quality of service.

It aims at identifying the areas of concerns related to patient safety, promoting cultural change, learn and share good practices.

**Method:** The QASD had reviewed a regional primary care clinic in Jul 2012. Standard guidelines will be provided beforehand so the clinic can follow.

The area of concerns including Adverse Incidents or "Near Miss" events, medication safety, fire safety, patient identification, record and documentation, infection control, emergency care.

**Results:** The PSW was held in July 2012. There was no severe deficiency noted during the round.

Measures were implemented in the clinic for patient safety include "near-miss" record book, cue cards for patient identification, infection control and shroff security with password lock while good practices like clear signage, eye catching standardized resuscitation guidelines were acknowledged.

All staff are encouraged to report potential risks and adverse incidents to prevent incidents from occurring.

**Conclusion:** Through this exercise, the awareness of patient safety was raised. Doctors, nurses and all clinic staff collaborate with each other to develop measures to improve quality of care and prevent incident happens.

Disclosure: No conflict of interest declared

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**Update the risk map of a primary care unit of the Brazilian national health care system (SUS).**A. M. Charneca<sup>1</sup>, N. G. Cruz<sup>1</sup>, T. Molina<sup>1</sup>, M. P. Pietro<sup>1</sup>, M. G. Loterio<sup>2</sup>*<sup>1</sup> Academic of Medicine, Universidade Cidade de São Paulo, São Paulo, Brazil; <sup>2</sup> Tutor of Medicine, Universidade Cidade de São Paulo, São Paulo, Brazil*

**Objective:** Understand the construction of a Risk Map in a primary care unit of the Brazilian national health care system contributing to this in the neighborhood of Jardim Cumbica II in Guarulhos.

**Methods:** In observation of the changes that have occurred in the physical space of Basic Health Unit Jardim Cumbica II we have been observed that the Risk Map formulated for this unit was no longer updated. Thus it would be necessary to draw up a new map. Construction of Risk Map was based on current and previous map changes in the physical set. It was necessary to recognize all areas and the risks to which workers are exposed as the activity. To construct the map we follow the rules established in Brazil regarding the use of the symbolism of circles and specific colors.

**Results:** After applying the map showed a reduction in accidents at work and better work of professionals.

**Conclusions:** The map is a survey of risk points in the different sectors of business. This is to identify potentially dangerous situations and locations. From a floor plan of each section are raised all kinds of risks, classifying them by degree of danger. The assembly of the Risk Map is more complex than we imagine but necessary if we expect the smooth progress of work of the employees of the unit, the occupational disease prevention and health promotion worker.

Disclosure: No conflict of interest declared

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**Implementation of a structured method for medication review in frail elderly.**Z. Damen-van Beek<sup>1</sup>, M. Ballieux<sup>2</sup>, M. Nelissen<sup>3</sup>, M. Verduijn<sup>1</sup>, J. Burgers<sup>1</sup>

<sup>1</sup> Guideline development and science, Dutch College of General Practitioners (NHG), Utrecht, Netherlands; <sup>2</sup> Implementation, Dutch College of General Practitioners (NHG), Utrecht, Netherlands; <sup>3</sup> Education, Dutch Institute for Rational Use of Medicine (IVM), Utrecht, Netherlands

**Objective:** The Dutch guideline 'Polypharmacy in elderly patients' (2012) provides recommendations for a structured approach for medication review in patients who are the most vulnerable for harmful side effects of drugs. This approach involves medical doctors, pharmacists as well as patients themselves. In this pilot study, the guideline will be tested in three local pharmacotherapy counseling groups.

**Methods:** The three groups have been recruited via contacts and an item in a newsletter. They have not performed structured medication reviews before this pilot. These groups will be supported by staff members of the Dutch College of General Practitioners (NHG) and the Dutch Institute for Rational Use of Medicine (IVM). Outcome measures are the number and category of changes in drug prescriptions, the time investment for the participants, their perceived facilitators and barriers for implementation, and the direct effects on the costs of drug treatment.

**Results:** Final results of this pilot will be available in May 2013. According to results in previous similar projects of the IVM, we expect more than one drug change per patient, a decrease in medication use and significant direct cost savings on drug treatment. The time investment will be approximately one and a half hour per patient.

**Conclusions:** We expect an annual medication review in elderly patients has strong potentials to improve the effectiveness and safety of drug treatment, particular in frail elderly. Substantial time investment, however, is needed by general practitioners and pharmacists. This could be funded by cost savings on drug treatment.

Disclosure: No conflict of interest declared

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**Workplace violence in Greek healthcare sector: causes and measures of prevention.**E. Fafliora<sup>1</sup>, V. G. Bampalis<sup>1</sup>, C. Sambazioti<sup>2</sup>, I. Christopoulou<sup>1</sup>, D. Lianas<sup>3</sup>, J. Lentzas<sup>4</sup>, G. Mantzouranis<sup>5,1</sup>

<sup>1</sup> Department of General Medicine, University Hospital of Patras, Patras, Greece; <sup>2</sup> Health Unit Kalanou, General Hospital of Patras, Patras, Greece; <sup>3</sup> Health Center of Erimantheia, General Hospital of Patras, Patras, Greece; <sup>4</sup> Health Center of Simopoulou, General Hospital of Amaliada, Amaliada, Greece; <sup>5</sup> Health Unit Evinoxoriou, General Hospital of Mesologgi, Mesologgi, Greece

**Objective:** Levels of exposure to workplace violence appear to be increasing and can have detrimental effects on both the individual's well-being and the organization's performance. We have previously reported a high prevalence of violence in Greek healthcare sector (83.3%). The aim of this study was to determine possible causes as well as measures of preventing this phenomenon. **Methods:** The study was conducted in the University General Hospital of Patras. An anonymous questionnaire was completed by 175 healthcare workers examining their demographic characteristics and their perception of the causes and necessary preventive measures of workplace violence.

**Results:** As possible causes of violence most frequently were indicated: long waiting time (88.6%), increased stress (70.9%), insufficient personnel (65.7%) and alcohol/substances abuse from patients/escorts (49.7%). Older employees indicated more often the lack of sufficient personnel (OR,0.057; 95% CI,0.011-0.28). The most common suggested possible measures of preventing violence were: entrance control (73.7%), reinforcement of healthcare personnel (69.1%)/ security staff (64.6%) and establishment of strict visit hours (40%). Younger employees suggested less often the entrance control (OR,0.11; 95% CI,0.02-0.52) whilst employees with long working experience indicated more often the reinforcement of security staff (OR,1.23; 95% CI,1.09-1.39).

**Conclusions:** The results of this study reflect some of the existing deficiencies of the Greek healthcare system. Providing healthy workplaces represents the main priority for many organizations. It is of great importance to work towards this direction in order to create a safer and thus more productive workplace environment.

Disclosure: No conflict of interest declared

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**Victims' reaction, administration support and consequences of workplace violence in a Greek hospital setting.**G. Mantzouranis<sup>1,2</sup>, V. G. Bampalis<sup>2</sup>, E. Fafliora<sup>2</sup>, A. Apostolopoulou<sup>3</sup>, Ch. Sambazioti<sup>4</sup>, I. Christopoulou<sup>2</sup>, P. Stouraitis<sup>5</sup>, D. Lianas<sup>6</sup>, J. Lentzas<sup>7</sup><sup>1</sup> Health Unit Evinoxoriou, General Hospital of Mesologgi, Mesologgi, Greece; <sup>2</sup> Department of General Medicine, University Hospital of Patras, Patras, Greece; <sup>3</sup> Health Unit Sarabaliou, General Hospital of Patras, Patras, Greece; <sup>4</sup> Health Unit Kalanou, General Hospital of Patras, Patras, Greece; <sup>5</sup> Department of General Medicine, General Hospital of Patras, Patras, Greece; <sup>6</sup> Health Center of Erimantheia, General Hospital of Patras, Patras, Greece; <sup>7</sup> Health Center Simopoulou, General Hospital of Amaliada, Amaliada, Greece**Objective:** Workplace violence is prevalent in a Greek tertiary hospital. We sought to investigate the victims' reactions, support from hospital administration and individual consequences on healthcare professionals following workplace violent incidents.**Methods:** A closed-type questionnaire was distributed to 205 healthcare professionals in the setting of the University Hospital of Patras, Greece. The response rate was 85.3%. Descriptive statistics and multiple logistic regression were used in the analysis.**Results:** The majority (83.4%) among healthcare professionals reported being personally victimized in the past. Many of the victims responded verbally (41.4%) or reported the incident to the hospital authorities (37.9%). Fewer ignored the incidence (24.8%). About half (46.6%) reported the incident to the hospital administration. No action was taken by the administration in 91.2% of cases reported. The majority of victims (72.6%) admitted suffering psychological consequences such as disappointment (57.5%), stress (55.4%), anger (54.7%) and loss of job satisfaction (50%). Victims with longer working experience, age greater than 40 and men were more prone to lose satisfaction from their job ( $p=0.015$ ,  $p=0.037$  and  $p=0.007$  respectively). One third of the victims (32.3%) suffered negative physical consequences, especially women ( $p=0.09$ ). Nevertheless just a few victims (9.6%) stated that they did not take time off work after the incident.**Conclusions:** The severe consequences of workplace violence, the lack of support by hospital administration and the diversity in victims' response underline the need to improve the respective management strategies and communication skills.

Disclosure: No conflict of interest declared

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**Incidence of workplace violence and perception of safety in a Greek university hospital.**V. G. Bampalis<sup>1</sup>, E. Fafliora<sup>1</sup>, I. Christopoulou<sup>1</sup>, C. Sambazioti<sup>2</sup>, D. Lianas<sup>3</sup>, G. Zarlas<sup>4</sup>, J. Lentzas<sup>5</sup>, G. Mantzouranis<sup>6,1</sup><sup>1</sup> Department of General Medicine, University Hospital of Patras, Patras, Greece; <sup>2</sup> Health Unit Kalanou, General Hospital of Patras, Patras, Greece; <sup>3</sup> Health Center of Erimantheia, General Hospital of Patras, Patras, Greece; <sup>4</sup> Department of General Medicine, General Hospital of Patras, Patras, Greece; <sup>5</sup> Health Center Simopoulou, General Hospital of Amaliada, Amaliada, Greece; <sup>6</sup> Health Unit Evinoxoriou, General Hospital of Mesologgi, Mesologgi, Greece**Objective:** To report on the nature and extent of workplace violence and to examine the perception of workplace safety among healthcare professionals in a Greek university hospital.**Methods:** A closed-type questionnaire was distributed to 205 healthcare professionals in the University Hospital of Patras, Greece (85.3% response rate, 175 returned questionnaires). The demographic characteristics of participants, workplace safety perception, frequency and type of workplace violence were assessed using descriptive statistics, multiple logistic regression and ordinal regression where appropriate.**Results:** The vast majority reported that a colleague (88.9%) had experienced violence and having been personally victimized in general (83.3%) and in the last year (70.9%). Almost all victims reported being subjected to verbal violence (97.9%); aggressive way of speaking being the commonest type (63.4%). About a fifth of the participants (18.8%) reported themselves as victims of physical violence. A significant proportion (15.4%) reported also sexual attack, women being significantly more frequently victimized (OR: 5.34, 95% CI: 1.81-15.6). Violence was reported to have occurred mostly in the emergency department (64.2%). Only 38.5% of the participants felt absolutely or somewhat safe in their workplace, nurses feeling less safe than doctors (OR: 4.47, 95% CI: 1.94-10.2). Insufficient workplace safety was reported by most (76.4%) and hostile working environment by about the half (44.8%).**Conclusion:** The incidence of workplace violence and, subsequently, feeling of insecurity is high among healthcare professionals in a Greek university hospital and should be nationwide further addressed.

Disclosure: No conflict of interest declared



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### The continuity of medical care and the transmitting medical information: from questionnaire survey

K. Noguchi<sup>1</sup>, K. Makino<sup>2</sup>, Y. Nagayoshi<sup>3</sup>, Y. Kuroda<sup>4</sup>

<sup>1</sup> Orthopaedic Surgery, Kumamoto Orthopaedic Hospital, Kumamoto, Japan; <sup>2</sup> Dermatology, National Hospital Organization Kumamoto Medical Center, Kumamoto, Japan; <sup>3</sup> Cardiovascular Medicine, Aso Central Hospital, Aso-shi, Kumamoto, Japan; <sup>4</sup> Department of Community Medicine, Kumamoto University Hospital, Kumamoto, Japan

**Objectives:** The continuity of medical care is the essence in primary care medicine. On the other hand, scheduled opportunity for medical training is essential in view of upskilling of physician, especially of young physician, who engage in rural area medical service. The accurate means of transmitting medical information is helpful for the continuity of medical care. The study's purposes were to perceive the current means of, and to create the best accurate means of transmitting medical information.

**Methods:** Ten physicians and nine nurses who engage in rural area medical services were surveyed using a questionnaire concerning the means, contents and problems of transmitting medical information.

**Results:** Electronic health record system was not induced into the medical institution that respondents belong. They filled out paper medical records. Eighty percent of physicians recorded lists of transmitting medical information on the original paper medical record. The remaining physicians made summaries of transmitting medical information with personal computer. The contents of transmitting medical record varied with the physician. Many physicians wrote down only lists of diagnosed disorders, while few physicians wrote down the context of the illness. Many nurses thought that lists of diagnosed disorders were insufficiency for transmitted medical information.

**Conclusions:** This study showed that current non-standardized transmitting medical information had a potentially detrimental effect on the continuity of medical care. The standardized transmitting medical information that includes the context of the illness will help the continuity of medical care in the situation of one or two years physician's transfer period.

Disclosure: No conflict of interest declared

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### NSAIDs prescription in a medical centre according to EUROMEDSTAT's criteria and regulation 013/2011 of health's general direction-quality cycle

C. Matias, L. M. Santiago, R. Carvalho

Centro de Saúde de Eiras, Centro de saúde de Eiras, Coimbra, Portugal

**Introduction:** Non-steroidal anti-inflammatory's (NSAIDs) prescription represents a major part of the therapeutic activity of Family Medicine, but we should consider their risks.

By the portuguese 013/2011 regulation, naproxen is indicated when high cardiovascular risk. Ciclo-oxygenase 2 selective inhibitors (ICox-2) are indicated in intolerance to anti-inflammatory associated with acid suppression or if higher risk of gastrointestinal complications.

By EuroMedStat criteria, drug's use should be studied by Daily Defined Dosis (DDD) and DDD/1000 inhabitants/day.

Discussion with peers about regulations should exist, to be better applied.

**Objectives:** In different periods

- evaluate NSAID's prescription (DDD and DDD/1000 inhabitants/day)

- compare %ICox-2, %Naproxen (DDD) and cost/user.

**Material:** Prescription registrations in Medical Centre's electronical files.

**Methods:**

**Study** observational, transversal, retrospective; analysis by descriptive, inferential statistics; quality assurance cycle.

**Studied Unit:** NSAID's prescription between: 21.12.2011–20.03.2012, 22.03.2012–21.06.2012 and 22.06.2012–21.09.2012. Intervention (21.03.2012): Discussion with peers about regulations (013/2011 and EuroMedStat)

**Results:** Seven (46,7%) out of the 15 doctors of the Medical Centre where present at the discussion -showing interest.

Observations:

- Initial rise of propionic acid derived drugs, followed by decreasing.

- Initial ICox-2 decreased prescription (mainly Etoricoxib), followed by increasing (mainly Celecoxib).

- no significant differences in acetic acid or sulfamidic derived drugs.

- NSAID's total prescription reduced.

- Reduction of cost/user.

**Discussion and Conclusions:** Prompt information was captured, but lost with time. We should consider also the seasonality of this drug's prescription.

Suggestions to the future: consider short, medium and long term effects and study possible causes to this prescripational modifications.

Disclosure: No conflict of interest declared

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**Quality of the prescription of gama-glutamyltransferase in primary care units**M. Pereira<sup>1</sup>, M. Sant'Ana<sup>2</sup>, A. Ramôa Castro<sup>2</sup>, A. Santos<sup>3</sup>, C. Santos<sup>4</sup>, D. Beça<sup>5</sup>, R. Xavier<sup>6</sup><sup>1</sup> ACES Tâmega III- Vale do Sousa Norte, USF Freamunde, Freamunde, Portugal; <sup>2</sup> ACES Grande Porto V – Porto Ocidental, USF Espaço Saúde, Porto, Portugal; <sup>3</sup> ACES Grande Porto V – Porto Ocidental, USF São João do Porto, Porto, Portugal; <sup>4</sup> ACES Grande Porto V – Porto Ocidental, UCSP Carvalhido, Porto, Portugal; <sup>5</sup> ACES Grande Porto V – Porto Ocidental, USF Bom Porto, Porto, Portugal; <sup>6</sup> ACES Grande Porto V – Porto Ocidental, UCSP Aldoar, Porto, Portugal**Objective:** Determination of gamma-glutamyltransferase (GGT) is often prescribed in Family Medicine consultation. However, according to the norm of the Portuguese General Health Direction of December 2011, it should only be prescribed in specific situations.

The aim of this work was to evaluate the quality of GGT prescription in primary care units in the northern region of Portugal, and promote its improvement.

**Methods:** Internal retrospective quality study with review of all adults consultations held in January 2012 by a group of family physicians. In each case we searched for determination of GGT and checked in the clinical process if it was prescribed according to the norm (codes of the ICPC-2 P15: Chronic Alcohol Abuse or D13: Jaundice or other justification for the request recorded in the clinical process).

We analyzed the data and presented the results and the norm in each Primary Care Unit involved in the study.

Later, we reviewed all consultations held in July 2012, and compared the results with the previous ones.

**Results:** There were a total of 1964 consultations in each period of evaluation. In January 2012, it was prescribed GGT determination in 14.2% of the consultations. Only 5.8% of these prescriptions were according to the norm. In July 2012, the prescription was reduced to 6.8% of consultations, and 9.8% of these were according to the norm.**Conclusions:** Although the results were not statistically significant, there was a decrease in the prescribing of GGT of more than 50% and the percentage of appropriate prescriptions increased.

Disclosure: No conflict of interest declared

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**General practitioners knowledge and attitudes towards safety in prescription**

I. López Pavón, C. López Mompó, C. Tajada Vitales, C. Vedia Urgell, B. Uehara

Escudero-Whu, S.M. Joy Way Bueno

Barcelones Nord i Maresme Primary Health Service, Catalan Health Institute, Santa Coloma de Gramenet, Spain

**Aim:** To determine general practitioners (GPs) knowledge and attitudes towards safety in prescription (SiP) as a first step of a program to improve quality in clinical practice.**Method:** A survey of 13 questions was conducted to GPs in a Primary Health Area checking the following issues related to Safety in Prescription: 1- self reported knowledge of a list of 10 proposed information sources 2- self reported usefulness of the proposed sources 3- self reported personal interest towards SiP ( 0 to 10 scale) 4- self reported importance of SiP in clinical practice (0 to 10 scale).**Results:** the survey was sent to 108 GPs. We received 38 answers (35.2%) Three of them were trainees. Predominant age group was 35-45 years. 26 of the respondents were female (68.4%). All the sources suggested in the survey were known by 26.3% of GPs and 78.9% of them knew the main 4 sources. Individual feed-back given by electronic records of computerized clinical history was considered the most useful tool by GPs. Most respondents (34.2%) rated their interest in SiP as a 9 out of 10 and 39.4% rated its importance as a 9 out of 10.**Conclusion:** GPs surveyed believe that safety in prescription is a very important topic in daily clinical practice. At the same time, they rated a high personal interest in this topic. So, although most of the proposed sources are known, it seems appropriate to enhance teaching about safety in our area.

Disclosure: No conflict of interest declared

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**Electronic records as a tool to improve quality in hypertension control: experience in a health centre**

I. López Pavón, B. Uehara Escudero-Whu, M.Fuentes Parrón, SM. Joy Way Bueno, C. López Mompó, C.Tajada Vitales  
 EAP Doctor Vilaseca-Can Mariner, Catalan Health Institute, Santa Coloma de Gramenet, Spain

**Aim:** as a part of a global program in quality improvement, we have developed a preliminary study oriented to determine if the use of previous information obtained by clinical electronic records could improve results on hypertension control (HC)

**Methods:** we studied changes in HC in the population assigned to a General Practitioner (GP) and his trainee after they had received information of the levels of HC compared with average results in the Health Centre and in the Health Region and the standards required by our Health Authorities. We compare data in August 2012 and November 2012 using electronic records. We have considered Hypertension as controlled according to our Health Officer's standards. We have studied data in general population and in risk population (secondary prevention of cardiovascular diseases)

**Results:** population assigned to GP and trainee: 1333. Hypertension prevalence: 22.4%. Risk population: 11.8%

HC percentages:

A) *General population:*

1-Health Centre's Average: 63.3%

3-Standard Required: 62.5%

4-GP and trainee's result August 2012: 55.9%

5-GP and trainee's result November 2012: 65.8%

B) *Risk population:*

1-Health Centre's Average: 52.1%

2-Health Region's Average: 56.5%

3-Standard Required: 51.6%

4-GP and trainee's result August 2012: 47.5%

5-GP and trainee's result November 2012: 58.2%

**Conclusions:** information received from electronic records seems to be an appropriate tool to improve clinical results in hypertension control

Disclosure: No conflict of interest declared

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**Medical Guidelines for ASKES's Primary Care Provider**

M. Amiarny Rusady<sup>1</sup>, C. Nurcahyo Utomo<sup>2</sup>

<sup>1</sup> Benefit Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia; <sup>2</sup> Provider Management, PT Askes (Persero) Indonesia, Jakarta, Indonesia

Indonesia nature as archipelagic country brings challenge to provide a medical treatment standard in every place of the country, an also hard to do the evaluation of health outcome of each Primary Care Provider.

ASKES initiate a medical professional organization to optimizing a medical guideline specially for chronic disease (diabetes mellitus type 2 and hypertension).

Medical guideline include handbook for physician, skill education from specialist (endocrine, nephrolog, cardiolog), routine peer review group, and also monitoring and evaluation the quality of health service by primary care.

Until October 2012, medical guidelines (diabetes mellitus type 2 and hypertension) is implemented by 12.500 primary care provider.

Disclosure: No conflict of interest declared

1245

### Targeted mailouts are an acceptable and effective means of influencing at risk veterans and their GPs to consider a home medication review: Evidence from the Australian Veteran's MATES program

L. Roughead<sup>1</sup>, G. Killer<sup>2</sup>, A. Barnard<sup>3</sup>, G. Gill<sup>4</sup>

<sup>1</sup> School of Pharmacy, University of South Australia, Adelaide, Australia; <sup>2</sup> Department of Veterans Affairs, Australian Government, Canberra, Australia; <sup>3</sup> School of General Practice, Rural & Indigenous Health, Australian National University, Canberra, Australia; <sup>4</sup> Department of General Practice, Deakin University, Geelong, Australia

**Objective:** Veterans MATES is a targeted medication education program run by the University of South Australia for the Australian Department of Veterans Affairs. It utilises mailed specially written modules sent to veterans identified at risk of medication related problems, their pharmacist and GP. Australian veterans are predominantly elderly with high rates of multi-morbidity. At risk veterans are identified from a central prescription payment database. A recommended intervention is the use of Home Medication Reviews (HMR) where a pharmacist reviews the veteran's medication at home following a request from their GP. The GP is funded to discuss the HMR recommendations with the veteran. Previous modules have shown HMRs reduce veteran hospitalisation rates.

**Methods:** In November 2011 identified at risk veterans and their GPs were mailed a module encouraging them to consider a HMR. Data on the rate of HMR claims was utilised to examine if the HMR rate increased in those targeted. Veterans, GPs and pharmacists were surveyed to see if this initiative was acceptable.

**Results:** The HMR rate in targeted veterans increased by 8 per 1000 eligible veterans per month following the mailout. 60% of the increase was for first time HMRs. Veterans not targeted increased their HMR rate by 1 per 100 per month with almost all of these veterans having had a previous HMR. The mailout was acceptable to 90% of all three parties.

**Conclusions:** A targeted mailout to veterans and their GPs suggesting a need to consider a medication review is acceptable and increases the uptake of these reviews.

Disclosure: No conflict of interest declared

1313

### Are we handling consent form properly?

M.Y. Lopez<sup>1</sup>, B. Valle Sahagun<sup>1</sup>, M.M. de la Torre Carpenté<sup>1</sup>, S. Sanchez Ramon<sup>2</sup>, L. Zapata Mosquera<sup>1</sup>, C. Fernandez Alonso<sup>3</sup>, P. Bustamante Marcos<sup>4</sup>, A. Andres Toribio<sup>5</sup>, M. Menendez Suarez<sup>6</sup>, M.J. Rollán Gómez<sup>1</sup>

<sup>1</sup> Cardiology, Rio Hortega University Hospital, Valladolid, Spain; <sup>2</sup> Emergency, Rio Hortega University Hospital, Valladolid, Spain; <sup>3</sup> Centro de Salud Casa del Barco, Gerencia de Atención Primaria, Valladolid, Spain; <sup>4</sup> Centro de Salud Arturo Eyries, Gerencia de Atención Primaria, Valladolid, Spain; <sup>5</sup> Rehabilitation, Rio Hortega University Hospital, Valladolid, Spain; <sup>6</sup> Digestive, Clinic University Hospital, Valladolid, Spain

Informed consent is rooted in concerns about protecting and enabling patients to choose. A signed consent form is mandatory in some procedures.

**Aim:** to assess the handling of the consent form

**Methods:** we have selected a series of consecutive patients (p) that underwent exercise stress testing. Once the test was finished, patients were asked to answer a self administered questionnaire and then we analyzed their answers.

**Results:** 231 patients agreed to participate (86 males (37%); mean age 48,5) Consent form was not handed previous to the test in order to reflect about it but at the very moment of the test in most of them (120 p; 100 p in outpatient clinic; 11 p null) and it was mainly handed by the nurse providing care during exercise test (131p by nurse, 78 by doctor who ordered test; 14p other; 8 null). When asked if they had been informed by the doctor who ordered the test, 213 p said yes and most of them were satisfied with the information (165 p). Regarding the information received at the moment of the test 199 p were informed by the physician and 192 p considered they had received enough information. Nurse providing care during test informed 222 p and 204 p believed information by the nurse was enough.

**Conclusions:** we believe the consent form was not handed with enough time for the patient to think over it though most of the patients deemed to be well informed. Nurses played a key role during the informed consent process.

Disclosure: No conflict of interest declared

1375

### The discrepancy between self-reported blood type and laboratory-checked blood type

C.F. Jan<sup>1</sup>, M.H. Lin<sup>1</sup>, Y.C. Lin<sup>1,2</sup>, Y.C. Chien<sup>3,4</sup>, K.C. Huang<sup>1</sup>, C.J. Chen<sup>3</sup>

<sup>1</sup> Family Medicine, National Taiwan University Hospital, Taipei, Taiwan; <sup>2</sup> Health Center, Office of Student Affairs, National Taiwan University, Taipei, Taiwan; <sup>3</sup> Genomics Research Center, Academia Sinica, Taipei, Taiwan; <sup>4</sup> Molecular and Genomic Epidemiology Center, China Medical University, Taichung, Taiwan

**Objects:** Recall bias was frequently found during the blood transfusion which might cause severe side effects while blood transfusion if there was incorrect data. This study aimed to delineate the difference between the self reported blood type and laboratory-checked blood type for young adults in Taiwan.

**Materials and Methods:** Young adults examined in master program entry health check-up in 2011 and 2012 were invited to participate this study at one medical center in Taiwan. Self reported blood type was collected by self administered questionnaire interview. The laboratory checkup for blood type was done for gold standard. This study was approved by Research Ethics Committee at the University Hospital.

**Results:** A total of 2439 young adults were enrolled. The distribution of laboratory checked blood type A, B, AB, O were 643(26.4%), 613(25.1%), 140(5.7%), and 1043(42.8%), respectively. The discrepancy rate and consistency rate between self reported blood type and laboratory checked blood type was 3.8% and 96.2%. The consistency rate was 97.0%, 95.3%, 95.0%, and 96.5% for blood type A, B, AB and O type, respectively. No gender difference was noted regarding the self reported or laboratory checked blood type.

**Conclusions:** The discrepancy rate between self reported blood type and laboratory checked blood type was 3.8%. Further research is needed to lookup for the cause of discrepancy in order to avoid the medical errors and improve the quality of care during the blood transfusion.

Disclosure: No conflict of interest declared

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### Are we following correctly our low-risk pregnancies?

A. Escada<sup>1</sup>, A. Rodrigues<sup>1</sup>, A.T. Ferreira<sup>2</sup>

<sup>1</sup> USF Cruz de Celas, CS Celas, Coimbra, Portugal; <sup>2</sup> USF Cruz de Celas, CS Celas, Coimbra, Portugal

**Objective:** The evolution of a low risk pregnancy is a responsibility of the GP, even though in collaboration with obstetricians. In this context, the Portuguese Government wrote the guidelines which recommend the laboratory exams that must be prescribed to all low-risk pregnant women\*. The goal of this work is to ascertain that we are asking the right laboratory exams to our low-risk pregnant women, according to the official Portuguese recommendations.

\* Norma nº 37/2011, de 30/09/2011, Direcção Geral da Saúde – Exames Laboratoriais na Gravidez de Baixo Risco – [www.dgs.pt](http://www.dgs.pt)

**Methods: Study** of the clinical dossiers of the pregnant women admitted to our local care who had a medical pregnancy consultation in July 2012. We checked the gestational age, date of the last vaginal smear (Papanicolaou test) and laboratory tests asked until that time (according to the gestational date). Women with high risk pregnancies, nurse consultations or followed only in hospital care were excluded. First evaluation: August/12. Presentation of results and implementation of corrective measures: last trimester/12. Second evaluation: January/13.

**Results and conclusions:** In the first evaluation, only 11 women were included; 100% had updated vaginal smears, but none (0%) fulfilled the laboratory requirements. Doctors are now implementing the corrective measures and the second evaluation will be made in January.

Disclosure: No conflict of interest declared

1396

**Report experience of the national programme rate for improving access and quality of primary care (PIAQP) team of the family health strategy in the western region of Sao Paulo, Brazil.**

C. Tamie, G. Mano

*Western Region Project, Faculty of Medicine, University of São Paulo, Faculty of Medicine, University of São Paulo, São Paulo, Brazil*

The Ministry of Health (MH) of Brazil has invested and encouraged public management in the monitoring and evaluation of processes and outcomes in health institutions, starting since December 2011 the PMAQ.

**Objective:** To describe the evaluation of the PIAQP through the vision of the managers of the Family Health Teams (FHT).

**Method:** Report deployment phases PIAQP starting the process carried out by managers FHS Analysis of indicators and monitoring arrays identified at FHS.

**Result:** monitoring phases: Contracts FHT in PIAQP; Self assessment and coordination teams (through 45 management indicators determined by MH); planning, implementation and evaluation of the ESF Intervention Matrices. The discussion of indicators and arrays along the ESF intervention enabled the deployment of tools for the improvement of working tools. Example: creating situational folder where all data were stored epidemiological population of areas covered by each team. Were reorganized agendas of doctors and nurses according to the need of the local population; systematic evaluation criteria of population risk for home visits.

**Conclusion:** Moment of self assessment for teams and managers, resulting in the improvement of the work process.

Disclosure: No conflict of interest declared

1398

**Quality evaluation of the antibiotic prescription in acute otitis media in a pediatric population**

J. Bordalo, M. Sebe, C. Carvalho, J. Sequeira, J. Pousa, V. Colaço  
*USF Flor de Sal, ACES Baixo Vouga, Aveiro, Portugal*

**Introduction:** Acute Otitis Media (AOM) is very common on pediatric population and is responsible for a high antibiotic consumption in outpatient setting, and its prescription should follow the established guidelines.

**Objective:** Evaluate the quality of antibiotic prescription for AOM in the pediatric population of a Primary Care Unit.

**Methods:** Dimension: Technical and scientific quality; Study Unit: Patients aged  $\leq 14$  years old diagnosed with AOM in an "Acute Illness Appointment" (AIA); doctors of the Primary Care; Sample: Patients aged  $\leq 14$  years old diagnosed with AOM in an AIA in the first semester of 2012; Type and data source: Clinical records; Type of evaluation: internal, peer-to-peer, retrospective; Inclusion criteria: Patients aged  $\leq 14$  years old, in which clinical file was encoded H71 (ICPC-2) in the first semester of 2012; Evaluation criteria: 1) All patients diagnosed with AOM (H71) without penicillin allergy should be treated with amoxicillin; 2) All patients younger than 6 months, diagnosed with AOM (H71) and with penicillin allergy should be treated with erythromycin. 3) All patients older than 6 months, diagnosed with AOM (H71) and with penicillin allergy record should be treated with azithromycin.

**Results:** 63 patients' clinical files were evaluated. The recommended antibiotic was prescribed to 46% of the AOM without recorded penicillin allergy. Amoxicillin with clavulanic acid was prescribed in 38,1% and a second generation cephalosporin in 9,5%. No patients were evaluable by the criteria 2).

**Discussion:** The first-line recommended antibiotic wasn't prescribed to most of the AOM suffering patients without recorded penicillin allergy. Corrective educational measures were implemented among the doctors of the Primary Care. A 1 year re-evaluation is proposed.

Disclosure: No conflict of interest declared

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**Quality evaluation of the antibiotic prescription in acute tonsillitis in a pediatric population**

J. Bordalo, M. Sebe, C. Carvalho, J. Sequeira, J. Pousa, V. Colaço  
 USF Flor de Sal, ACES Baixo Vouga, Aveiro, Portugal

**Introduction:** Acute tonsillitis (AT) is very common in the pediatric population. If a bacterial etiology is suspected, the therapeutic approach includes the antibiotic prescription, in accordance with guidelines.

**Objective:** Evaluate the quality of antibiotic prescription in AT in the pediatric population of a Primary Care Unit.

**Methods:** Dimension: Technical and scientific quality; Study Unit: Patients aged  $\leq 14$  years old diagnosed with AT in an "Acute Illness Appointment" (AIA); doctors of the Primary Care; Sample: Patients aged  $\leq 14$  years old diagnosed with AT in an AIA, in the first semester of 2012; Type and data source: Clinical records; Type of evaluation: internal, peer-to-peer, retrospective; Inclusion criteria: Patients aged  $\leq 14$  years old, in which clinical file was encoded H71 (ICPC-2) in the first semester of 2012; Evaluation criteria: 1) All patients diagnosed with AT (R76) without penicillin allergy record should be treated with amoxicillin or Penicillin G benzathin. 2) All patients diagnosed with AT (R76) with penicillin allergy record should be treated with erythromycin or clarithromycin or azithromycin.

**Results:** 73 patients' clinical files were evaluated. Among the AT suffering patients without recorded penicillin allergy, a recommended antibiotic was prescribed in 49,3%. Amoxicillin with clavulanic acid was prescribed in 41,1% and azithromycin in 8,2%. The recommended antibiotic was prescribed to the only child with recorded penicillin allergy.

**Discussion:** In the group of patients with AT without record of penicillin allergy, a substantial percentage of the prescriptions didn't match the first-line recommendations. Corrective educational measures were implemented among the doctors of the Primary Care Unit. A 1 year re-evaluation is proposed.

Disclosure: No conflict of interest declared

1404

**Quality evaluation of the metabolic control in type 2 diabetes**

J. Bordalo, M. Sebe, C. Carvalho, J. Sequeira, J. Pousa, V. Colaço  
 USF Flor de Sal, ACES Baixo Vouga, Aveiro, Portugal

**Introduction:** The International Diabetes Federation 2012 establishes goals which seek the metabolic control of the patients, such as abdominal perimeter (AP), systolic (SBP) and diastolic (DBP) blood pressure, fasting glycaemia, glycated hemoglobin (HbA1c) and lipid profile. DM2 demands a quality follow-up in order to delay its progression and prevent its complications. **Objective:** Evaluate the metabolic control of the DM2 patients followed at the Diabetes Appointment of a Primary Care Unit.

**Methods:** Dimension: Effectiveness; Study Unit: DM2 patients, doctors and nurses of the Primary Care Unit; Sample: DM2 patients followed in the Diabetes Appointment in 2011; Data source: Computer clinical records; Type of evaluation: internal, peer-to-peer, retrospective; Inclusion criteria: DM2 patients with records of Body Mass Index (BMI), AP, SBP, DBP, fasting glycaemia, HbA1c, HDL-cholesterol (HDL), LDL-cholesterol (LDL) and triglycerides (TG) in a Diabetes Appointment in 2011; Exclusion criteria: Type 1 Diabetes patients, lack of record of at least one of the evaluated parameters; Evaluation criteria: All patients should have: 1) BMI  $< 25 \text{ Kg/m}^2$ ; 2a) AP  $< 94 \text{ cm}$  (male); 2b) AP  $< 80 \text{ cm}$  (female); 3) SBP  $< 130 \text{ mmHg}$ ; 4) DBP  $< 80 \text{ mmHg}$ ; 5) Fasting glycaemia  $< 115 \text{ mg/dl}$ ; 6) HbA1c  $< 7\%$ ; 7a) HDL  $> 40 \text{ mg/dl}$  (male); 7b) HDL  $> 50 \text{ mg/dl}$  (female); 8) LDL  $< 80 \text{ mg/dl}$ ; 9) TG  $< 150 \text{ mg/dl}$ .

**Results:** 343 patients' clinical files were evaluated, with the following criteria compliance rates: 1) 12,5%; 2a) 15,3%; 2b) 1,2%; 3) 33,2%; 4) 52,2%; 5) 30%; 6) 68,8%; 7a) 65,9%; 7b) 39,5%; 8) 21,9%; 9) 67,9%.

**Conclusions:** No patient complied all the criteria. HbA1c and TG were the most complied criteria, while the AP in the female was the least complied criteria. Most of the criteria had compliance rates less than 50%. Corrective educational measures were implemented among patients and health professionals. A 1 year re-evaluation is proposed.

Disclosure: No conflict of interest declared

1789

### Clinical practice guidelines – 10 years of the development process in the Czech Republic

S. Býma<sup>1</sup>, O. Herber<sup>2</sup>, J. Lankova<sup>2</sup>, B. Seifert<sup>2</sup>

<sup>1</sup> Department of Social Medicine, Faculty of Medicine in Hradec Kralove, Hradec Kralove, Czech Republic; <sup>2</sup> Department of General Practice, First Faculty of Medicine, Charles University in Prague, Prague, Czech Republic

**Introduction:** It has been 10 years since the Society of General Practice of the Czech Medical Association (SGP) started the project of development of clinical practice guidelines for general practitioners (GP). General practice due to its dealing with a wide range of clinical conditions is a medical discipline which is prone to the highest variability of care and therefore needs clear expert recommendations.

**Method:** In past there were multiple interests as specialist groups, pharmaceutical companies and other interest groups which were sporadically presenting guidelines for GPs. For to stop this uncontrollable process the SGP in accordance with the Department of Health established in the 2003 the Guideline Clearinghouse, where the development of new guidelines is planned and supervised, the current guidelines are reviewed and updated and the implementation process is managed.

**Outcomes:**

- The Clearinghouse is currently managing 37 of key clinical guidelines.
- In past 10 years there were presented altogether 82 clinical guidelines.
- All clinical guidelines are available online ([www.svl.cz](http://www.svl.cz)).
- The implementation of guidelines in past 10 year was supported by their presentation on 1450 regional CME conferences and 15 national conferences with altogether 100 000 attending GPs.

**Conclusion:** The SGP understands clinical practice guidelines as expert recommendations which are currently corresponding with lege artis practice in most patients, help to enhance the quality and give a higher forensic confidence in the provided care. The GP nevertheless is entitled to choose a different individual procedure in the present conditions and particular patient.

Disclosure: No conflict of interest declared

### 2.11. RURAL CARE

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#### The difference of risk factors for pulmonary tuberculosis between aborigines and non-aborigines

K.Y. Ko<sup>1</sup>, C.F. Mu<sup>2</sup>, C.Y. Hsu<sup>2</sup>

<sup>1</sup> Department of Medical Education, National Taiwan University Hospital, Taipei, Taiwan;

<sup>2</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan

**Objective:** Tuberculosis control is an important mission for public health in Taiwan. The incidence rate of pulmonary tuberculosis for aborigines is higher than the general population. The objective of this study is to determine the difference of risk factors for pulmonary tuberculosis between aborigines and non-aborigines.

**Method:** All newly-confirmed pulmonary tuberculosis patients in our hospital were eligible for this study if they were reported to CDC-Taiwan between July 2011 and April 2012. Data was collected through medical records. They were categorized into two subgroups according to the race: aborigines and non-aborigines. We compare the difference (age, gender, place, family history of tuberculosis, diabetes mellitus, smoking, drinking and betel nut chewing) between aborigines and non-aborigines.

**Result:** Between July 2011 and April 2012, a total of 67 newly-confirmed tuberculosis cases were enrolled. Forty-five patients were aborigines (67.2%). The average age was 54.5.

Comparing to the aborigines, the odd ratio (OR) of “older than 65 years old” (OR=0.26, p=0.014) in non-aborigine group was significantly lowered. However, the OR of “alcohol drinking” (OR=7.42, p=0.002) as well as “living in mountain area” (OR=14.28, p<0.001) in the aborigines were significantly higher.

**Conclusion:** “Alcohol drinking” and “living in mountain area” were risk factors to aborigine with tuberculosis. Control alcohol drinking may be necessary for aborigines especially those who living in mountain area.

Disclosure: No conflict of interest declared



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**Use and effectivity of self-instructional material on stroke as guidelines to caregivers in rural community center**

B. Santiago

*Medical, National Healthcare Group Polyclinic, Singapore, Singapore*

**Objective:** The Purpose of this study is to design, utilize and test the effectivity of self-instructional material in stroke, aimed at enhancing the knowledge of caregivers in the Sapang Palay, Rural Community Center regardless of age, sex and educational level.

**Methods:** This is a randomized controlled trial wherein subjects were randomly grouped into 2 using a computer generated random numbers, conducted in rural community center included 32 subjects (adequate sample size 0.05 and power 95% confidence interval), Group 1 were those given the self-instructional material and Group 2 were those who were not given any. Paired t-test was used to compare the mean score of the posttest of the 2 groups, p value 0.05, while chi squared test was used to determine whether the demographic variables (age, sex, educational level) had strong relationship to posttest scores.

**Results:** The results of posttest scores showed higher outcome in Group 1 (with self-instructional material)  $t = 14.37$  than Group 2  $t = 0.657$  and this is more evident when the posttest scores of both groups were compared  $t = 6.8$ . Correlation between the demographic variables and posttest scores were not significant in age  $X^2 = -1.119$ , sex  $X^2 = 0.2$ , educational level  $X^2 = 0.85$ .

**Conclusion:** The knowledge gained by the caregivers, regardless of age sex or educational level can be reasonably attributed to the self-instructional material.

Disclosure: No conflict of interest declared

1339

**Multidisciplinary care in a traditional community – the experience of Saúde Kalunga**

T. Coimbra, A. Campos, X. Fernandes, M. Iwamoto, M. Pedroso, L. Silva, L. Pereira,

Y. Barbosa, P. Peres, D. Santos

*UFG – FM, SMS, Goiânia, Brazil*

**Objective:** To present the experience of multidisciplinary care in Kalunga Community of Cavalcante de Goiás

**Methodology:** In June of 2012 a survey of the health demands of Kalunga and it was drawn from an action of medical care, where medical students would attend with the supervision of a physician. The action took place on November 15, 2012 and consisted of: medical care for adults and children (in the morning), colpocytological examination, serological testing for Chagas disease and drug distribution.

**Results:** We treated 16 people, being 68.75% females below the age of ten years was the most prevalent (33%), headache and urinary tract infections were the most prevalent complaints. Fourteen Pap tests were conducted, and the changes by *Candida sp* were the most common. There were 25 blood samples for testing for Chagas disease.

**Conclusions:** We conclude that actions like this that bring together medical students from the reality outside the university hospitals or other places of learning are valuable for vocational training and human of them. Another important aspect is the access of the poor to a type of service often slow or even unreachable.

Disclosure: No conflict of interest declared

1483

**A survey on the status of OB/Gyne care in the Japanese rural areas and isolated island**Y. Ito<sup>1</sup>, Y. Fujioka<sup>2</sup>, T. Arai<sup>3</sup>

<sup>1</sup> *Obstetrics and Gynecology, Nishi-Agatsuma County Hospital, Jadecom, Agatsuma-gun Gunma, Japan;* <sup>2</sup> *Family Medicine, Shizuoka FMR Program, Shizuoka, Japan;* <sup>3</sup> *K-CAPPIC, Kanazawa University, Kanazawa, Japan*

**Objective :** To show the necessity of primary care physicians' (family physicians and general practitioners) involvement in obstetric and gynecologic care by revealing actual state and problems of perinatal, obstetric and gynecologic care in rural areas and isolated islands in Japan.

**Methods :** The questionnaires were sent the 758 rural clinics and hospitals, and 250 additional hospital supporting rural medicine. Status of the facilities was reported at the time point of the survey and actual details of practices were reported by the heads of the facilities who are non-OB/Gyne physicians.

**Results :** 351 facilities answered (34.7%). Practices by non- OB/Gyne physicians were performed at 22.7% of clinics and 16.2% of hospitals but actual obstetric and gynecologic care such as prescription for perinatal care, and gynecologic physical exams were barely done by them, mainly because patients themselves tend to go see OB/Gyne specialists or the facilities themselves direct them to see them. On the other hand, 39% of clinics and 27% of hospitals are in need of providing certain OB/ Gyne cares, therefore, they were in need of being trained to provide certain OB/Gyne skills.

**Conclusions :** In rural areas and isolated islands, demands for women's health including obstetric cares such as perinatal care and delivery by primary care physicians are pretty much high. Residents and primary care physicians who work in the rural areas or isolated islands should be trained for OB/Gyne, therefore, revision of pre- and post- graduate educational system for residents and primary care physicians are urgently required.

Disclosure: No conflict of interest declared

1728

**The experience of an MD at family health care**

D. I. Correa Alves, F. K. Melchior Silva Pinto, J.H. Vieira Pedroso

**Objective:** Our goal with this paper is to share experiences acquired as a medical doctor within the first year of medical practice and two ungraduated, working as a general physician at a Basic Health Care Unit (UBS) in a small city inside the country region of Brazil, for three months. The city has roughly 6000 inhabitants and two UBS to serve the population mostly formed by small farmers and workers of a nearby factory.

**Method:** Attending an average of 30 persons a day, approximately 15 minutes spent with each patient, 40 hours a week, is possible to hear and feel almost everything, from touching life histories to poorly elaborated lies.

**Results and conclusion:** It is amazing to observe how the figure of the doctor is differently perceived by people in a same community. General Physicians are seen as gods on earth by some people, and as a simple middle man with the only function of sending the patient to the real doctors by others. It is also important to realize how the segmental graduation programs are limited in preparing the future doctors for an holistic and more humanized care of the population.

Disclosure: No conflict of interest declared

## 2.12. CROSS-CULTURAL MEDICINE

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### A snapshot of Canadian family physicians caring for recent immigrants from the National Physician Survey

I. Grava-Gubins, A. Safarov, J. Eriksson

*Research, College of Family Physicians of Canada, Mississauga, Canada*

Canada is one of the most multicultural and multilingual countries in the world, with over 200 languages being spoken as of 2011. Meeting the health care needs of the recent immigrant population is an important consideration for the Canadian health care system.

We used the data from the 2010 National Physician Survey (NPS), Canada's largest workforce survey of current and future physicians, to provide an in-depth look at family physicians providing care to recent immigrants.

Family physicians and general practitioners are the entry point to health care for most immigrants. The proportion of FP/GPs who reported that recent immigrants constitute 10% or more of their practice has been decreasing from 11% in 2004, to 7% in 2007, to 3% in 2010. This downward trend is surprising, as the number of permanent resident immigrants entering Canada has increased by 19% over the same time period. The percentage of FP/GPs who reported providing care to any recent immigrants has also decreased from 69% in 2007, to 63% in 2010.

The NPS data indicates that the family physicians caring for recent immigrants are significantly more likely to be younger, female and to speak languages other than English and French (Canada's two official languages). They are also significantly more likely to have a practice open to new patients, to work in urban centres, and to be satisfied with their relationship with their patients. The poster provides detail on these and other important characteristics of Canadian FP/GPs providing care to recent immigrants.

Disclosure: No conflict of interest declared

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### Speaking in tongues: A National Physician Survey (NPS) study of languages spoken by family physicians in Canada.

J. Eriksson, I. Grava-Gubins, A. Safarov

*Research, College of Family Physicians of Canada, Mississauga, Canada*

Canada has one of the most multilingual populations in the world. English and French are Canada's two official languages, but neither language is the mother tongue for many in Canada. In 2011, approximately 280,000 individuals immigrated to Canada. Of these, close to 27% did not speak one of the official languages. Often depending on others to communicate with physicians, this creates difficulties when communicating about personal/sensitive health issues. Previous studies show language barriers during patient-physician interactions to be associated with undesirable outcomes in primary care, including a lack of understanding about their medical condition, and lower health outcomes in general.

The National Physician Survey (NPS) is a comprehensive physician workforce study of all current and future physicians in Canada, conducted by the College of Family Physicians of Canada, the Canadian Medical Association and the Royal College of Physicians and Surgeons of Canada in 2004, 2007 and 2010. We asked about the languages which FPs in Canada use with their patients.

The 2010 NPS data shows that 54.7% of FPs in Canada only speak English with patients, & 9.0% speak only French. However, 15.8% of all FPs in Canada indicated also speaking a non-official language with patients. It is unclear whether speakers of non-official languages have access to primary care through a family physician in their own language. We examined and compared the languages spoken by potential patients and the languages spoken by family physicians providing care in three large urban areas in Canada (Greater Toronto Area, Vancouver and Montreal).

Disclosure: No conflict of interest declared

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**Relationship between family adaptability, cohesion and adolescent problem behaviors : linearity versus curvilinearity of circumplex model**

Y.-P. Kim

*Family Medicine, Chonnam National University, Hwasun, Korea*

**Objective:** The FACES III (Family Adaptability and Cohesion Evaluation Scale), using the circumplex model has been widely used in investigating the family function. However, the criticism about the curvilinear hypothesis of the Circumplex model has always been from an empirical point of view. This study examined the relationship between adolescent adaptability, cohesion and adolescent problem behaviors, and especially tested the linear versus curvilinear hypotheses with FACES III.

**Methods:** We used the data from 398 adolescent participants who were in the middle school. A self-reported questionnaire was used to evaluate the FACES III and YSR (Youth Self Report).

**Results:** According to the level of family adaptability, the results showed significant differences with linear relation in internalizing problems ( $p = 0.002$ ), and in externalizing problems ( $p = 0.013$ ). Also, according to the level of family cohesion, the results showed significant differences with linear relation in internalizing problems ( $p = 0.002$ ) and externalizing problems ( $p = 0.004$ ).

**Conclusion:** The relationship between the dimensions of adaptability, cohesion and adolescent problem behaviors was linear, rather than curvilinear. Adolescents with high adaptability and high cohesion showed low problem behaviors.

Disclosure: No conflict of interest declared

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**Using commercial movie to assess cultural competence of freshman medical students.**

D. Vidiawati

*Community Medicine, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia*

**Introduction:** In 2012-2013 academic year, is the first experience of Medical Faculty of Universitas Indonesia (FMUI) held 'Introduction to Indonesia Culture' module and 'Cultural Competence' module for freshman medical student. These modules are important because Indonesia has more than 300 ethnics and more than 700 local languages. It accepted 6 religions and more than 200 beliefs. The students originally come from all over the country.

**The purpose** of assessing the reflection on (?) movie was to explore the medical students' respects on diversity in Indonesia and identify their paradigm of living in diversity.

**Methods:**All first grade students assigned to upload their reflection after watching on youtube, the (?), a commercial movie that directed by Hanung Bramuntyo.

**Results:** 52 medical students uploaded their reflections. Most students learned much the meaning of diversity and how to respects each other. Some students wrote the relation of diversity conflict, as in movie, with their own environment. Some students express their learning of being more respect in diversity for their daily life. Some students achieved to understand the diversity in Indonesia and reasons of being respects and be respected.

**Conclusions:** watching commercial movie and reflecting, was a good method to evaluate students on early cultural competence in medical school.

Disclosure: No conflict of interest declared

1288

**Life Cycle: A Look transcultural and complementary**

F. Garcia

*family medicine service, Italian hospital of B.A., CABA, Argentina***Objectives:** Analyze the life cycle from various ancient cultures**Method:** divide the life cycle into twelve cycles of 7 years each

At each stage there is a fear to overcome, an attitude that strengthen, a level of consciousness, and sense an element that characterizes and serving as a tool for the full development of the individual.

They go through 5 stages to 42 years and then repeated in the second half of life.

With the first 5 stages comes to claim, and the second, to transform your life and the environment.

**Result:**

1st stage: from birth to 7 years:

Fear is the distance, to cultivate the attitude, the presence, the element, water, strengthen the sense of taste and level of consciousness, the self.

2nd stage: 7 to 14 years

Fear, the closeness, the attitude, the autonomy, the fire element, the direction, vision and social conscience

3rd stage: 14 to 21 years

Fear, however, safety attitude, the air element, sense touch and existential conscience

4th stage: 21 to 28 years

Fear, continuity, attitude, creativity, element, earth, sense, smell and transpersonal consciousness

5th stage: 28-35-42

Afraid to lose, attitude of being, the sun element, sense, hearing and unity consciousness.

Then, the same steps are repeated with its contents

63-70 years: 1st stage; 56-63 years, 2nd stage, 49-56 years, 3rd stage, 42-49 years, 4th stage, 70-77-84; 5° step

**Conclusions:**

This complementary view of the life cycle, gives us the opportunity to understand and providing concrete tools for prevention and health promotion.

Disclosure: No conflict of interest declared

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**Developing a tool to help newcomers refugees**S. gagnon<sup>1</sup>, M. Chamulla<sup>2</sup>, I.Pirija<sup>2</sup>

<sup>1</sup> Family Medicine Department, Université laval, Quebec city, Canada; <sup>2</sup> programme de médecine, université laval, Quebec city, Canada

**Intro:** As a physician at the Healthcare Refugee clinic in Quebec city, Canada and working with aa community organism with the newcomers we receive, I notice than few tools were available to help this population

**Objective:** To develop a practical tool for the newcomers refugees we see at the clinic to help them in the first months after their arrival. This tool could be used by a large proportion of the refugees even those who are illiterate

**Method:** Involving undergraduate students I receive at the clinic for rotations, we have conducted a survey with the health professionnals of the Heathcare Refugee clinic and the professionnals of the community organism. According to their opinion the choice of the tool to be developped was made. The tool was developed and tested upon refugees to evaluate the usefulness and the clarity of the tool

**Results:** Different sheets to help them to find the way to go to the health establishments in the Quebec city area, the bus to take to do so and the documents to bring to the consultation was developed. These tools were tested with some refugees, the opinion of the professionnals, the bus conductors was also asked. After that the format of the tool was modified and tested again to a final format

**Conclusions:** It is possible to develop tools to help newcomers even illiterate. Involving undergraduate students in this kind of project is interesting for them and make them to be useful for this population.

Disclosure: No conflict of interest declared

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**Foreign-trained family physicians discuss the challenges and successes of intercultural practice in rural Saskatchewan, Canada**

R. Hamoline

*Sociology, University of Saskatchewan, Saskatoon, Canada*

**Objective:** This qualitative PhD dissertation research explores: Saskatchewan family physicians (FPs') occupational experiences of meaning-making; how social factors of ethnicity, gender, and age influence FPs' meaning-making; and how contextual factors such as practice location and type of practice affect this process.

**Methods:** Data was collected from 17 interviews obtained from a purposive sampling of practicing provincial FPs that included domestic/foreign trained, male/female, urban/rural/remote, fee-for-service/salaried practice, and 32 – 80 years of age. Interviews of approximately 1 hour were digitally recorded. An applied phenomenological approach facilitated data analysis and theme identification.

**Results:** Foreign-trained FPs working in rural/remote areas discussed the professional challenges of heavy workloads, intercultural friction between foreign-trained FPs and residents, persistent racism towards FPs of colour, and concerns with the Saskatchewan International Physician Practice Assessment program (SIPPA). However, FPs also revealed high levels of satisfaction via increased knowledge and skill development associated with the variety of medical issues in rural/remote areas, of success in non-professional engagement with community, and growth of emotional attachment to Saskatchewan as “home”. FPs noted that meaningful professional and social integration was related to the stabilizing influences of partners and family.

**Conclusions:** Increased job/life satisfaction, occupational meaning-making, and retention of foreign-trained FPs in the rural/remote areas of Saskatchewan can be mediated by: increased FP training and hiring; continued efforts to educate rural/remote residents regarding intercultural acceptance of foreign-trained FPs; work to improve SIPPA via ongoing consultation with foreign-trained FPs; and assistance with social integration not only for foreign-trained FPs but also for partners and families.

Disclosure: No conflict of interest declared

**2.13. INTEGRATED CARE**

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**Three-week dietary intervention at workplace cafeteria– a pilot study**M.Y. Kim<sup>1</sup>, M.J.Kim<sup>2</sup>, H.D.Park<sup>2</sup>, S.S.Kim<sup>2</sup>, J.W.Lee<sup>3</sup><sup>1</sup> Family medicine, Seoul Medical Center, Seoul, Korea; <sup>2</sup> Healthcare division, Ubcare Co., Ltd, Seoul, Korea; <sup>3</sup> Family medicine, Yonsei University College of Medicine, Seoul, Korea

**Background:** A healthy diet is important for the prevention and management of major chronic diseases including cancer, cardiovascular disease, diabetes, and obesity. However, the effect of dietary intervention-based education and consultation has not been satisfactory. This study sought to investigate the effects of a diet intervention supplying food directly to the workplace cafeteria.

**Methods:** Study subjects included 36 employees (23 men) staffed at two companies located in Seoul and Gyeonggi-do. Participants were supplied with liquid meals made mainly with fruits and vegetables for breakfast and dinner. Lunch was supplied as well and comprised of a balanced diet. Consumption of other foods, except water and provided snacks, were prohibited. The program also included light exercise, yoga, and mind-body control for 20 minutes, three times a week. Changes in anthropometric and metabolic parameters were evaluated.

**Results:** None of the subjects complained of serious adverse effects or dropped out of the program. Post-intervention mean body weight and body fat mass decreased significantly (-3.3 kg and -2.0 kg respectively,  $P < 0.001$  for both comparisons). There were additional reductions in systolic blood pressure (-6.7 mmHg,  $P < 0.001$ ), fasting glucose (-9.0 mg/dL,  $P < 0.001$ ), total cholesterol (-13.9 mg/dL,  $P = 0.005$ ), triglyceride (-44.0 mg/dL,  $P < 0.001$ ), and insulin (-2.4 uIU/mL,  $P = 0.007$ ). The satisfaction rate of the program was 88%.

**Conclusions:** This study showed that a diet intervention supplying food directly to the workplace cafeteria could succeed in decreasing body weight and improving metabolic parameters, most likely due to high compliance.

Disclosure: No conflict of interest declared

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**Collaborative care – a brazilian preliminary study**

L. Moscovici, A. Waldo Zuardi, J. Mazzoncini de Azevedo Marques

*Department of Neuroscience and Behavioral Sciences, University of São Paulo, Ribeirão Preto, Brazil*

**Objective:** To evaluate the results of monitoring done by PHC (Primary Health Care) teams with and without Collaborative Care (CC) in patients with Major Depressive Episode (MDE) and Generalized Anxiety Disorder (GAD).

**Methods:** Forty-two patients with MDE and/or GAD diagnosis (21 relying on CC and 21 without CC) of 4 PHC teams (2 teams with CC and 2 without CC), using screening tools (COOP-WONCA and WHO-5) and the Mini International Neuropsychiatric Interview (MINI) were selected. Thirty patients (15 in each group) completed 5 assessments at intervals of 8 to 12 weeks over 12 months, with PHQ-9, GAD-7 and MINI-TRACKING (MDE and GAD modules) instruments. Statistical evaluation used to compare the outcomes of all patients in both groups (teams with and without CC) was the repeated measures analysis of variance (ANOVArm).

**Results:** ANOVArm showed significant differences in the time factor ( $F_{4, 120} = 16.60$ ,  $p < 0.001$ ) and in group x time interaction – contrasts between the first and fourth measure ( $F_{1,30} = 4.55$ ,  $p = 0.041$ ) and between the first and fifth measure ( $F_{1,30} = 5.33$ ,  $p = 0.028$ ) – favoring the group accompanied by teams with CC.

**Conclusions:** In this preliminary study, patients followed by PHC teams with CC had a better outcome.

Disclosure: No conflict of interest declared

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**Aquatic-biodanza and stretching for improving pain and quality of life in patients with fibromyalgia.**G.A. Matarán-Peñarocha<sup>1</sup>, A. María Castro-Sánchez.<sup>2</sup>,M. Encarnación Aguilar-Ferrándiz.<sup>3</sup><sup>1</sup> *Medicina Familiar y Comunitaria, Servicio Andaluz de Salud, Jódar-Jaén, Spain;*<sup>2</sup> *Departamento de Enfermería, Fisioterapia y Medicina, Universidad de Almería, Almería, Spain;*<sup>3</sup> *Facultad de Ciencias de la Salud, Universidad de Jaén, Jaén, Spain*

**Objective:** To determine the level of improvement, as regards pain, impact on fibromyalgia and depression, achieved by patients with fibromyalgia by comparing aquatic biodanza and stretching exercises.

**Methods:** We develop a randomised controlled trial with two intervention groups in five health centres (Almería). A total of 82 fibromyalgia patients between 18 and 65 years old, diagnosed by American College of Rheumatology criteria, were included, with 12 patients declining to take part in the study. The 70 remaining patients were randomly assigned to two groups of 35 patients each: aquatic biodanza and stretching exercises. Those who did not attend in at least 14 sessions or changed their treatment during the studio were excluded. The final sample consisted of 19 patients in aquatic biodanza group and 20 in stretching group. The limitations of the study included, the open evaluation design and a sample size reduced by defaults. The outcome measures were sociodemographic data, quality of life (Fibromyalgia Impact Questionnaire), pain (McGill-Melzack questionnaire; and Visual Analogue Scale), pressure algometry (Wagner FPI10 algometer) and depression (Beck Inventory). These were carried out before and after a 12-week therapy.

**Results:** The mean age of the sample was 55.41 years. The mean period from diagnosis was 13.44 years. The sample consisted mainly of housewives. There were significant differences ( $P < .05$ ) between groups, in pain ( $P < .01$ ), fibromyalgia impact ( $P < .01$ ), and depression ( $P < .04$ ) after the treatment.

**Conclusions:** The biodanza aquatic exercises improve pain and quality of life in fibromyalgia patients.

Disclosure: No conflict of interest declared

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**The effect of the diabetic centers on the outcome of Saudi patients with diabetic foot problems attending Gurayat General Hospital**

A. Alkhier Ahmed, A. Alsharief, E. Alsharief

*Primary health care, National guard health affairs, Jeddah, Saudi Arabia*

**Introduction:** Diabetic foot is one of the major complications affecting diabetic patients. Although it is not so common complication but it is one of the serious and costly complications. Multidisciplinary approach is the best approach for diabetic foot cases. Caring through diabetic centers with multiple points of care is preferable than one point of care approach.

**Objective:** To evaluate the efficacy of the diabetic center in Gurayat General Hospital before and after commence of work in this center.

**Methodology:** Cross sectional study was designed. Medical records of patients admitted to surgical wards due to diabetic foot lesions during the period from Jan 2009 to Oct 2010 were reviewed. The number of diabetic foot cases admitted to surgical wards was detected. The duration of hospital stay was calculated. Numbers of amputations were detected. Comparison between year 2009 and 2010 was done.

**Results:** During the year 2005 seventy three (73) cases with diabetic foot lesions were admitted to the surgical wards, the total hospital stay was 614days. Four cases undergone lower limb amputation. During the year 2006 forty cases (40) were admitted to the surgical wards due to diabetic foot with total hospital stay of 561 days. The total amputations were only one case. The differences were statistically significance for the number of admissions (P-value 0.0001), for the duration of hospital stay (P-value 0.0041) and for the number of amputations (P-value <0.000).

**Conclusion:** The services presented by the diabetic center towards diabetic foot care were affecting obviously the out come of the diabetic patients suffering from diabetic foot lesions attending Gurayat General Hospital.

Disclosure: No conflict of interest declared

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**Nation-wide study on integrated care for adults suffering of chronic diseases: palliative care and care insurance laws for general practitioners in Luxembourg.**J.-C. Leners<sup>1</sup>, J. Jacquemart<sup>1</sup>, M. Aubart<sup>2</sup><sup>1</sup> LTFC and Hospice, ALA and Omega, Ettelbruck, Luxembourg; <sup>2</sup> Scientific Society GP, Soc Scientifique Lux de Medecine Générale, Luxembourg, Luxembourg

**Objective:**The aim of this first national study was to find out where and how often palliative care and care insurance plans were applied to the general population regardless of their living situations. The specific laws allowing care insurance and palliative care have been voted over the last years.

**Method:**The results have been collected through the Ministry of Social Affairs including all people above 40 years over a period of 2 years. The results have been categorized in 3 domains: home, long term care facilities and hospice.

**Results:**The number of allocated specific palliative and dependency care plans was 2028. These plans included 16,4 hours of assistance per patient and per week. Less than 10% were delivered in the hospice (12 beds unit), 35% in nursing homes and the remaining at home. Mean age was 63,3 years; the gender ratio was 2,6 versus 1 (comparing female and male) and the overall first diagnosis was neuro-psychiatric disorders (37%), followed by cancer diseases and cardio-pulmonary pathologies. Statistical data on lengths and types of care plans showed 69% lasting less than one year; 26% for 18 months and the remaining for more than 1,5 year.(details will be shown in the graphics).

**Conclusion:** a new double care plan for dependent and palliative adults was a major cornerstone in the quality of their life and a positive incentive to keep patients as long as possible at home with the help of the family doctor.

Disclosure: No conflict of interest declared



835

**Programed practice approach in family medicine**

L. Trtica Majnarić

*Family Medicine, Internal Medicine, Faculty of Medicine Osijek, Osijek, Croatia*

**Objective:** It is expected that family physicians (FPs) invest their professional efforts in preventive activities and quality practice assurance. But what practical frameworks are there, on their disposal? Guidelines and evidence exist for a limited number of issues. How to convert the huge biological variability of the population to the skewed scoring schemes? These and similar dubious questions FPs are daily facing with.

**Methods:** As an executive methodology framework, programed practice approach is suggested. This includes systematically evaluated evidence against some explicit criteria, structural analysis and critical audit of an individual's practice and learning by the case method. This compound method may support data standardization for computer-based collection and interfaces building.

**Results:** Some examples of using the method are addressed. Program for cardiovascular risk prediction and primary prevention is presented through the method elaboration.

**Conclusions:** Evidence and practice analysis, FP professional experience and computer programming, are all needed to act together, for programed practice to get into the routine.

Disclosure: No conflict of interest declared

1276

**Home care; beginning and after all**Ö. Akça<sup>1</sup>, İ. Şencan<sup>1</sup>, T. E. Yılmaz<sup>1</sup>, İ. Kasım<sup>1</sup>, F. Yüksel<sup>1</sup>, F. Özçelik<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Özkara<sup>2</sup>*<sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey*

**Objectives:** Elderly population is increasing in the world and Turkey. Therefore, the incidence of chronic diseases and number of care-dependent people are increasing. This also makes it compulsory to give home care services. State-funded home care services in Turkey are a relatively new practice. Home care arrangements were made in 2005 by the Government. The study aims to evaluate the causes of application for home care services and to determine the outcomes of patients after follow-up care at home.

**Methods:** This retrospective study, designed by the family medicine department of a training and research hospital, was conducted between June 2012 and December 2012. Patients that were followed up by the home care unit of the hospital in recent 6 months were included in this study. Socio-demographic data, the admission causes of the patients receiving home care services, patients' dependency status (whether they are bed-ridden) and outcomes of follow-up were determined from medical records of patients. Descriptive statistics were performed.

**Results:** This is ongoing study and the results will be presented during the congress.

**Conclusion:** It's important to learn the patient's admission reasons and determine new measures for home care services for improving the quality of home care services and of new regulations.

Disclosure: No conflict of interest declared

1372

**Factors associated with hospitalization of patients with community acquired pneumonia (cap)**C. Lionis<sup>1</sup>, G. Duijker<sup>1</sup>, A. Bertias<sup>1</sup>, C. Psaroudaki<sup>1</sup>, G. Ktistakis<sup>2</sup>, I. Platakis<sup>2</sup>, R. Pateli<sup>3</sup>, I. Stefanaki<sup>4</sup>, I. Tsiligianni<sup>5</sup>, T. Vasilopoulos<sup>5</sup><sup>1</sup> Clinic of Social and Family Medicine, University of Crete, Heraklion, Greece; <sup>2</sup> Health Centre of Moires, Health Centre of Moires, Moires, Greece; <sup>3</sup> Health Centre of Kastelli, Health Centre of Kastelli, Kastelli, Greece; <sup>4</sup> Health Centre of Ano Viannos, Health Centre of Ano Viannos, Ano Viannos, Greece; <sup>5</sup> Health Centre of Aghia Varvara, Health Centre of Aghia Varvara, Aghia Varvara, Greece**Introduction:** CAP is an acute illness which can be treated at home or in a hospital depending on its severity and the health status of the patient. A project to monitor the incidence of CAP in the primary care setting in rural Crete by utilising efforts and capacity of both, primary and secondary health services was designed and implemented.**Methods:** Patients aged 50 years or above, residents of areas within the responsibility of Health Centers in the county of Heraklion with signs and/or symptoms of a lower respiratory tract infection and a chest x-ray confirming CAP who visited the primary care services in this rural setting were eligible. Hospitalized patients were recorded by pulmonologists.**Results:** Overall, 124 CAP cases were recorded, 40 (32.3%) of which were hospitalized. Multivariate logistic regression indicated that age (OR 1.09; 95% CI: 1.021-1.156 years), presence of 2 or more chronic illnesses (OR 8.57; 95% CI: 2.70-27.22), a central heating system in the house (OR 4.54; 95% CI: 1.42-14.59) and the number of roommates (OR 0.54; 95% CI: 0.33-0.90) were found to be associated with hospitalization. Conditional logistic regression for patients 65 years and above indicated that pneumococcal vaccination was also associated with a reduced probability of hospitalization (OR 2.49; 95% CI: 1.004-6.168).**Conclusion:** This study revealed that older, non-vaccinated patients with comorbidities and lived on their own were at greater risk for hospitalization due to CAP. The results of this observational study may have a prognostic value to GPs who serve rural and isolated areas.

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1527

**The Perceptions of shared medical appointments among health care workers at Parkland hospital's community oriented primary care clinics**N. Chandra Murthy<sup>1</sup>, T. Powell<sup>2</sup>, J. Scott-Harris<sup>1</sup>, N. Gimpel<sup>1</sup><sup>1</sup> Department of Family and Community Medicine, University of Texas Southwestern Medical Center at Dallas, Dallas, United States; <sup>2</sup> Cancer Control and Population Sciences, U.S. National Institutes of Health – National Cancer Institute, Bethesda, United States**Objective:** Shared Medical Appointments (SMAs) are a novel way of delivering health care to patients in a group setting. Past research regarding SMA quality improvement has been patient focused. The literature shows that patients perceive SMAs favorably and that patients experience better health outcomes through the SMA format. There is a paucity in the literature regarding providers' perceptions regarding SMA efficacy and implementation, and whether or not provider perceptions could affect care. The specific aims of this study were to determine the SMA team's perceptions on 1) the quality of care delivered through an SMA, and 2) the feasibility of implementing an SMA in a primary care setting.**Methods:** This cross-sectional study recruited 72 participants who worked at the eight Parkland Community Oriented Primary Care (COPC) clinics, which serve mostly low-income populations throughout the Dallas metropolitan area. All participants filled out a survey that asked for their perceptions regarding SMA job training, SMA facilitation, SMA implementation, and SMA quality of care.**Results:** Quantitative and qualitative analyses were conducted. We found that most SMA team members harbored positive perceptions regarding SMA format and structure, and SMA quality of care. SMA protocols and curricula were not standardized, and language assistants were most likely to be not trained for their roles.**Conclusions:** Non-standardized protocols/curricula and lack of training for language assistants could affect the quality of care being delivered to patients. SMAs need to have standardized protocols/curricula, and all SMA team members need to have a refresher training course for their job roles.

Disclosure: No conflict of interest declared

1560

**Measuring the reach of primary care-behavioral health integration innovations: challenges and solutions**D. Fernald<sup>1</sup>, B. Balasubramanian<sup>2</sup>, D. Cohen<sup>3</sup>, M. Cifuentes<sup>1</sup><sup>1</sup> Department of Family Medicine, University of Colorado School of Medicine, Aurora, United States; <sup>2</sup> Division of Epidemiology, Human Genetics, & Environmental Science, University of Texas School of Public Health, Dallas, United States; <sup>3</sup> Department of Family Medicine, Oregon Health & Science University, Portland, United States

**Objective:** To describe challenges and strategies to capture meaningful data on the reach of primary care integrated care interventions. Implementation science and comprehensive evaluation frameworks highlight the value of calculating reach. Reach is the absolute number, proportion, and representativeness of individuals who are willing to participate in an intervention. Capturing reach data across diverse primary care interventions presents logistical and technical challenges.

**Methods:** Eleven U.S. ambulatory primary care and mental health sites in the Advancing Care Together (ACT) initiative, focused on integrating health care for people with emotional and behavioral problems within patient-centered medical homes. Following a trial-run period, a standardized, but tailored, data reporting tool was developed for each site. Evaluators and program office staff worked collaboratively with intervention sites to discuss trial-run reach data and to clarify target populations, behavioral health screening procedures, and reach tracking and reporting strategies. Formal reach data collection is ongoing during the intervention phase.

**Results:** The reach trial-run yielded provisional reach data on target population patients screened in 11 sites. Lack of clear roles, electronic medical record limitations, loosely defined interventions, and delays in reporting were notable challenges to reporting reach. Reporting tools were refined for formal reach tracking and reporting.

**Conclusions:** A multi-step process involving a trial-run period helped projects and evaluators clarify key components of each innovation, including target populations and screening methods. Common barriers to capturing important reach data benefit from a multi-step, planned, collaborative approach to accurately estimate the reach of innovations integrating physical and mental health services.

Disclosure: No conflict of interest declared

**2.14. INFORMATION AND TECHNOLOGY**

328

**Certification process for electronic health record in primary health care**

G. Gusso

General Practice, University of São Paulo, São Paulo, Brazil

**Introduction:** Electronic Health Record (EHR) is an important issue in Primary Health Care (PHC) nowadays. The technique used when a family doctor is seeing a patient is completely different from a specialist in a hospital. The same logic should be used to access EHR. Although certification process happens in many countries few articles are found in Pub Med.

**Design:** Non systematic review of certification experience. PHC leaders from Portugal, Denmark and Belgium sent the experiences in files not published in journals. The author studied the experiences and based on books and all sort of texts since Lawrence Weed's publications developed a proposal of architecture for one adequate EHR. The frame was taken from the Portuguese experience. This proposal involved just the professional aspects and not the interoperability.

**Results:** The place where the information is sets one axe with units as problem list and allergies. Each unit has variables as type of information and who can fill it. The professionals or how the information will be feed sets the second axe with, for example, the following frames: information fed through SOAP and coded by ICPC and ICD or information fed in not structured frame classified through ICNP. The information must be feed in an integrated manner horizontally and not vertically through programs as hypertension or tuberculosis. This vertically information must emerge through reports.

**Conclusion:** Certifications documents systemizing the aim of PHC professionals are crucial to avoid a colonization from information technology specialist that often bring their experiences with hospitals.

Disclosure: No conflict of interest declared

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**A new website for the Wonca International Classification Committee [www.ph3c.org](http://www.ph3c.org)**M. Jamouille<sup>1</sup>, G. Gusso<sup>2</sup>, S. Juncosa<sup>2</sup>, E. Falkø<sup>3</sup>, N. Buono<sup>3</sup>, Ch. Simon<sup>4</sup><sup>1</sup> General Practitioner, Researcher in Primary Care, Charleroi, Belgium; <sup>2</sup> Primary Care unit, Head, University of Sao Paulo, Sao Paulo, Brazil; <sup>3</sup> General practitioner, Danish Quality Unit of General Practice, Odense, Denmark; <sup>4</sup> Computer scientist, Silk Informatique, Angers, France

The WICC, Wonca International Classification Committee, has produced several tools since 1972. Now in its 40<sup>th</sup> the WICC has launched a new website for internal communication and diffusion of the methodology and tools it has developed along the years. This has been possible thanks to an unrestricted grant from the Sociedade Brasileira de Medicina de Família e Comunidade (<http://www.sbmfc.org.br>). The website technical editor is the French society Silk Informatique (<http://www.silk-info.com>) which is also the voluntary editor of [www.cispclub.org](http://www.cispclub.org), the French speaking ICPC fan club.

The name of the website is an appeal to collaboration to other Wonca groups which are involved in methodological issues or are using WICC tools. The Primary Health Care Classification Consortium of which the initials are PHC3 has been launched to support the missions of the WICC.

The website main parts are dedicated to the International Classification of Primary Care (ICPC), its aim, story, use, training sites, links, bibliography and corresponding fan clubs and research centers. The other tools developed by the WICC such as Dusoi Wonca, COOP Wonca charts and Wonca Dictionary of General/Family Practice are also available as well as a rubric about Quaternary Prevention. The ICPC is regularly updated and information is available through reference publications or linked to the classification domain.

A reserved access of the website, available only for the 50 WICC members and observers, is used as repository for the working documents and as sharing point to prepare and develop the annual WICC meetings.

Disclosure: No conflict of interest declared

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**“Learning the coding process”; ICPC minded Internet based e-learning program for Belgian GPs**V. Belfontaine<sup>1</sup>, L. Vargas<sup>2</sup>, C. Leyns<sup>3</sup>, D. Schrans<sup>3</sup>, M. Jamouille<sup>4</sup>, J. De Maeseneer<sup>3</sup>, M. Roland<sup>1</sup><sup>1</sup> Department of General Practice, Free University of Brussels (ULB), Brussels, Belgium; <sup>2</sup> Webmaster, Free lance, Brussels, Belgium; <sup>3</sup> Department of General Practice, Ghent University, Ghent, Belgium; <sup>4</sup> General practitioner, Researcher in Primary Care, Charleroi, Belgium

The two Belgian societies of GP/FM, DOMUS MEDICA and SSMG, funded by the National Belgian insurer (INAMI), are running a common bilingual e-learning SOAP and ICPC minded program to teach to the Belgian GPs the basis of the coding process in EMRs. The program is supervised by the department of GP/FM of Ghent University (Ugent) and of the Free University of Brussels (ULB)

An interactive e-learning program has been designed by a team of four GPs and a computer scientist. The program runs on a free open source internet platform (DOKEOS) and is a mix of theoretical approach, cases description, interactive coding on written vignettes and screen plays by hired actors.

The program contains 7 parts; Introduction/ From chaos to structure (EMR architecture) / From clinics to electronics (From written records to electronic ones) / A Common language (Terminological issues) / Information network (Belgian e-health) / Evaluation / Bibliography

Six screen plays by actors and doctors are included together with interactive progressive coding exercises after a theoretical description of SOAP, episode and ICPC related knowledge.

The program is currently bilingual (French and Dutch) but the text files will be available on a Creative Commons license and the DOKEOS platform is easy to manage. This opens the way to a multilingual ICPC minded international e-learning program. Contact person; [vinciane.belfontaine@hotmail.com](mailto:vinciane.belfontaine@hotmail.com)

Disclosure: No conflict of interest declared

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**Control of the Cutaneous lesion with the new technology.**

A.M. Pedro Pijoan<sup>1</sup>, L. Santiago Fernández<sup>1</sup>, E. García Muñoz<sup>1</sup>, K. Ibrahim Abdullah<sup>1</sup>, S. Perez Zamora<sup>1</sup>, E. Gonzalez Platas<sup>1</sup>, B. Ribas Lopez<sup>1</sup>, E. Bello<sup>1</sup>, M. Martínez Pascual<sup>1</sup>, M. Sarmiento Cruz<sup>2</sup>

<sup>1</sup> ABS Gaudí, Consorci Sanitari Integral, Barcelona, Spain; <sup>2</sup> CS Son Gotleu, Ibsalut, Palma de Mallorca, Spain

**Introduction:** Today our population have a mobile with new technologies and new applications. The new way to communicate is with free messages. We present the development of a skin lesion remotely controlled by a nurse, a burn injury.

The patient had fingers burned of the left hand with a "paella". The first contact was a photo as he was in the distance. We decided to transfer the patient to the health center to debride and perform first aid. Lesion located around nails with large ampoules.

Patient's work could not assist to the health center appointments so he was taught to perform cures. Was agreed monitoring obtained through new technologies, via mobile. (With covenant confidential personal mobile)

Followed by photos sending them to the nurse. That was the way to show the evolution.

1. Cleaning with iodine and a cream repitelizant. Cover with gauze. Recommended one week.

2. Cleaning with iodine. And carefully cleaning of the lesion and not exposed to the sun.

3. Reappearance new small ampoule in the Little finger so start again same procedure. One week.

4. Do not cover the lesion, without sun exposure

**Conclusion:** New technology can be a new and cost-effective way for medicine. We have to be careful with the use of personal data of patients and know how to contact. But if the patient understands what is involved and their role, in this case, to the improvement of their lesions may be the way to prevent health center appointments and better clinical control.

Disclosure: No conflict of interest declared

918

**Doctors opinions of patients´ on-line access to their electronic medical records**

T. Alander

Uppsala University, DOME project, Uppsala, Sweden

Internet and electronic medical records make it possible for patients to participate in their medical care. E-mailing, social media and web sites world wide provide direct health information. There has been a fast development in this field during the recent years. In Sweden, Uppsala county council has been developing a patient portal for online E-health services since year 1997. A single family practice started with the portal and the system has been expanded to all 340 000 citizens in November 2012. The patient portal now gives the patients opportunities to book an appointment time, choose a house physician, see prescriptions of medicines and high-cost protection. There is also a presentation from the patient records of appointments, doctor´s notes, diagnoses, prescribed medicines, laboratory results, referrals, idiosyncrasies and personal data.

In december 2012 a web based questionnaire was sent to all registered medical doctors in primary and secondary care in Uppsala county, Sweden. Questions were asked about the physicians use of email, social media, opinions of patient participation, worries about patient access and overall experiences so far.

Disclosure: No conflict of interest declared

1064

**Performance evaluation program for family health strategy teams of a Brazilian city**

M. G. Z. Wieliczka<sup>1</sup>, C. Khawali<sup>1</sup>, R. J. Kitamura<sup>1</sup>, P. F. C. Pimentel<sup>1</sup>, M. S. Ribeiro<sup>1</sup>, F. P. Carvalho<sup>1</sup>, G. O. Barreto<sup>1</sup>, C. L. L. Abicalaffe<sup>2</sup>, A. S. Muller<sup>2</sup>, A.T.B. Guimaraes<sup>2</sup>  
<sup>1</sup> HEALTH CARE DEPARTMENT, SOCIAL ORGANIZATION – CONGREGATION ASSOCIATION OF SANTA CATARINA, SAO PAULO, Brazil; <sup>2</sup> MEDICAL INTELLIGENCE, 2iM, CURITIBA, Brazil

**Objective:** To demonstrate the methodology of a performance evaluation program for Family Health Strategy Teams of a Brazilian city.

**Methods:** We used the model GPS developed by 2iM S/A. A multidisciplinary team used evidence-based indicators and targets, grouped into four domains: effectiveness of care, technical efficiency, structure, and client satisfaction. As an illustration of the analysis, the performance in the Effectiveness of Care domain was analyzed in three hierarchies: among 5 teams of a Healthcare Unit (HU), among three HU (HU-A, HU-B, HU-C), and over a period of 10 months regardless of HU (Feb/2012 to Nov/2012). These data were transformed into a score of performance variation, which was compared to the midpoint of the first month of program evaluation (Jan/2012). The means were compared by One-way-ANOVA with *post-hoc-test* Tukey ( $\alpha=0.05$ ).

**Results:** In the HU-B, no statistical differences among the teams ( $p>0.05$ ), and on average there was an increase of 3% in their performance. When comparing the HU, there were no statistical differences, all of them showed an increase in their average performance of 4% ( $p>0.05$ ). However, when performed a temporal analysis, there was a tendency of increasing the Effectiveness of Care domain over the period ( $p<0.05$ ), with statistically significant differences from the months of October (13%) and November (10%). Besides that, there were also a lot of positive externalities related to quality improvement perceived by the teams.

**Conclusion:** The model implemented is valid for performance evaluation of the service in order to guide actions that lead to continuous quality improvement.

Disclosure: No conflict of interest declared

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**Integration of computerized health systems of a Brazilian city**

M.G. Wieliczka, C. Fabiano, H. Silva, C. Khawali, R. Kitamura, P. Capelossi  
social health organization, associação congregação de santa catarina, SAO PAULO, Brazil

**Objective:** To demonstrate the methodology of implementation of computerized systems for managing health services of a social health organization, integrated with the official public health information system of a Brazilian city.

**Methods:** For the integration of computerized health systems, it is being uses the webservice solution focused on the integration of systems and on communication between applications. We selected four types of different health services as a pilot project, providing integration between a Basic Health Unit, a Basic Health Unit offering Family Health Program, a Specialty Outpatient and Medical Outpatient services in a region with over half a million inhabitants. The system is oriented to provide an integrated management of the electronic clinical process, able to ensure the management of health services based on workflows and patient centered.

**Results:** Integration on the modules of Registration, Reduced Attendance and Scheduled Patients with the computerized system of the city.

**Conclusion:** The model is valid for integration between different applications and meets real time information of all levels in a secure updated form supporting administrative and care teams in assisting the user of health services and thereby strengthening the local health system.

Disclosure: No conflict of interest declared

1132

**The role of family physician in genomic counseling in the genomic era**

K.H. Lee

*Biomedical Informatics, Seoul National University Collage of Medicine, Seoul, Korea*

**Objective:** The cost of next generation sequencing(NGS) technology has been decreasing sharply. Within a few years, the cost would be expected less than 100\$ for each person's whole genome sequencing. And also there are many companies which deliver the genetic test result or report of specific risk prediction for person's own SNP directly to patients themselves. Some medical experts group concerned about the immature genomic information might mislead the patients and interfere the physician's clinical decision besides the doctor-patient relationship. Moreover the NGS differ from the old fashioned genetic testing focused on rare mendelian inheritance which is mainly descriptive and estimate the complex disease risk and nonspecific phenotype.

**Methods:** To define the family physician's role in the genomic era, we reviewed the related literatures. Searching keywords are „genomic“, „genetic“, „next-generation sequencing“, „counseling“, „physician“, „primary care“. There are more than 350 articles related with these keywords. After the manual curation, we finally reviewed 28 articles.

**Results:** After reviewing 28 articles, there still was not a strong recommendation. But there were increasing demands of patients even healthy person. and family physician centered study was scarce.

**Conclusions:** In the genomic era, there would be three major partners in the genomic health, the patients, the company and the physician. The classic role of genetic counselor would be facing the great challenge. And the family physician must be prepared for the complex and delicate counterpart in the patient and whole family's genomic decision.

Disclosure: No conflict of interest declared

1174

**The world's first trial of a 3G telecommunication network mounted to the blood pressure manometers in Fukushima**K. Harasawa<sup>1,2,3</sup>, Y. Kanazawa<sup>4</sup>, Y. Oikawa<sup>5</sup>, T. Okada<sup>6</sup>, H. Komatsu<sup>7</sup>

<sup>1</sup> *General Practice and Home Care Medicine, Minamisoma Municipal General Hospital, Minamisoma, Japan;* <sup>2</sup> *Family Medicine, Kameda Medical Center, Kamogawa, Japan;* <sup>3</sup> *Family Medicine, Kameda Family Clinic Tateyama, Tateyama, Japan;* <sup>4</sup> *Director, Surgery, Minamisoma Municipal General Hospital, Minamisoma, Japan;* <sup>5</sup> *Assistant Director, Neurosurgery, Minamisoma Municipal General Hospital, Minamisoma, Japan;* <sup>6</sup> *Director, Family Medicine, Kameda Family Clinic Tateyama, Tateyama, Japan;* <sup>7</sup> *Assistant Director, Kameda Medical Center, Kamogawa, Japan*

**Objective:** The tumani attack to the Fukushima Daiich Nuclear Power Plant posed the hydrogen explosion, and people were forced to evacuate. Since November 2011, we have been stationed near the refugee camp, providing health check-ups and essential health services such as vaccinations, whole body counter (internal exposure) exams, and visiting practice. One of the most tragic aspects of the disaster is the break-up of communities and families because of the fear of radiation exposure. The proportion of those aged 65 years or older has increased from 25.9% to 32.2%. Many young families moved out of the city, which resulted in a sudden increase in the number of frail elderly people living alone in temporary housing. A sort of innovation in the healthcare system was desired.

**Methods:** As the home blood pressure is known to be important in managing hypertension, we started the world's first trial of a 3G telecommunication network mounted to the blood pressure manometers in the city. This unique measure is to ensure adequate home blood pressure measurements, and we added a safety confirmation service which gives us direct information on the elderly everyday.

**Results:** The triage of the patient who needs the early intervention was essential to deliver the staff in this kind of poor human resource settings.

**Conclusions:** The accidental increase in the frail elderly in Minamisoma may represent the near future of Japan as a leading country of aging society, and global aging in the next 30 years.

Disclosure: No conflict of interest declared

1402

**Quaternary prevention in pap test in a health centre**B. Brunelli<sup>1</sup>, W. S. Brunelli<sup>2</sup><sup>1</sup> UBS Luar do Sertão, UNASP, São Paulo, Brazil; <sup>2</sup> Centro de Parto, Hospital Municipal do Campo Limpo, São Paulo, Brazil

The Pap Test routine collection represents an advance in the control of cervix carcinoma. São Paulo proposes and achieves the annual target of 20% coverage, but its cross-sectional data system difficult to know who participates and their periodicity. This paper's objective is to measure pap test collections in a Health Centre of São Paulo, Brazil, during 1 year, distributing by age and comparing the frequency in search for patterns.

2032 tests were collected in a female population of 8897 women between 15 and 88 years, a coverage of 22.8%. 5.31% were between 15-19 years (A group), 47.98% among 20-39 (B), 35.62% among 40-59 (C) and 11.09%, 60 or more (D).

63.58% was collected in the previous year, 18.84% for at least 3 years, 8.02% for longer and 5.85% never. Noteworthy is the low proportion of those who collected in the last 3 years being repeated in the three major age groups: 20.41% (B) 17.54% (C) and 23.56% (D).

The current guidance is to promote collection in 3 in 3 years for those with 3 consecutive negative tests, while only 12.6% requires repetition earlier.

The data are not conclusive, but allows ask if the goal is not achieved because of hyper users feeding the database, which represents high risk to unnecessary interventions.

Although the healthcare teams carries out an active search of noncompliant and promotes education for hyper users, it is urgent a longitudinal system that facilitates prevention work, including the quaternary.

Disclosure: No conflict of interest declared

1425

**Community demand diagnosis in a area of Sao Paulo**B. Brunelli<sup>1</sup>, W.S. Brunelli<sup>2</sup><sup>1</sup> UBS Luar do Sertão, UNASP, São Paulo, Brazil; <sup>2</sup> Centro de Parto, Hospital Municipal do Campo Limpo, São Paulo, Brazil

Although the International Classification of Diseases (ICD) is the most used, to many researchers its applicability in primary health care is controversial (PHC), since there are common complaints which do not fit in any of its chapters.

Thus, a system was developed to count it: the International Classification of Primary Care (ICPC). It makes possible the construction of a community demand diagnosis, a task essential to develop preventive vision and manage resources in order to ensure fairness.

This study sought to build a community demand diagnosis: the main reasons for medical consultation and the main interventions proposed under the ICPC in an area of São Paulo for a month.

The average age of users was 34.57 years. 370 consultations were held, with an average of 1.41 motives and 2.30 intervention proposals for consultation. 87.03% had their problems solved at the level of PHC, with only 12.97% destined. Physiotherapy was the main destination with 12.50% of the total, followed by gynecology, general surgery and emergency clinics with 10.42% each.

158 reasons for consultation were found, 15 were most prevalent (50.29% of total). Hypertension was the most prevalent (10.86%), followed by without disease (8%) and pregnancy (4.95%).

Through the diagnostic demand the healthcare team can better meet the needs of users, having data to guide their actions in the search for the proper management of resources.

Disclosure: No conflict of interest declared



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**The attraction of Social Media – Vasco da Gama Movement and EURIPA**R. Gómez Bravo<sup>1</sup>, C. Lygidakis<sup>2</sup>, S. Rigon<sup>2</sup>, J. Banque<sup>3</sup>, T. Pekez-Pavlisko<sup>4</sup><sup>1</sup> Vasco da Gama Movement, SEMFYC, Spain, Spain; <sup>2</sup> Vasco da Gama Movement, Vasco da Gama Movement, Bologna, Italy; <sup>3</sup> EURIPA, SEMFYC, Cataluña, Spain; <sup>4</sup> EURIPA, EURIPA, Croatia, Croatia

**Objective:** To analyse the importance, impact and use of Social Media between colleagues and other users.

**Methods:** The confluence of social media and medicine has many benefits, but Family Physicians are still not taking advantage of the opportunity to reach their patients on the online community that has formed around social media websites like Facebook, Twitter, LinkedIn and YouTube to propel medical interests forward.

We will analyse the impact of the use of this social media tools in the European rural community through its network since one year ago when EURIPA created it and we will compare it with other similar networking. We will also discuss about the three social media obstacles that they face normally underlying the opportunities that each one present: risk, education and time, trying to find out the benefits outweigh the costs.

**Results:** Social media and technology are providing a new way of Communications between professionals, professionals and patients, and patients between themselves, P2P. How to use health information technology and how to design these strategies of communication to improve first, communication, health outcomes, health quality and equity is possible but we are dealing with a lack of knowledge in our professional network on how to use these tools for communication, for developing skills, participation and engagement, what are the legal regulations, opportunities and benefits of using them.

**Conclusions:** Social Media has the potential to spread the information, to create a forum between all the health users and we should provide the education for using it.

Disclosure: No conflict of interest declared

1591

**Developing innovative local manikin for undergraduate clinical skills training: intravenous insertion manikin attached to simulated patient**

D. Widyandana

Clinical Skills Laboratory and Dept. of Medical Education, Fac. of Medicine, Gadjah Mada University, Yogyakarta, Indonesia

**Objective:** This study aimed to explore the advantages, disadvantages, and suggestions to improve local intravenous insertion manikin that attached to the lower arm of simulated patient.

**Methods:** Clinical Skills laboratory FM UGM produce low cost and innovative intravenous insertion manikin that easily attached to the lower arm of simulated patient. The manikin was designed to stimulate undergraduate students, not only practice on inserting needle to the vein but also learn how communicate with the patients while performing medical procedure. FM UGM produce prototype of intravenous insertion manikins using silicone, silicone plus oil, and latex to be evaluated by respondents; 30 students, 15 teachers, and 15 simulated patients that randomly invited to review those manikins using survey questionnaire. Data analyzed quantitative using Mann-whitney test and qualitative using „inductive content analysis“.

**Results:** The manikin was highly accepted by the respondents. The best manikin was made by combination between silicone plus oil ( $p < 0.05$ ). Medical students able to practice integrated clinical skills using this manikin combined with simulated patients. However, the manikin need improvement on the skin design and prevention of fluid leakage from the pump and pipe in order to maximize the utility of this equipment.

**Conclusions:** The local intravenous insertion manikin can be used for undergraduate students practicing integrated clinical skills in skills laboratory. However, the manikin should be evaluated and improved regularly to reach optimal results.

Disclosure: No conflict of interest declared

## 2.15. ETHICS AND LAW

70

### Indigenous medical systems and attention to indigenous health subsystem: mapping bioethical conflicts

D. Ramos Henrique, O. Araújo, S. Guimaraes, R.S. de Oliveira Santos  
PUBLIC HEALTH, UNB, BRASILIA, Brazil

This study is part of a project that intends to understand how the indigenous experience conflicts, negotiate and manage therapeutic procedures and other dimensions of social life when they are in the official network of Indian health care in the state of Roraima and the Federal District. The objective of this study is to map and analyze ethnic conflicts involving the care of indigenous peoples in the official health system that are disclosed in the media, to identify defining categories of indigenous peoples who are guided by preconceived ideas.

Therefore, this project is divided into three methodological phases. The first stage involves the reading of literature about the topic, which will result in a literature review of anthropological and healthcare texts dealing with Indigenous health and themes about infanticide. The idea is to see if scientific studies are based on moral issues in the definition of indigenous peoples.

The second phase will target a survey in newspapers written in Boa Vista / RR and Brasília / DF, between the years 2010 and 2012, with news about conflicts in healthcare involving indigenous peoples. The third phase is an interview with people who keep a shelter in Brasilia for Indians and families who allegedly fled from what they call "infanticide threat actions".

Accordingly, it is intended to analyze the speeches of the people involved by mapping the conflicts in indigenous health, in order to have categories that express unequal relations established between indigenous and non-indigenous. And discuss the concept of infanticide and its construction as a form of domination of indigenous peoples.

Disclosure: No conflict of interest declared

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### A case report: Granulomatous spondylitis due to Brucella

A. Parlak<sup>1</sup>, A. Aytekin<sup>2</sup>, S. Develi<sup>3</sup>, U. Aydogan<sup>4</sup>

<sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey

57 years old female patient admitted to our outpatient clinic for fever, loss of appetite, night sweats, weight loss, low back pain lasting about two months and radiating to the leg. On physical examination, her body temperature was 37.2° C, pulse rate was 72 beats / min and limitation of motion of waist and hip joints noticed. There were no pathological findings in the examination of the other systems. In complete blood count hemoglobin value was 11g / dL, white blood cell count was 1100/mm<sup>3</sup> and in peripheral blood smear 65% of the white blood cells were polymorphonuclear leukocytes, 25% of the cells were lymphocytes, 10% of the cells were monocytes. Sedimentation rate was 45 mm/h and CRP value was 40 mg/L (normal range 0-6). In lumbar spine radiograph of the patient; a mass approximately in 45 mm x 30 mm size at the level of L2-L3 observed. In MRI of the patient, hypointense signal changes on T1 weighted sequences, hyperintense signal changes on T2-weighted sequences at the bone marrow of L2 and L3 vertebral bodies and on the post-contrast examination diffuse contrast enhancement detected. Paravertebral abscess formation in 47x33 mm size was observed noticeably on the right paravertebral distance, prevertebral distance, psoas muscles, para-aortic area, extending to epidural space and showing parietal contrast enhancement. Brucella agglutination test was performed to the patient. It was detected positive in 1/640 titer. Blood cultures taken from the patient were negative. The patient was diagnosed as granulomatous spondylitis due to brucella.

Disclosure: No conflict of interest declared

1204

**Doctor! Don't Resuscitate Me! A cross-sectional survey with patients**T. Albayrak<sup>1</sup>, I. Sencan<sup>1</sup>, O. Akca<sup>1</sup>, I.Kasim<sup>1</sup>, P. Doner<sup>2</sup>, R.Kahveci<sup>1</sup>, A.Ozkara<sup>3</sup><sup>1</sup> Family Medicine, Ankara Numune Research and Training Hospital, Ankara, Turkey; <sup>2</sup> Family Medicine, Public Health Center, Kilis, Turkey; <sup>3</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Medical decisions are provided by doctors most of the time in conventional medical (biomedical) model. The patients usually remain out of the decision making process. There is not sufficient research about shared-decision making in our country. Decision making

in critical care conditions is especially important to promote shared decision-making. On the other hand researches on involvement of patients in critical care decision-making are quite limited. The aim of this study is to understand the views and preferences of patients and their first-degree relatives on end-of-life decisions and the factors affecting these preferences. The participation of patients and care givers on decision-making processes will further be explored.

**Methods:** This cross-sectional study is designed by the family medicine department. A survey is conducted with adults who accepted to join the study. Individuals below 20 and above 65 years of ages, health professionals, patients diagnosed with psychiatric disorders, serious life-threatening conditions such as cancer. A questionnaire was prepared which include socio-demographic information, personal and family history, and factors that influence decision-making processes in end-of-life care. We included questions about potential role of family doctors in the processes. Hospital Anxiety and Depression Scale (HADS) and the Templer's Death Anxiety Scale (TDAS) were also applied.

**Results and Conclusion:** This study is still being analyzed. The results are planned to be presented during the conference. The findings are expected to highlight the understanding about roles and expectations of patients regarding end-of-life decisions

Disclosure: No conflict of interest declared

1316

**Taking care of very elderly relatives can be a difficult task**S. Guadilla<sup>1</sup>, M.M. de la Torre Carpenté<sup>2</sup>, S. Sanchez Ramon<sup>3</sup>, R. Lozano Gimón<sup>4</sup>, Y. Valpuesta Martín<sup>5</sup>, C. Fernandez Alonso<sup>6</sup>, M. Zelada<sup>7</sup>, P. Alfonso<sup>6</sup>, J.L Zamorano<sup>1</sup>, M.J Rollán Gómez<sup>2</sup><sup>1</sup> Centro de Salud Plaza del Ejército, Gerencia de Atención Primaria, Valladolid, Spain;<sup>2</sup> Cardiology, Rio Hortega University Hospital, Valladolid, Spain; <sup>3</sup> Emergency, Rio Hortega University Hospital, Valladolid, Spain; <sup>4</sup> Centro de Salud Huerta del Rey, Gerencia de Atención Primaria, Valladolid, Spain; <sup>5</sup> Centro de Salud Medina de Rioseco, Gerencia de Atención Primaria, Valladolid, Spain; <sup>6</sup> Centro de Salud Casa del Barco, Gerencia de Atención Primaria, Valladolid, Spain; <sup>7</sup> Centro de Salud Parquesol, Gerencia de Atención Primaria, Valladolid, Spain

In Spain, rotation among relative's homes is a mechanism of care for some elderly people unable to live by themselves. This way of life generates different problems.

A 100-year-old man lives every other month with each one of his two male sons in different towns, he is a widower. Though he is on low dose aspirin, he has neither history of diseases nor cognitive impairment.

The patient was referred to our health center because of a syncope due to atrial flutter. The medical report of the event does not explain if anticoagulation was considered. When we bring up the issue, the daughter-in-law rejects it without any further consideration and when we propose doing an ECG Holter the family says it is not possible till next month when he comes back. The family does not allow the patient to answer when we question him and they do not ask about his point of view. ECG monitoring showed third grade atrioventricular block and therefore pacemaker implantation was considered.

We want to point out the following problems: patient autonomy was abolished; his family neglected his care regarding medical management. Anticoagulation cannot be rejected just because of his age without any further consideration. If he is not anticoagulated, should we implant a pacemaker?

**Conclusion:** we have to avoid *ageism* when deciding medical management even in the very elderly. Taking care of the elderly is more than sheltering them and it is vital to show respect for their autonomy as long as it is possible.

Disclosure: No conflict of interest declared

## 2.16. ADOLESCENT MEDICINE

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### Who creates sexual behaviour of young people in BiH

E. Alibasic, O. Batic – Mujanovic, A. Beganlic, A. Tulumovic, E. Ramic  
Family medicine, Primary health care-family medicine teaching center Tuzla, Tuzla,  
Bosnia-Herzegovina

**Introduction:** Sexual behavior of young people in BiH is still „forbidden“ topic burdened by many prejudices.

**Objective:** To examine the influential factors in creating opinions about the sexual behavior of young people in BiH.

**Subjects and Methods:** 196 students has been surveyed by anonymous questionnaire in their last year of high school in three predominantly rural municipalities of the northeast Bosnia. The questionnaire contained general questions about sexual behavior that young people acquire from the available formal and informal sources of information.

**Results:** 68% of young people most of the information about sexual behavior had at its disposal and obtained from informal sources (internet, tv) and 32% students the information obtained from the less accessible formal sources (schools, health institutions). 40% of young people openly talks exclusively with friends / peers on issues of sexuality and the consequences of risky sexual behavior. 14% of young people think that the best guides on the issues of sexual life are religious and traditional way of life, 21% of young people thought it was the formal educational system, 22% believe the best guide provides the health system. 43% of young people think it's all the abovementioned.

**Conclusion:** Young people have at their disposal an unlimited source of information in the field of forming attitudes about sexual behavior. Informal sources of information that are usually superficial and totally inaccurate, in significant numbers of cases create patterns of behavior among young people, with negative consequences in the field of reproductive as well as general health of the population.

Disclosure: No conflict of interest declared

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### Serum alanine aminotransferase and adolescents hypertension

V. Calneryte<sup>1</sup>, K. Simanaukas<sup>1</sup>, V. Sapoka<sup>1</sup>, V. Kasiulevicius<sup>1</sup>, K. Ryliskiene<sup>1</sup>,  
R. Matuzeviciene<sup>1</sup>, A. Jankauskiene<sup>1</sup>, T. Rekasius<sup>2</sup>

<sup>1</sup> Faculty of Medicine, Vilnius University, Vilnius, Lithuania; <sup>2</sup> Department of Mathematical Statistics, Gediminas Technical University, Vilnius, Lithuania

**Objective:** Hypertension is one of the main cause of cardiovascular disease and reason of early death in the world. Growing epidemiology data supporting a correlation between blood pressure at childhood and adolescence with the incidence of hypertension at adulthood. Serum alanine aminotransferase (ALT) is an established cardiovascular risk factor that is not routinely assessed in clinical practice. The aim of our cross – sectional study was to identify cardiovascular markers for adolescents with arterial hypertension and to compare with cardiovascular disease risk factor – high-sensitivity C-reactive protein (hs-CRP).

**Methods:** The study was performed in two primary health care centers and pediatric care center in Vilnius in 2008-2011. 105 adolescents (age 17-18) were examined: 75 (78.75%) normotensive adolescents (NA) and 30 (21.25%) hypertensive adolescents (HA). Arterial blood pressure was assessed by the WHO recommendation and according to Lithuanian children's blood pressure rate made by prof. J. Tutkuviene. Hs-CRP and ALT were measured in the blood. Statistical analysis was made by „SPSS 17.0“ program.

**Results:** HA had significantly greater values of ALT concentration ( $21.06 \pm 11.265 \mu$  vs.  $15.81 \pm 5.947 \mu$ ) ( $p=0.014$ ) compared with NA. Statistically significant difference between groups was not found, when compared hs-CRP (HA  $0.902 \pm 1.2923 \mu$  vs. NA  $0.721 \pm 1.3618 \mu$ ) ( $p=0.112$ ). There was no correlation between hs-CRP and ALT (Spearman's correlation coefficient (r) HA  $r=0.224$   $p=0.202$  and NA  $r=0.123$   $p=0.295$ ) in both groups.

**Conclusions:** ALT is associated with arterial hypertension among 17-18 years adolescents and can be used to determine the risk of arterial hypertension.

Disclosure: No conflict of interest declared

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**Evaluation of an integrated school health promotion programme in a high school in the second largest city of Hungary**

Z. Erdélyi, R. Ádány, K. Kósa

*Department of Preventive Medicine, Faculty of Public Health, University of Debrecen, Debrecen, Hungary*

**Objective:** A governmental tender to help create schools with integrated and sustained program to improve the school's capacity for health promotion was won by one of the high schools of Debrecen. The programme aimed at improving nutrition, everyday physical education, health education in the curriculum, and personality centered education by training teachers.

**Methods:** In order to evaluate the program, an online questionnaire was filled by targeting all students of the school before and after the intervention. The questionnaire included items and scales taken from the questionnaire of the Health Behaviour in School-aged Children on demographic data, general and mental health, health behaviour and the students' feelings about the school, their teachers and classmates. Two sample t-test was used for analysing continuous variables, and chi-square test for categorical variables.

**Results:** Response rate of the baseline survey was 87.6% (N=747) with a mean age of 16.7 years±0.93, including 60% females. Response rate of the final survey was 78.8% (N=627); mean age was 16.7 years±0.91 including 64% females. Comparing the final survey to the baseline, a higher proportion (79% vs. 83%) of girls had excellent or good (p=0.046) subjective health, but 44% vs. 51% students didn't know what they could do to improve their health status (p=0.009). By the end, students participated in more P.E classes (p<0.001) compared to the baseline survey. Satisfaction with teachers (boys: p=0.344; girls: p=0.175) and classmates (p<0.001) decreased by time of the final evaluation.

**Conclusions:** Whether these changes are sustained will be seen during the further follow up.

Disclosure: No conflict of interest declared

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**Adolescent gynecomastia**I. Martins<sup>1</sup>, R. Costa<sup>2</sup>*<sup>1</sup> USF Lagoa, ULSM, Matosinhos, Oporto, Portugal; <sup>2</sup> USF S.Félix da Marinha, ACES Espinho/Gaia, Vila Nova de Gaia, Portugal*

**Objective.** Review the clinical approach of gynecomastia in the adolescent at the Primary Health Care and identify criteria for referral to Secondary Health Care.

**Methods.** Literature search for articles published since January 2000 until December 2012, in English, Portuguese and Spanish, with the MeSH terms *adolescent* and *gynecomastia*, at Pubmed/MedLine database, Cochrane Library and Index of Portuguese Medical Journals, as well as search of bibliographic references of the selected articles.

**Results.** In adolescence the gynecomastia rarely represents a pathological process. The main differential diagnosis of gynecomastia is the pseudogynecomastia, which is the presence of adipose tissue beneath the nipple. The use of drugs or illegal substances is a causal factor to exclude in an adolescent with gynecomastia. Other possible causes are: primary or secondary hypogonadism, thyroid dysfunction, liver dysfunction, testicular or adrenal neoplasms. A careful examination of the breast and testicles is the key in addressing these patients. In most cases additional studies for diagnosis are unnecessary. However, faced with a clinical history or objective examination suggestive of an underlying pathology, a subsequent study becomes necessary. In cases of gynecomastia with rapid progression, diameter greater than 4cm, galactorrhea, hematic nipple discharge, and nipple or skin retraction, referral to Secondary Health care is mandatory.

**Conclusion.** A spontaneous regression after 18-24 months is the expected development. The adolescent should be reassured and monitored by the doctor to document this regression. When an underlying pathology is suspected, the patient must be referred to a specialized hospital for treatment of the disease.

Disclosure: No conflict of interest declared

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**Frequency of scoliosis in children who are active in sport**

S. Milutinovic Matic

*General practice, „Dom zdravlja“ Banja Luka, Banja Luka, Bosnia-Herzegovina*

**Objective:** Research was to determine the frequency of scoliosis at children who participate in sports, and whether or not the sport is helping in preservation of build and function of the spine.

**Respondents and methods :**The study was conducted within a systematic review of children. Children,who attend the seventh and ninth grade,were examined in the period from 13.03 to 20.03 in 2012. 103 boys and 93 girls were examined. The criterion was to be active in some sport more than 1.year and that they are still active in that or some other sport. The diagnosis was made on anamnesis of clinical examination.

**Results :**Of the 103 examined boys, 64 of them that are active in sport and 41 of them,scoliosis is not verified. 39 are not active in sport, and at 21 children scoliosis is not verified. 47 girls are active in sport, and 25 does not have scoliosis. 46 girls are not active in sport but scoliosis is not visible only in 10 of them.

**Conclusion:** There is statistically significant difference in the representation of scoliosis in children who are active in sport and who are not. Benefits that they have was achieved thanks to the improvement of the functional status of the spine and thanks to reduced back pain.We should also think about excessive physical exertion at children who want to train and about the benefits of healthy habits in future.

Disclosure: No conflict of interest declared

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**The individual characteristics of the victims of school bullying**A. Bajraktarević<sup>1</sup>, N. Pranjić<sup>2</sup>, E. Ramić<sup>1</sup>, E. Karić<sup>1</sup>, A. Delić<sup>1</sup>

<sup>1</sup> 1Department of Family medicine, Health Care Centre Tuzla, Bosnia and Herzegovina, Tuzla, Bosnia-Herzegovina; <sup>2</sup> 2Department of Public Health, Tuzla University School of Medicine, Tuzla, Bosnia and Herzegovina, Tuzla, Bosnia-Herzegovina

**Objective:** A school bullying is defined as aggressive behavior, in which consistently display antisocial behavior, with the intention of harming the less dominant individual. Confirm the frequency and the level of exposition to harassment of secondary school adolescents aged 17 in Tuzla Canton; and to investigate individual characteristics of victims who suffered school harassment.

**Methods:** The sample was consisted of 290 students of third grade in high schools in the City of Tuzla. Elected method of the research was the survey with interviewee's self-answers to the questions asked in the Questionnaire on bullying.

**Results:** The frequency of peer bullying was from 20 to 25%. Most frequent types of the bullying behavior were: teasing (50%), bad names calling (48%), bad stories and gossip (48%). Negative health effects of exposure to bullying behavior among victims were: loss of self esteem and depression (13%), loss of confidence (13%), feeling of anger and being frustrated annoyed (12%), being hopeless about the future (12%), alcohol drinking (7%), cigarette smoking (4%) and suicidal ideation (4%). Bullying causes discomfort in a victim, such as headaches, pounding of the heart, fear, loss of concentration, and most important depression. The main predictor for school peer bullying was poverty of victims.

**Conclusions:** School bullying victims suffered various health disorders. Stable family surrounding, content relationship with a father and mother, positive climate of school's environment and a good relationship with professors, protects an adolescent from peer harassment.

**Key words:** bullying, personality characteristics, victims of school bullying.

Disclosure: No conflict of interest declared

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**What is the degree of association between problematic substance use and sexual risk behaviors in our teens?**

C. Abarca, J. Arias, M. Galarce, F. Poblete, O. Padilla  
*Family Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile*

According to the sixth national survey of Youth, by 2009 the population between 15 and 19 years in our country corresponded to 8.7% of the total population, expected for the year 2015 with more young people in the history of Chile. The leading causes of illness and risk of this age group are linked to behaviors such as unprotected sexual activity, drug use, alcohol and smoking.

**Objective:** To determine the degree of association between screening positive for problematic use of substances (alcohol and drugs) and risky sexual behaviors in adolescents health of Puente Alto public schools.

**Methods:** Analytical, cross, applied the test screening of problematic alcohol and substance CRAFFT, validated nationally and internationally for use in teens special. To measure sexual risk behaviors addressed ECRA scale and family vulnerability through SALUFAM screening test. **Results:** We calculated a sample size of needed 320 teenagers between 15 and 19 years, from three public high schools in the district of Puente Alto, who have applied the tools discussed in a single survey. Evidenciación result is a (+) in the test CRAFFT was associated sexual risk behaviors such as sexual contact without condom use (OR 2.5 95% CI 2.6-5.7) and two or more sexual partners in the last 6 months (OR 4.5 95% CI 2.8-27.1). Also, adolescents with screening (+) for problematic substance use are associated with increased household vulnerability.

**Conclusions:** The identification of a given risk behavior screening opportunity to subdue others. Enfanzar should co-intervention in adolescent health, due to the high association presenting their risk behaviors.

Disclosure: No conflict of interest declared

1708

**Reproductive health in adolescence: communication, family functionality and preventive behavior**

H. Samartine Junior, M.M. de C. Graciano, V. C. Marcos, V.C. do Lago  
*Public Health, Universidade José do Rosário Vellano – UNIFENAS, Alfenas, Brazil*

**Objective:** Aiming to scale the supply and effectiveness of family planning into a city of Minas Gerais state in Brazil, correlating the same sexual behavior of adolescents, and the latter to social variables, access to information and functionality of the family, we performed a cross-sectional study with a random sample of adolescents, enrolled in public schools in the municipality.

**Methods:** Data collection was conducted through a structured questionnaire, addressing only females between 10-19 years old and univariate and bivariate analysis in Epi Info version 3.5.

**Results:** 54.3% of young people have information about sexuality and contraception in schools, 37.4% participated in sexual educational activities, 54.6% reported interfamilial dialogue. Condom is the best-known method (72%), followed by oral contraceptives (52.6%). 33.8% already had sexual intercourse and 71.2% know that the Public Health Program provides free contraceptives. Of those who initiated sexual life, 55.7% searched medical attention. Shame is the most frequent reason (10.5%) for not looking. Also, detected a significant association between the functionality of the family, social class, level of information and use of contraceptives.

**Conclusions:** The family APGAR proved predictor of sexual and reproductive behavior. Communication within the family is associated with safe behavior and communication between sexual partners reduces risk of unintended pregnancy, as well as the network of local health services lacks programs targeted to this audience, even reliable data on the clientele.

Disclosure: No conflict of interest declared

1747

**Sex Doctors – A playful approach on sexuality**

L. Reis, J. Pedroso, D. Hohl, I. Carneiro, A. Queiroz, S. Batista

*Departemente of Health Public, School Medicine of University Federal of Goias, Goiânia, Brazil*

**Objectives:** The project “Sex doctors” aims to promote discussion and orientation about the “sexuality” thematic with students, between 10 and 19 years, belonging from a low income resources region.

**Methodology:** Were performed 3 meetings using a participative-active methodology about sexuality. At the first meeting, interactive stands was made, presenting thematics related to the sexuality project. In these, the students were able to participate on the activities and clear your doubts. At the second and the third meetings, was devolved theatre-forum plays focused on the postponed subthematics: “Adolescent pregnancy” and “STD’s”. This theatre technic, created by Augusto Boal, propose to present to the crowd a station that contains a conflict, and the crowd be invited to solve this problem along to the actors, participating in the stage. At the last meeting, was made an educative gymkhana witch evaluated the students on their use on the project thematics devolved.

**Results:** The avaliation showed the assimilation of the contend proposed. The evolution related on the participation of the students was positive, because they turned gradually more participatory. The project served as a stimulus for the school teachers who considerer themselves incapable to work with the thematic “sexuality” on the class ambient.

**Conclusion:** The discussion about the sexuality thematic stills a taboo on the school environment, “but”, adopting active methodologies may subserve the process and empower the student/adolescent in this process.

Disclosure: No conflict of interest declared

1764

**A congenital deformity diagnosed during puberty**

M.J. Araújo, L. Amaral, M. Padrao Dias, C. Shinn

*Family Medicine, ACeS Lisboa Ocidental e Oeiras, Lisboa, Portugal*

**Introduction:** Tubular breasts are a congenital breast deformity that manifests during puberty when the breast fails to develop properly. Differences in breast development can result in low self-esteem and lack of self-confidence. Although a benign condition, it requires surgical correction.

**Case description:** Female, 15 years old, caucasian, single parent family, regular health checks with her Family Doctor (FD) since the age of eight, treated with oral combined contraceptive pills over the past year due to polycystic ovaries, with no other relevant medical problems. Despite denying any problems, at regular health checks in July and November of 2011, she cried throughout both appointments. When evaluated in February 2012 due to earache, the patient refused to expose her chest for cardiopulmonary auscultation and started crying. The patient invoked an existing unspecified health problem but refused to explain. An offer was made allowing the patient to return for further evaluation whenever she wished. Two days later the patient requested an appointment and allowed the FD to observe her chest. The patient was diagnosed with tubular breasts and referred to a Plastic Surgery consult. Psychological counseling was made available and surgical correction was performed.

**Discussion:** Although one must respect the adolescent’s need to establish their own identity, the FD must be aware that growing up feeling different can cause great emotional and mental anguish. An empathic and solid doctor-patient relationship facilitates communication and can be vital in overcoming barriers, allowing the doctor to effectively diagnose problems that interfere with psychological wellbeing.

Disclosure: No conflict of interest declared



## 2.17. GERIATRICS

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### Assessment of nutritional status of rural elderly populations, Minia, Egypt

E.M. Mahfouz

Public health, Faculty of Medicine, Minia University, Cairo, Egypt

**Background:** Malnutrition affects nearly 5-10% of community residing elderly population and negatively impacted their health.

**Methodology& objectives:** This cross sectional study was carried in rural upper Egypt to identify the magnitude of undernutrition and associated risk factors among systematically randomly chosen elderly populations during the period from Dec. 2011 till May 2012. A total of 350 elderly aged between 60-93 years were interviewed to complete the questionnaire including demographic characteristics and Mini Nutritional Assessment (MNA) questionnaire.

**Results:** Males represented 38.9% of the sample and were older than females (68.3±5.9 vs. 67.3±6.9). The mean BMI of males was 26.9±5.9 and the mean BMI for females was 27.6±6.2. Based on MNA score, 38.3% of participated elderly were malnourished or at risk of malnutrition. Elderly Females were significantly more likely to be malnourished than males (9.8% vs. 6.6%). There was a significant relation between mobility limitation and malnutrition as 50% of bed ridden were malnourished vs. 4.2% of normal mobility (p=0.0001). Nearly 38% of old-old persons were malnourished vs. 5.8% of young-old persons (P=0.0001). Using multiple regression, it was found that the most important contributing factors to malnutrition among rural elderly population were general decrease in food intake, neuropsychological problems and mobility limitation followed by reduced dairy consumption and presence of chronic disease.

**Recommendations:** It is recommended to use MNA score as a screening tool to timely intervene with those identified as malnourished or at risk of malnutrition and to involve families in the nutritional care of the elderly.

Key words: Elderly, Malnutrition, MNA, diseases, BMI.

Disclosure: No conflict of interest declared

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### Epidemiological aspects of brazilian elderly hip and femoral trauma: the health implications

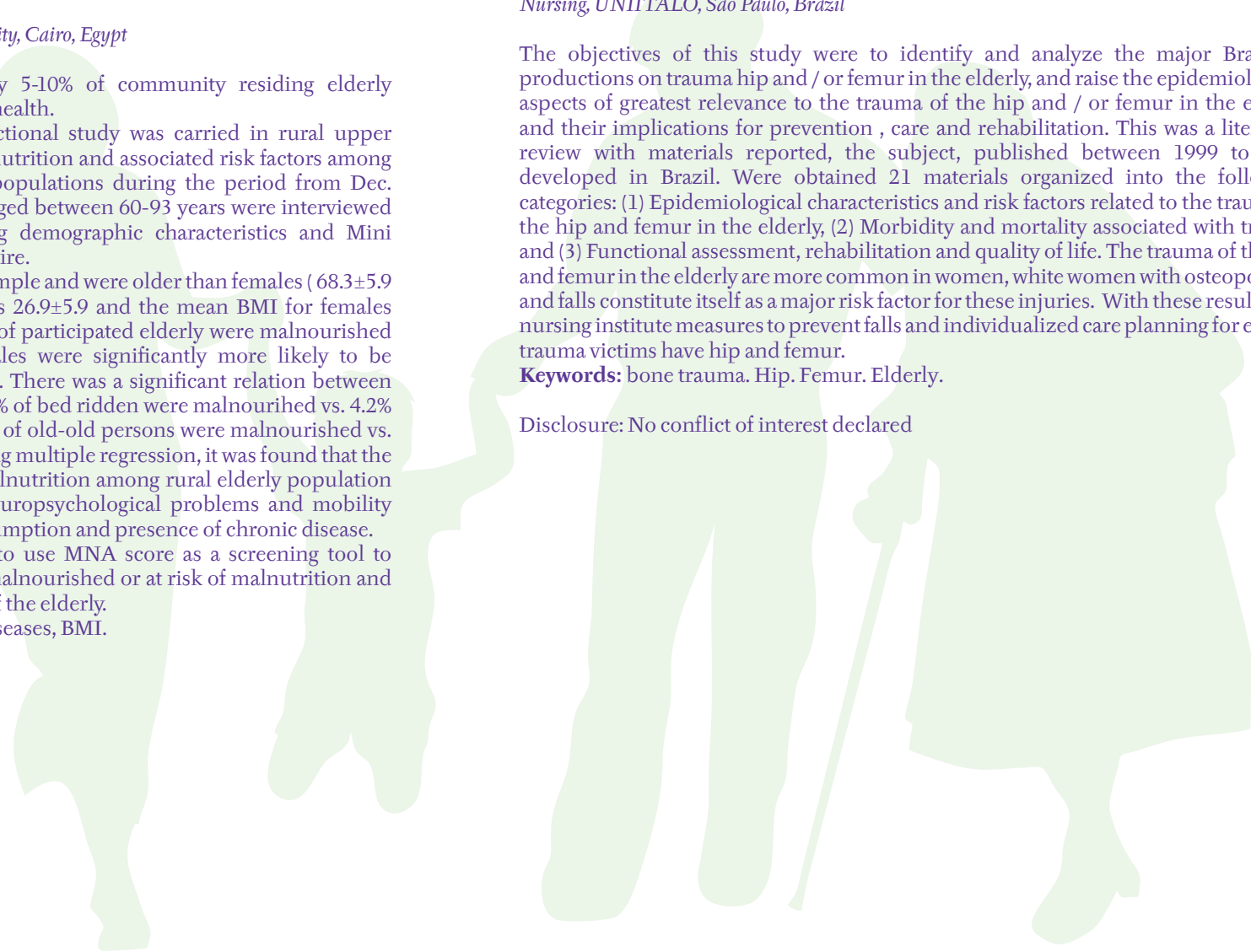
H. Fernandes, B.Cunha, I. Santos, J. Almeida, T. Faria, T. Silva

Nursing, UNÍITALO, São Paulo, Brazil

The objectives of this study were to identify and analyze the major Brazilian productions on trauma hip and / or femur in the elderly, and raise the epidemiological aspects of greatest relevance to the trauma of the hip and / or femur in the elderly and their implications for prevention, care and rehabilitation. This was a literature review with materials reported, the subject, published between 1999 to 2011 developed in Brazil. Were obtained 21 materials organized into the following categories: (1) Epidemiological characteristics and risk factors related to the trauma of the hip and femur in the elderly, (2) Morbidity and mortality associated with trauma and (3) Functional assessment, rehabilitation and quality of life. The trauma of the hip and femur in the elderly are more common in women, white women with osteoporosis, and falls constitute itself as a major risk factor for these injuries. With these results, it is nursing institute measures to prevent falls and individualized care planning for elderly trauma victims have hip and femur.

**Keywords:** bone trauma. Hip. Femur. Elderly.

Disclosure: No conflict of interest declared



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**Functional assessment in the elderly patients**J. Matovic<sup>1</sup>, M.Racic<sup>2</sup>, V.Pejovic<sup>1</sup>, S.Kravic<sup>3</sup><sup>1</sup> Family Medicine, Health Centre, Foca, Bosnia-Herzegovina; <sup>2</sup> Family Medicine, University of East Sarajevo, East Sarajevo, Bosnia-Herzegovina; <sup>3</sup> Family Medicine, Health Centre, Gacko, Bosnia-Herzegovina

**Objective:** The primary aim is to determine the presence and degree of functional deficits among elderly primary health care patients in Bosnia and Herzegovina. The secondary aim is to assess risk of falls in elderly patients with low functional status.

**Methods:** This study included 300 patients, older than 70 years of age, registered with two family medicine practices, in the region of Foca, BiH. As a part of Comprehensive Geriatric Assessment, all patients were asked to complete Katz ADL index and Lawton IADL scale, as well as history sheet on falls in the past year. Questionnaires were evaluated, and the patients were invited back to the clinics for the "Get Up and Go" test.

**Results:** Of the total number of respondents, 41% had score 3 or lower on the Katz index. Score 4 or lower on Lawton scale was found in 64% of respondents. A history of falling in the past year was found in 55% of respondents with low score on Katz index and 69% of respondents with low score on Lawton scale. Seventy-three percentage of patients with history of falls have needed 15 s or more to perform the "Get Up and Go" test.

**Conclusions:** Functional impairment is common in the elderly and functional information should be included in the assessment of all older people. Poor functional status is a very significant risk factor for falls. This problem demands a team work and improvement in the quality of care for the geriatric patients.

Disclosure: No conflict of interest declared

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**Diagnosis, treatment characteristics, and survival of breast cancer women aged 65 years and above**M. Kartal<sup>1</sup>, S. Tezcan<sup>2</sup>, T. Canda<sup>3</sup><sup>1</sup> Family Medicine, Dokuz Eylul University, Izmir, Turkey; <sup>2</sup> Public Health, Hacettepe University, Ankara, Turkey; <sup>3</sup> Pathology, Dokuz Eylul University, Izmir, Turkey

**Objective:** Breast cancer incidence in women increases by aging, while survival rate decreases. Studies interpreted this as higher comorbidity, late diagnosis, less effective treatment in elderly. Aim is to evaluate the diagnostic and treatment characteristics, and their effect on survival of women 65 years and above.

**Methods:** Data of 1120 women with breast cancer who were followed-up in Dokuz Eylul University Medical Faculty Hospital during 2000-2006 were analyzed retrospectively. One, 5, 10-year survival probabilities were calculated by life table analysis, while differences between groups were evaluated by log-rank test. Backward elimination method was used in multivariate analysis, and -2log-likelihood ratio used in comparison of different models.

**Results:** Of the patients, 25.0% were aged 65 and above at diagnosis. Compared to younger ages, they had more comorbidity, were more likely diagnosed at advanced stages. Additionally, they had less surgery, chemotherapy and radiotherapy. Respectively, 1 and 5-year survival probabilities by age groups were 96.4% to 85.4% for <65 years, 93.8% and 85.5% for 65-69, 98.8% and 83.4% for 70-74, 90.8% and 68.0% for 75-79, 78.7% and 48.0% for 80 years and above. When analyzed with multivariate model; age, clinical stage, and comorbidity were negatively affecting the survival rate.

**Conclusion:** Survival of women with breast cancer aged 65 and above was affected negatively by age at diagnosis, clinical stage, and presence of comorbidity. Early diagnosis is also very important for the elderly women. Additionally, due to higher comorbidity their evaluation and treatment should be planned by an interdisciplinary team including family physicians.

Disclosure: No conflict of interest declared

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**The impact of leisure activities for elderly**Y.S. Wang<sup>1</sup>, C.F. Mu<sup>2</sup>, C.Y. Hsu<sup>2</sup><sup>1</sup> Department of Medical Education, National Taiwan University Hospital, Taipei, Taiwan;<sup>2</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan

**Objective:** The elderly population those who age above 65 years old was 10.69% in Taiwan by 2011. The objective of this study is to determine whether leisure activities have benefit for elderly.

**Method:** Between September and October 2012, 107 persons with more than 55 years old were enrolled in this study. The data was collected by face-to-face interview with questionnaire regardless of race. The participants were asked whether they have leisure activities.

The health condition and comorbidity, cognition status, depressive symptoms and activities of daily living were compared between persons who with and without leisure activities by Charlson comorbidity index (CCI), short portable mental status questionnaire (SPMSQ), brief symptom rating scale (BSRS-5) and instrumental activities of daily living (IADL).

**Result:** The average age of participants (36 males, 71 females) was 70. Sixty-four (59.8%) participants had leisure activities regularly. There were no difference between the elderly who with and without leisure activities in sex, age, race, living with child and retired.

The elderly with leisure activities regularly had significantly lower CCI (0.44 vs 0.88,  $p=0.0306$ ), which means they had better healthy status. There were no statistical difference in SPMSQ, BSRS-5 and IADL. However, the elderly with leisure activities regularly had better status in cognition (0.93 vs 1.09), depression (2.08 vs 3.02) and activities of daily living (6.84 vs 6.44).

**Conclusion:** The elderly with leisure activities regularly had better status in health, cognition, depression and activities of daily living. For health life, developing a leisure activity may be necessary in elderly.

Disclosure: No conflict of interest declared

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**Anemia in elderly**C.Y. Yao<sup>1</sup>, C.F. Mu<sup>2</sup>, C.Y. Hsu<sup>2</sup><sup>1</sup> Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan;<sup>2</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan

**Introduction:** Anemia not only causes impairment in cognitive and physical functions, but also impacts on the admission and mortality rates in elderly. The objective of this study is to demonstrate the prevalence of anemia among Taiwanese elderly.

**Method:** Between Nov and Dec 2011, those who were older than 65 years visited our hospital with hemoglobin data within one year were enrolled in this study. The patients with dialysis were excluded from this study. The criterion for anemia was established by the WHO: hemoglobin <12.0 g/dl for women and <13.0 g/dl for men. The living areas (downtown and rural) were also compared.

**Result:** Eight hundred and thirty-seven patients (405 men and 432 women) were enrolled in our study. The mean age was 76.3. Overall, 385 (46.0%) of them had anemia including 189 males and 196 females. The mean hemoglobin was 12.8 g/dl for male and 12.0 g/dl for female.

Of them, 762 lived in downtown and 75 lived in rural area. Anemia was found 45.9% (350/762) in downtown and 46.7% (35/75) in rural area. There was no significant difference in hemoglobin between the elderly who living in downtown or rural area. However, macrocytic anemia was higher in downtown (6.9% vs 2.9%).

**Conclusion:** Anemia among Taiwanese elderly was higher than the western countries. The difference may due to economic status and dietary. A detailed history, physical examination and relevant laboratory studies should be performed to discover the cause of the anemia in elderly. Besides, nutrition supporting may be also important.

Disclosure: No conflict of interest declared

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**Effectiveness and safety of ginkgo biloba in elderly; a metaanalysis**

B. Santiago

*medical, National Healthcare Group Polyclinic, Singapore, Singapore*

**Objective.** To assess the efficacy and safety of Ginkgo biloba for the elderly patients with age-related memory impairment.

**Methods.** A systematic search of literature from 1995-2008 was done. Included were people randomized controlled trials, among the subjects were elderly, 65 years of age and older, both sexes, MMSE > 26. Excluded were people with other illnesses that could be causing the memory problems and also those with history of alcohol, drugs or medications. Patients taking vasoactive drugs, antipsychotics, neuroleptics, cholinergics, antidepressants and Anti-Parkinson's medication were often excluded. The intervention considered was the use of Egb 761, 120 to 240mg/day for 12-52 weeks. Study quality was evaluated using primary validity (randomization, drop outs/withdrawals, number needed to treat) and secondary validity (blinding, co-intervention) of appraising journals. Data was analyzed using Review Manager 4.1. A total of 430 patients from the 5 included studies were used.

**Results.** weighted mean difference of ginkgo biloba after 12, 24, 36, and 52 weeks of treatment (-0.92, -1.30, -1.23, -1.04 respectively) and Activities of Daily Living was likewise assessed (-0.14, -0.14, -0.16, -0.5 respectively) are all statistically significant. Ginkgo proved to reduce the occurrence of adverse events using Peto Odds ratio (OR 0.22, 95% CI, 0.12, 0.29,  $p < 0.00001$ ).

**Conclusion.** The results of this metaanalysis showed that Ginkgo produced 1) enhancement in cognitive function 2) improvement of activities of daily living and 3) occurrence of adverse events is reduced

Disclosure: No conflict of interest declared

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**Factors associated with functional capacity impairment among elderly residents in a Family Health Unit area**

A.M. Santos, S.C. Franco, M.A.M. Reis

*Masters in Health and Environment, University of Joinville Region, Joinville, Brazil*

**Objective:** To assess functional capacity and to identify factors associated with its impairment among elderly in a Family Health Unit.

**Methods:** A cross-sectional study was carried out through domiciliary visits to elderly people residents within a health family unit area in a municipality in the south of Brazil. It was used a socio demographic questionnaire and the Lawton Instrumental Activities of Daily Living (IADL) Scale. Statistical analysis was performed using the Chi Square test and a logistic regression model for multivariate analysis, at significance level of 0.05.

**Results:** The sample was composed by 935 elderly, 57.3% females, 57.9% aged between 60 and 69 years, 26.2% illiterate, 57.4% married, 84.3% without remunerated activity and 98.1% related at least one health problem. It was found that 49.2% presented some degree of dependency to accomplish the IADL. The logistic regression model identified risk factors associated with functional capacity impairment: urinary incontinence ( $p=0,002$ ), fecal incontinence ( $p=0,022$ ), falls ( $p=0,003$ ) and age ( $p=0,000$ ).

**Conclusions:** Most of the elderly studied live in a family context and show a high level of dependency, illiteracy and morbidity. Functional capacity is an important marker for elderly's health, so that its assessment could base effective actions and prevention strategies. The risk factors identified should call the attention of the Family Health Teams that are responsible for the delivery of care to the elderly living in the unit's area in order to be more efficient in planning and providing the access for a comprehensive and quality care.

Disclosure: No conflict of interest declared

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**Is there any benefit in the introduction of statins in the elderly?**

J. Machado, P. Almeida, N. pinto, E. Mendes  
USF Viver Mais, USF Viver Mais, Maia, Portugal

**Objective:** Review the scientific evidence of use of statins in the elderly (> 65 years old).

**Methods:** Was conducted a search of clinical guidelines (NOC), systematic reviews, meta-analyses and randomized clinical trials (RCT) in Pubmed, sites of evidence-based medicine and Portuguese Index of medical journals, published since 2008 until 2011, in Portuguese and English, using the MeSH terms: "Hydroxymethylglutaryl-CoA Reductase Inhibitors", "Dyslipidemias/drug therapy", "Aged" and "Aged, 80 and over". For assessment of levels of evidence and recommendation forces assignment was used the SORT scale of American Academy of Family Physicians.

**Results:** We found 108 articles, of which 20 were selected: 1 synopsis, 17 clinical guidelines and two systematic reviews.

**Conclusions:** Most studies and recommendations are based on studies of populations mostly under 65, not distinguishing different types of approach to dyslipidemia aged over 65. There are no studies that demonstrate the effect of the introduction of statins in elderly patients on cardiovascular risk and mortality. This is reflected in the absence of specific recommendations for this age by the majority of clinical guidelines. Only the most recent begin to address this issue, and there are opposing views among standards. Due to lack of evidence the initiation of therapy with statins in elderly has a strength of recommendation C.

Disclosure: No conflict of interest declared

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**The family APGAR applied in the elderly and home-care nurses: evaluation and relevancy**

M.W. Wang<sup>1</sup>, K.P. Chien<sup>1</sup>, H. Lin<sup>2</sup>, E.W. Wang<sup>1</sup>, Y.Y. Huang<sup>1</sup>

<sup>1</sup> Department of Family Medicine, Chang Gung Memorial Hospital, Keelung, Keelung, Taiwan;

<sup>2</sup> Nursing Department, Chang Gung Memorial Hospital, Keelung, Keelung, Taiwan

**Objective:** Home care and medical care in localization to elders are more and more important and in increasing demand. Home-care nurses are the main health workers who approach more frequently and more closely to the elders in the elders-caring-group. This study is to explore the differences and relevancy of the family APGAR results made by home-care nurses and the elders.

**Methods:** There are totally 56 patients who are older than 65-year-old taken care by well-trained nurses at home. Elders are excluded the ones with psychiatric disease, dementia, or any disoriented condition. This study uses the family APGAR as the questionnaire. The elders completed the questionnaire assisted by the same one well-train staff. It compares the results evaluated by the elders and his/her home-care nurses.

**Results:** If the family function was evaluated as moderate impairment (4 to 6 points) or well function (7 to 10 points) by home-care nurses, there is a high relevance with the self-assessment by the elders ( $R=0.94/0.89$ ,  $P<0.001/<0.001$ ). But it is moderate relevant between home-care nurses evaluation and the elders self-assessment if the family function was evaluated as severe impairment condition (0 to 3 points) by home-care nurses ( $R=0.6$ ,  $P=0.08<0.1$ ).

**Conclusions:** The home-care nurses could help to assess the family function of the elders. To elders with family function severe impairment evaluated by nurses, family physicians should take more consideration in further assessment. Moreover, we believe the evaluation made by home-care nurses could also apply to the elders who are disabled to answer the family APGAR independently.

Disclosure: No conflict of interest declared

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**The caring time may affect the family APGAR validity evaluated by home-care nurses**M.W. Wang<sup>1</sup>, K.P. Chien<sup>1</sup>, H. Lin<sup>2</sup>, E.W. Wang<sup>1</sup>, Y.Y. Huang<sup>1</sup><sup>1</sup> Department of Family Medicine, Chang Gung Memorial Hospital, Keelung, Keelung, Taiwan;<sup>2</sup> Nursing Department, Chang Gung Memorial Hospital, Keelung, Keelung, Taiwan

**Objective:** In recent years, home caring with elders becomes a tendency. Although doctors or family physicians play a critical role in the elders-caring-group, home-care nurses are the ones who are close and familiar with the elders. This study is aimed to explore if the caring time would affect the family function assessments by home-care nurses.

**Methods:** There are totally 56 patients who are older than 65-year-old taken care by well-trained nurses at home. Elders are already excluded the ones with psychiatric disease, dementia, or any disoriented conditions. This study uses the family APGAR to evaluate the elders' family function. The elders completed the questionnaire assisted by the same one well-train staff. It divides elders into 4 groups depending on the caring time: within 3 months, 3-6 months, 6-12 months, and over 12 months. Then it compares the results evaluated by the elders and his/her home-care nurses.

**Results:** The family function assessment is in less correlation between the home-care nurses and elders who were cared within 3 months ( $R_{<3} = 0.92$ ,  $P_{<3} = 0.07 > 0.05$ ). However, if the caring time lasts more than 3 months, it gets highly correlation. ( $R_{3-6} = 0.91$ ,  $P_{3-6} = 0.002$ ;  $R_{6-12} = 0.89$ ,  $P_{6-12} < 0.005$ ;  $R_{>12} = 0.94$ ,  $P_{>12} < 0.005$ ).

**Conclusions:** It is believed that if the home-care nurses care the elders more than 3 months, the family APGAR has high validity evaluated by the home-care nurses. Therefore, if the elders are cared more than 3 months, home-care nurses should take the family APGAR assessment into routine work to help the doctors or family physicians finding out when to assist the elders and their family.

Disclosure: No conflict of interest declared

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**Hard, light-heavy and light technologies on the prevention of pressure ulcers in the elderly in nursing homes**H. Fernandes, C. Soares Júnior, J. Santos, M. Aparecido, R. Jesus, S. Soares  
Nursing, Centro Universitário Ítalo-Brasileiro, São Paulo, Brazil

**Objective:** Identifying the major technologies available in the current market to prevent pressure ulcer (PU) in elderly, hospitalized in nursing homes.

**Methods:** Review of related literature, comprising the databases Medical Literature Analysis and Retrieval System online (MEDLINE), Scientific Electronic Library Online (SciELO) and Latin American and Caribbean Literature in Healthcare Sciences (LILACS), and the use of six keywords for searching the materials published from 2002 and 2012; thus, 17 articles of them were selected, which were arranged in 3 analytical categories. All materials included in the review were rated as level IV. In relation to the approach of the researches, it was mostly quantitative (58.8%).

**Results:** It was possible to evidence the importance of the ability and competency of the nurse as regards the assessment of the intrinsic and extrinsic factors to prevent PU. By using the hard, light-hard, and light, because the care is what indicates which technologies are required in a certain situation, i.e., to provide an efficient and effective care.

**Conclusion:** In view of the foregoing, it is highlighted that the prevention or intervention is the best alternative, since it avoids pain and suffering of the client, as well as reduces the length of hospital stay and, consequently, the treatment-related expenditures; within such context, the application of the directed and individualized care obtains space in an integral form.

**Keywords:** Pressure ulcers, Technologies, Nursing homes, Prevention,

Disclosure: No conflict of interest declared

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**Depression and fall among elderly**Y.C. Hu<sup>1</sup>, C.F. Mu<sup>2</sup>, C.Y. Hsu<sup>2</sup><sup>1</sup> Department of Medical Education, National Taiwan University Hospital, Taipei, Taiwan;<sup>2</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan

**Objective:** Fall was happened frequently in elderly. Depression was also found commonly among elderly. The objective of this study is to investigate whether depression is a risk factor of fall.

**Method:** A cross-sectional study was carried out in two long-term care facilities during November 2012. The patients were selected if the age more than 65, without bed ridden, blindness or taking antidepressive drugs. The questionnaires were collected by face to face interview. Frequency of fall was recorded. Depression was assessed by Geriatric Depression Scale (GDS). Depression was defined if the GSD more than 5.

**Result:** Fifty-one residents (22 men, 29 women) agreed to answer the questionnaire. The prevalence of fall was 56.9%. Depression was found in 15.7% of participants. Depression is a risk factor fall ( $p < 0.001$ ). There was a positive relationship between severity of depression and frequency of fall ( $p < 0.001$ ).

**Conclusion:** Depression is a risk factor fall. In order to prevent fall, the emotion of elderly who living in long-term care facilities should be noted regularly.

Disclosure: No conflict of interest declared

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**Polypharmacy evaluation on elderly people assisted in the Vila Velha University Polyclinic**

G. Souza, F. Furlan, R. Mukamal, W. Poton, A. Szpilman

Medical School Department, Vila Velha University, Vila Velha, Brazil

**Introduction:** The elderly people is increasing in numbers in Brazil and, because of their particularities, they are the ones who suffer the biggest prescriptive load, many times with undesirable effects due to the multiple medications given by the various specialists.

**Objective:** evaluate the prevalence of polypharmacy in the elderly people assisted in the Vila Velha University Integral Attention Clinic, besides the medication adjustment and the analyses of the undesirable effects caused by the medications.

**Methods:** from the total 63 elderly people assisted, 50 medical records were evaluated.

**Results:** The results demonstrated that the elderly people assisted in this clinic, are, majority, female (66%) and between 70-74 years (29%). The most part lives with their family (47%). Among the comorbidities presented, 82% of the patients had Systemic Hypertension, 31% Diabetes Mellitus, 51% Dyslipidaemia e 39% Depression. From this group, 35% had a diagnosis of Dementia, accordantly to the Diagnostic and Statistical Manual of Mental Disorders (DSM IV), being the most prevalent the Alzheimer. The presence of polypharmacy was identified in 69% of the cases. Contrarily, self-medication was observed in only 10%. The use of psychotropics was found in 57%. Based on the Beers criteria, 56% were using inappropriate medication. The main undesirable medication effects were sedation, dizziness, cognitive alteration and intestinal constipation.

**Conclusion:** the results identify polypharmacy and iatrogenesis in the elderly people, many times caused by wrong prescriptions and inadequate medication use, causing undesirable effects and new symptoms, which are treated with new medication, causing a prescriptive cascade.

Disclosure: No conflict of interest declared

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**Use of drugs by elderly persons**E.Ramic<sup>1</sup>, E.Karic<sup>1</sup>, O.Batic-Mujanovic<sup>1</sup>, E.Alibasic<sup>2</sup>, L.Ahmetovic<sup>3</sup>, A.Bajraktarevic<sup>1</sup><sup>1</sup> JZU DZ Tuzla, DZ Tuzla, Tuzla, Bosnia-Herzegovina; <sup>2</sup> JZU DZ Kalesija, DZ Kalesija, Kalesija, Bosnia-Herzegovina; <sup>3</sup> HF Sarajevo, HF Sarajevo, Sarajevo, Bosnia-Herzegovina

**Introduction:** Seniors with multiple chronic illnesses usually take multiple medications, including those that were not recommended. Number of prescribed medications increases with age. Elderly people sometimes get more than six different medications a day.

**Objective:** To evaluate how many different drugs use elderly persons

**Patients and methods:** 200 patients aged over 65 who live alone or in a family environment. General Geriatric questionnaire was designed for this study, and includes questions about age, gender, living conditions, economic situation, mobility, safety at home, neglect, aids, smoking, alcoholic beverages consumption, chronic illness, and information about the drug use.

**Results:** 200 elderly patients, 45% of those living alone and 55% of surveyed persons living in the family or social environment. The age of participants ranged from 65 to 94 years. There were 57.5% of women and 42.5% men. The most common diseases that afflicted patients are hypertension, diabetes mellitus, lung disease, rheumatic disease. 30% of participants use more than five medications, 43.5% of participants use three to four different drugs. In the surveyed group 46.7% participants use three to four drugs daily, and 41% participants in the control group. Women often use more than 3 drugs. People that were neglected use more drugs.

**Conclusion:** The elderly persons should be given the smallest possible number of safe and effective drugs with known side effects. Also, the simplest possible application of drugs is necessary. Patients should be advised about the proper use of drugs, and drug consumption reviews need to be conducted for our patients.

Disclosure: No conflict of interest declared

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**Nutrition status of elderly patients admitted to a home health care unit**H. Akan<sup>1</sup>, A. Ayraller<sup>2</sup>, O. Hayran<sup>3</sup><sup>1</sup> Family Medicine, Yeditepe University Medical Faculty, Istanbul, Turkey; <sup>2</sup> Family Medicine, Taksim Training and research Hospital, Istanbul, Turkey; <sup>3</sup> Health Sciences, Yeditepe University, Istanbul, Turkey

**Objectives:** Home care services has been reorganized by Ministry of Health in 2010 in Turkey. Home care centers have been constructed in second care public hospitals to give free home health service in coordination with primary care health services. In this study we have aimed to explore nutritional status of the elderly patients taking home health-care service.

**Methods:** This cross-sectional study was carried out between August 2011 and September 2012 in home health care unit of Taksim Research and Training Hospital in Istanbul also providing home health care service to an elderly institute. For sociodemographics, health status and laboratory parameters, the nationally standardized patient files have been used. Mini Nutritional Assessment (MNA) test has been applied by the nurse or the doctor. Scores classified as 23.5-30 normal nutritional state, between 17-23 risk for malnutrition and below 17 malnutrition.

**Results:** Total 89 patients included in the study. Descriptive characteristics and nutritional status have been shown in table 1. Malnutrition incidence was 48.3% in whole group and was more common in home group ( $\chi^2= 33.564$ ,  $P<0.001$ ). There was no statistically difference between home and institutionalized groups regarding chronic diseases. But bedridden incidence and pressure ulcers were statistically significantly more in home group than institutionalized group ( $p<0.001$ ). Regarding laboratory parameters albumin and total protein were positively correlated with malnutrition status (respectively  $r=0.357$ ,  $p=0.001$ ;  $r=0.297$ ,  $p=0.007$ ).

**Conclusion:** Malnutrition is common among patients taking home health care service. Nutritional status of patients taking home health care service should be assessed and intervened as it is needed.

Disclosure: No conflict of interest declared



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**Low Vitamin D Levels as a Predictor to MMS and ADL?**

E. Fernandova, H. Matejovska Kubesova

*Department of Internal Medicine, Geriatrics and General Practise, Faculty Hospital Brno, Brno, Czech Republic*

**Introduction:** Vitamin D (cholecalciferol; vit D) plays an important role in regulation of calcium levels and among non-skeletal functions the connection to cognitive functions has been proposed. Increasing number of information about low vit D serum levels in elderly population brings its relation to functional status of seniors into consideration.

**Aim:** The aim of the research was to study vit D serum concentrations and its correlation to cognitive functions represented by the Mini Mental State Examination (MMSE) and the Activities of Daily Living (ADLs) in seniors.

**Materials and Methods:** In our study 259 patients (73 men and 186women) were evaluated. Average age was  $80 \pm 7,4$  (min. 57, max. 99). The vit D levels, MMSE and ADLs were examined since March 2012 till September 2012 in all patients. Relationship of vit D serum concentration to the period of the year was studied, too.

**Results:** In our patients average concentration of vit D levels was  $38,2 \pm 26,46$ , range 8-142 mmol/l, average MMSE value was  $23,3 \pm 7,01$ , range 0-30 points, and average ADL value was  $80,1 \pm 25,73$ , range 0-100 points, retrospectively. Correlation of vit D serum concentrations with MMSE values was  $r=0,307$ ,  $p \leq 0,001$  and vit D with ADLs  $r=0,306$ ,  $p \leq 0,001$ . No significant relationship between period of the year and vitamin D serum concentration was found.

**Conclusions:** Within limitation of our study we can conclude that patients with low vit D serum concentrations achieved significantly lower values of MMSE and ADL tests. Further research is necessary to confirm our results.

Disclosure: No conflict of interest declared

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**An elderly man presenting with ekbom syndrome associated with left lacunar thalamic infarct: a case report.**P. Martínez Andrés<sup>1</sup>, J. Martínez Andrés<sup>2</sup>, J. Martínez Lozano<sup>3,4</sup>, M. C. Martínez Lozano<sup>5</sup>, N. Martínez Lozano<sup>6</sup>, M. D. Martínez Lozano<sup>7</sup>, M. A. Martínez Lozano<sup>8</sup>, J. V. Ramírez Villaescusa<sup>9</sup>

<sup>1</sup> Plastic Surgery, General Hospital University, Albacete, Spain; <sup>2</sup> Medical School, Catholic University „San Vicente Ferrer“, Valencia, Spain; <sup>3</sup> Health Center of Banyeres de Mariola, Agència Valenciana de Salut, Banyeres de Mariola (Alicante), Spain; <sup>4</sup> Medical Director, Clínicas Martínez Lozano, Spain, Spain; <sup>5</sup> Medical Director, I. N. S. S., Albacete, Spain; <sup>6</sup> Rehabilitation, General Hospital University, Albacete, Spain; <sup>7</sup> Neurology. Dementia's Unit. Medical Director, General Hospital University, Castellón, Spain; <sup>8</sup> Dentistry. Master Medical Director, University „Cardenal Herrera“ C. E. U., Valencia, Spain; <sup>9</sup> Traumatology, General Hospital University, Albacete, Spain

**Purpose:** Ekbom syndrome is a rare psychiatric disorder that can manifest as a delusion, overvalued idea or hallucination of parasitic infestations. It is more prevalent in postmenopausal women and patients are usually seeking dermatology rather than psychiatry consultation for their symptoms.

**Materials & Methods:** We present a case of Ekbom syndrome associated with acute left lacunar thalamic infarct in an elderly patient. Her medical history was notable for amnesic cognitive impairment, benign essential tremor, hypertension and hypercholesterolemia. The patient presented with tactile hallucinations of insects crawling just under her skin. These hallucinations resolved with antipsychotic quetiapine.

**Results:** This case report highlights the presence of a rare psychiatric presentation of Ekbom syndrome within the context of cerebrovascular disease. The majority of such cases will not be seen by psychiatrists but by dermatologists.

**Conclusions:** Therefore collaborative consultations between dermatologists and psychiatrists of patients presenting with symptoms of Ekbom are essential for the identification and management of such cases. The case also takes a look at possible aetiologies and the importance of descriptive psychopathology in distinguishing psychotic symptoms in different disorders.

Disclosure: No conflict of interest declared

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**Features and sanitary measures adopted in scheduled inspections of nursing homes in the city of Sao Paulo – Brazil**

H. Fernandes, M. Moraes, R. Gardin, R. Piagentini, L. Costa, S. Silva, A. Venturelli  
*Health surveillance / Vigilância Sanitária, Prefeitura do Município de São Paulo – SMS, São Paulo, Brazil*

Like almost all countries of the world, the demographic transition, social and epidemiological led Brazil to increased life expectancy and the elderly, especially in the capitals of the states, such as São Paulo (Latin America's largest city). Due to the increasing number of long-stay institutions for the elderly (LSIE) in this city it was necessary to the performance of the constant health monitoring. The objectives of this study are to evaluate the key features of health nursing homes São Paulo – Brazil, and present measures employed by health surveillance for scheduled inspections. This was a cross sectional study carried out from January 2011 to January 2012, with a sample of 32 nursing homes, located in 9 administrative districts of the region southeast of the city (second region with the highest proportion of elderly in the city). The results showed that 85% of the sample had inadequate physical structure, especially for mobility of seniors, 75% had insufficient workers to patient demand, about 65% had some irregularity in feeds and medicines. Approximately 68% of nursing home were inspected to be unsatisfactory for operation, having been classified health risk moderate to high. The arrangements were more incidents of fine and ban partial (70%). The deadlines for adjustments ranged from 7 days to 6 months, the average being 14 days and a median of 30 days. We conclude that the scheduled inspections in nursing homes are necessary to reduce the risks to health of the elderly population.

Descriptors: Health surveillance. Elderly. Institutionalization. Health

Disclosure: No conflict of interest declared

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**Sanitary inspections prompted by complaints in nursing homes in Sao Paulo – Brazil**

H. Fernandes, M. Moraes, R. Gardin, A. Honda, M. Carvalho, E. Nunes, M. Medeiros  
*Health surveillance / Vigilância Sanitária, Prefeitura do Município de São Paulo – SMS, São Paulo, Brazil*

The number of long-stay institutions for the elderly (LSIE) in São Paulo – Brazil is growing. To minimize the risks hygienic and sanitary these asylums, it was necessary to the performance of constant surveillance, both in scheduled inspections as in cases of complaints. The objectives of this study are to evaluate the key features of health nursing homes São Paulo – Brazil, and present measures employed in the sanitary inspections prompted by complaints from citizens. This was a cross sectional study carried out from January 2011 to January 2012, with a sample of 14 nursing homes, located in 9 administrative districts of the region southeast of the city (second region with the highest proportion of elderly in the city). The results showed that 80% of the sample had inadequate physical structure, especially for mobility of seniors, 85% had insufficient workers to patient demand, about 92% had some irregularity in feeds and medicines. Approximately 92% of nursing home were inspected is unsatisfactory for operation, have been classified with high health risk. The arrangements were more incidents ban partial (60%) and total ban (40%). The deadlines for adjustments ranged from 1 day to 6 months, with an average median of 7 days and 14 days. It is concluded that inspections in response to complaints in nursing homes are critical to reduce the risks to health of the elderly population and that complaints of complaint are based on real facts.

Descriptors: Health surveillance. Elderly. Institutionalization. Health

Disclosure: No conflict of interest declared

733

**Identification of the site of pain more prevalent in the elderly population belonging to cambará basic health unit**

E. de Cássia Prete, E. Corazza, M.V. Assad Medeiros, A. Ferraz  
*Medicine, University Cidade de São Paulo, São Paulo, Brazil*

The study examines the most prevalent site of pain in the musculoskeletal system in the elderly population belonging to UBS Cambará in the city of Guarulhos. The aim of the research is to identify the places with the biggest complaints of pain in patients and initiate interventions to assist, prepare and improve the quality of life of elderly patients with chronic pain. The survey was conducted via written questionnaire completed by the respondents. 10 interviews were conducted, where the average age of patients was 68 years, seven women and three men. Of the kinds of pain questioned, the burning pain accounted for 50% of the cases, followed by stabbing pain (30%) and sting pain (20%). 70% of patients reported being hampered in their daily activities because of the pain. More than half of respondents claimed that daily pain lasts longer than 2 hours. Low back pain was the most prevalent (40%), followed by back pain without specific location (30%) and pain in the wrists (20%). 70% of patients do not use drugs and only 30% exercise / stretch for improvement of pain.

The data obtained in this work shows that it is possible to identify a specific location with the highest prevalence of pain and that we can perform interventions, with the intention of bringing improvement factors for these patients and improve their quality of life and helping them deal with pain, suggesting positions to sit / lie, or even stretching and exercises suitable for their age group.

Disclosure: No conflict of interest declared

857

**The correlation of bone mineral density and anemia in Korean older population.**

S. Jang, Y. Park, S. Park, S. Lee, K. Cho  
*Family Medicine, NHIC Ilsan Hospital, Goyang-shi, Korea*

**Objective:** The aim of our study is to investigate the relationship of femur T-score and lumbar spine T-score with anemia and in Korean older populations.

**Method:** Elderly men and women 80 years from the age of 65 taken National Health Nutrition Survey 2008 were studied. Total 416 Participants were enrolled after excepted participants that anemia and osteoporosis or history of treatments that may affect bone mineral density with diseases. All the analyses were performed considering continuous hemoglobin level and the anemia variable. Dual-energy X-ray absorptiometry of femur and lumbar spines was performed to evaluate bone mineral density. Also, physical measurements, health-related behaviors, serological characteristics and comorbid diseases were investigated.

**Result:** Between no anemia group and anemia group, the femur T-score and lumbar spine T-score did not show statistically significant difference in both men and women. In univariate regression analysis, hemoglobin and lumbar spine T-score showed statistically significant correlation ( $\beta=0.180$   $P=0.009$ ) in men only. In multivariate regression analysis, anemia and hemoglobin with femur T-score and lumbar spine T-score did not show a statistically significant association after adjusted for age, BMI, activity limitation, education and HDL cholesterol.

**Conclusion:** There are some studies that hypoxemia can affect bone mineral density and hemoglobin, either directly or indirectly, could be a risk factor for reduced bone mineral density. But, additional research is need on the entire skeletal system and the mechanism of association hemoglobin and bone mineral density.

Disclosure: No conflict of interest declared

1148

**Prescription analysis using STOPP/START criteria on a university hospital**S.J.Lee<sup>1</sup>, J.H..Choi<sup>1</sup>, Y.J..Lee<sup>1</sup>, H.Ga<sup>2</sup><sup>1</sup> Family Medicine, Inha University Hospital, Incheon, Korea; <sup>2</sup> Family Medicine, Eunhye Hospital, Incheon, Korea

**Objective:** Prescribing potentially harmful drug and omitting essential drugs to older patients is highly prevalent because they take so many medicines. In this study, our goal was to identify Potentially inappropriate medicines(PIMs) and potential prescribing omissions(PPOs) using STOPP(Screening Tool of Older Persons' potentially inappropriate Prescriptions) and START(Screening Tool to Alert to Right Treatment) criteria as to improve proper prescription and reduce improper prescription.

**Methods:** A total of 117 patients, older than 65 years old who had hospitalized at the InhaUniversityHospital due to pneumonia from January 2012 to March 2012 were enrolled in the study. Patient data, including medical histories, current diagnoses, current medications and biochemical data, were recorded from electronic-based records. In all patients, STOPP and START were applied to their clinical datasheets.

**Results:** 24 patients had 29 PIMs which identified by using STOPP criteria. The highest prevalence of potential inappropriate prescribing was in relation to the cardiovascular system, followed by drugs whose primary effect on the urogenital system, gastrointestinal system. 31 patients had 46 PPOs was identified by using START criteria. The cardiovascular system drugs were accounted for the most of the PPOs. No PPOs were identified under the central nervous system criteria.

**Conclusion:** Regarding current Korean medical system condition and considering existence of too many clinically important situation when prescribing drugs, applying STOPP/START criteria did not show absolute role to prevent improper prescription. But sagacious usage for these criteria would help doctors to prescribe properly in clinical field.

Disclosure: No conflict of interest declared

1167

**Gender and age differences of the pharmacokinetics of triazolam**S. Kim<sup>1</sup>, D. Sohn<sup>2</sup>, J. Oh<sup>3</sup>, C. Cho<sup>1</sup><sup>1</sup> Department of Family Medicine, Soon Chun Hyang University Hospital, Seoul, Korea; <sup>2</sup> Department of Clinical Pharmacology, Soon Chun Hyang University, Asan, Korea; <sup>3</sup> Department of Family Medicine, Soon Chun Hyang University Chunan Hospital, Chunan, Korea

**Objective :** Benzodiazepine which is largely used clinically is known to have differences of pharmacokinetics according to age and gender depending on the medication types. This study is comparing and analyzing the pharmacokinetics of triazolam contingent on the age and gender.

**Methods :** 0.25mg of triazolam has been orally administered once to 24 Koreans (6 young men, 6 young women, 6 elderly men, 6 elderly women), blood samples were collected at each point within 24 hours, and blood triazolam concentration has been analyzed by HPLC. Pharmacokinetic variables were calculated with measured blood concentration and each variable was compared in terms of age and gender groups.

**Results :** Absorption of triazolam was relatively slow and reached to the peak plasma levels in 2 to 2.56 hrs on average after taking the medicine. Elimination half-life was statistically significantly longer in females than in males (  $P < 0.05$ ). There was no correlation between ages in male, meanwhile, in female, it seemed to get longer as the age increased ( $r = 0.45$ ). Free fraction tended to increase with age increase ( $r=0.25$ ). Clearance rate of total triazolam as well as unbound triazolam was statistically significantly greater in males than in females ( $P < 0.02$ ,  $P < 0.05$ ). The differences contingent on the age was not statistically significant.

**Conclusions :** Pharmacokinetics of triazolam in Koreans has not shown statistically significant differences between genders when compared with the differences between ages but it has been examined that it has relative differences.

Disclosure: No conflict of interest declared

1180

**Atrophic gastritis: A risk factor for osteoporosis in the elderly women**B.J. Ko<sup>1</sup>, H.W. Kim<sup>1</sup>, Y.H. Kim<sup>2</sup>, K. Han<sup>3</sup>, G.E. Nam<sup>2</sup>, B.D. Han<sup>1</sup>, K.H. Cho<sup>1</sup>, J.Y. Ahn<sup>4</sup><sup>1</sup> Family Medicine, Korea University Anam Hospital, Seoul, Korea; <sup>2</sup> Family Medicine, Korea University Ansan Hospital, Ansan, Korea; <sup>3</sup> Biostatistics, Catholic University, Seoul, Korea;<sup>4</sup> Internal Medicine, Ulsan University Asan Medical Center, Seoul, Korea

**Objective:** Osteoporosis is prevalent worldwide and osteoporotic fractures account for enormous disability-adjusted life years (DALYs) lost. Hypochlorhydric or achlorhydric conditions, such as gastric surgery, and proton pump inhibitor use are risk factors for osteoporosis. Atrophic gastritis (AG) also decreases gastric acid production. However, the role of AG as a risk factor for osteoporosis is unclear. The aim of this study was to investigate the correlation between AG and osteoporosis in postmenopausal women over 60 years of age.

**Methods:** A total of 313 postmenopausal women aged 60 or older were included in this cross-sectional study during medical check-ups at a university hospital in Seoul from March 2007 to March 2009. Anthropometric and laboratory measurements were performed. Bone mineral densitometry was measured using a dual energy X-ray absorptiometry. AG was defined endoscopically if gastric mucosa in the antrum and the body observed atrophied and thinned and submucosal vessels could be visualized well.

**Results:** Osteoporotic patients were older, had lower body mass index, and high-density lipoprotein cholesterol levels than subjects without osteoporosis. The proportion of people with AG was higher in osteoporotic group than group without osteoporosis. A multiple logistic regression analysis demonstrated that the presence of AG, old age, and high fasting glucose levels were associated with an increased risk of osteoporosis, whereas obesity was associated with a decreased risk of osteoporosis in lumbar spine or femur.

**Conclusions:** AG is associated with increased risk of osteoporosis in the Korean elderly women after adjusting for anthropometric, and laboratory parameters.

Disclosure: No conflict of interest declared

1302

**Promoting and impeding factors for implementation of an organizational change to improve the quality of medical care in residential homes. The MOVIT project.**

L.M. van der Sande, A.J. Poot, C.S. de Waard, A.W. Wind, J. Gussekloo, M.A.A. Caljouw

*Department of Public health and Primary care, Leiden University Medical Center, Leiden, Netherlands*

**Background** Since the criteria for admittance become more strict, the complexity of medical care for residents in Dutch residential homes increased. Current organization of medical care is insufficiently equipped to deliver care for vulnerable older persons. MOVIT aims to improve the quality of care by the implementation of a new organizational model, including a Local Working Group (LWG) per residential home. LWG-members include general practitioners, pharmacists, elderly care physicians and nursing staff.

**Objective** Investigate the promoting and impeding factors for implementation of the LWG as experienced by LWG-members.

**Methods** Semi-structured telephonic interviews with members of 27 LWGs to explore experiences on collaboration and describe promoting and impeding factors. We considered three implementation phases (I forming of LWG, II making plans for improvement, III performing plans).

**Results** After 96 interviews (72%) in 20 LWGs (74%), no new promoting or impeding factors were mentioned. Overall, promoting factors are communication and cooperation, respectively mentioned by 85% and 68% of LWG-members. Communication especially improved in implementation phases I and II. Over all phases, major implementation obstacles are finances (17%) and lack of time (17%). Over 65% of LWG-members intend to continue participation to the LWG.

**Conclusion** Despite most obstacles have been experienced in the area of finances and lack of time, the implementation of the new structure with LWGs has been successful. MOVIT will give insight in the process and effects of structural changes in the medical care for older persons in residential homes.

Disclosure: No conflict of interest declared

1326

**Inappropriate and suboptimal prescription detection using stopp-start criteria in a primary care area.**

E. Rodríguez-Soler<sup>1</sup>, M. Navarro-González<sup>1</sup>, B. Adriyanov<sup>2</sup>, A. Sisó<sup>2</sup>  
<sup>1</sup> CAP BORRELL, CAPSE, BARCELONA, Spain; <sup>2</sup> CAP LES CORTS, CAPSE, BARCELONA, Spain

**Aims:** Elderly are an heterogeneous group of patients, often with comorbidities, and a large number of drugs prescribed. Inappropriate prescription(IP) is common in elderly and contributes to the increased risk of adverse drug reactions. STOPP-START (Screening Tool of Older Person's Prescriptions and Screening Tool to Alert doctors to Right Treatment) is a new tool to detect potential IP and potential prescribing omissions(PPOs). The aim of this study is to detect IP and PPO's using STOPP-START criteria in elderly

**Methods:** Cross sectional study on population  $\geq 65$  years in three urban primary care areas visited at least once in the last two years (n=1.137).

Sociodemographic data, IP and PPO's, number of medicines, polypharmacy, chronic diseases, Charlson Index, geriatric syndromes and cost of treatment were reviewed.

**Results:** Women 61.5%, 76 $\pm$ 5years $\pm$ 7.

Insomnia(21,1%) and incontinence(15%) are the most prevalent geriatric syndromes. The most prevalent chronic disease is hypertension(62.6%) and dyslipidemia(50.6%).

Polypharmacy 44.2% with a mean of 5.6 $\pm$ 4 $\pm$ 1 drugs. Average daily cost 2 euros/day. Charlson Index 1.0 $\pm$ 1.3

35.8% have at least one STOPP-START criteria. The most prevalent START criteria is F3 (antiplatelet therapy in DM II if more cardiovascular risk factors) and the most prevalent STOPP criteria is E4 (NSAID prolonged use (more than 3 months) as monotherapy for mild articular pain relief in osteoarthritis).

The variables most related to IP are polypharmacy, chronic diseases, more visits to the doctor and higher cost of treatment.

**Conclusions:** Our elderly population is overmedicated. Inappropriated prescription and potential prescribing omissions are highly prevalent among population living in the community.

Disclosure: No conflict of interest declared

1466

**Oral pathology in the elderly**

L. Troni<sup>1</sup>, V. Carvalho<sup>2</sup>, C. Mestrinho<sup>3</sup>

<sup>1</sup> Family Physician, USF Rodrigues Miguéis, Lisboa, Portugal; <sup>2</sup> Family Physician, USF Sobreda, Almada, Portugal; <sup>3</sup> Family Physician, USF Servir Saúde, Seixal, Portugal

**Objective:** Oral health is considered an integral part of general health, being an objective of Active Ageing Programme of the World Health Organization. The prevalence of oral disease in the elderly is significant and may affect nutritional status, physical well-being and promote mental and social isolation. The goal of this work is review oral pathology in the elderly, their relationship to systemic diseases and impact on quality of life.

**Methods:** Research literature in databases of Evidence Based Medicine, using key words: Elderly, Geriatric, Oral Disease, Oral Pathology, Primary Care. It was limited to articles in English, Portuguese and Spanish, published between 2001 and 2012.

**Results:** Periodontal disease, tooth decay, lesions of the oral mucosa and xerostomia are the most common oral diseases in the elderly.

Periodontal disease and cavities are the major cause of tooth loss. Have risk factors such as smoking, diabetes, drugs, salivary gland dysfunction and poor oral hygiene.

Xerostomia affects about 30% of the elderly, the main causes are medication, systemic diseases, smoking and salivary gland dysfunction.

A wide variety of oral lesions can arise associated with the use of fixed and removable dentures. The family physician should also be alert for possible premalignant lesions and malignancies.

**Conclusion:** The National Oral Health Promotion has been extended to elderly beneficiaries of the solidarity supplement – Draft Oral Health in the Elderly. It promotes the treatment of oral health problems, reduce the incidence and prevalence of oral diseases in the elderly, and approaches the relationship between family physician, medical dentist and oral hygienist.

Disclosure: No conflict of interest declared

1513

**Common health problems in old age**

M. Klačar, B. Dimitrijevic

*General Medicine, Health Center Dr Simo Milosevic, Belgrade, Serbia*

An increase in longevity raises the average age of the population by increasing the numbers of surviving older people. The growing number of older adults increases demands on the public health system and on medical and social services. Chronic diseases, which affect older adults disproportionately, contribute to disability, diminish quality of life, and increased health- and long-term care costs.

**Objective:** To determine the most common health issues that diminish the quality of life in elderly.

**Methods:** Study enrolled 63 participants (27 male and 36 female) more than 60 years old. Data were obtained through telephone interviews with patients and through their medical records.

**Results:** For 42 patients (66.67%) knee and/or hip pain is the factor that influences their QOL. 58.73% suffer from lumbalgia, 31.75% from fatigue, 31.16% from diminished mobility, 22.22% from vision impairment and 19.04% from insomnia. Depression was reported by 19.05% of patients, anxiety by 17.46%, impaired function by 15.87%, vertigo by 14.29% and headaches by 3.17%.

When asked about their impression of their physical mobility, 38.09% responded that they were completely mobile, 22.22% had trouble moving, 9.52% needed help from another person and 30.16% were immobile. Among immobile participants 78.95% were older than 85 years and 63.16% were women.

Of all participants 41.26% had satisfying vision. Only 2 patients used hearing aid out of 33 who complained of trouble hearing.

**Conclusions:** As world population continues to grow old, effective health care programmes must be developed in order to address main health issues and increase quality of life of elderly.

Disclosure: No conflict of interest declared

1586

**The frequency of polypharmacy in family doctor's practice**

A. Brković, A. Džanić, A. Beganlić, B. Hrustić, O. Batić Mujanović,

*Family Medicine Teaching Center, Primary Health Care Center, Tuzla, Bosnia-Herzegovina*

**Objective:** Polypharmacy is by definition use of multiple medications at the same time. Depending on the number of the medications that are being used there are more types of polypharmacy: minor polypharmacy- use of two or three medications, moderate polypharmacy use of four or five medications and major polypharmacy- use of more than five medications at the same time. The goal of the research is to establish prevalence of major polypharmacy by patients aged over 65.

**Methods:** The research was done as a randomized study of a cross section. Data for research were gathered from patients' medical charts and by insight into medications from "personal home pharmacy".

**Results:** 73 patients (46 women and 27 men) have taken part in the research. Major polypharmacy is present by 21/73 (29%) of the examinee, moderate form of polypharmacy is present by 35/73 (48, 2%) and minor polypharmacy is present by 16/73 (21, 9%) of the examinee. Only one patient is taking one medication. From all the medications without prescription that were used by patients most frequent were analgesics (24%) and sedatives (11%). It has been determined that over 60% of the patients take OTC preparations daily.

**Conclusion:** Elderly patients represent a great challenge for family practice team because of the changes that occur in their body during ageing. The problem of polypharmacy demands special attention and regular checkup of the prescribed medications as well as of the medications that our patients use from their "personal home pharmacy".

Keywords: polypharmacy, medications, ageing

Disclosure: No conflict of interest declared

1648

**Associations between psychological noncompliance and nutrition state of geriatric patients**

V. Ozeraitiene, D. Makaraviciene

*Medical Faculty, Vilnius University, Vilnius, Lithuania*

**Objective:** To investigate the associations between psychological noncompliance of geriatric patients and their nutrition state.

**Materials and Methods:** 72 patients were interviewed in Gerontology and Rehabilitation Centre of Vilnius. The questionnaires were used: Well-being indicator (WHO-5), Psychological Evaluation of Noncompliance. Nutritional status was assessed by carrying out the anthropometric measurements (waist circumference, BMI).

**Results of the research:** The average age of the respondents was  $80 \pm 3.92$ . 53% of respondents had WHO-5 index less than 50%. Overweight and obesity was observed in 37 (76%) women and 15 (65%) men. 21% of the patients had nutritional deficiency (BMI<22). Noncompliance usually was determined by disorders in the adaptation processes and bad memory. More than 62% of the patients were passive, did not show willingness to recover, were afraid to ask, to clarify. It was found that patients with higher BMI were significantly more likely not to adhere and refuse treatment. Patients with lower waist circumference were often reported to arbitrarily terminate the use of medication ( $r = -0.5, p < 0.05$ ).

**Conclusions:** Well-being of 53% of the investigated geriatric patients has been found unsatisfactory. The vast majority of the investigated were overweight and obese. Only 21% of the surveyed men and women had nutritional deficiency. Patients with higher BMI were more likely to be noncompliant. Patients with lower waist circumference were more often reported to arbitrarily terminate the use of medicine.

Disclosure: No conflict of interest declared

1698

**Factors affecting service quality perceived in providing corporate elderly care service and corporate care preferences**N. Tekin<sup>1</sup>, N. Şahin<sup>2</sup>, M. Kartal<sup>3</sup><sup>1</sup> *Family Medicine, Narlidere Geriatric Care Center and Residential Home, Izmir, Turkey;*<sup>2</sup> *Business Administration Program, Gediz University Vocational School, Izmir, Turkey;* <sup>3</sup> *Family Medicine, Dokuz Eylül University Faculty of Medicine, Izmir, Turkey*

**Objective:** In this project it is aimed to assess factors affecting preferences of individuals of corporate care service to be delivered to the increasing elderly population in our country, expectations of service, perceived service quality.

**Methods:** The study was designed as 16-question face to face questionnaire including attitude, behavior and spending tendencies relating to corporate care service.

**Results:** Average age of 50 persons included in the study was  $35,36 \pm 7,583$  (24-55). 72% of participants were male. While 50% of them answered the question that "Will you stay at nursing home when you get older?" as yes. 50% of them gave the answer to the question that "What do you think about staying at nursing home?" of "healthcare service is easily provided," 46% of them answered as "a safe life can be led." 38% of them answered that "we can live because of obligation". 74% of them gave the answer to the question that "how do you think a nursing home should be?" as state-owned, 16% of them stated that it should be like a home. 44% of them answered the question that "when you want to stay at a nursing home of the private sector, how will you choose?" as chain nursing homes like hospitals and the persons at the same rate said that they would choose by the low fee.

**Conclusions:** It was thought that results of pilot study questionnaire could be guiding for conducting the questionnaire in the society-based and works of care insurance.

Disclosure: No conflict of interest declared



1705

**Factors affecting polypharmacy in geriatric in two different cities of Turkey**

H. Çakmur

*Family Medicine, Kafkas University School of Medicine, Kars, Turkey*

**Objective:** The aim of this study is to research the factors affecting polypharmacy in the geriatric population of two cities within developed (western) and undeveloped (eastern) area of Turkey. Those areas absolutely different in terms of weather, life style, health care and opportunities.

**Methods:** The design of the study is cross-sectional.

The study was carried out between October and November, 2012 in Kars (east of Turkey) and November to December in İzmir (west of Turkey). Sixty-five to over 200 people were included in this study. Ethics Committee approval was obtained and written informed consent form has been taken from each person that attended the study. Polypharmacy was defined as five or more drugs.

**Results:** Total polypharmacy ratio is 15.5% in the study group. In İzmir 7.0%, in Kars 24.0%. This difference is significant statistically. Polypharmacy ratio in female gender was higher in both cities. There was significant relationship between polypharmacy and education level. It has been observed that as the literacy level increased, the ratio of polypharmacy decreased. No statistical relation between the polypharmacy and perception of economical level has been found. Polypharmacy is found in lowest level amongst the group of people who live alone than any other groups.

**Conclusions:** In this study it has been found that polypharmacy is affected from living in different cities of same country. The association between area of residence and polypharmacy was adjusted for confounders. As a result it was seen that polypharmacy higher in the undeveloped city of Turkey.

Disclosure: No conflict of interest declared

1782

**Studies of İzmir branch of Alzheimer's Association of Turkey: Requirements of service delivery of Alzheimer's patient and relatives**A.Gürsoy<sup>1</sup>, N.Tekin<sup>2</sup>, G.Yener<sup>3</sup>, S.Şahin<sup>4</sup>

<sup>1</sup> Coordinator, İzmir Branch of Alzheimer's Association, İzmir, Turkey; <sup>2</sup> Family Medicine, Narlidere Geriatric Care Center and Residential Home, İzmir, Turkey; <sup>3</sup> Neurology, Dokuz Eylül University, Faculty of Medicine, İzmir, Turkey; <sup>4</sup> Internal Medicine, Division of Geriatrics, Ege University, Faculty of Medicine, İzmir, Turkey

**Objective:** Alzheimer's disease is an important disease not affecting only the person but also affecting the whole family and care givers and seen in family physician practices more and more. Service delivery of İzmir Branch of Alzheimer's Association of Turkey was evaluated and it was aimed to determine the requirements of Alzheimer's patients and patients' relatives in Turkey in this study.

**Methods:** Registration form was prepared for service delivery for the employees of İzmir Branch of Alzheimer's Association of Turkey, registrations of 2012 were assessed.

**Results:** 65,9% of individuals participating in 208 interviews recorded at İzmir Alzheimer's association were females. 40,9% of these people were the daughter of patients, 19,2% of these people were son of the patients, 6,2% of them were the wives of the patients. 39,9% of them became aware of Alzheimer's association by means of Internet, 22,1% of them became aware of the association by obtaining information from the doctor. 29,3% of these people requested to participate in social activities of the association, 17,8% of them requested counseling for finding a proper doctor for the patient, 16,4% of them requested general information about Alzheimer's disease. Average service time was determined as 11,42 min ± 8,51 (5-60 min).

**Conclusions:** Alzheimer's Associations are the organizations providing support services for the patient and patients' relatives. The associations can play active roles in meeting social support requirements of patients' relatives applying, efficient uses of healthcare and social service deliveries for the patients and increasing general knowledge level of the society.

Disclosure: No conflict of interest declared

1786

**London dementia development pathway: the GP's role**

S. Mir

*Faculty of public health and primary care, Imperial college London, London, United Kingdom*

**Introduction:** Over the last decade in the UK, dementia has gained increasing political, social and medical prominence. From the National dementia strategy to the Prime Ministers dementia challenge steps have been taken to evaluate and improve current dementia pathways and care.

**Methods:** In Sept 2012, a cohort of 35 primary care physicians, representatives of the different geographical areas of London, enrolled on a new, NHS London initiative, to address deficiencies of dementia care in London at primary, secondary and community level. The initiative, which ran for 6 months, highlighted key psychosocial issues of dementia along with formal commissioner based learning and informal peer group teaching. Over 6 months, primary care physicians were treated as dementia „fellows“ and guided to evaluate local guidelines, work with managerial leads, educate fellow primary care physicians and work on a local, self-directed project aimed at improving dementia care in their locality.

**Results:** Regular monthly meetings of the fellows, guided by the London dementia lead resulted in streamlined care pathways (eg one stop memory clinics), improved diagnosis rates of dementia, accurate disease coding, increased uptake of tele-health diagnostics for memory disorders and enhanced utility, access and integration of third sector resources (eg day centres).

**Conclusions:** The initiative was successful by forming a united, local and shared primary care led review and renovation of London wide dementia services. This pilot project, aimed at collaborating shared primary care working, has now been emulated for mental health disorders in London, and could prove successful for other high priority pathways.

Disclosure: No conflict of interest declared

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**Comparison of physical examination findings and magnetic resonance imaging results of young adult patients followed for lumbar disc herniation**A. Parlak<sup>1</sup>, A. Aytekin<sup>2</sup>, S. Develi<sup>3</sup>, S. Ekinci<sup>4</sup>*<sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Orthopedia, Agri Military Hospital, Agri, Turkey*

**Objective:** The aim of this study is to identify the presence of lumbar discopathy with magnetic resonance imaging (MRI) in patients who presented with low back pain and physical examination findings were positive in terms of lumbar discopathy.

**Methods:** Patients, aged between 20-45 and admitted to family physician with complaint of low back pain were included in the study. Laseque, contralateral laseque, femoral stretch and FABER tests were applied to patients. 150 patients evaluated as positive for any of the tests were included to the study. Lumbar MRI of patients performed and existence of lumbar discopathy investigated.

**Results:** The mean age of the patients was  $35.45 \pm 8.35$  years. Laseque test was positive in 76% of the patients (n = 114) and contralateral laseque in 48% (n = 72), femoral stretch test in 55% (n = 81), FABER test in 44% (n = 66). According to MRI findings of the patients, while 20% of the patients (n = 30) had lumbar discopathy and 6% (n = 9) had spinal stenosis, 74% of the patients (n = 111) were observed to have normal lumbar MRI.

**Conclusions:** In this study, we detected that patients who considered to have lumbar discopathy due to physical examination were mostly found to have a normal anatomy in magnetic resonance imaging. In terms of cost-effectiveness having an MRI in young adult patients with low back pain does not seem very reasonable.

Disclosure: No conflict of interest declared

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### The effect of levothyroxine replacement therapy on lipid profile and oxidative stress parameters in patients with subclinical hypothyroid

S. Mutlu<sup>1</sup>, A. Parlak<sup>2</sup>, U. Aydoğan<sup>1</sup>, U. Özuguz<sup>3</sup>, K. Saglam<sup>4</sup>

<sup>1</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey; <sup>2</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Endocrinology, Afyon Kocatepe University Medical Faculty, Ankara, Turkey; <sup>4</sup> Internal Medicine, Gulhane School of Medicine, Ankara, Turkey

**Objective:** The purpose of this present study is to investigate the effects of levothyroxine (LT4) replacement therapy on oxidative stress parameters and lipid profile in.

**Methods:** 30 patients recently diagnosed with subclinical hypothyroid (SH) and 30 healthy volunteers (euthyroid) are included in the study. Blood samples are collected from the patients at the beginning of the study and in the 3<sup>rd</sup> Month in order to make oxidative stress, lipid profile and biochemical analyses, and replacement therapy with LT4 are performed for SH patients.

**Results:** A statistically significant decrease in post-levothyroxine therapy superoxide dismutase (SOD) values and catalase (CAT) values are determined (for SOD pre-therapy and post-therapy, respectively;  $669.89 \pm 192.44$  kU / mL,  $564.40 \pm 162.24$  kU / mL,  $p = 0.019$ , for CAT pre-therapy and post-therapy, respectively  $89.61 \pm 27.03$  kU / ml,  $62.73 \pm 35.97$  kU / mL,  $p = 0.001$ ). With levothyroxine therapy, a statistically significant improvement is observed in the HDL levels (pre-therapy and post-therapy, respectively;  $48.23 \pm 7.66$  mg / dL,  $51.76 \pm 7.94$  mg / dL,  $p = 0.004$ ).

**Conclusions:** SOD and CAT levels, used as oxidative stress indicators, decrease with LT<sub>4</sub> replacement therapy, and the HDL level is increased.

Disclosure: No conflict of interest declared

## 3.1. PREVENTION AND SCREENING

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### Gingiva overgrowth and dental anomaly: An unusual presentation of Noonan's syndrome

K. Marakoglu<sup>1</sup>, N. Çetin Kargin<sup>1</sup>, İ. Marakoglu<sup>2</sup>, C. Ucar Albayrak<sup>3</sup>, T. Çora<sup>4</sup>

<sup>1</sup> Selçuk University, Selçuklu Medical Faculty, Department of Family Medicine, -, Konya, Turkey;

<sup>2</sup> Department of Periodontology, Faculty of Dentistry, Selçuk University, -, Konya, Turkey;

<sup>3</sup> Department of Pediatric Haematology, Ondokuz Mayıs University, -, Samsun, Turkey;

<sup>4</sup> Department of Genetics, Selçuk University Medical School, -, Konya, Turkey

**Objective:** We aimed to discuss a different variant of Noonan Syndrome progressing especially with gingival overgrowth and dental anomaly in our cases.

**Methods and Results:** A 15-year-old female patient presented to our family medicine outpatient clinic with the complaint of growth retardation. The physical examination of the patient revealed that she was 135 cm tall (<3 percentile) and weighed 44 kg (3-10% percentile). The patient's head-neck examination showed that her uvula was deviated towards the right; she had low set hair line on the neck, had short neck and hair development on her neck; nasal speaking. She had dental anomaly, decayed and yellow teeth, gingival overgrowth, and surgical scars in the upper lip and palate of a previous cleft palate surgery. The patient's ear, nose, and throat consultation revealed that her audiometer and hearing test results were normal but her both ears were dysplastic. Her ophthalmologic examination results were normal except the presence of pterygium in her right eye. The WISC-R test conducted by a psychologist revealed a slight mental retardation (total score=62) in comparison with her peers. The patient had shortness of the 4<sup>th</sup> finger of her right hand, scoliosis, and extensive brown pigmentations on her back. Her genetics results and genogram was normal (46 XX). The patient was diagnosed with Noonan Syndrome with phenotypic symptoms.

**Conclusions:** Noonan Syndrome cases should be examined carefully. Specifically, if there are accompanying symptoms and findings in cases with gingival overgrowth and dental anomalies as seen in patients' mouth and teeth examinations, Noonan Syndrome should be taken into consideration.

Disclosure: No conflict of interest declared

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**Screening for microvascular complications in type 2 Diabetes**N. Damjanac<sup>1</sup>, V. Kilibarda<sup>1</sup>, M. Racic<sup>2</sup><sup>1</sup> Family Medicine, Health Centre, Trebinje, Bosnia-Herzegovina; <sup>2</sup> Family Medicine, University of East Sarajevo, Sarajevo, Bosnia-Herzegovina

**Objectives:** Diabetes is associated with significant morbidity and mortality. The majority of disease burden is attributed to long-term complications. Screening tests to detect early forms of microvascular complications are available, but few diabetes patients receive screening at the recommended level. The objective of the study was to determine the use and predictors of optimal screening behavior, defined as receiving dilated eye exam, foot examination, spot urine test, serum creatinine test and screening for signs and symptoms of autonomic neuropathy.

**Method:** The retrospective, descriptive study was conducted in Family medicine teaching centre in Foca, BiH. The study population was 192 patients between 20 and 85 years of age. The data were obtained by analyzing medical records of the patients, as well as by using short interviews with respondents.

**Results:** Screening rates were as follows: 69% had a dilated eye exam, 35% had a foot exam, 2% had a spot urine test, 74% had a serum creatinine test and 1% had a screening for signs and symptoms of autonomic neuropathy. Within this group, none of the patients reported undergoing all five tests.

**Conclusion:** Based upon this research, screening rates occur at lower rates than recommended by the American Diabetes Association. The areas in need of improvement include optimal screening rates and targeting screening endeavors toward patients with type 2 diabetes. The intervention and policies that will improve screening rates and reduce subsequent morbidity and mortality associated with chronic complications need to be designed within the whole country.

Disclosure: No conflict of interest declared

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**Can vitamin D improve migraine?**M.C.Martinez-Altarriba<sup>1,2</sup>, J.M.Lopez-Abuin<sup>2</sup><sup>1</sup> ICS, CAP HORTA, BARCELONA, Spain; <sup>2</sup> RHI, Rural Health Institute, La Coruña, Spain

**Introduction:** Recent studies describe that headaches may happen due to a hypothalamus vitamin D receptor dysfunction.

**Aims:** To verify the correlation between migraine prevalence and lack of vitamin D, and the improvement of migraine patients with a vitamin D intake.

**Method:** A two-year long comparative randomized study performed in two groups of 75 patients: one with migraine history, the other without; reviewing their health problems by their clinical files, performing blood tests with vitamin D levels, and diagnosis of migraine following the International Headache Society criteria; prescribing vitamin D to those in which we found deficit, and new vitamin D levels after its intake.

**Results:** Migraine and vitamin D deficit prevalence was higher in winter and lower in summer. The migraine group showed a 25% vitamin D deficit (the other group, 6%). Dark skin patients had double prevalence of vitamin D deficit and 3 times more headaches. After vitamin D intake in the group suffering from migraine and with vitamin D deficit, headache prevalence became 20% lower.

**Conclusions:** There is a relationship between migraine and vitamin D levels. Optimizing its blood levels may improve the migraine patients' life quality. It's possible influence of more factors in vit D deficiency in blacks as they receive more sunshine, should have more vit D. More studies are needed

Disclosure: No conflict of interest declared

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**A case of autosomal dominant polycystic kidney disease accompanying with intracranial aneurysm**A. Aytekin<sup>1</sup>, A. Parlak<sup>2</sup>, S. Develi<sup>3</sup>, S. Uguz<sup>4</sup>, O.Sari<sup>5</sup><sup>1</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Urology, Agri Military Hospital, Agri, Turkey; <sup>5</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey

48 years old female patient admitted to our clinic with the complaint of headache and mild abdominal pain. Arterial blood pressure was 150/95 mmHg. In abdominal examination bowel sounds found to be normoactive, no rebounding and defense noticed. Neurological examination was normal. Complete blood count was normal and mild hematuria and borderline creatine values detected in urine analysis. In abdominal ultrasonography, bilateral increase in sizes of kidneys, multiple renal cortical and parapelvic cyts detected. However, some cysts were in heterogeneous appearance and sporadically foci which were giving shades observed. Magnetic resonance imaging (MRI) was planned due to heterogeneous cysts and borderline creatine values. In MRI examination, bilateral, multiple cortical cysts were observed. Cyts were in various sizes and the largest was in 30x20mm at the right upper pole. Some cysts had high signal intensity due to dense proteinaceous and hemorrhagic content In T1A sections. Cysts detected by sonography were firstly evaluated as complicated cysts due to hemorrhage. In further examination no cyts detected in liver, spleen, and pancreas. In intracranial examination aneurysm of inferior cerebellar artery was detected. The patient's other system examinations were evaluated as normal. The patient was diagnosed as polycystic kidney. According to the family history, patient's father was found to have multiple renal cyts but no intracranial aneurysm. The current state of the patient was evaluated as an autosomal dominant polycystic kidney disease accompanying with intracranial aneurysms.

Disclosure: No conflict of interest declared

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**What can we expect from healthy adults family history?**Z. Klemenc-Ketis<sup>1,2</sup>, B. Peterlin<sup>3</sup><sup>1</sup> Department of family medicine, Medical School, University of Ljubljana, Ljubljana, Slovenia;<sup>2</sup> Department of family medicine, Medical School, University of Maribor, Maribor, Slovenia;<sup>3</sup> Department of Obstetrics and Gynecology, Institute of Medical Genetics, University Medical Centre Ljubljana, Ljubljana, Slovenia

**Background:** Traditionally, family history taking is focused on patients with symptoms or problems which might imply that the patient is having a raised risk for the development of some chronic diseases. Rarely, healthy patients or patients with acute problems are being asked about their family history. Inadequate knowledge on family history among medically underserved population is a major obstacle limiting quality management of such patients and often leads to delayed treatment.

**Aim:** The aim of this study was to determine the prevalence of healthy individuals at risk for developing cardiovascular diseases, cancer, and diabetes based on their self-reported family history.

**Method:** This cross-sectional observational study took place in Slovenian occupational practices in primary health care centres. Study population consisted of consecutive individuals (N = 1,696) who came to occupational practices for their regular occupational preventive check-up from November 2010 to June 2012. Data on family history was collected by a self-developed questionnaire. The disease risk was calculated based on the CDC guidelines.

**Results:** Final sample consisted of 1,340 respondents, out of which 841 (62.8%) were males. Mean age of the sample was 40.3 ± 10.1 years. High or moderate risk for cardiovascular diseases was observed in 262 (19.6%) respondents, for cancer in 153 (11.4%) respondents, and for diabetes in 148 (11.1%) respondents.

**Conclusion:** A large number of healthy individuals at high or moderate risk family risk for most common non-communicable diseases points to the need of regular screening of family history also in healthy part of general population.

Disclosure: No conflict of interest declared

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**Risk factors for chronic noninfectious diseases in the population at the age of 19 to 35 years of service users in the Health center „Stari Grad“ Belgrade**

B. Lazić, V. Janjušević, B. Obradović, N. Radisavljević, L. Apostolska  
*Healthcare for adults, Healthcare center Stari grad, Belgrade, Serbia*

**Background:** Preventative care in a population of 19 to 35 years has a significant contribution to the identification and elimination of risk factors for chronic noninfectious diseases (CND).

**Objective:** Analysis of risk factors for CND in a population of 19-35 years who are treated in the Health center „Stari Grad“ Belgrade.

**Method:** The method of research used data obtained from preventive examinations performed in one year by general practitioners using a standard protocol: medical history, family history, physical exime, laboratory examination (glicemia, cholesterolemia).

**Results:** A total of 280 persons aged 19-35 years, of which 43.57% were male and 56.43% were female. In 10% of patients there was a positive family history of cardiovascular (8.5%), diabetes (1.2%) and malignancy (0.3%). There were 14 (5%) smokers. Although 80% had normal weight, 4.9% respodents had Body mass index (BMI) less than 17, 12.96% had BMI between 25 to 29.9 and 2.14% of them had BMI over 30. Hyperglycemia had 0. 36%, and 1.78% had high cholesterolemia. Elevated blood pressure values were not recorded.

**Conclusion:** The identified variable risk factors for CND in this group are: smoking, high body weight and hypercholesterolemia.

All patients with identified risk factors were given oral advice and written instructions regarding lifestyle changes, while smokers were referred to counseling for smoking cessation.

Intensive and timely health educational intervention through group and individual health education work can contribute to the prevention and elimination of CND risk factors.

Key words: risk factors, young, preventative care, health promotion

Disclosure: No conflict of interest declared

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**Elastic restraint orthotic and manual lymphatic drainage for preventing lymphoedema after breast cancer surgery**

G. A. Matarán-Peñarrocha<sup>1</sup>, A. M. Castro-Sánchez<sup>2</sup>, M. E. Aguilar-Ferrándiz<sup>3</sup>

<sup>1</sup> *Medicina Familiar y Comunitaria, Servicio Andaluz de Salud, Jódar-Jaén, Spain ;*

<sup>2</sup> *Departamento de Enfermería, Fisioterapia y Medicina, Universidad de Almería, Almería, Spain ;*

<sup>3</sup> *Facultad de Ciencias de la Salud, Universidad de Jaén, Jaén, Spain*

**Background:** Secondary lymphoedema is considered one of the most common complications after breast cancer surgery. The aim of the present study was to analyze the effectiveness of containment elastic orthosis and manual lymphatic drainage in the prevention of lymphoedema secondary to mastectomy.

**Method:** An experimental study was performed with a control group. Forty-eight patients were randomly assigned to experimental (containment elastic orthosis and manual lymphatic drainage) and control (postural measures) groups. Outcomes measures were quality of life, body composition, temperature, functional assessment of the shoulder, pain and limb volume. Measures were performed at baseline and after 8-months intervention.

**Results:** After the intervention period, the experimental group showed significant differences ( $P < .05$ ) in the quality of life, extracellular water, and functional assessment of the volume of the limb of the mastectomized side.

**Conclusions:** The application of containment elastic orthosis and manual lymphatic drainage contribute to prevent secondary lymphoedema after breast cancer surgery, improving the quality of life in these patients.

Disclosure: No conflict of interest declared

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**Assessment of dietary habits, physical exercise and obesity in primary health care workers**O. Tanriover<sup>1</sup>, S. Hidiroglu<sup>2</sup>, P. Ay<sup>2</sup>, M. Karavus<sup>2</sup><sup>1</sup> FAMILY MEDICINE, YEDITEPE UNIVERSITY FACULTY OF MEDICINE, ISTANBUL, Turkey; <sup>2</sup> PUBLIC HEALTH, MARMARA UNIVERSITY, ISTANBUL, Turkey

**Objective:** Obesity continue to be a serious public health problem despite many primary health care workers more frequently evaluate, refer, and supervise the long-term medical management of obese patients. In this study our aim was to detect the prevalence of obesity among primary health care workers and evaluate the dietary habits and physical activity status in this population.

**Methods:** In this descriptive study, 229 participants were included in the study. A face to face interview was performed using a semi-structured questionnaire consisting of 43 questions asking about the participants' socio-demographic features, current health status, dietary habits and physical activity status.

**Results:** The majority of the participants were women (75.1%, n=171), nurses (51.1%, n=117) and married (75.5%, n=172). 13.1% had a BMI of 30 kg/m<sup>2</sup> or more. Most of the participants eat their meal outside their homes (75.5%, n=172), and 41% of the participants do not think that their diet is adequate and balanced. More than half of the participants do not do regular physical activity. 76.7% of the physicians were obese while in nurses it was detected in only 23.3%. We have found out that more doctors than nurses have obesity which is statistically significant (p < 0.001).

**Conclusion:** The primary health care workers are under a high-risk work group with respect to obesity and related diseases. There should be work based interventions to adress this important issue.

Disclosure: No conflict of interest declared

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**What do older women know and do about cancer screening ?**O. Tanriover<sup>1</sup>, S. Hidiroglu<sup>2</sup>, P. Ay<sup>2</sup>, M. Karavus<sup>2</sup><sup>1</sup> FAMILY MEDICINE, YEDITEPE UNIVERSITY FACULTY OF MEDICINE, ISTANBUL, Turkey; <sup>2</sup> PUBLIC HEALTH, MARMARA UNIVERSITY FACULTY OF MEDICINE, ISTANBUL, Turkey

**Objective:** The aim of this study was to evaluate the older women's knowledge, attitudes and behaviors related to cancer screening including mammography, Pap smears and fecal occult blood tests.

**Method:** 194 women aged between 50-65 years were recruited in this descriptive study. A semi-structured questionnaire was used to ask the socio-demographic and obstetric characteristics and the level of knowledge about cancer screening tests. Access to health care facility and use of screening tests were also determined.

**Results:** 25.7% of respondents have heard about all three tests. The rate of participants having had all three tests was 4.1%. 80.4% of the women have heard of mammography. 45.4% of participants had a mammography screening. The rate of having had a Pap test was 47.9% of the participants. 39.7% of the participants have heard of FOBT, and the rate of having a FOBT was 9.8%. 47.9% of the participants heard information about screening tests from their family physicians.

**Conclusion:** Despite the risk of breast, cervical and colon cancer increases with older age; due to lack of knowledge, majority of the women we assessed, did not have their screening tests done. Women over 50 years of age should be counselled in terms of screening test and encouraged to follow the recommendations.

Disclosure: No conflict of interest declared

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**Prevalence and factors associated with nonalcoholic fatty liver disease in a southern semiconductor company**

Y.H. Shen

*Family Medicine, Yuan's General Hospital, Kaohsiung, Taiwan*

**Objective:** Nonalcoholic fatty liver disease (NAFLD) has become the most common chronic liver disease in Asians. However, data on prevalence and factors associated with NAFLD in Asians are lacking. The aim of this study is to investigate the prevalence of NAFLD in a southern semiconductor company from 2012 annual health exam to assess the relationship between NAFLD and gender, uric acid and metabolic risk factors.

**Methods:** We selected 918 officers and each of them underwent detailed medical history-taking, physical examination, laboratory assessments and abdominal ultrasonography. Statistical calculations were performed by SPSS version 12.0. Nominal logistic regression analysis was used to estimate the odds ratio for risk factors of NAFLD.

**Results:** Prevalence of NAFLD was 78.5%. 232 (25.3%) officers were diagnosed as MetS. 8% of the officers have hyperuricemia and 53.9% have abnormal BMI. The prevalence of components of MetS was 23% for abnormal waist circumference, 40.6% for abnormal blood pressure, 30.9% for abnormal TG, 40.3% for abnormal HDL-C, and 24.2% for abnormal fasting glucose. In both genders, the prevalence of metabolic factors was higher in the NAFLD group. BMI, waist circumference, blood pressure, blood glucose, total cholesterol, triglyceride and uric acid were found to have a diagnostic value for NAFLD. BMI is a better index for diagnosing NAFLD.

**Conclusion:** Male gender, metabolic factors such as obesity, dyslipidemia, hypertension or type 2 diabetes are risk factors for NAFLD. As NAFLD is a very common condition, future study is needed to evaluate the possible links between NAFLD, uric acid levels, and cardiovascular disease.

Disclosure: No conflict of interest declared

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**Surveillance of risk factors for diabetic foot ulceration with particular concern to local practice**

A. Alsharief, A. Alkhier Ahmed, E. Alsharief

*Primary health care, National guard health affairs, Jeddah, Saudi Arabia*

**Introduction:** Diabetes mellitus is a global health problem. Prevalence of diabetes varies between countries due to different factors. Ulceration in diabetes is a common and disabling complication. Foot ulcers and amputations are a major cause of morbidity, disability, as well as emotional and physical costs for people with diabetes. Early recognition and management of independent risk factors for ulcers and amputations can prevent or delay the onset of adverse outcomes.

Foot problems are the most common cause of admission to hospital for people with diabetes. In developing countries, foot problems related to diabetes are thought to be even more common.

**Aims of study:** Detect the risk factors for diabetic foot ulceration using designed diabetic foot risk factors screening form among Saudi patients with type 2 diabetes attending our centre which is one of the specialist centres belonged to Saudi National Guard health affairs located in Jeddah – Saudi Arabia.

**Methodology:** Cross sectional study was designed, participants were selected randomly. Three hundred and fifty participants (350) were included. Screening form was used to detect the risk factors. Data was collected and analyzed using SPSS software version 14 using personal computer.

**Results:** The commonest risk factors found in our study were diabetic neuropathy (48%) inappropriate foot wear (41%), Hux vulgus (22%) and peripheral arterial disease (15%).

**Conclusion:** Diabetic foot is a serious problem need to be screened as early as possible. Further studies are needed to detect more risk factors.

Disclosure: No conflict of interest declared



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**Role play in mutual exchange experiences of alcohol consumption student awareness model within Maharakham University, Thailand**

B. Srichaikul

*Faculty of Public Health, Maharakham University, Maharakham, Thailand*

Alcohol Consumption among the adolescents always is the Public health and legal problems in every countries including Thailand.

**Objective:**The control of accessibility of alcohol purchasing among the adolescents is lack of following up and Maharakham University has over 50,000 students. This study is aimed at evaluating the effect of using : *Role Play in Mutual Exchange Experiences of Alcohol Consumption Student Awareness Model* to prevent the alcohol drinking.

**Method:** The research is designed as the Quasi experiment The activities also included Role Play in Mutual Exchange Experiences of Alcohol Consumption Student Awareness Model and home visits at the alcohol drinking students residents and alcohol selling convenience stores by the volunteers group of alcohol abstinent students who had faced the tragic experiences in their past with their overcoming methods to explain to the samples group of 114 alcohol drinking students. Data was collected by interviewing questionnaires before and after experiment in 12 weeks. The statistics were percentage, means, standard deviation, range, Paired and Independent –samples t-test.

**Result:**The result showed that means scores of knowledge in drinking alcohol, perception in denying for drinking alcohol, social supports and drinking alcohol outcome were higher in statistically significant with p-value at 0.05 than before the experiment. It also showed the decrease in alcohol drinking students gradually.

**Conclusion:** Role Play in Mutual Exchange Experiences of Alcohol Consumption Student Awareness Model is one of the effective models in preventing the accessibility of alcohol as an alcohol abstinence tool.

Disclosure: No conflict of interest declared

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**Accuracy of diagnosis of diabetic retinopathy using digital fundus photographs by primary care physicians from a university hospital of Thailand**

W. Amruklert, S. Jamulitrat

*Community medicine, Faculty of Medicine. Songklanagarind Hospital, Hatyai. Songkhla, Thailand*

**Background:** Only 21% of diabetic patients in primary care settings in Thailand underwent an annual fundus exam.To improve the coverage of diabetic retinopathy (DR) screening in context of the limited number of ophthalmologists, primary physicians must take this role.

**Objective:** To determine the sensitivity and specificity of primary care physicians from Songklanagarind Hospital in diagnosing DR.

**Methods:** A set of 79 digital fundus photographs were purposively selected with the intention to archive a similar distribution of types of DR lesions. A grid with 10x12 cells was placed over each image. The 16 physicians practicing in the primary care unit of Songklanagarind Hospital participated in the study.The participants were asked to identify DR lesions and recorded them in the corresponding cells along with the confidence level. The recorded DR lesions in each cell were compared with lesions defined by an ophthalmologist.

**Results:** The presence of diabetic retinopathy was detected in 74 fundus photographs (93.7%). The overall sensitivity and specificity of detecting any DR lesions were 30.9% (95%C.I = 30.6-31.3) and 99.0% (95%C.I = 99.0-99.0), respectively. Overall sensitivity and specificity of diagnosing cases that needed referring (severe NPDR or PDR) were 52.3% (95%C.I = 48.5-56.1) and 83.5%(95%C.I =80.2-86.4)

**Conclusions:** Screening for diabetic retinopathy by primary care physicians from Songklanagarind Hospital using digital fundus photographs for patients who needed referring to an ophthalmologist is not sensitive enough.

Disclosure: No conflict of interest declared

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**Screening program for diabetic retinopathy in Bosnia and Herzegovina**M. Racic<sup>1</sup>, N. Avram<sup>2</sup>, Lj. Kozomara<sup>3</sup>, S. Kusmuk<sup>4</sup>, S. Kravic<sup>5</sup>

<sup>1</sup> Family medicine, University of East Sarajevo, Sarajevo, Bosnia-Herzegovina; <sup>2</sup> Ophthalmology department, Clinical hospital, Foca, Bosnia-Herzegovina; <sup>3</sup> Family Medicine, Health Centre, Banja Luka, Bosnia-Herzegovina; <sup>4</sup> Family Medicine, University of East Sarajevo, Sarajevo, Bosnia-Herzegovina; <sup>5</sup> Family Medicine, Health Centre, Gacko, Bosnia-Herzegovina

**Objective:** Since diabetic retinopathy is asymptomatic in its early and most easily treatable stages, it can only be detected by clinical eye examination. A screening program must be comprehensive, that is, covering all persons with diabetes in a defined area. The primary objective of this study was to determine the prevalence of diabetic retinopathy among diabetic patients in Bosnia and Herzegovina.

**Method:** Public screening program for diabetic retinopathy was conducted in five towns in eastern region of BiH during the period from 2004 to 2009. Screening methods included 'ophthalmologist-led' assessment of vision and ophthalmoscopy with photography. Screening program included the patients with diabetes mellitus type 1 and 2, registered with local family practices, who have never been screened for diabetic retinopathy before.

**Results:** The total number of respondents was 1079. An average age of respondents was 60 years. An average duration of diabetes was 7.66 years. Diabetic retinopathy was found in 49% of the respondents. Of those, 61% had minimal non-proliferative diabetic retinopathy, 5% advanced proliferative diabetic retinopathy and 17% had clinically significant macular oedema. Poor glycaemic control was found in 57% and uncontrolled hypertension in 33% of patients with diabetic retinopathy. Eighteen percents of respondents needed urgent laser treatment.

**Conclusion:** The prevalence of diabetic retinopathy in eastern parts of Bosnia and Herzegovina was high. Screening program and early treatment can prevent substantial disability. Primary care physicians play a significant role in optimizing glycaemic control and managing other cardiovascular risk factors which can potentially affect eye health.

Disclosure: No conflict of interest declared

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**Quaternary prevention; from Wonca world Hong Kong 1995 to Wonca world Prague 2013**M. Jamouille<sup>1</sup>, M. Roland<sup>2</sup>

<sup>1</sup> General practitioner, researcher in Primary Care, Charleroi, Belgium; <sup>2</sup> Professor of general Practice, Department of General Practice, Brussels, Belgium

During the World Wonca congress in Hong Kong 1995, the Quaternary Prevention concept (P4), supported by the Wonca International Classification Committee in its Durham meeting, has been presented as a poster by the same authors.

As stated in Wonca dictionary of family Medicine (Bentzen, 2003), quaternary prevention definition is "Action taken to identify a patient or a population at risk of overmedicalisation, to protect them from invasive medical interventions and provide for them care procedures which are scientifically and medically acceptable."

18 years later, the concept has turned around the world and is now taught in many medicine schools. After a successful Wonca Europe Basel workshop, Wonca world Prague welcomes a workshop that provides speakers from 6 countries and 4 continents. The draws used in various publications are shown on the poster in an attempt to explain visually the concept and refer to the corresponding quotes.

Links with the actual controversy about overscreening, overdiagnosis and overtreatment are indicated. Several mailing list addresses and websites related to Quaternary prevention are also displayed.

More about P4 on [www.ph3c.org](http://www.ph3c.org)

Disclosure: No conflict of interest declared

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**Is blood pressure higher in obese children?**

M. Polat, H. Yikilkan, C. Aypak, S. Gorpelioglu

*Family Medicine Department, Diskapi Yildirim Beyazıt Training and Research Hospital, Ankara, Turkey*

**Objective:** One of the most important and widely affecting reason of hypertension (HT) is reported to be obesity. The aim of the study is to investigate the relation between body mass index and blood pressure (BP) in children.

**Methods:** A total number of 2826 students (7 to 12 years of age) from three different primary schools in Ankara were included in the study. Height, weight and BP of children were calculated and BP above 95th percentile were evaluated as hypertensive according to sheme of "High Blood Pressure Work Group" standardized in 2004. The definitions of overweight and obesity were defined according to the criteria presented in "Centres for Disease Control (CDC 2000)". According to body mass index (BMI) percentile tables, 85th percentile and above were interpreted as overweight; 95th percentile and above were as obese.

**Results:** The prevalence of HT was 7,9%. Fifty six percent of hypertensive children were male. Even though HT is more frequent among boys than girls, there was not a statistically meaningful difference ( $p=0.401$ ). The prevalence of overweight was found as 13,9% and obesity 13,9%. Obesity was more common in boys than girls with statistically significant difference ( $p=0.001$ ). There was a positive relation between BMI and BP in children ( $p=0.001$ ).

**Conclusions:** HT prevalence was found to be higher in children than assumed. Childhood HT can cause HT in adulthood and cardiovascular and other complications might be seen in early ages. BP measurement should be a part of physical examination especially for obese children.

Disclosure: No conflict of interest declared

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**Results from the 1st year implementation of an eye disease screening unit in primary care**M.Torremorell-Núñez<sup>1</sup>, E. Díaz-Salcedo<sup>1</sup>, G.Puig-Ponsico<sup>1</sup>, C. Gallardo-Sánchez<sup>1</sup>, M. Albiol<sup>2</sup>, C. Viladot<sup>2</sup>, X. Castro<sup>3</sup>, D. Altafaja-Albert<sup>1</sup>, P. Contamina<sup>1</sup>, C.Mateo-Gambarte<sup>1</sup>*<sup>1</sup> Primary Care, Institut Català de la Salut, Cunit (Tarragona), Spain; <sup>2</sup> Primary Care, Institut Català de la Salut, Vilanova i la Geltrú (Barcelona), Spain; <sup>3</sup> Primary Care, Institut Català de la Salut, Sant Pere de Ribes (Barcelona), Spain*

**Objective:** An eye disease screening protocol and unit (EDSU) was designed in order to make an early diagnosis of retinopathy in asymptomatic type2 diabetic (DM-2) population in primary care (PC). EDSU was established in our region in order to increase coverage and accessibility to DM-2 population.

**Methods:** Descriptive and prospective study in a rural PC region. Individuals included were DM-2 patients with no retinopathy. DM-1 patients, DM-2 with retinopathy, macular edema, retinal detachment, advanced cataract and glaucoma were excluded. Visual acuity, measurement of intraocular pressure (IOP) with air tonometer and fundus eyes examination using a non mydriatic camera was performed to patients referred to EDSU. EDSU was formed by a team of 5 general practitioners trained to interpret the results of the scans that were performed by a nursing assistant trained in the techniques mentioned above.

**Results:** During the year 2011, a total of 2309 patients were examined in EDSU. The percentage of patients with DM2 detection in Garraf region was 91.6% and screening coverage in EDSU reached 76.4%. DM-2 patients visited in EDSU had 39% normal vision, 60.13% had a visual deficit and 0.51% had NO VISION. 91,92% had normal IOP, 8,07% had altered IOP. 73,31% no signs of retinopathy, 9% positive signs of retinopathy, 8% no possible interpretation, 10% were excluded.

**Conclusions:** The EDSU achieved high coverage of eye screening to the DM-2 population in our PC region and detected a significant percentage of diabetic retinopathy in early stage.

Disclosure: No conflict of interest declared

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**Use of supplements of omega 3 in cardiovascular primary prevention – what is the evidence?**

J. Machado, A. Ribeiro, N. Pinto, M. Pinho  
USF Viver Mais, USF Viver Mais, Maia, Portugal

**Objective:** Review the scientific evidence of use of  $\omega$ -3 supplements as a primary prevention of cardiovascular disease.

**Methodology:** Was conducted a search of clinical guidelines (NOC), systematic reviews, meta-analyses and randomized clinical trials (RCT) in Pubmed, sites of evidence-based medicine and Portuguese Index of medical journals, published between 2000 and 2012, in Portuguese and English, using the MeSH terms: „omega 3“ and „cardiovascular prevention“. For assessment of levels of evidence and recommendation forces assignment was used the SORT scale (*Strength of Recommendation Taxonomy*) of *American Academy of Family Physicians*.

**Results:** In a RCT,  $\omega$ -3 shown to produce a significant reduction of triglycerides levels compared to placebo, without any difference in LDL and HDL levels. The  $\omega$ -3 were associated with a reduction of sudden death in 45% and from cardiac cause in 35%, attributed to its antiarrhythmic effect. Other pleiotropic effects are conferred to  $\omega$ -3 as the reduction of endothelial inflammation and blood pressure, inhibition of platelet aggregation and stabilization of atherosclerotic plaques. The *American Heart Association* recommends, for healthy people, the consumption of fatty fish at least twice a week as a measure of cardiovascular risk reduction. *The  $\omega$ -3 are devoid of significant side effects.*

**Conclusion:** *The  $\omega$ -3 are safe and effective as cardiovascular primary prevention (SORT A), in a daily dose of 400-500 mg. Further studies are needed to evaluate the potential of  $\omega$ -3`s pleiotropic effects in reducing cardiovascular risk.*

Disclosure: No conflict of interest declared

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**Normative data and interpretation of scores on the simple lifestyle indicator questionnaire (SLIQ)**

A. Pike, M. Godwin, A. Kirby, C. Bethune, A.R. Pike  
Family Medicine, Memorial University of Newfoundland, St. John's, Canada

**Objective:** To provide normative data for scores on the SLIQ (an instrument designed to measure lifestyle as a single construct) overall and by common demographic variables; to provide normative data by lifestyle component; and to determine logical cut-points for labeling lifestyle as Unhealthy, Intermediate, or Healthy.

**Methods:** 680 individuals were recruited from shopping centres, gyms, university classrooms, and physician waiting rooms for this cohort descriptive study.

**Results:** The overall SLIQ Score ranges from 0 to 10. Mean overall SLIQ Score for participants was 6.85 (SD 1.64). SLIQ Score varied by population in a way that suggests valid measurement: Gym Users > University Students > Mall Shoppers > Waiting Room Patients; the respective Mean and SD of the scores was 7.64(1.32), 6.91(1.62), 6.77(1.64), and 6.72(1.68). Using tertiles of the frequency distribution of the overall SLIQ Score as a starting point, the following ranges of scores on the SIQ were categorized: 0-4 Unhealthy, 5-7 Intermediate, 8-10 Healthy. **Conclusions:** Physical activity, diet, smoking, alcohol consumption, and chronic, self-reported stress, predispose people to higher risk of cardiovascular disease. The SLIQ measures these five cardiovascular lifestyle factors and can be used to help guide treatment plans for clinicians seeking to prevent or treat CVD and researchers interested in study lifestyle behaviors. The availability of normative data for the overall SLIQ score, lifestyle factor scores, and by demographic characteristics allows researchers and clinicians using the SLIQ to interpret an individual's score. It also provides the information needed to calculate sample size for studies using the SLIQ as an outcome variable.

Disclosure: No conflict of interest declared

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**Patient profiles of dieticians and outcomes for primary care**

F.G. Cihan, A. Ozturk, N. Karsavuran, F.G. Durmaz

*Family Medicine, MoH Konya Training and Research Hospital, Konya, Turkey*

**Objective:** Lifestyle and nutrition changes are the first steps to be taken for the treatment of many diseases. The aim of this study was to determine the socio-demographic characteristics and diagnoses of the patients consulting to the dietician in a tertiary care hospital in Konya, Turkey.

**Methods:** In this retrospective and cross-sectional study, the data of patients admitting to the dietician during May to June 2012, were evaluated with SPSS 15.0.

**Results:** Of 1661 participants, 409 (24.6%) were male, 1252 (75.4%) were female. Age interval of the patients was 0-84 years old. There was a significant association between age groups and debilitating diet, due to differences in the age group 19-40 ( $p < 0.01$ ). Age groups were significantly correlated between diet for DM and dyslipidemia, disease-specific diet; the difference was due to the age group 41-64 ( $P < 0.01$ ). 0-18 age group significantly wanted to gain weight ( $p < 0.01$ ). Internal medicine department was referring the patients to the dietician mostly for debilitating diet, DM diet, dyslipidemia, disease-specific diet ( $p < 0.01$ ). Pediatricians were referring the patients mostly for malnutrition ( $p < 0.01$ ). Female patients were mostly referring the dietician for losing weight ( $p < 0.01$ ). There was a significant correlation between male sex and diet for DM and dyslipidemia besides disease-specific diet ( $p < 0.01$ ).

**Conclusions:** Due to the increasing rates of obesity, patients referred to the dieticians have increased. Family physicians can reach more patients with obesity than tertiary care. Nutrition-related interventions should be implemented in the primary care setting in order to be successful.

Disclosure: No conflict of interest declared

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**Concurrent and convergent validity of the simple lifestyle indicator questionnaire (SLIQ)**

M. Godwin, A. Pike, A. Kirby, C. Bethune, A.R. Pike

*Family Medicine, Memorial University of Newfoundland, St. John's, Canada*

**Objective:** To assess the concurrent validity of the physical activity, diet, alcohol, and stress components of the SLIQ; the convergent validity of the whole instrument; and the correlation between the overall SLIQ scores and scores on a similar series of questions that have been correlated with cardiovascular morbidity and morbidity.

**Method:** Survey of 193 patients recruited through the practices of family physicians in St. John's, NL, CA. Patients completed the SLIQ and the reference standards: a detailed Diet History Questionnaire (DHQ), the Social Readjustment Rating Scale (SRRS), the SF36 Health Status Questionnaire, and a survey of eight questions on cardiovascular risk from Spencer et. al. They also wore a pedometer as a measure of physical activity. Scores on the SLIQ were compared with the reference standards.

**Results:** Correlations between the SLIQ and the references standards were: The SLIQ vs DHQ ( $r=0.679$ ,  $p=0.001$ ), SLIQ vs pedometer ( $r=0.455$ ,  $p=0.002$ ), SLIQ vs alcohol consumption ( $r=0.665$ ,  $p=0.001$ ), SIQ vs SRRS ( $r= -0.264$ ,  $p=0.001$ ), SLIQ vs Spencer Score ( $r= 475$ ,  $p=0.001$ ); and SLIQ vs SF36 ( $r=0.303$ ,  $p=0.001$ ).

**Conclusions:** Physical activity, diet, smoking, alcohol consumption, and chronic, self-reported stress, predispose people to higher risk of cardiovascular disease. The SLIQ measures these five cardiovascular lifestyle factors and can be used to help guide treatment plans for clinicians seeking to prevent or treat CVD and researchers interested in study lifestyle behaviors. The SLIQ is sufficiently valid when compared to reference standards to be useful as a brief assessment of an individual's cardiovascular lifestyle in research and clinical settings.

Disclosure: No conflict of interest declared

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**Screening of peripheral arterial disease is in the hand of general practitioners**K. Dostalova<sup>1</sup>, L. Kukuckova<sup>2</sup>, V. Stvrtnova<sup>3</sup>, V. Sefranek<sup>4</sup>, S. Moricova<sup>1</sup><sup>1</sup> Faculty of Public Health, Slovak Medical University, Bratislava, Slovakia; <sup>2</sup> Department of long term ill, Derer's Hospital, University Hospital, Slovak Society of General Practice, Bratislava, Slovakia; <sup>3</sup> School of Medicine, Comenius University, Bratislava, Slovakia; <sup>4</sup> Slovak Medical University, Slovak Medical University, Bratislava, Slovakia

Peripheral arterial disease (PAD) is characterised by progressive thickening of arterial walls by fat deposits and subsequent limitation of the oxygen-rich blood flow to organs and limbs. This causes leg pain when walking (intermittent claudication). Progression of arterial changes leads to rest pain and gangrene. If revascularisation procedures are not possible it leads to amputation, thus reducing the quality of life.

The Ankle Brachial Pressure Index (ABPI) test is a simple and cheap tool for the non-invasive assessment of PAD with 90% sensitivity and 98% specificity for detecting stenosis of major leg arteries. We use ultrasound blood flow detector – Doppler probe and a sphygmomanometer. 24 general practitioners from all regions of Slovakia assessed 2207 consecutive patients over 60 years. 67,4% of patients had normal ABPI 0,9-1,2. 9,4% of patients had decreased ABPI < 0,9 and 23,2% of patients ABPI > 1,2. By questionnaire of risk factors and complications we detected that patients with decreased ABPI have significantly increased risk of myocardial infarction and stroke. Decreased ABPI is more often in men, smokers, diabetics, patients suffering from high blood pressure, patients with dyslipidemia and people with lower education. These people are at high risk of stroke and heart attack events so they need further active management of risk factors.

The Ankle Brachial Pressure Index (ABPI) test performing by general practitioners seems to be effective screening method for identification changes of limb arteries. After that general practitioners have to refer patients to a specialist – angiologist.

Disclosure: No conflict of interest declared

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**SISCOLO and SISMAMA update of Guarulhos city's USF**G.A.P.Passos<sup>1,2</sup>, A.J.M.Fukusato<sup>2</sup>, F.A. Neman<sup>2</sup>, B. Torres<sup>3</sup>, H.V. Franco da Costa de Oliveira<sup>2</sup>, R. Soneghet<sup>2</sup><sup>1</sup> Medicine, Universidade Cidade de São Paulo, São Paulo, Brazil; <sup>2</sup> Medicine Student, Universidade Cidade de São Paulo, São Paulo, Brazil; <sup>3</sup> Medicine Instructor, Universidade Cidade de São Paulo, São Paulo, Brazil

Since 1998, in Brazil it's used to control the mortality and incidence of cervix and breast cancers, SISCOLO (Information system of cervical cancer) and SISMAMA (Information system of breast cancer), which are programs for implementation of actions which aim is the prevention and control of cancer (promotion, prevention, diagnosis, treatment, rehabilitation and palliative care).

In this work we conducted a research of 90 examinations from patients of Palmira's Garden USF – Guarulhos, SP, which appeared altered and had not been included in the database of SISCOLO or SISMAMA, in order to fit them in these.

Of the 90 patients analysed we concluded that 54 were included in the SISCOLO and 36 in SISMAMA. Among the SISCOLO patients, 24 women repeated the Pap screening, all within the normal range, 8 women abandoned the treatment, 12 women made obtaining biopsy results that were altered: 9 Squamous metaplasia or chronic cervicitis, CIN II 1 and 2 changed consistent with HPV / CIN I, 10 women had colposcopy, 5 women have followed up with treatment, and one polyp removed, 3 clinical / pharmacological and 1 cauterization. The 36 patients included in SISMAMA none held the histopathology and cytopathology, 15 women abandoned the treatment, 9 women underwent mammography resulting in: 6 mammographic findings or additional tests and 3 without mammographic findings, 11 women underwent ultrasound resulting in: 4 abnormal breast and 7 normal breast; and 1 death.

men underwent ultrasound resulting in: 4 abnormal breast and 7 normal breast, and 1 death.

Disclosure: No conflict of interest declared

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**The role of family physicians in fighting NCDs in Jordan**

M. Tarawneh, O. Smadi

*Family Medicine, MOH, Amman, Jordan*

**Objective:** To determine the Knowledge, Practice and Attitudes of health campaign attendees towards the risk factors of NCDs.

**Method:** Jordanian attendees of 3-days health campaign run by Family Physicians were interviewed. Random blood samples were collected and tested for sugar and cholesterol.

**Results:** The total number of health campaign attendees was 1280 persons (51.8% men and (48.2%) women. The mean age of attendees was  $51.8 \pm 9.4$  years.

It was found that ( 42%, 53% and 70%) of the participants didn't measure their Bp, BS, cholesterol during the last year respectively.

One third of those who reported either don't have hypertension or don't know if they have hypertension, were found to have high blood pressure. We found that 3% of those who reported not having DM, have RBS > 200 mg/dl and 7% of those who reported not having dyslipidaemia were found to have blood cholesterol > 240 mg/dl.

Co-morbidity of ( DM, Hypertension and dyslipidaemia ) was found in 6% of participants.

One third of hypertensive patients and 18.5% of diabetic patients were current smokers.

**Conclusion:** More effective community-based health education programmes about Non- communicable diseases and its risk factors are highly required in Jordan.

Disclosure: No conflict of interest declared

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**Relationship between stage of hypertension and complication in hypertensive patient at Prasat hospital, Surin**S. Soomthong<sup>1,2</sup>, D. Munyuen<sup>1,2</sup>, A. Limsuwatt<sup>1,2</sup>, S. Kidsuk<sup>1,2</sup>, S. Kongsattayakul<sup>1,2</sup>, S. Cheurprung<sup>1,3</sup>, S. Kaewpitoon<sup>1,4,3</sup>, R. Rujirakul<sup>4</sup>, M. Wiset<sup>5</sup>, N. Kaewpitoon<sup>6,4</sup><sup>1</sup> *Family Medicine and Community Medicine, Suranaree University off Technology,**Nakhonratchasima, Thailand;* <sup>2</sup> *Medical Education Center, Surin Hospital, Surin, Thailand;*<sup>3</sup> *Suranaree Medical Center, Suranarruu University off Technology, Nakhonratchasima, Thailand;*<sup>4</sup> *Parasitic Disease Research Unit, Suranaree University off Technology, Nakhonratchasima,**Thailand;* <sup>5</sup> *Preventive Medicine, Prasart Hospital, Surin, Thailand;* <sup>6</sup> *Pathology, Suranaree**University off Technology, Nakhonratchasima, Thailand*

**Objective:** 1.To study the stages of hypertension and complications in hypertensive patients at Prasat hospital.

2.To study the relation of stages of hypertension and type of complication in hypertensive patients at Prasat hospital.

**Design:** Retrospective analytical charter review

**Setting:** Prasat hospital, Prasat District, Surin Province.

**Subject:** Hypertensive patients who has complications that treat at Prasat hospital.

**Method:** Used data from medical record from Prasat hospital by take a random of person who was diagnosed hypertension with complication that researcher interest in that is Chronic kidney disease, Myocardial infarction, Stroke. Then figure out the relation of stage of hypertension and complication by calculate the relative risk.

**Results:** From the results showed that most of samples were female(59.84%), aged 51-60 years(3.17%), BMI 18-24(53.32%), systolic blood pressure 120-139 mmHg(56.95%). Most complication are hyperlipidemia, hypercholesterolemia, lipoprotein deficiency, chronic kidney disease, stroke and myocardial infarction. The result of the research are hypertension affect to stroke, chronic kidney disease and myocardial infarction. There was significant relation between degree of hypertension with stroke and chronic kidney disease.

**Conclusion:** Increasing of blood pressure relative with complication that are chronic kidney disease and stroke.

**Keyword:** Hypertension, Chronic kidney disease, Stroke, Myocardial infarction

Disclosure: No conflict of interest declared

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### The study of prevalence and clinical risk factors of dyslipidemia in HIV Infected patients, Satuek Hospital, Buriram, 2012

K. Mesang<sup>1,2</sup>, P. Jirawikrankul<sup>1,2</sup>, P. Jenuwan<sup>1,2</sup>, P. Phonphakwean<sup>1,2</sup>, S. Thagurngsakdakul<sup>3</sup>, E. Yodkalw<sup>2,3</sup>, N. Kunaton<sup>3</sup>, N. Kaewpitoon<sup>4,5</sup>, R. Rujirakul<sup>5</sup>, N. Namwichisirikul<sup>1</sup>

<sup>1</sup> Family Medicine and Community Medicine, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>2</sup> Medical Education Center, Buriram Hospital, Buriram, Thailand; <sup>3</sup> Preventive Medicine, Satuek Hospital, Buriram, Thailand; <sup>4</sup> Pathology, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>5</sup> Parasitic Disease Research Unit, Suranaree University of Technology, Nakhonratchasima, Thailand

**Background:** Dyslipidemia was adverse effect of antiretroviral drugs. Objectives of study to assess prevalence of dyslipidemia and identify factors associated among HIV patients in Satuek hospital, Buriram province, Thailand.

**Methods:** Descriptive study were reviewed OPD card and collected data to determine dyslipidemia among HIV patients. Case definition of dyslipidemia was defined as HIV patients with total cholesterol  $\geq 240$  mg/dl or triglyceride  $\geq 200$  mg/dl or HDL-C  $< 40$  mg/dl or LDL-C  $\geq 160$  mg/dl between January-December 2012. Retrospective cohort study was performed to identify possible risk protective factors. Univariate, multivariate analyses used to estimate crude risk ratio, adjusted odds ratio with 95% confidence interval.

**Results:** 208 HIV patients, 139 cases to definitions, the prevalence of dyslipidemia among HIV patients was 66.8%. Median age of cases was 41 years (IQR: 36-45 years) and male to female ratio was 1.17:1. Gender specific attack rate was highest in male was 69.4%. In univariate analysis the significant factor was age group  $> 40$  year (crude risk ratio = 1.39, 95%CI=1.15-1.68), HT (crude risk ratio = 1.37, 95%CI=1.08-1.72) and ARV formula No.3 (crude risk ratio = 1.45, 95%CI=1.02-2.06). In multivariate analyses only 1 significant factors was age group  $> 40$  year (adjusted odd ratio = 2.89, 95%CI=1.49-5.58)

**Conclusions:** The prevalence of DLD cases among HIV infection was 66.8%. The significant risk factor in univariate analysis was age group  $> 40$  year, HT and ARV formula No.3. But only age group  $> 40$  year had significant risk factor in multivariate analyses.

**Keywords:** HIV, Dyslipidemia, Satuek hospital, Thailand

Disclosure: No conflict of interest declared

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### Distribution of office and home blood pressures in hypertensive outpatients in a Japanese rural area

T. Hamada<sup>1</sup>, M. Takechi<sup>2</sup>, K. Matsuzawa<sup>1</sup>, K. Yamaguchi<sup>1</sup>, A. Watanabe<sup>1</sup>, S.-i. Taniguchi<sup>1</sup>

<sup>1</sup> Department of Regional Medicine, Tottori University Faculty of Medicine, Yonago, Japan;

<sup>2</sup> Department of Internal Medicine, Ebi Clinic, Kofu, Japan

**Objectives:** To study office and home blood pressures of hypertensive outpatients in a Japanese rural area and their goal achievement.

**Methods:** Hypertensive outpatients who visited Ebi clinic (Kofu, Tottori, Japan) were instructed to measure home blood pressure (BP) using upper arm cuff-oscillometric method in the morning and the evening. A total of 369 hypertensive outpatients (147 men, mean age 74) in spring of 2011 enrolled in this cross sectional survey and data on home and office BP were collected as the mean in the period. Data are shown in mean  $\pm$  standard deviation and an analysis of variance was considered  $P < 0.05$  as statistically significance.

**Results:** According to the guidelines for the management of hypertensive patients in Japan in 2009 (JSH-2009), 87% of the patients achieved the target office BP with a mean systolic and diastolic BP of  $125 \pm 12 / 63 \pm 10$  mmHg, respectively. Target home BP was achieved according to JSH-2009 in 80% of patients with a mean BP of  $127 \pm 9 / 73 \pm 8$  mmHg. Both office and home BPs of 71% of the patients showed beyond target levels, regardless of age. Most patients beyond target home BP/ above target office BP revealed white-coat hypertension and those beyond target office BP/ above target home BP revealed masked hypertension.

**Conclusions:** Most of hypertensive outpatients in Ebi clinic, regardless of age, were treated closely beyond BP goal according to the JSH guidelines. It should be investigated further to elucidate characteristics of both white-coat and masked hypertensive patients and how to select appropriate treatment with them.

Disclosure: No conflict of interest declared



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**Medical record evaluation in the Vila Velha University polyclinic handbooks – ES, Brazil**

M. Alves, W. Poton, A. Coelho, M. Dalla, A. Szpilman  
Medical School, Vila Velha University, Vila Velha, Brazil

**Introduction:** The medical record is a document in which all the patient attending information must be registered in the health services. But its correct filling out, many times, is not valued.

**Objective:** The aim of this study is to identify the fragilities and potentialities in order to subsidize the permanent educational processes to improve the medical records.

**Methods:** It was analyzed 557 Vila Velha University Clinic of integral attention medical records, from August 2010 to December 2011. In relation to the register model, in 83% of the appointments it was used the patient centered model (Subjective, Objective, Assessment, Plan – SOAP). The International Classification of Diseases (ICD) was found in 94% of the medical records, and the International Classification of Primary Care (ICPC) was evidenced in 95% of the records. The identification information was omitted in many records, such as: racial group, marital status and religion. In the anamnesis, the main complaint and the actual disease history were presented in 98% and 93% of the records, respectively. In relation to the physical exam some information were absent, such as weight (77%), height (83%), body mass index (90%) and respiratory movements (60%). In relation to the patient diagnosis information, 56% of the records had a problem list, 83% had diagnosis hypothesis and 71% had complementary exams solicitations. The patient conduct established was in 95% with a therapeutic plan and only 28% had an educational plan.

**Conclusion:** it was demonstrated that health promotion and prevention actions are still underused in medical appointment.

Disclosure: No conflict of interest declared

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**Significance in discovering and diagnosing chronic renal insufficiency (kidney failure)**

V. Spasic, A. Jesic  
Health Centar Primary, Novi Beograd, Belgrade, Serbia

Patient 55 years old, not any complaints, brings laboratory analysis.

Lab results: urea 8.6 mmol/l, creatinine 159 mmol/l

Patients referred to nephrologists

Ultrasound diagnosis has been done: signs of reduced parenchyma left renal (cyst size 27.3mm): reduced the cortex of the right renal (kidney)

During hospitalization has been found:

Intravenous urography revealed left kidney dysfunction and renal insufficiency.

Dynamic scintigraphy showed terminal reduction of parenchyma of the right kidney, reduction of the left part of the medullar

Control laboratory data showed improvement: urea 8.3, creatinine 117 mmol/l.

Patient is stable and on medical nutrition diet.

HBI is a syndrome caused by chronic, progressive and irreversible impairment of renal function with changes in biochemical composition of the plasma-dominated azotemia.

Screening, primary prevention in the practice of family physicians, allows early discovery of the first symptoms HBI, as well as further progression and complications of this chronic disease.

**Keywords:** HBI, DIAGNOSIS, UZ DIAGNOSTIC, SCREENING

Disclosure: No conflict of interest declared

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**Appreciation of an exercise program in patients with cardiovascular risk from patients perspective.**

M. Soler-Torroja, J.F. Menárguez-Puche, S. Ruiz-de-Aguirre-Maneiro, P.A. Alcántara-Muñoz, D. De-Los-Santos-Feliz, J.J. Vives-Hernández, R. Guillamón-Candel, G. Silva-Molina, R.E. Martínez-Belló, L. Quiles-Sánchez Health Service „Jesús Marín López“, Murcian Health Service, Molina de Segura (Murcia), Spain

**Aim:** Evaluate, from a subjective perspective, a program of physical exercise prescribed in patients with cardiovascular risk factors.

**Patients and methods:**

Inclusions criteria: patients aged 35-65 years, sedentary lifestyle and the presence of two or more cardiovascular risk factors. Patients were referred from two healthcare centers in a county. The program was led by licensed instructors and lasted 30 sessions (10 weeks).

Program was assessed using a self-administered questionnaire carried at the end of the program (Likert scale, score range=1-4).

Descriptive study was conducted on 437 patients who entered the program.

Dependent variables: perceived improvement in physical fitness, improved mood, and anticipation of continue workup.

Independent variables: gender and age.

**Results:** 170 patients answered the questionnaire (38.9% of those who started and 59.4% of those who attended more than two thirds of sessions). Average age: 50.8±8.8 years. 61% were women.

The perception of improvement in the physical condition had a mean value of 3.32±0.58, similar in men and women and unrelated to age. 93.8% of patients felt very or somewhat improvement.

The mean improvement in mood was 3.37±0.63, higher in women than in men (3.47±0.62 vs. 3.23±0.61,  $p < 0.05$ ) and in elderly ( $p < 0.05$ ). In 92.7% of cases the mood improved very much or good enough.

The main reasons given for missing the sessions were: disease (44.1%) and family (14.7%).

58% reassured they would continue working out in the next 6 months.

**Conclusions:** The program achieves a very high perception of improvement and encouraged to continue practicing exercise.

Disclosure: No conflict of interest declared

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**Serum carcinoembryonic antigen is associated with arterial stiffness in healthy Korean adult**

J. Young Shin, H. Ree Lee, J. Yong Shim  
Family Medicine, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

**Objective:** Carcinoembryonic antigen (CEA), widely used tumor markers, has been reported to be related with atherosclerosis and cardiovascular disease. However, little is known about relationship between arterial stiffness and CEA. We assessed whether serum CEA level is related with arterial stiffness by measuring brachial-ankle pulse wave velocity (ba-PWV) in healthy subjects.

**Methods:** Serum CEA, ba-PWV and conventional risk factors were measured in 2909 subjects (1767 men and 1142 women) who underwent routine health check-up. We performed correlation, multiple linear regression and multiple logistic regression analyses to divide into quartiles according to CEA level.

**Results:** The mean values of ba-PWV increased gradually by CEA quartile. After correcting for significantly correlated variables, the ba-PWV was independently associated with CEA ( $P < 0.001$ ). The odds ratios (95% CI) for high ba-PWV (> 75th percentile; men: 1518 cm/s, women: 1487 cm/s) according to CEA quartile were 1.00 (Q1), 1.044 (0.659-1.652; Q2), 1.075 (0.688-1.681; Q3), and 1.595 (1.009-2.520; Q4) after adjusting for age, blood pressure, BMI, fasting glucose, heart rate, log hs-CRP, LDL-cholesterol, WBC count, alcohol intake, smoking and exercise in men ( $P < 0.001$ ). The odds ratios (95% CIs) in women were 1.00 (Q1), 1.719 (0.971-3.032; Q2), 1.793 (1.019-3.156; Q3), and 2.330 (1.312-4.139; Q4) ( $P < 0.001$ ) after adjusting for age, blood pressure, BMI, fasting glucose, heart rate, log hs-CRP, lipid profile, uric acid, WBC count, alcohol intake, smoking and exercise.

**Conclusions:** The CEA level is associated with arterial stiffness which measured by ba-PWV in healthy Korean men and women.

Disclosure: No conflict of interest declared

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**Community-based study of gastric cancer examination using serum pepsinogen I/II ratio and endoscope in rural area of Japan**K. Matsuzawa<sup>1</sup>, A. Watanabe<sup>1</sup>, K. Yamaguchi<sup>1</sup>, T. Osaki<sup>1</sup>, T. Hamada<sup>1</sup>, M. Takechi<sup>2</sup>, S.-i. Taniguchi<sup>1</sup><sup>1</sup> Department of Regional Medicine, Tottori University Faculty of Medicine, Yonago, Japan;<sup>2</sup> Internal Medicine, Ebi clinic, Kofu town, Japan

**Back Ground:** The local governments utilizing endoscope for the screening of gastric cancer are gradually increasing in Japan. However, due to its invasiveness and economical efficacy, there remain many tasks for progressing. We tried to estimate an outbreak risk of gastric cancer by an easier biochemical screening strategy, serum pepsinogen I/II ratio (PG ratio). The reduction of PG ratio reflects the atrophy of gastric mucosa which is high risk to develop gastric cancer. According to PG ratio, the low risk group of gastric cancer received X-ray checkup, and high risk group received endoscope examination. We applied this screening strategy for the rural residents of Kofu town, Japan.

**Method:** We compared the rate of gastric examination and the discovery rate of gastric cancer between before and after 2000, when Kofu town started to utilize the PG method.

**Result:** The population of Kofu town is 4161. The candidate targeted for gastric cancer examination (age>40) was 1553. First, the consultation rate of gastric examination was 28% before adopting PG ratio (1996-1999). After the application of PG ratio, the consultation rate markedly increased to 39% (2000-2003). Second, the absolute number of gastric cancer discovery was 1.0 person/year before PG method. After PG method, it was clearly increased to 2.18 person/year.

**Conclusion:** The absolute population consulting gastric checkup significantly increased by the introduction of PG method. The discovery rate of gastric cancer markedly increased. The PG ratio is a useful way to manage the high risk group of gastric cancer in a small community.

Disclosure: No conflict of interest declared

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**Influence of socioeconomic status on incidents of diseases in two different municipalities in Skopje**M. Shevchenko<sup>1</sup>, A. Davitkov<sup>2</sup>, K. Kikerkovska<sup>3</sup>, J. Damcevska<sup>2</sup><sup>1</sup> primary care, PZU Refena praktica, Skopje, Macedonia; <sup>2</sup> primary care, PZU Intergin, Skopje, Macedonia; <sup>3</sup> primary care, PZU Pantelejmon, Skopje, Macedonia

**Objective:** Depending on socioeconomic, culturally status of the population, and the certain types of illnesses dominated. We want to compare and show the dominance of certain types of illnesses in two clinics in the city of Skopje, with approximately the same number of patients from different socioeconomic and cultural status.

**Methods:** A retrospective analysis of data from January to December 2012, obtained from the files of the patients from PHI Refena praktica in central city area and PHI Intergin in peripheral city area with population of lower socioeconomic and cultural standard.

**Results:** PHI Refena praktica has 2419 patients of which 1010 or 42% are male and 1409 or 58% are female. Most represented are cardiovascular illnesses with 32%, endocrinological with 13%, respiratory with 12.8%, traumatological with 11.49%, diseases of genitourinary system with 6.98%, mental diseases 4.54%, digestive system 4.13%, cancer with 2.93% and other are less represented. PHI Intergin out of 2193 patients 53% are women and 46% men, and has the following structure on illnesses: Cardiovascular 35.15%, respiratory 25.76%, endocrinological 16.2%, gastrointestinal 26%, mental diseases 11.8%, genitourinary 6.20%, trauma 3.10%, cancer 0.8%, the rest are with small representation.

**Conclusions:** There are significant differences in cancer diseases, mental, gastrointestinal diseases and traumas. The differences that exist confirm that heterogeneous lifestyle is an introduction to different diseases that speaks for the different kind of prevention approach to the disease.

Disclosure: No conflict of interest declared

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**Quality of Life in caregivers of long-term home care patients**H. Yikilkan<sup>1</sup>, C. Aypak<sup>1</sup>, S. Cifci<sup>2</sup>, E. Engin<sup>2</sup>, S. Gorpelioglu<sup>1</sup><sup>1</sup> Family Medicine Department, Diskapi Yildirim Beyazit Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Home Care Service Department, Diskapi Yildirim Beyazit Training and Research Hospital, Ankara, Turkey

**Objective:** Increased numbers of individuals with complex healthcare needs are being cared at home by their families. The aim of our study is to assess the quality of life (QOL) in long-term caregivers.

**Methods:** A descriptive study was carried out with 37 caregivers of chronically ill home care patients. Caregivers were asked to complete a demographic questionnaire and Short form 36 (SF-36), which measures health related QOL. From August to December 2012, data were collected by the team of Home Care Service of Family Medicine Department.

**Results:** The majority of caregivers were female (83,4%) and the daughter of the care receiver (54,1%). The mean scores referring to the QOL in the various categories included in SF- 36 in caregivers were 51,2±20,7 for mental health, 48,7±32,1 for social functioning, 46,2±27,1 for bodily pain, 26,6±36,1 for role-physical, 33,1±23,0 for vitality, 43,5±25,2 for general health, 23,5±35,8 for role emotional and 26,6±36,2 for physical functioning. Statistically significant differences in SF-36 mean scale scores were not observed as a function of age, gender, and the duration of caregiving.

**Conclusions:** We found lowest scores especially on role emotional, role-physical and physical functioning scales of the SF-36. The results emphasize that caregivers have problems with work or other daily activities as a result of emotional and physical problems.

Disclosure: No conflict of interest declared

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**The results of screening program in the kitchen staff working at a university hospital**

C. Büyükyörük, S. Civi, R. Kutlu, A. Kocak

Department of Family Physician, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey

**Objective:** Health screening is essential for the early detection of diseases and conditions that cause disability and death. In this study, we aimed to evaluate the results of screening program in the kitchen personnel working in a university hospital.

**Methods:** This descriptive study was performed among 102 kitchen staff working at a university hospital. Data were obtained via a questionnaire form and revealed socio-demographic characteristics, smoking status. Specific Anti HAVIgG, HBsAg, AntiHBsAg, AntiHCV levels were measured in the serum patterns of the participants. The cultures of throat, nasal, stool and stool parasite analysis were examined.

**Results:** Of the participants, 99 (97.1%) were male, the mean age was 31.7±7.8 (range: 18-55), 79.4% married, 43.1% primary school education, 54.9% middle/high school education, 47.1% overweight, 9.8% obese, 62.7% current smokers, 5.9% ex-smoker, 25.5% hypertensive. Of the participants, 3.9% (n=3) had HBs Ag seropositivity, HAVIgG seropositivity were 89.1%, nobody had antiHCV seropositivity, respectively. The lowest age starting smoking was 10, the highest age was 33 and the mean value was 18.0±4.7 year. The median value of Fagerstrom dependence was 2 and 79.7% was placed at a low and very low addiction degree. Throat and stool culture was negative. Giardia lamblia had positive in two cases. Staphylococcus aureus strains were isolated in the nasal culture of seven cases.

**Conclusion:** All staff who have antiHBs seronegativity were vaccinated. Antiparasitic agents and antibiotics are given to patients. Healthcare workers are a high risk group for development of contagious diseases. So, screening tests are important in these groups.

Disclosure: No conflict of interest declared

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**Going to the school to reach children at risk for obesity**

J. Pasquini, R. Basso, A. Andrade, L. Frosi, V. Santos, D. Ballestes, A. Correia, S. Gannam, J.L.M. Machado  
*School of Medicine, UNICID, Sao Paulo, Brazil*

**Introduction:** Obesity is a major worldwide concern. Risk for a child to continue to be obese in adult life is 25%. Prevalence of child obesity is 10 – 40%. In the city of Guarulhos, the children actually following up for obesity is much less than what would be expected. Therefore, a strategy to reach these children could be to access them at school.

**Objective:** To determine the prevalence of child obesity in a school as a strategy to identify children with nutritional risk without follow up.

**Method:** During a week, all children attending the school nearby the Health Center were weighted and measured. BMI were calculated and children were classified according to the WHO charts.

**Results:** 625 children, 5-9 years old (49% males), were accessed. There were 16.3% of obese and 17.1% of overweight children. No differences were found according to gender. There was a relation between age and overweight and obesity: the older the children the higher the prevalence ( $p < 0,05$ ). We also found 11 children (1,8%) undernourished. Most children were not being seen at the Health Center. Follow up consultations were scheduled for all children at risk.

**Conclusion:** The prevalence of obesity found was similar to other studies, however not all children were seeing a doctor. Other studies showed a greater prevalence in boys, what was not found in this study. Although undernourishment is not a major concern, it is still present. To access children at school seems to be a good strategy to recognize children at nutritional risk.

Disclosure: No conflict of interest declared

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**Impact of a workshop with aged people on the influenza knowledge and the vaccination adherence**

R. Reolid, E. De los Santos, M. Flores, S. Matos, C. Ayuso, F. Escobar  
*University Healthcare Centre Zone IV, SESCAM, Albacete, Spain*

**Aim:** To know the changes about the knowledge on influenza and the vaccination adherence in aged people who attended a workshop about it.

**Design:** Pretest-posttest study.

**Setting:** Community setting.

**Participants:** 24 people belonging to a group of seniors in a social center for the elderly.

**Main outcome measures:** Before and after a workshop about influenza, were asked to respond to an anonymous questionnaire. Previously they signed an informed consent. The people knowledge was analyzed and compared (pretest-posttest), using Mc Nemar Test. Also we compared the vaccination rate in years 2007-2012, based on the medical records' data. We performed a logistic regression analysis to know the variables associated with vaccination compliance.

**Results:** The mean age was of 67.9 years (SD:4.7; ranging 58-77 years); 75% were women. Half of them had primary studies and a third was illiterates. They admitted having a good or very good health in a 62.5%. Only 45.8% considered they knew about the general symptoms of influenza before the workshop, and afterwards this answer was given by 58.3%, nevertheless the differences were not significant. Before the workshop 25% said they knew prevention of influenza, and afterwards this percentage raised to 70.8% ( $p=0.001$ ). In 2012, 66.7% were vaccinated against influenza; slightly higher than previous 5 years (60-65%). In a logistic regression analysis, independent association was not found with vaccination in 2012 for the analyzed variables.

**Conclusions:** After a workshop, people showed an improvement in their knowledge of influenza and a slightly higher vaccination adherence.

Disclosure: No conflict of interest declared

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**Should family physicians think about osteoporosis in men?**M.F.M.J.Costa<sup>1</sup>, M.R.R.Galhardo<sup>2</sup>, J.A.B.Barros<sup>3</sup><sup>1</sup> USF Serpa Pinto, ACeS Porto Ocidental, ARS Norte, Porto, Portugal; <sup>2</sup> USF Dunas, ULS Matosinhos, Matosinhos, Portugal; <sup>3</sup> USF Maresia, ULS Matosinhos, Matosinhos, Portugal

**Objective:** Male osteoporosis has been a neglected disorder with underestimated prevalence and unrecognized consequences. The purpose of this work is to highlight the main differences according to gender and review the best approach to diagnosis and treatment of osteoporosis. **Methods:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms male AND osteoporosis, published from January 2001 to December 2012 in English, Spanish and Portuguese.

**Results:** Osteoporosis and associated fractures are a major cause of disability. Some studies suggest morbimortality rates are higher in men. Unlike women, there is an underlying cause in nearly half of affected men. The most common are corticosteroid therapy, hypogonadism, alcohol/tobacco abuse, physical inactivity and thyroid dysfunction. A complete clinical history, physical examination and routine laboratory testing identify most of them. According to Portuguese guidelines, dual-energy x-ray absorptiometry (DEXA) should be performed in men over the age of 70; younger men should be tested in the case of a possible secondary cause. The diagnosis is based on the bone mineral density (T-score  $\leq 2.5$ ). The decision to treat depends on this parameter but also in the risk of osteoporotic fractures, calculated by FRAX<sup>®</sup>. Bisphosphonates are the first-line therapy; teriparatide is indicated in severe cases. Adequate intake of calcium and vitamin D and physical activity are important measures.

**Conclusions:** Osteoporosis, in the absence of a fracture, is silent and its consequences are devastating. This review highlights the importance of early diagnosis in men's osteoporosis.

Disclosure: No conflict of interest declared

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**General eye health assessment of elementary school students**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, O.M.Ceylan<sup>3</sup>, P.Nerkiz<sup>2</sup>, U.Yolcu<sup>3</sup>, F.M.Mutlu<sup>3</sup>, H.I.Altinsoy<sup>3</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Academy, Ankara, Turkey;<sup>3</sup> Department of Ophthalmology, Gulhane Military Medical Academy, Ankara, Turkey

**Objective:** Ocular pathologies such as refractive disorder, strabismus and ambliopia in students of primary school age can lead to serious and irreversible problems at adult period. In our study, a general assessment of primary school-age students in terms of eye health was made.

**Methods:** Our study was performed among 714 students of primary school age, after obtaining informed consent from families, by assessing sociodemographic data form about eye diseases.

**Results:** Average age of students participating in study was  $9.11 \pm 1.62$ . 45.7% (n=326) of students were male. 50.4% of students whom were performed eye screening had eye examination at least once before, 49.6% (n=354) of students had not been so far any eye examination. When evaluation of previous medical history and eye examination was done; 12.2% (n=87) of students were wearing glasses. 2.5% (n=18) had amblyopia, 1% (n=7) had strabismus, 0.3% (n=2) had dyschromatopsia and 4.2% (n=30) patients had other eye pathology. Rate of the students who have positive family history of eye diseases in first-degree relatives was 33.8% (n=241). When we examined periods spent at computer and TV; 15.8% (n=113) spent 1 hour, 29.6% (n=211) 2 hours, 24.2% (n=173) 3 hours, 16.8% (n=120) 4 hours, 5.3% (n=38) 5 hours, and 4.8% (n=34) spent 6 hours. 10 students spent more than six hours, 15 students spent no time for computer or TV.

**Conclusions:** Our study has revealed the fact that a significant proportion of primary school-age students did not undergo eye screening examination. Giving priority to those with a family history in particular, suggested that all students must undergo periodic eye examination.

Disclosure: No conflict of interest declared

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**Screening for BPH in family practice**

N. Ferizovic, A. Lasic, Z.. Frasto, S. Hebobovic, M. Podzic

*Family practice, Public Health Center Sarajevo Canton, Sarajevo, Bosnia-Herzegovina*

**Objective:** Determine lower urinary tract symptoms (LUTS) frequency among men up to 65 years of age in the purpose of Benign prostatic hyperplasia (BPH) screening in family practice.

**Methods:** The research was conducted in a Family Medicine Clinic in Sarajevo, in the period from April to September 2012. The method used was a standard IPSS (International Prostate Symptom Score) questionnaire. The pool of research included 100 consecutive male subjects, age between 37 and 62 **with no prior BPH diagnose**, who visited the clinic for some other reason. After the statistic evaluation of data, subjects were classified according to the symptoms into 3 groups: Score: 1-7 Mild, 8-19 Moderate and 20-35 Severe symptoms.

**Results:** Average age of subjects was 52,6 years. 77% of subjects fought in Bosnian war. 52% had mild, 32% moderate and 16% severe symptoms. Average life quality rate in the first group was 0,34-great, in the second group was 2,34- mostly satisfied, and in the third group was 4-mostly dissatisfied. All of the subjects in the last group were found to be participants of the Bosnian War. All patients with moderate and severe symptoms were referred to further diagnostics and treatment.

**Conclusion:** The fact that **48% of subjects had moderate or severe LUTS symptoms justifies routine screening on BPH** in family practice. Written questionnaire is more adequate for patients for lack of time and embarrassment toward oral questioning. The occurrence of more severe LUTS symptoms among participants of the Bosnian War (1992-1995) requires further research.

Disclosure: No conflict of interest declared

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**Cost analysis for reusing gloves in the infection prevention and control unit of Songkhla Hospital**

M. Chumming, P. Wattanasoonthorn

*Infection Prevention and Control Unit of Songkhla Hospital, MOPH, THAILAND, Amphur Moung, Songkhla, Thailand*

**Objective:** To investigate the costs of reusing gloves in the Infection Prevention and Control Unit of Songkhla Hospital

**Methods:** This cost descriptive research compared between the costs reusing 294,000 pairs of gloves and the costs of 199,650 pairs of single-use gloves. The data collecting instruments was a costs record form consisting of labor costs, investment costs, and costs of disposable materials. The content validity index was .83, and the reliability of observation was 1.0. The data were analyzed using the descriptive statistics.

**Results:** The results of the study revealed that the costs of reusing gloves in the Infection Prevention and Control unit of Songkhla Hospital was 5,000,940 Baht consisting of 1,721,323 Baht for labor costs; 1,685,816.87 Baht for investment costs, and 1,593,799.58 Baht for the costs of disposable materials. The proportion of the costs of the labor costs: investment costs: disposable materials costs was 34.42:33.71: 31.87. The total cost was higher than that of single-use gloves which was 2,990,757 Baht.

**Conclusions:** In order to save costs and reduce infection, single-use gloves should be used. Administrators can use the results of this study as basic data in allocating supplies and budget planning for the hospital.

Disclosure: No conflict of interest declared

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**Screening of alcohol use disorders in family practice**

A. Lasic, N. Ferizovic, M. Podzic

*Family Practic, Public Institucion Medical Center of Canton Sarajevo, Sarajevo, Bosnia-Herzegovina*

**Aim:** By using AUDIT (Alcohol Use Disorders Identification Test) screening test, detect the patients that have issues with alcohol but consider it to be a cultural phenomenon. Alcohol abuse is one of the main risk factors for human health, whereas violence as a side effect represent a growing social issue.

**Method:** 50F and 50M patients, age between 21 and 35, that visited the clinic for whatever reason in the period from September 1, 2012 to November 30, 2012, have filled out the AUDIT screening test (anonymously and voluntarily). All the patients denied to have a drinking problem prior to the testing. They did not have alcoholism diagnosed, nor did they showed symptoms of associated diseases.

**Results:** Score ( Scor  $\geq 8$  on the AUDIT generally indicates harmful or hazardous drinking) with male patients was in the range from 2-28 and 64% of them had score  $\geq 8$ . Female patients Score was from 0-11 with 24% of score  $\geq 8$ . Work agility with 2% of female patients and 6% of male patients was decreased. 8% M and 2% F felt the need for the first drink in the morning. 4%F and 10%M had been hurt or have hurt someone, under the influence of alcohol.

**Conclusion:** AUDIT helps us to distinguish patients that have drinking problems, but are not necessarily addicts. Significant prevalence of those with problem, combined with an easy and fast intervention, shows that screening is possible and necessary on the level of the Family practice.

Disclosure: No conflict of interest declared

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**Colon cancer – factors influencing presentation and recognition in a primary care setting**

B.M. Boland

*HSE/DML GP Training Scheme, University College Dublin, Dublin 4, Ireland*

According to the National Cancer Registry report 2011, there were 2270 new cases of colorectal cancer in Ireland in 2007, making colorectal cancer the second most common solid organ cancer in the country. The same report documented over 900 deaths due to colorectal cancer, the second highest mortality rate after lung cancer. This relatively high mortality rate may in part be explained by the fact that many cases of colorectal cancer present in the later stages, with approximately 50% of colorectal cancers being diagnosed in stages III and IV. In order to facilitate earlier diagnosis of colorectal cancer, the Irish government is to roll out a colon cancer screening programme, with all adults aged 60-69 years being offered screening. This screening is then to be extended to all adults aged 55-74 years. In this study we examined whether age, sex, access to free Primary Care, and education level influenced the timing of a patients presentation with certain symptoms. Also, as colorectal screening is to be rolled out soon, we looked at whether the population at who the screening programme is aimed, are willing to partake in such a programme.

Disclosure: No conflict of interest declared



845

**Breast cancer screening in Ireland – women's knowledge, attitudes and practice**E. Murphy<sup>1</sup>, F. MacLeod<sup>2</sup><sup>1</sup> Department of Medicine, Beaumont Hospital, Dublin, Ireland; <sup>2</sup> Department of Public Health, University College Cork, Cork, Ireland

**Objective** The importance of seeking potential barriers to breast cancer screening (BCS) has been emphasised by 2008 European Guidelines. Understanding and attitudes towards BCS have been identified as factors that may influence a woman's decision to attend. This study aimed to investigate these variables in an Irish population.

**Methods** Cross-sectional study consisting of a questionnaire distributed in GP Practices in Cork, Ireland. Women aged 49-64 were included. Purposive sampling was used in selecting practices with the aim of achieving a balance across demographic variables, namely location, education and income. Answers were described as knowledge, attitude and practice and correlated with demographic variables. Regression analyses were also used.

**Results** The response rate was 65% (n=191). Over 80% of women understood that breast cancer can be asymptomatic and early detection improves outcome. Less than half were aware of age-related risk of breast cancer and less than a third of mammography accuracy. Knowledge varied significantly across demographical factors including education and income. 80% of women demonstrated positive attitudes towards BCS. Potential non-attendees (n=24) had poorer understanding of BCS and viewed it less positively than future attendees (p <0.05).

**Conclusions** Most women understand the principles of BCS and view it positively. Accuracy of mammography as a screening tool is poorly understood leading to questions about informed consent. The study suggests that knowledge and attitudes affect future attendance. These are variables that are amenable to change. Health care professionals are well placed to distribute tailored information based on these results yielded from a local population.

Disclosure: No conflict of interest declared

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**Chronic diseases: the health care needs of the spontaneous demand**B. Zanchetta<sup>1</sup>, G. Bagnatori<sup>1</sup>, T. Gaino<sup>1</sup>, E. Gemignani<sup>2</sup>, D. Dal Molin<sup>1</sup>, I. Aoyagi<sup>1</sup>, P. Andrade<sup>1</sup><sup>1</sup> Medical Graduation, Universidade Cidade de São Paulo (UNICID), São Paulo, Brazil; <sup>2</sup> Medical Tutor, Universidade Cidade de São Paulo (UNICID), São Paulo, Brazil

**Objectives:** Identify the health care needs of the spontaneous demand and reflect on the accommodating process.

**Methodology:** This was a descriptive research with quantitative approach. We used a questionnaire with closed and open questions about the personal data, complaint and duration of spontaneous demand in Emergency Care, Hospital and Maternity Mairiporã. Data was collected during October of 2012. All participants signed a consent form. For statistical analysis we used Microsoft Excel program.

**Results:** Of 152 questionnaires answered, we obtained the following results: 24% complained about internal medicine, 14% pediatrics, 10% orthopedics, 1% gynecology and 5% without definite symptoms.

It was observed that the attending had no severity criteria, made in order of arrival, and no promotion of a comprehensive assistance to the user.

**Conclusion:** Receiving people that seek for a health care with effectiveness assumes that everyone who seeks for a health unity, through spontaneous demand, should be welcomed by professionals who hear their complaint, identify risks and vulnerability being responsible for giving the patient an answer. Moreover, the chronic conditions require an attention strategy that reflects this fact clarifying the roles and responsibilities of patients in self-management of their health problems. To improve user's access to health services, the relation between them and health professionals in listening to their problems, reduce queues, improve teamwork and increase responsibilities of health professionals, we suggest the risk classification protocols with colors, performed by nursing professionals with specific training in emergency and urgent care services, based on ethic and humanity.

Disclosure: No conflict of interest declared

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**Study of risk factors of coronary heart disease in urban slums of Patna**

R. Singh

*Department of Anaesthesiology, King George's Medical University, Lucknow, India*

Coronary Heart Diseases (CHDs) are believed to be diseases of affluence.

**Objective:** Obtaining baseline data on CHD risk factors of urban poor in slums of Patna.

**Methods:** This population based cross sectional study was conducted between January and May 2011 among adult slum dwellers chosen by random sampling method. Variables collected were age, sex, consumption of tobacco, alcohol, physical activity, weight, height, waist circumference, blood pressure and random capillary blood glucose (RCBG).

**Results** Out of a total of 3118 participants, 16.36 percent (95percent CI 15.62 – 17.1) were hypertensive; 26.3 percent (95percent CI 25.42 – 27.18) had elevated RCBG, 4.46 percent had symptoms of Diabetes mellitus. Overall, high body mass index (BMI), waist circumference (WC) and waist to height ratio (WHtR) was noted in 31.94 percent, 50.45 percent and 86.53 percent respectively; only 12.54 percent and 9.14 percent reported consumption of tobacco and alcohol respectively; 33.64 percent were sedentary. Hypertension was significantly associated increased BMI, WC, WHtR, tobacco and alcohol use as well as physical inactivit, Elevated RCBG was significantly associated with increased BMI only. Odds ratio for hypertension with increased BMI, WHtR and alcohol use was found to be 1.522, 1.651 and 2.09 respectively. RCBG had an OR of 1.2 with increased BMI. Multivariate logistic regression showed that BMI, WHtR and alcohol were associated with hypertension but not with elevated RCBG.

**Conclusion:** Urban poor already have the burden of communicable diseases, this additional disease risk necessitates their inclusion in the ambit of preventive care and intervention for CHD also.

Disclosure: No conflict of interest declared

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**Colorectal cancer screening in Primary Healt Center Šabac in 2012**

M. Milješić, L. Nožinić-Vilus

*Department of general prectice, Primary Healt Center, Šabac, Serbia*

**Objectiv:** We present in this paper the results of the Primary Healt Center Šabac screening programme (preliminary research) for colorectal cancer (CRC) in 2012.

**Metods:** Screening programe for CRC included personal an family anamnesis, clinical examination by general practitioner and use of Fecal occult blood test (FOB test). We included all high risk patientes (with a positive family history on CRC) and persons between 50 and 70 years old of both genders. Patients with positive FOB test results were directed for colonoscopy and further diagnostics.

**Results:** In the preliminary phase of screening tested 1660 patients, of whom 1589 did the test properly. Of this patients were 668 (42%) man, and 811 (58%) woman, in avg. age of 62 years. The test results of 1495 (94,1%) patients was negative, while 94 (5,9%) patientes had a positive result of FOB tests. 30 of these patients do not want a colonoscopy, bath 64 patients of them have a colonoscopy with the folowing results: 22 patients have homorrhoids, 11 have a polypus, 8 have a adenoma and 4 (0,25% of the total number of tested) have CRC.

**Conclusions:** The results of this preliminary research indicate the importance of implementation the screening programe for CRC. The results of FOB test are fully adequate enforcement for this screening program. Only colonoscopy in patients with positive FOB test is the method for excluding or confirming CRC.

**Key words:** colorectal cancer, screening, fecal occult blood

Disclosure: No conflict of interest declared

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**Colorectal screening after polypectomy in a private university hospital of Argentina: a cross sectional study**

M. Verna, K. Kopitowski, V. Vietto, S. Terrasa

*Servicio de Medicina Familiar y Comunitaria, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina*

**Objective:** to describe the knowledge about colonoscopic surveillance recommendations proposed by a multisociety panel (USMSTF) during 2008 of a group of primary care physicians working at a private university hospital in Buenos Aires.

**Methods:** cross-sectional observational study through a self-administered survey. 94 physicians were asked when they would recommend to repeat a colonoscopy to an hypothetical 55-year-old man with no family history of colorectal cancer after the following findings: one hyperplastic polyp, one 6mm tubular without dysplasia, two 6mm tubular adenomas without dysplasia, one 12mm tubulovillous adenoma, one 12mm tubular adenoma with a focus of high-grade dysplasia. They had to select only one of the following options: six months, one year, three years, five years, ten years, not to repeat the colonoscopy.

**Results:** response rate was 75% (71/94). 71.8% of the respondents were family physicians and 28.2% were internists. Correct answers ranged between 39% (12mm tubular adenoma with a focus of high-grade dysplasia) and 69% (hyperplastic polyp). Respondents answered they would repeat the colonoscopy earlier than recommended in the following scenarios: an hyperplastic polyp (20%), a 6mm tubular adenoma without dysplasia (46%), two tubular adenomas without dysplasia (34%), a 12mm tubulovillous adenoma (20%), a 12mm tubular adenoma with a focus of high-gradedysplasia (56%).

**Conclusions:** the proportion of correct responses consistent with an adequate follow-up were better than those reported in the bibliography, being the most frequent mistake to repeat the colonoscopy early than current recommendations.

Disclosure: No conflict of interest declared

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**Recommended preventive activities for adults**P. Fonte<sup>1,2</sup>, M. Jordão Abreu<sup>1</sup>, C. Bulhões<sup>3,2</sup>*<sup>1</sup> Ponte Family Health Unit, Ponte Family Health Unit, Guimarães, Portugal; <sup>2</sup> Department of Community Health, School of Health Sciences, University of Minho, Braga, Portugal; <sup>3</sup> São Martinho do Campo Health Care Unit, São Martinho do Campo Health Care Unit, Santo Tirso, Portugal*

**Objective:** One of General Practitioners' functions is to contribute to preventive health care, not only opportunistically, but also in advance, reminding patients the need to undergo preventive procedures. However, in clinical practice patients frequently ask for exams, which are difficult to justify scientifically. In addition, there are many procedures that are usually done at a medical consultation, whose scientific validity is questionable. The authors aimed to determine which screenings are scientifically justified in healthy adults.

**Methods:** A literature review was conducted. The bibliography included the clinical guidelines issued by the Portuguese Ministry of Health, as well as Australian and North American documents related to primary health care.

**Results:** We realized that certain screenings such as Body Mass Index, which is usually assessed at every visit, should be evaluated only biannually. On the other hand there are screenings that are frequently forgotten and should be implemented, such as the performance of bone mineral density test in women over 65 and men over 70 years old in screening for osteoporosis. Furthermore, we found a scientific justification for not ordering tests often required by patients, such as ultrasound screening for thyroid cancer in asymptomatic users and resting electrocardiography for coronary heart disease in adults at low risk for these events.

**Conclusions:** We developed a useful tool for the follow-up of healthy adults, emphasizing, however, that agreement should be reached between clinician and patient about what preventive actions are to be taken.

Disclosure: No conflict of interest declared

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**Overweight, obesity and cardiometabolic risk**

M. Constantin

Family medicine, 'Victor Babes', 'Diagnostic &amp; Treatment Centre, Bucharest, Romania

**Objective:** To compare cardiometabolic risk factors in normoponderal versus overweight and obese patients.

**Methods** There were included two non-smokers groups of patients : normoponderal and abnormal body mass index (BMI) groups with the same number of patients (90) and similar distribution by sex. Group of abnormal BMI patients was divided in young adult group (18-35 years old ) and mature adult group (36-65 years old).

Overweight, obesity, cardiometabolic risk were defined in accordance with the guidelines.

**Results :**For abnormal BMI group versus normoponderal group our analyze showed (in percents): total cholesterol (64.44 vs 46.66 ); HDL cholesterol (32.22 vs 25.55); LDL cholesterol (65.55 vs 42.22); triglyceride (42.22 vs 28.88 ); sugar blood (10 vs 3.33); uric acid (10 vs 3.33); blood pressure (27.33 vs 3.33).

Young adult had higher percents for abnormal HDL cholesterol (42.22),triglycerides (46.66) and uric acids (13.33) vs mature adult group (22.22; 37.7; 6.66) High blood pressure was more frequent in mature adult group (31.11 vs 15.55)

**Conclusions:** Overweight and obesity were associated with cardiometabolic risk factors.

Young adults had an increased metabolic risk by abnormal HDL cholesterol, triglycerides and uric acids.

We should screen all young adults with abnormal BMI with complete lipid profile and uric acids for better long – term follow up.

Evaluation of endothelial dysfunction using arteriograph could be useful for better appreciation of cardiovascular risk and indication of pharmacological treatment.

Disclosure: No conflict of interest declared

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**Impact on the prevalence of obesity in patients with cardiovascular risk factors (CVDR) depending on their predisposition to put into practice corrective measures as diet and/or exercise.**

N. Gonzalez López, E. Díaz Sánchez, J.A. Sánchez Ortiz, N. Jorge Martín,

J.C. Pérez Sánchez, J.C. De Sola

C.S.Rincón De La Victoria, SAS, Málaga, Spain

**Objective:** determine the prevalence of obesity in patients with CVDR and the predisposition to do diet and/or exercise.

**Design:** descriptive, cross-sectional observational study. Include all patients of a quota doctor they have recorded in their clinical story CVDR, differentiating if they are obese (those who have a BMI greater than or equal to 30 and non-obese (BMI < 30). The obese are classified according to their willingness to perform corrective measures in patients in action, which would be those who made diet and/or exercise, and the pre-contemplative that do not perform any type of action. Also was took into account the age and sex of patients.

**Results:** The sample of patients was 408, of whom 176 were obese and 232 had BMI < 30. The mean (X) age in obese patients is 63,1022, standard deviation (d) 12,0147 and (I.C.) confidence interval 63,1022 +/-2,4518. In non-obese age X is 62,6379; d = 12, 8598 e I.C. 62,6379 +/-1,6547. Studied obese patients by sex and status of action results were as follows: male 83 of whom are in action 27 and pre. contemplative 56; 93 females in action 24 and pre-contemplative 69.

**Conclusions:** there is a high proportion of obese patients with cardiovascular risk CVR. Not significant differences were found between the mean age. There was also no significant differences between sex and predisposition to action, being both independent variables.

Disclosure: No conflict of interest declared

1044

**Chagas disease in Kalunga community**

T. Coimbra, A. Campos, J. Rezende, X. Fernandes, M. Pedroso, L. Silva, L. Pereira, M. Iwamoto  
UFG/FM, SES, Goiânia, Brazil

**Objectives:** This study aims to determine the prevalence of positive serology for Chagas in Kalunga Community (community remainder of Quilombo) and study the profile of seropositive.

**Methodology:** Data collection happened from 23 to 30 June 2012 and was divided into three parts: presentation of IC, the application of a symptomatic complaint questionnaire, physical examination and collecting 10mL of venous blood. The data from the questionnaire and serological (ELISA, IFA and HI) of the samples collected were tabulated in the program EXCEL 2007. All subjects received the results of serology, the positives being referred to the Reference Service.

**Results:** We selected 99 individuals, all residents of three (Engenho II, Vão de Almas e Vão do Moleque) of the five community centers, aged between 20 and 92 years, 61 women and 38 men, with seven (7, 07%) were seropositive, coming from the core Engenho II, aged between 39 and 63 years, with 71% of men. Were reported nonspecific cardiovascular and digestive complaints such as heartburn and breathlessness. No change in physical exam.

**Conclusions:** The seroprevalence of Chagas in the study population was higher than the national average (4.2%) and Goiás (5%), suggesting that despite the reduction of natural transmission, there are still places of high prevalence of the disease. The symptoms of clinical forms of the disease are nonspecific, so the clinician should always consider Chagas disease as a possible diagnosis when faced with a patient with digestive and/or cardiovascular impairment.

Disclosure: No conflict of interest declared

1084

**Preventive services in adult – current recommendations**

C. Rino, A. I. Esteves  
Unidade de Saúde Familiar São João Evangelista dos Lóios, Centro de Saúde Marvila, Lisbon, Portugal

**Objective** – List evidence-based primary, secondary and tertiary preventive services in the adult, as preventive healthcare is an important activity in Primary Care. Due to the impact of chronic diseases in the adult, it is important to know the evidence-based practices which increase life expectancy, while promoting quality of life.

**Methods** – Literature review of the current international evidence-based recommendations about preventive services.

**Results** – There are recommendations from United States Preventive Services Task Force, The Royal Australian College of General Practitioners and Canadian Task Force.

**Conclusions** – Prevention is better than cure. International recommendations about preventive services provide a basis for guidance of health promotion and disease prevention and ensure the best use of resources in general practice. However, preventive services should not be based only on strict recommendations, but also on intuitive medicine and doctor common sense. The Family Doctor has a crucial role in individualized approach and prioritization of preventive services. The increase of life expectancy, with health and independence, should be seen as an opportunity and a goal to achieve.

Disclosure: No conflict of interest declared

1089

**The importance of the multidisciplinary team of basic health unit in the continuing care of chronic diseases in Sao Paulo – Brazil**

L. F. Benati, A. W. Lourenco, N. C. Costa, R. P. Santos, F. H. Benati  
MEDICAL, SPDM – MEDICINA DA FAMILIA, SAO PAULO, Brazil

By comparing a group of patients (n = 80) suffering from chronic diseases such as hypertension and diabetes mellitus, among others, attended the family physician, received the prescription and supervision of the multidisciplinary team with another group (n=80) in which only received medical prescription without the accompaniment of a multidisciplinary team.

In group I, the control group of the multidisciplinary team (nurse, social worker and community health agent) after 30 days of the first medical consultation, 93% (ninety-three) of patients after prescribing, 3% (three) did not follow the treatment decision itself, 2% (two) were not at home during visiting hours, 2% (two) found no prescription needed due to the improvement of symptoms.

In group II, the group without monitoring by a multidisciplinary team, after 30 days of the first medical consultation, only 56% (fifty six) continued after the initial prescription, 12% (twelve percent) seeking another medical center, 25% (twenty five) did not improve symptoms and judged to need more resources, 2% (two) were not home at the time of the visit and 5% (five) were again to confirm medical treatment.

Teamwork in the context of family health takes on a new dimension. The complete design of care is interdisciplinary action in practice, in the appreciation of the various disciplines contribute to the solution of a broad and carefully. From this perspective, the responsibility of care is decentralized the professional of medicine, considered the center of the computer on hospital-centered model, which is divided among the team members.

Disclosure: No conflict of interest declared

1124

**Evaluating the long-term effects of disclosing salt sensitivity identified by genetic testing on salt restriction behavior: a non-randomized, controlled study**

Taro Takeshima<sup>1,2</sup>, Masanobu Okayama<sup>1</sup>, Maki Kumada<sup>3</sup>, Masanori Harada<sup>4</sup>, Eiji Kajii<sup>1</sup>

<sup>1</sup> Division of Community and Family Medicine, Jichi Medical University Center for Community Medicine, Shimotsuke, Japan; <sup>2</sup> Department of Healthcare Epidemiology, Kyoto University Graduate School of Medicine, Kyoto, Japan; <sup>3</sup> Division of Project for Integration of Community Health, Jichi Medical University Center for Community Medicine, Shimotsuke, Japan;

<sup>4</sup> Department for Support of Rural Medicine, Yamaguchi Grand Medical Center, Hofu, Japan

**Objective:** The study aimed to assess the long-term effects of disclosing a genetic risk of salt-sensitive hypertension on salt restriction behavior.

**Methods:** We recruited 894 outpatients from 5 Japanese medical institutes between August 2010 and January 2011, and followed them for 1 year. We disclosed the presence or absence of the T allele of G-protein  $\beta 3$  (GNB3) subunit gene 825C/T polymorphism to the intervention group. End-points were changes in salt intake and blood pressure levels. Salt intake was estimated from second morning voiding urine specimens. Analysis was performed using multiple linear regression model adjusted for age, sex, educational level, salt preference, etc.

**Results:** Complete follow-up data was analyzed for 769 patients (86%). Age (mean  $\pm$  SD) was  $66.6 \pm 14.8$  years and 306 men (40%). The genetic risk was disclosed to 709 patients and not disclosed to 60 patients. Salt intake at baseline in the intervention and non-intervention groups was  $11.8 \pm 3.6$  g/day and  $10.8 \pm 3.3$  g/day, respectively, and the frequency of the T allele of GNB3 was 540 (76%) and 38 (64%), respectively. Change of salt intake for 1 year was  $+0.02$  g/day in the intervention group and  $+0.42$  g/day in the non-intervention group ( $\beta = 0.08$ , 95% CI,  $-0.93$  to  $1.09$ ;  $p = 0.872$ ). Blood pressure levels were not associated with intervention.

**Conclusions:** This study indicated that disclosing the genetic risk of salt-sensitive hypertension alone did not affect salt intake and blood pressure. An alternate approach should be devised based on modification of salt restriction behavior.

Disclosure: No conflict of interest declared

1172

**Prevalence of chronic venous disease among Czech primary care patients**

J. Vojtíšková, B. Seifert

*Institute of General Practice, First Faculty of Medicine, Charles University of Prague, Prague, Czech Republic*

**Background:** The management of chronic venous disease in primary care varies according to competence and engagement of general practitioners. An internationally conducted Vein Consult Programme, joint initiative between Union Internationale Phlebologie and Servier, is the global effort to raise awareness of primary chronic venous disease (CVD) in different areas and to compare the management of the disease between countries

**Methods:** As a part of Vein Consult Programme, a prospective observational survey was conducted in 80 general practices in the Czech Republic. 20 consecutive patients aged over 40 years were included in a survey in each practice. Risk factors, complaints likely to be of venous origin, objective findings and the level of patient information and education were registered.

**Results:** A total of 1622 patients, mostly women were screened. Mean age was 60. Reported symptoms in order of importance were: heaviness, pain and sensation of swelling and night cramps. 6 from 10 patients had at least one objective finding of chronic venous disease. 28,6% patients with CVD had personal history of venous thrombosis, while patients without CVD only in 3%. Symptoms significantly increased with age and with severity of disease.

**Conclusions:** The results of the survey in the Czech Republic are consistent with results of Vein Consult Programme international. Results indicate the need of active approach to patients with symptoms of CVD in general practice, otherwise consultations for leg problems then occur at a later stage of the disease.

Disclosure: No conflict of interest declared

1216

**Porcelain gallbladder (random ultrasonographic finding)**M. Bošković<sup>1</sup>, V. Petrović<sup>1</sup>, S. Bošković<sup>2</sup>, M. Barović<sup>2</sup>*<sup>1</sup> Primary care, Savski venac Health Center, Belgrade, Serbia; <sup>2</sup> Student, Belgrade School of Medicine, Belgrade, Serbia*

Ultrasonography has become the method of choice when it comes to detecting gallbladder diseases because of its accuracy in setting the diagnosis of gallbladder diseases, but also because of its simplicity, absence of ionizing radiation and low examination price. Objectives: this research is to show the significance of ultrasonography in an early detection of symptomatic and asymptomatic gallbladder diseases. Methods and results: the focus of this research is the group of 46 patients who were diagnosed with gallbladder disease. This group was consisted of 33 females and 13 males with an average age of 59,7. 8 patients were referred to ultrasonographic examination because of the symptoms that did not primarily indicate gallbladder disease. Examined patients were mostly diagnosed with chronic calculous cholecystitis (18 patients) and cholelithiasis (18 patients). As the consequence of cholelithiasis, 3 patients had shown signs of acute cholecystitis. One form of chronic cholecystitis is „porcelain“ gallbladder and it is diagnosed with 3 female patients and 2 of them did not have symptoms that would indicate the cholecyst disease. Because of the possibility of malignant alteration, all of them had cholecystectomy, after which one of the patient was diagnosed with primary cholecystic cancer. Conclusion: the most common gallbladder disease that is diagnosed ultrasonographic is cholelithiasis. Cholelithiasis is the most common cause of the chronic and acute gallbladder inflammation. The significance of ultrasonography as the method of choice when it comes to detecting the gallbladder diseases is highlighted even if symptoms are not defined by clear symptomatology and clinical picture.

Disclosure: No conflict of interest declared

1272

**Physical activity in the elderly**Isabel Nazaré<sup>1</sup>, Paulo Santos<sup>2</sup><sup>1</sup> *Unidade de Milheirós de Poiares, UCSP SUL, Santa Maria da Feira, Portugal;* <sup>2</sup> *General Practice Department, Faculty of Medicine of Oporto University, Oporto, Portugal*

**Background:** Physical activity is an important factor in health promotion, particularly in primary and secondary prevention of cardiovascular diseases. Its implementation should be a priority on primary health care.

**Aim:** To evaluate physical exercise practice in elderly people.

**Methods:** A cross-sectional observational study was conducted by applying a self-answer questionnaire to a sample of patients, users of a rural Health Centre in the North Region of Portugal. We included all the patients that went to Health Centre during first two weeks of 2012-April, regardless of the motive for admission. If there was any difficulty in completing the form, clinical secretaries provided some help. t student and logistic regression were used to test null hypothesis and an alpha error fewer than 0,05 was accepted.

**Results:** A hundred and forty patients answered questionnaire (76,4% of females) with a mean age of 80,7 (+/-6,95) years old, varying from 65 to 96 years old. 28,6% (CI95%: 21,0-36,1%) declared to practice physical activity regularly. Values of arterial pressure were significantly lower in the group who declared to practice physical activity (systolic BP: 116 vs 126 mm Hg, p<0,001; diastolic BP: 66 vs 72 mm Hg, p=0,008; mean BP: 83 vs 90; p=0,001). After adjusting for age and gender, patients with obesity showed to practice less physical activity (OR=0,259; CI95%:0,103-0,651; p=0,004).

**Conclusion:** In this population, physical activity practice is slightly above expected, with benefit in lowering blood pressure levels. Efforts should be directed to patients with obesity in order to increase their exercise levels.

Disclosure: No conflict of interest declared

1320

**Awareness of chronic renal disease among family doctors: A cross-sectional survey**B. Ataman<sup>1</sup>, I. Kasim<sup>1</sup>, D. Ayhan<sup>1</sup>, U. D. Dursun<sup>1</sup>, T. Albayrak<sup>1</sup>, I. Sencan<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Ozkara<sup>2</sup><sup>1</sup> *Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey;* <sup>2</sup> *Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey*

**Objectives:** Chronic renal disease (CRD) is chronic, progressive and irreversible injury of renal parenchyma with several etiologies. Because of etiologic factors CRD is an epidemic in the world, as well as in Turkey. According to CREDIT (Chronic Renal Disease in Turkey) trial CRD prevalence in adult population (above 18) of Turkey is 15.7%. End Stage Renal Disease has economic, social and medical aspects. In 2009, dialysis cost of end stage renal disease patients was 1.5 billion US dollars. Annual growth rate of CRD patients is 10-12% in the world. It will reach unaffordable amounts in several decades. Because of all these threats family physicians should be aware of risk groups and should diagnose and manage CRD. We aimed to determine awareness of CRD among family doctors.

**Methods:** A structured survey (including questions about socio demographic status, definition, risk factors, diagnosis and management of CRD) was offered to participants of national congress of family medicine in 2012. 317 accepted to join the study. 28 was excluded because of incomplete questionnaire.

**Results:** It's found that family physicians are more likely have nephrology training according to non specialist family doctors (medical faculty graduate). On the other hand similar difference was found in knowledge levels about diagnosis and management of CRD. As the analysis is still running further results will be shared in the conference. The findings are expected to contribute understanding of management of CRD at primary care level.

Disclosure: No conflict of interest declared



1341

**Cerebrovascular diseases – management of risk factors in primary care**A. Demirci<sup>1</sup>, Y. Üstü<sup>1</sup>, A. B. Artantaş<sup>1</sup>, İ. K. Eray<sup>1</sup>, M. Uğurlu<sup>2</sup><sup>1</sup> Department of Family Medicine, Ankara Atatürk Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Yıldırım Beyazıt University, Ankara, Turkey

**Objective:** Cerebrovascular Disease (CVD), is still one of the most important health problems. Defining the etiology of CVD is important for management of risk factors. We aimed to describe the characteristics and the risk factors of the patients who were hospitalized with diagnosis of CVD.

**Methods:** The patients who were hospitalized with the diagnosis of CVD between January 2009-March 2012 were enrolled the study. The characteristics and medical histories of the patients were obtained by the records of Ankara Atatürk Training and Research Hospital.

**Results:** Totally 657 patients were enrolled the study, 51% were female. 93.9% patients were 45 years and above. It was found that frequency of stroke, especially ischemic stroke increased with age. 450 patients have hypertension, %28,6 were not regulated. High HbA1c levels were related with ischemic stroke. It was found that 57.1% of the patients with atrial fibrillation didn't have primary prophylaxis treatment. Combination of acetylsalicylic acid (ASA) and clopidogrel treatment has no superiority to prevent ischemic stroke, according to only ASA treatment.

**Conclusion:** Many risk factors have effect on occurring CVD. Regulation of blood pressure and blood glucose level, prevention of obesity, use of anticoagulant therapy when it is required and etc. are the important points for struggling with the risk factors. It shows us, family physicians have really great responsibilities at the prevention of CVD. They should be awake about the risk factors and give medical attention on time. It should be never forgotten; prevention is always more effective and easier.

Disclosure: No conflict of interest declared

1378

**Cancer screening – continuous quality improvement in a Portuguese family health unit**

S. Lima, C. Bulhoes, M. Abreu, P. Fonte, R. Oliveira

Ponte Family Health Unit, Ponte Family Health Unit, Guimarães, Portugal

**Introduction:** Despite the targets of screening programs, cervix, breast and colorectal cancers remain the major causes of morbidity and mortality in Portugal. Primary Health Care is the first stage for the efficient implementation of these surveys, enabling early diagnosis of these pathologies. However, it is essential to monitor their application, increase the number of users evaluated and optimize procedures as well as technical and scientific quality of the involved professionals.

**Methods:** Transversal study based on the evaluation of the National Plan for Prevention and Control of Diseases in Oncology of a Portuguese family health unit, from 2010 to 2012 (baseline, 12 and 24 months). The percentage of users followed in this health unit with updated cancer screening was the considered quality criteria.

**Results:** 352 users were evaluated, mean age being 48 years. There was an increase of registered and monitored users with updated cancer screening from the first to the second evaluation – breast cancer (81% to 97.2%), cervix (21% to 73.1%) and colorectal (31.8% to 80.3%).

**Discussion:** The measures implemented (mainly invitation to the patients with no updated cancer screening) had a positive impact on the percentage of correctly followed users. This fact is related to the generalized knowledge that early detection of screenable, and consequently treatable, diseases leads to an important decrease in mortality and morbidity, so to health gains. The third evaluation is still in progress and its results will be presented in June.

Disclosure: No conflict of interest declared

1390

**Hypothalamic hamartoma in a child**

A. Escada

USF Cruz de Celas, CS Celas, Coimbra, Portugal

**Objective:** This case report summarizes the history of a severe sick child and his family since 2008 and enhances the role of the GP in the follow up of this severe condition, the familial support and the link with the hospital and social care, inclusively abroad.

**Methods:** Consultation of written clinical information; interview with the boy and the family; review of clinical papers about Hypothalamic hamartoma published in Pubmed since 2008.

**Results:** In 2008, a new Cape Verdean family came into our file. They were in Coimbra to proceed their studies and meanwhile they had a son, to whom was diagnosed a hypothalamic hamartoma and epilepsy by the age of 3 years. They felt lost and couldn't understand why the Pediatricians couldn't solve the boy's problem. I met them in 2009, when I started my residency and followed the boy until these days (when I'm almost finishing it), after a major surgery in Paris, the birth of his sister and the beginning of school with his cognitive impairment.

**Conclusions:** The GP plays a key role in the support of a family with a sick child, by explaining them all the clinical procedures involved, talking with colleagues to obtain more credible information, trying to understand the family's expectations and to provide coping strategies, as well as enhancing the boy's skills.

Disclosure: No conflict of interest declared

1429

**Approach of obstructive sleep apnea syndrome in children**V. Carvalho<sup>1</sup>, L. Troni<sup>2</sup>, N. Monteiro<sup>3</sup><sup>1</sup> Family Physician, USF Sobreda, Almada, Portugal; <sup>2</sup> Family Physician, USF Rodrigues Migueis, Lisboa, Portugal; <sup>3</sup> Family Physician, USF Locomotiva, Entrocamento, Portugal

**Objective:** The Obstructive Sleep Apnea Syndrome (OSA) can affect between 1-4% of children. They present symptoms, risk factors and pathophysiology different from adults and need a different approach. The OSA is associated with significant morbidity, leading to an increase in direct and indirect costs. The goal of this work is conduct a literature review on the diagnostic of OSA in children.

**Methodology:** Reaearch literature in databases of Evidence Based Medicine, using the key words: obstructive sleep apnea syndrome, children, primary care. It was limited to articles in English, Portuguese and Spanish, published until October 2012.

**Results:** Interview should be conducted among parents, asking about sleep characteristics, the BEARS questionnaire can be useful.

The main manifestations are nocturnal snoring, daytime sleepiness and behavioral problems, but it can be an asymptomatic pathology. Complications can include changes in growth and neurocognitive development.

The physical examination should value the observation naso-oropharynx, as well as recognition of the major risk factors.

For diagnostic procedures, polysomnography sleep is the gold standard. OSA is diagnosed when the apnea-hypopnea index is one or more event per hour.

**Discussion:** The family physician has an important role in the diagnosis of OSA, and should questioning symptoms suggestive of sleep disturbance systematically. Polysomnography is insufficiently available and the interpretation of results is not standardized for the different age groups.

In practice most children with no other health problems can be treated based on clinical diagnosis, emphasizing the importance of a multidisciplinary team approach in this disease to prevent complications and improve the quality of life of the child.

Disclosure: No conflict of interest declared

1430

**PRECIT Study- Prevalencia de citologia cervical atualizada em médicas e enfermeiras da Unidade Local de Saude do Alto Minho**C. Matos<sup>1</sup>, B. Regado<sup>2</sup>, I. Faria<sup>1</sup>, S.F. Araujo<sup>3</sup>, A.C. Barbosa<sup>3</sup>, H. Cadavez<sup>4</sup><sup>1</sup> USF Gil Eanes, ULSAM, Viana do Castelo, Portugal; <sup>2</sup> USF Vale do Ancora, ULSAM, Viana do Castelo, Portugal; <sup>3</sup> ULSAM, USF Vale do Vez, Viana do Castelo, Portugal; <sup>4</sup> ACES Grande Porto III, UCSP Ermesinde II, Porto, Portugal

**Introduction:** Cervix Cancer is the 2nd most common in women and is associated with high mobility and mortality worldwide, which has been reduced by countries whose rate of adherence to screening with cervical cytology (CC) is  $\geq 70\%$ . There are studies that indicate a lower adherence to cancer screening cervical health professionals compared with the general population.

**Objective:** To determine the prevalence of CC updated on doctors and nurses of Unidade Local Saúde (ULS), and determine whether there is an association between CC and updated biographical information, personal history, habits and health monitoring. **Methods:** Observational, analytical and cross study. Population consists of the doctors and nurses of the ULS aged between 25 and 60 years. Data collected by anonym and self-administered questionnaire. The collected data were recorded and analyzed in computer application Microsoft® Excel 2010.

**Results:** There was obtained 397 completed questionnaires. The majority of responses corresponded to nurses (80%), professionals serving at hospital (68%), with consultation at the health center (53%) and CC current (87%). There was a statistically significant association between the CC and the existence of updated query surveillance at the health center.

**Conclusions:** The prevalence of CC updated outperforms the general population, contrary to the trend found in the literature. The association between CC and the existence of updated query surveillance at the health center may be due to the fact that this group be alerted by his family physician for the need to conduct CC. However, due to the limitations of this study will need further studies to confirm the results.

Disclosure: No conflict of interest declared

1465

**Aquapro – Evaluation and Quality Assurance Records Prescription Cancer Screening in Patients**E. Silva<sup>1</sup>, S. Gonçalves<sup>2</sup>, M. Sá<sup>3</sup><sup>1</sup> Family Health Unit São Miguel-O-Anjo, ACES do Ave III – Famalicão, Braga, Portugal; <sup>2</sup> Family Health Unit São João de Braga, ACES de Cavado I – Braga, Braga, Portugal; <sup>3</sup> Family Health Unit Saúde em Família, ACES da Maia, Porto, Portugal

Cancer is a leading cause of morbidity and mortality worldwide. The Family Physician (FP) should propose cancer screening on a regular basis in order to reduce the consequences of developing this pathology. According to the National Plan for Prevention and Control of Oncological Diseases in Portugal, cancer screening should include colorectal, breast and cervical cancer.

**Objective:** to evaluate and ensure the quality of the records of cancer screening in patients aged between 50 and 60 years of 3 Family Health Units (FHU).

**Methods:** basic institutional, random sample. Unit of study: patients with consultation between January and July 2012 from all FP of the 3 FHU. Exclusion criteria: patients with previous diagnosis of cancer. Data sources: computerized clinical process – cancer screening program; Type of review: internal. Criteria evaluated: registration prescription of colorectal cancer screening (1), breast (2) and cervical cancer (3). Data collection: evaluation/reevaluation April/2012 and August/2012. Temporal relationship of evaluation: retrospective. Intervention provided: educational.

**Results:** Evaluation/Reevaluation: FHU A – 146/142 users, Criterion 1: quality standard (QS) insufficient/sufficient, Criteria 2 and 3 very good in both phases. FHU B – 151/147 users, all criteria QS very good in both phases. FHU C – 147/141 users, Criterion 1: QS sufficient/good, Criteria 2 and 3 very good in both phases.

**Conclusions:** in the evaluation 88.9% of the studied parameters fulfilled the QS established. At reassessment there was an overall improvement in registrations, with 100% of the criteria meeting the standards, which reflects the success of the measures implemented. However, periodic reviews should be conducted.

Disclosure: No conflict of interest declared

1476

**Breast self-examination on screening for breast cancer: an evidence-based review**H Cadavez<sup>1</sup>, P Pereira<sup>2</sup><sup>1</sup> UCSP Ermesinde I, UCSP Ermesinde I, Ermesinde, Portugal; <sup>2</sup> USF Covelo, USF Covelo, Porto, Portugal

**Introduction:** Breast cancer is the most common non-skin cancer and second deadliest cancer in women. Although there is a strong consensus for routine screening mammography there is no consensus for routine screening with breast self-examination (BSE).

**Objective:** To determine whether screening for breast cancer by regular BSE is recommended to reduce breast cancer mortality and morbidity.

**Methods:** We searched the National Guideline Clearinghouse, the Cochrane Library, the Canadian Medical Association Infobase and MEDLINE database for guidelines relative to BSE for breast cancer screening. We also conducted secondary referencing by manually reviewing reference of the guidelines previously found.

**Results:** We found 3 guidelines, 1 review and 2 recommendation statements relative to breast cancer screening with information about breast self-exam. The U.S. Preventive Services Task Force (2009) and the Canadian Task Force on Preventive Health Care (2011) recommend not advising women to routinely practice BSE. The American Cancer Society (2010) no longer recommends BSE and states women should be informed about the potential benefits, limitations, and harm associated with BSE. The Cochrane review (2008) does not suggest a beneficial effect of screening by BSE. The World Health Organization (2012) advises that national cancer control programs should not recommend screening by BSE. The National Cancer Institute (2012) states that teaching BSE does not reduce breast cancer mortality.

**Conclusions:** We conclude that BSE should not be performed given the lack of benefit and the increased harm in terms of increased numbers of benign lesions identified and an increased number of biopsies performed (SORT A).

Disclosure: No conflict of interest declared

1506

**From silence to orality: the hearing screening in childhood**M. Pereira<sup>1</sup>, J. Araújo<sup>2</sup><sup>1</sup> ACES Tâmega III – Vale do Sousa Norte, USF Freamunde, Freamunde, Portugal; <sup>2</sup> ACES Tâmega II – Vale do Sousa Sul, USF Terras de Souza, Paredes, Portugal**Objectives:**

- Parameters revision's for evaluate in the Children's Health Surveillance Consultations in the hearing range and the main techniques used in the Hearing Screening
- Systemize the knowledge available in this area
- Unify the procedures in the Primary Health Care

**Methodology:** Bibliographic research between august and September of 2012, which includes published articles in Medline and Uptodate, between 2004 e 2012, written in Portuguese and English, with Mesh terms: "Hearing Screening" and "childhood"; Pediatrics Portuguese Society site; Type-Program of Acting in Children's and Juvenile's Health of General Direction of Health; applications appointment's of SAM<sup>+</sup> for PHC

**Results:** In the Children's Health Surveillance Consultations, Family Doctor has the SAM<sup>+</sup> support, where he can check the several "Avaluation Parameters", "Modified Sheridan" and "Alarm Signs" to guide the HS, that must be done by stages. There is a set of essential materials (an otoscope, a spoon, a bell, a paper and a cup) and several components to evaluate (crying, direct answer to the sound, social interaction and language development).

**Conclusions:** The child's development depends on the hearing quality, therefore the preventive actions are very important. The HS must be universal and accomplished with otoacoustics emissions in newborns. In Portugal, this only happens in some maternities. Later, it should be done in a systematic way with sound answers maneuvers, allowing FD suspect of hearing loss. In cases where the suspicion exists, the child should be referenced to the otolaryngologist.

Disclosure: No conflict of interest declared

1526

**Diagnosis downstream consecutive to colorectal cancer screening with faecal occult blood test in an average risk population: a retrospective cohort study**V.Vietto<sup>1,2</sup>, S.Terrasa<sup>1,2</sup>, S.Belardinelli<sup>3</sup>, F.Rubinstein<sup>1</sup><sup>1</sup> Family and Community Medicine Service, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina; <sup>2</sup> Public Health Department, Instituto Universitario del Hospital Italiano de Buenos Aires, Buenos Aires, Argentina; <sup>3</sup> Medicine Faculty, Universidad de Buenos Aires, Buenos Aires, Argentina

**Objective:** to describe the diagnostic downstream consecutive to the prescription of a faecal occult blood test (FOBT) in an asymptomatic and average risk population of colorectal cancer (CRC) belonging to an HMO system of a Private University Hospital in Buenos Aires, Argentina during 2009, in the context of a colorectal cancer screening program.

**Methods:** retrospective cohort study based on secondary data obtained from clinical records of 42,770 patients aged 50 to 75 years, with an average risk of CRC.

**Results:** FOBT screening rate was 13.6% (5,818/42,770) during 2009. 24.8% of those patients that performed FOBT (5,818/1,441) had at least one positive result. A complete colonic evaluation was performed in only 53.23% (767/1,441) which consisted in colonoscopy in 96% of cases. 174 adenomas, 41 advanced adenomas, 3 early carcinomas and 2 advanced colorectal carcinomas were detected through this screening strategy.

**Conclusion:** FOBT screening rate for CRC was 13.6% and allowed the detection of 41 advanced adenomas and 5 colorectal carcinomas.

Disclosure: No conflict of interest declared

1585

**Feasibility of hand-held-ultrasonography in the screening of abdominal aortic aneurysm and abdominal aortic atherosclerosis in the point-of-care**A. Sisó-Almirall<sup>1</sup>, R. Gilabert Solé<sup>2</sup>, C. Bru Saumell<sup>2</sup>, B. Kostov Adriyanov<sup>1</sup>, D. Cararach Salami<sup>1</sup>, L. González de Paz<sup>1</sup>, M. Mas Heredia<sup>1</sup>, L. Sebastián Montal<sup>1</sup>, J. Benavent Àreu<sup>3</sup><sup>1</sup> CAP Les Corts- Unitat de Recerca, CAPSE and University of Barcelona, Barcelona, Spain;<sup>2</sup> Servei de Radiodiagnòstic, Hospital Clínic, Barcelona, Spain; <sup>3</sup> Afers Assistencials, Institut Català de la Salut, Barcelona, Spain

**Objectives:** To determine the prevalence of abdominal aortic aneurysm (AAA) and abdominal aortic atheromatosis (AA-At) using a hand-held ultrasound (HHUS) by a general practitioner (GP) in the Public Primary Health Care system.

**Methods:** Pilot study that prospectively studied a cohort of men over 50 years with cardiovascular risk factors (CRF): active smokers, former smokers, or hypertensive patients, attended in primary health care center. GP completed an ultrasonography training in an Ultrasound Unit under supervision of experienced radiologists using an standard ultrasound equipment and HHUS (VScan<sup>®</sup>, General Electric. USA). One hundred and six patients participated in the study and all imaging data recorded was blindly evaluated by a radiologist in order to establish the concordance in the interpretation of images between GP and radiologist. *Kappa* index was calculated to study the agreement on the presence or absence of AAA and AA-At.

**Results:** We observed a prevalence of 5.88% for AAA. *Kappa* index for concordance in AAA diagnosis were absolute ( $\kappa=1.0$ ) with a sensitivity and specificity of 100%. Otherwise GP identified 59 patients (58.4%) with AA-At, while radiologist readed 39 (38.6%) in the image review, with moderate concordance ( $\kappa=0.435$ ), sensitivity 89.74% and specificity 57.14%. Hypercholesterolemia (OR 2.61; CI95%[0.92-7.39]) and diabetes mellitus (OR 3.35; IC95%[0.89-12.55]) were independent risk factors for AA-At development in logistic regression.

**Conclusions:** After an adequate training in ultrasonography, HHUS is a useful tool for AAA screening in Primary Care. Its simplicity, security, validity, cost-effectiveness and acceptance by the general population, makes it a feasible tool for cardiovascular risk assessment.

Disclosure: No conflict of interest declared

1610

**Obesity – risk factor for arterial hypertension**

J. Vukotic, S. Milovancevic, L. Bunjak, B. Grujic  
*general practice, Health center Zvezdara, Belgrade, Serbia*

Obese people have more hypertension. In addition to the risk of hypertension, obesity further enhances total cardiovascular risk by increasing LDL-cholesterol levels, reducing HDL-cholesterol levels, diminishing glucose tolerance, and predisposing to the development of left ventricular hypertrophy (independent of the systemic BP).

**Objectives:** were to recognize arterial hypertension in group of obese patients and to change their dietary behaviors and physical activities.

**Methods:** The prospective, twelve month long research, included 125 patients, aged 18-60 years (mean 46), 74 women and 51 men, without previously established Hypertension, but with present obesity. The diagnosis of hypertension is made in this setting only after an elevated and properly measured blood pressure (SBP>140mmHg and DBP >90mmHg). Establishment of obesity diagnosis was based on BMI >30kg/m<sup>2</sup> and waist circumference according IDF for Europeans (>80cm for women and >94cm for men). Change of lifestyle was demanded from all patients.

**Results:** Hypertension was established in 56 patients (44.8%), in 31 women (41.8%) and 25 men (49.01%). After 12 month and after changes in dietary behavior and physical activity only 34 patients have hypertension (27.2%), and 49 patients (39.2%) were overweight not obesity.

**Conclusions:** This research confirmed that obesity is a strong predictor for development hypertension. Changing behaviors is difficult, requires time, considerable effort and motivation. Early detection and more intensive management to reduced weight in obese people can really reduce the long-term risk hypertension.

Disclosure: No conflict of interest declared

1620

**HHT centres: a multidisciplinary approach to a rare disease**

B.Tarazona<sup>1,2</sup>, A.Conejero<sup>2</sup>, M.Verde<sup>3,2</sup>, R.Gomez<sup>1</sup>, A.Rabanal<sup>2</sup>, G.Anton<sup>4</sup>, J.Arce<sup>5</sup>, L.Botella<sup>6</sup>, R.Zarrabeitia<sup>7</sup>

<sup>1</sup> *International SEMFYC, Vasco da Gama, Madrid, Spain;* <sup>2</sup> *Barrio del Pilar Health Center, Saludmadrid, Madrid, Spain;* <sup>3</sup> *Group of rare diseases (SEMFYC), Saludmadrid, Madrid, Spain;* <sup>4</sup> *Castroviejo Health Center, Saludmadrid, Madrid, Spain;* <sup>5</sup> *Infanta Leonor Hospital, Saludmadrid, Madrid, Spain;* <sup>6</sup> *Centro de Investigaciones Biológicas (CIB), Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain;* <sup>7</sup> *Sierrallana Hospital, Group of rare diseases (SEMI), Cantabria, Spain*

**Objectives:** To approach the reality of Rare Diseases to Primary Care Physicians by providing a multidisciplinary approach: Hereditary Hemorrhagic Telangiectasia (HHT) centre or Rendu-Osler-Weber, and to emphasize the importance of referral centres among primary care physicians

**Methods:** Observational descriptive study of patients treated at the HHT centre, consisting of a multidisciplinary team: Primary Care Medicine, Internal Medicine, ENT, other medical and surgical specialities, Genetics, Interventional Radiology and assisted reproduction. According to the international guidelines of HHT Management (Toronto) the clinical diagnosis of HHT should rely on the Curacao Criteria: recurrent epistaxis, mucocutaneous telangiectases, arteriovenous malformations, and family history for HHT. The study identifies genetic mutations and major variants in HHT1 (endoglin), HHT2 (ALK1), SMAD4. Screening protocols were also applied to diagnose visceral lesions.

**Results:** 429 cases were treated during the 2003–2010 period. 141 patients (32.87%) were attended, 140 (32.63%) were hospitalized for study and 148 (34, 50%) were only tested for genetics.

The average patient age was 47.3 + / -14.4 years.

The number of patients treated was highly variable depending on the geographic origin. Primary Care based screening have a high importance on it; but since 2008, it is also possible to make online consultation from other countries.

**Conclusions:** Gate-keeping by primary care physicians is crucial for these patients who have a risk of under detection and under management of genetic problems before been diagnosed, therefore it is important the coordination of medical care provided at the different levels of the Health system.

Disclosure: No conflict of interest declared

1623

**Role of family doctors in preventive medicine and cancer survey program**P.-F. Chen<sup>1</sup>, J.-J. Huang<sup>1</sup>, C.-H. Chiu<sup>1</sup>, C.-L. Chen<sup>1</sup>, Y.-H. Shen<sup>1</sup>, K.-W. Leung<sup>2</sup>, W. Leung<sup>3</sup><sup>1</sup> Department of Family Medicine, Yuan's General Hospital, Kaohsiung, Taiwan; <sup>2</sup> Oral/Maxillofacial Surgery, Yuan's General Hospital, Kaohsiung, Taiwan; <sup>3</sup> Radiation Oncology, Yuan's General Hospital, Kaohsiung, Taiwan

**Aim :** Cardiovascular diseases and cancer were gradually increased and had a high ranking rate in mortality in Taiwan for recent decades. Therefore, the role of family physicians has deserved an important role in the preventive medicine and cancer survey program in Taiwan.

**Subjects and Methods:** There were eight familiar doctors cooperative with HPH team and Cancer Center in our hospital for two national programs of controlling the body weight (BWC) and cancer survey (CS) for specific population in regional area. For BW controlling program will including the employee (n=1011) and regional people (n=389) in the year of 2012. Cancer survey program will include; i. Cervix cancer with PAP smear, ii. Breast cancer with mammography, iii. Colon cancer with stool occult blood method, iv. Oral cancer from 2010 to 2012. This survey works were managed by family doctors (n=8) of our hospital.

**Results:**

- 1. BWC program:** There were 1011 employee and 389 regional people enrolled and accepted BW control education and care program. Decreased value of BMI were measured from 24.7 to 24.4 and 26.5 to 24.8 for employee and regional people respectively. The improvement was found significantly in regional people.
- 2. CS program:** There were new cancer patients detected and proved in 54 (0.79% of 6819) for Cervix cancer, 49 (0.42% of 11564) for Breast cancer 41 (0.33% of 12336) for Colon cancer and 59 (0.90% of 6520) for Oral cancer.

**Conclusion:** From this study, family doctors can achieve healthy care program with a solid results in national projects in Taiwan.

Disclosure: No conflict of interest declared

1625

**Oral health in the SUS in Sao Paulo – Brazil**

R.A.A. Marques, M.C. Soares

*Atenção Básica Area Técnica de Saúde Bucal, Secretaria Municipal da Saúde, São Paulo, Brazil*

**Objective:** Present the organization of oral health care in São Paulo according to the national health system, *Sistema Único de Saúde- SUS*, deployed throughout Brazil.

**Methodology:** Universality of access, integral actions to health, with equality are principles of SUS. Sao Paulo, southeastern Brazil, has almost 12 million inhabitants, marked by socio economic and cultural differences. To meet the principles of SUS the city identifies the most vulnerable social groups and seeks to develop actions for health promotion, disease prevention and health care in its almost 600 Basic Health Units – UBS. **Results:** In 75% of UBS 1200 dentists identify risk to caries, periodontal disease and oral cancer by screening, monthly or bimonthly. All the people screened receive self care education. People classified as at risk for any of the injuries receive dental care and scheduled preventive, curative, surgical or preservation, according to your needs. The Atraumatic Restorative Treatment – ART is adopted as definitive treatment in deciduous teeth and as temporary in permanent teeth, reducing pain and tooth loss. In order to provide integral oral care São Paulo has 29 specialized dental clinics where at the end of basic treatment in UBS is possible to have Endodontics, Periodontics, Prosthodontics, Dentistry, Oral Surgery and Special Patients, Orthopedics/Orthodontics and, soon, Implantology.

**Conclusions:** In despite of the encouraging results in some population groups, coverage of oral health care is low, because of the accumulated dental needs, mainly in adults and the elderly.

Disclosure: No conflict of interest declared

1676

**The importance of mammography screening in early detection of breast cancer**

L. Maksimovic, S. Petrovic, D. Punosevac

*Dom zdravlja Krusevac, Zdravstveni centar Krusevac, Krusevac, Serbia*

**Introduction:** Breast cancer is the most common cancer among women. Every year about 4000 women are diagnosed with breast cancer in Serbia.

**Goal:** Because of all these bad statistics and predictions, the goal of our work is to raise awareness among women about the risks of this disease and how important is prevention, because more than 90% of cancer cases are treatable if they are found out early.

**Method:** The research was done during the last three months of 2012 at the Health Center Krusevac using mobile mammograph. It includes 48 asymptomatic women aged 45 to 65 who are treated among selected doctors. The obtained mammogram results are classified into 6 categories BI RADS (Breast Imaging Reporting and Data System), developed by the American College of Radiology.

**Results:** Among 48 randomly selected women who were examined by mammography, 33 (68.75%) had normal mammography result – BI-RADS, 4 (8.33%) had BI RADS 0 and they were proposed additional imaging, BI RADS 2, which mainly refers to benign changes, had 6 (12.50%) females and they were advised annual control, and in 3 (6.25%) women was registered mammographic result BI RADS 3 where is proposed monitoring by ultrasound every 6 months. In 2 patients (4.17%) result belongs to the group of BI RADS 4-5, suspected malignant changes, and they were sent to an oncologist, and one has already been operated on.

**Conclusion:** The results of our research show that mammography is the best method for early detection of breast cancer, especially among women older than 45 years because it is the period when frequency of cancer grows rapidly. If any woman has not been tested, she should be examined because she owes that herself and her life.

Key words: breast cancer, mammography screening, prevention

Disclosure: No conflict of interest declared

1680

**Tobacco in primary care. Approaching the community.**

A. Ribatallada Diez, R. Ayala Mitjavila, A. Guiu Viaplana, C. Font Palou, M. Senabre Casan, C. Prieto Villalba

*PRIMARY CARE, ICS – CAP SERRAPARERA, CERDANYOLA DEL VALLÈS, Spain*

**Aims:** We studied our community to find new ways to quit snuff.

**Design & Method:** Semi-structured interview. Exploratory research. Qualitative study. Voluntary participation. Questionnaire includes specific open questions. Techniques of standardized observation protocol.

Work done in 2 nearby towns and with similar comparative demographics. We interview teens (T) and adults(A); (T) in their school, and (A) in the health center.

**Results:** n= (A)104/(T)221. (T) from 11-15 y. Of both sexes at the assigned school. Adults over 30 y to 82 y. Attendees at the health center. Analysis answers (A) (T); Exploratory 3 shafts;

INFORMATION (A) Closely linked to doctor. Through tips, testimonials, explain Message associated diseases. Passive smoking. INFORMATION (T) Bring smokers to the doctor. Teaching image of a lung burning. Tips.

PSYCHOLOGICAL HELP (A) Behavioral strategies. In order to model character motivation. Organized projects. (T) Motivate. Talk. Helping to make changes. Therapy group. Electronic Cigarette.

COST INCREASE TOBACCO/ NO SALE (A) Use new tobacco tax to finance stop smoking, to finance tt cancer and related illnesses. Financing new therapies, ex: hypnosis. Increased revenue in Social Seg.

Remove tobacco market. Income tax. (T) No sale.

**Conclusion:**

- There are common points of views between teenagers and adults.
- Detected in the Community the low support to provide psychological help at affordable cost.
- Detected the growing interest to the passive smoking, we must to improve the stop smoking advice with active alert to the breathing secondhand smoke.
- The strategic health authorities are accepted.

Disclosure: No conflict of interest declared



1684

**General practitioners' and midwives' fight against cervix's cancer at primary care health center**

M.S. Bakola, O. Chrysostomou, I. Koliototi, A. Kostula

*Filippiada Medical Health Center; General Hospital of Preveza, Filippiada, Greece*

**Objectives:** Regular Pap smears help preventing up to 90% cervical cancer's cases. The majority of women in rural areas has to travel to distant areas in order to do a Pap smear. The ministry of Health offered free cervical cancer screening test at selected medical health centres in rural areas, in cooperation with general practitioners as well as midwives trying to eliminate the inconvenience of travelling as the reason for not participating in the screening.

**Methods:** 732 women aged 18–70 years, who came voluntary, had a Pap smear at our medical health centre, between November 2011 and December 2012. The laboratory results of the Pap smears, as well as the collected data (by means of a questionnaire) were both used in our study.

**Results:** The majority of women had no abnormal cells at their Pap smear. Several types of inflammation were the most common problem among the women who had abnormal cells. Ten women were referred to a gynaecologist for further examination. A significant number of women got a Pap test for the first time due to the screening program.

**Conclusions:** General practitioners and midwives are responsible for communicating the results from the cervical cancer's screening program to the participating women. Although these results are encouraging, cervical cancer's screening tests should be intensified. Thanks to general practitioners and midwives who participated in the screening program, people's response has been increased within the passage of time.

Disclosure: No conflict of interest declared

1685

**Integrated preventive services in primary care; pilot implementation of a CVD risk assessment and lifestyle intervention program**A.H. Rengers<sup>1</sup>, K. van den Brekel<sup>1</sup>, N.J. de Wit<sup>2</sup>, R.A. Kraaijenhagen<sup>3</sup>*<sup>1</sup> Julius Health Centers, -, Utrecht, Netherlands; <sup>2</sup> Julius Health Centers, Julius Health Centers for Health Sciences and Primary Care, Utrecht, Netherlands; <sup>3</sup> NDDO Institute for Prevention and Early Diagnostics, Niped, Amsterdam, Netherlands*

**Background:** Julius Health Centers (JHC), the Municipal Health Service Utrecht (MHS) and NDDO Institute for Prevention and Early Diagnostics (NIPED) joined forces in developing an integrated tailored prevention program in primary care, 'Community based Personalized Prevention'. In this program an individual on line health risk assessment (HRA) for several preventable diseases, such as cardiovascular diseases (CVD) diabetes (DM) and mental health is combined with tailored lifestyle interventions, available in the community of the practice.

**Methods:** From JHC, 800 patients between 45 and 70 were invited to participate in this study. Patients with known common chronic diseases (eg. DM, CVD) were excluded. Patients received an invitation from their general practitioner for an online electronic risk assessment using a web-based questionnaire, biometric measures, and laboratory evaluation. The system automatically generates 10 years risk for CVD, followed by tailored feedback, including GP consultation and electronic referral to available lifestyle intervention programs in the practice area.

**Results:** 800 patients were invited to participate in the pilot. In total, 60 lifestyle interventions from several providers were incorporated in the electronic risk assessment program. Among them were interventions to improve f.e. physical activity (13), dietary intake (8), stress- (12) alcohol- (6) and tobacco consumption (8). Follow-up data of the participants will be presented June 2013.

**Conclusions:** combined CVD risk assessment and lifestyle interventions in a primary care based integrated prevention program seems feasible and requires cooperation between stakeholders from sectors other than primary healthcare, f.e. private partners and welfare organisations.

Disclosure: No conflict of interest declared

1686

**Integrated lifestyle intervention program in primary care; results of a pilot evaluation**M.Stigter<sup>1</sup>, K van den Brekel<sup>1</sup>, N.J.de Wit<sup>2</sup><sup>1</sup> Primary Care, Julius Health Centers, Utrecht, Netherlands; <sup>2</sup> Primary Care, Julius Center for Health Sciences and Primary care, Utrecht, Netherlands

**Background:** In the Julius Health Centers (JHC) a primary care based multidisciplinary combined lifestyle intervention program was developed ( 'Julius Fit'). The program focusses on changing the lifestyle of the patient using behavioral change approach to integrate new lifestyle in patient's daily life. We report the 6 months pilot results of 'Julius Fit'.

**Methods:** Non randomised intervention study without control. Patients from the JHC (33.000 patients) with a chronic disease (Diabetes, Cardiovascular Disease (CVD), COPD, Depression) or a risk factor (overweight or smoking) were invited by the GP to participate in 'Julius Fit'. This program consist of a web-based lifestyle and quality of life (SF-36) assessment, biometric measures on 0,6 and 12 months, tailored guidance of a lifestyle coach. After goals were set, participants choose to increase exercise (supported by physiotherapist), change their dietary habits (with dietician) or reduce stress (with mental health practice nurse). Most participants had 2 hours of support in 3,3 consultations from the lifestyle coach.

**Results:** 51 patients (average 55,0 years), 2/3 females and 1/3 males participated in the pilot. Quality of life ( SF-36 ) scores were relatively low. All had overweight at the start (average 98,2 kg) with weight reduction of 0,9 kg (95% CI) after 6 months. There was no significant effect on bloodpressure, BMI and 'quality of life'.

**Conclusions:** pilot evaluation of a structured life style intervention program shows favourable results at 6 months, especially in weight reduction. However, further research is required to asses the effectiveness of this lifestyle intervention program

Disclosure: No conflict of interest declared

1758

**The importance of screening... addressing other problems**

I. Coelho, C. Pires, A.M. Correia, O. Costa, E. Pinto

USF, Grão Vasco, Viseu, Portugal

**Case description:** 67 year old male, retired, married, belonging to a nuclear family, highly functional, class VIII of Duvall cycle, medical history of hypertension (HT), family history irrelevant.

Patient with frequent appointments in our family health unit (FHU). On the 04/10/2012 presents to a appointment for the screening of colorectum cancer (SCRC). During the appointment, when asked about prior abdominal surgeries, the patient replied that at the age of 27 years old he suffered an abdominal surgery due to a stomach ulcer, „but didn't know very well.“

The patient was asymptomatic, but the importance of conducting an upper endoscopy was discussed with the patient and thereby requested.

On the 26.07.2012 the patients returns with the following results:

“partial gastrectomy, ulcerated superficial lesion in the gastric stump. Biopsy: malignant cells and scantatypical glands suggestive of recurrent adenocarcinoma”. Due to theses results the family physician called the hospital so that the patient could have an urgent surgery appointment.

**Discussion:** With the implementation of the SCRC program in the central region of Portugal many patients are called for a appointment. This case shows the importance of the implementation of organized screening programs. These provide the family physician the possibility to observe patients who do not normally visit their doctor allowing them to discuss patients' medical histories, enabling the possibility of an early detection of pathologies.

Disclosure: No conflict of interest declared

1788

**Case study: the incidence of cervical cancer at UBS Continental compared to the index of the municipality of Guarulhos / SP during the first semester of 2012**J. Beserra<sup>1</sup>, T. Netto<sup>1</sup>, M. Miyamoto<sup>1</sup>, F. Martins<sup>1</sup>, R. Braga<sup>1</sup>, E. Vieira<sup>1</sup>, L. Neto<sup>2</sup><sup>1</sup> *Medicine, Student, São Paulo, Brazil;* <sup>2</sup> *Medicine, Teacher, São Paulo, Brazil*

**Objective:** This study proposes to verify the results of screening campaigns for cancer of the cervix of the population served by basic health unit in Guarulhos, Sao Paulo, comparing the result with the base city, as well as determining the parameters that influence the outcome.

**Material and methods:** Data were collected primarily in the database of the institution and the database SISCOLO.

**Results:** The results presented show a greater identification of intraepithelial lesion high-grade at UBS comparing to municipality.

**Conclusions:** Some initiatives of the unit suggest that this identification is consequence of an active search at the unity in comparison to the municipality. UBS Continental presents proposals for action to combat cancer of the cervix probably more efficient, which means that more cases are detected.

Disclosure: No conflict of interest declared

**3.2. CARDIOVASCULAR DISEASE**

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**The BP Holter monitor in general practitioners office**L. Iannantuoni, G. B. D'Errico, R. Grisorio, L. Mazzeo  
*Family medicine, training course in family medicine, Foggia, Italy*

Conducted in the setting of general practitioner, the research, lasting 1 year, allowed the evaluation of the results obtained from established therapies, awareness and proper patient adherence to therapy, as well as the identification of new patients with hypertension. The study suggests that if the BP Holter monitor, as well as other methods, find use in general practice, we would get many benefits, correct assumption of the assisted, earlier diagnosis, streamlining of the waiting list. The survey was subjected to control sample of 149 patients aged between 31 and 90 (M64; W65). Patients were selected according to their known medical history of hypertension or following the discovery, on several occasions, of blood pressure indicative of a hypertensive state. For the conduct of the study were used:

-Recorder model "Device Walk 200b" wireless transmission;

-Mobile phone with modem function, with software for the management and the sending of the track.

The actual performance of the examination were conducted by the office's nurse who was properly trained. For setting up the parameters of the evaluation we followed the guidelines of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). The survey has allowed to make 21 new diagnoses of hypertension, 26 diagnoses of white coat hypertension (equal to 17.5%), to distinguish patients in whom treatment successfully controlled blood pressure to those in which therapeutic adjustment was required.

Disclosure: No conflict of interest declared

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**Hemoglobin level is an independent cardiovascular risk factor**M.Y. Kim<sup>1</sup>, J.E. Yun<sup>2</sup>, S.H. Jee<sup>2</sup>, D.C. Lee<sup>3</sup><sup>1</sup> Family medicine, Seoul Medical Center, Seoul, Korea; <sup>2</sup> Graduate School of Public Health, Yonsei University, Seoul, Korea; <sup>3</sup> Family Medicine, Yonsei University College of Medicine, Seoul, Korea

**Objective:** Anemia and polycythemia were known as independent cardiovascular risk factors, but whether hemoglobin level itself can be a cardiovascular risk factor has not yet been clarified. This study was designed to investigate the relationship between hemoglobin level and cardiovascular disease (CVD) incidence.

**Methods:** A total of 407,858 subjects (256,851 men, aged 30-94) who underwent physical examination at 19 Korean nationwide health examination centers were included in this study. CVD incidence was determined using the health insurance reimbursement database of the National Health Insurance Corporation.

**Results:** During the follow-up (median 8.2 years), a total of 30,407 CVD events (19,049 events in men) were detected. In Cox proportional hazard models, men with lower or higher level of hemoglobin showed higher hazard ratios with total CVD (HR, 1.14, 95% confidential interval [CI], 1.08-1.21 for the 1<sup>st</sup> quintile; HR, 1.14, 95% CI, 1.09-1.21 for the 5<sup>th</sup> quintile), ischemic heart disease (HR, 1.16, 95% CI, 1.07-1.26 for the 1<sup>st</sup> quintile; HR, 1.16, 95% CI, 1.07-1.25 for the 5<sup>th</sup> quintile), and stroke (HR, 1.13, 95% CI, 1.02-1.25 for the 1<sup>st</sup> quintile; HR, 1.18, 95% CI, 1.07-1.30 for the 5<sup>th</sup> quintile) after adjustment for multiple confounding factors compared to those with mid-level of hemoglobin (3<sup>rd</sup> quintile).

**Conclusions:** We found a U-shaped independent association between hemoglobin level and CVD incidence, including ischemic heart disease and stroke, in men.

Disclosure: No conflict of interest declared

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**Use of panel assay of cardiac biomarkers in the detection and management of suspected acute myocardial infarction in the emergency department of Health Centre of Soxos**

M. Pape, A. Smagadi, I. Charitonidis

HEALTH CENTRE OF SOXOS, AHEPA UNIVERSITY HOSPITAL OF THESSALONIKI, THESSALONIKI, Greece

**Objective:** To determine the feasibility of using cardiac biomarkers to identify patients with suspected acute myocardial infarction (AMI).

**Methods:** The study population consisted of 55 patients who presented with symptoms [T=sudden chest pain typically radiating to the left arm or left side of the neck (n=18) and A=shortness of breath, sweating, anxiety (n=37)] of possible cardiac cause. Each participant underwent a physical exam, including medical history [risk factors for myocardial infarction (RFMI): diabetes, hypertension, dyslipidemia, smoking, obesity]. A 12-lead electrocardiogram (ECG) was recorded. Venous blood samples were drawn in heparinised tubes, 6 hours after symptoms onset, for cardiac biomarkers (CB) testing. We used a point-of-care-device for rapid estimation of myoglobin (Myo), creatinine kinase (CK-MB), and cardiac troponin (cTn) (Triage Cardiac Panel). Patients were divided into groups based on the ECG findings: [nondiagnostic electrocardiogram (NDE), acute myocardial infarction or acute coronary ischemia based on ST segment elevation or depression (AMI/ACI), arrhythmia (A), atrioventricular block (AV-B)] and on the cardiac assay results (CAR): [1=CK-MB+Myo+Tn (-), 2=Myo (+) + CKMB (+), 3= Myo+CKMB (+), 4=(CKMB+Myo+Tn (+)].

**Results:** The evaluated outcome measures after the initial clinical assessment, electrocardiography and laboratory analysis were as follows: admission in cardiology service using the emergency ambulance (ACS-EA) [symptoms (T) (n=9), symptoms (A) (n =12)], proposed admission in cardiology service for further cardiologic evaluation (FCE) [symptoms (T) (n=4), symptoms (A) (n=2)], proposed examination of family doctor (EFD) [symptoms (T) (n=5), symptoms (A) (n=23)].

**Conclusion:** Cardiac biomarkers have a complementary role in the assessment of a suspected stroke patient.

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**A rare cause of dysphagia: An aberrant right subclavian artery**A. Parlak<sup>1</sup>, A. Aytakin<sup>2</sup>, S. Develi<sup>3</sup>, U. Aydogan<sup>4</sup><sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey

27 years old female patient admitted with the complaints of difficulty in swallowing which lasting for many years. It was understood that patient could swallow but morsal was sticked in patient's throat. It was learned that patient had no complaints from other systems but sometimes she was feeling numbness in her right arm. Patient's height was 160 cm and weight was 50 kg. The patient's blood pressure was 100/60 mmHg, heart rate was 76 beats / min and body temperature was 36.4 degrees. The patient's head, neck and other system examinations were normal. The patient's complete blood count, biochemistry, vitamin B12, folate, ferritin levels and thyroid function tests were within normal limits. The patient's voice lung sounds were vesicular type, no pathological sounds was heard. Esophageal barium X-ray with and chest x-ray were observed to be normal. Patient's magnetic resonance imaging of thorax and neck was taken. Cervical discopathy, cervical ans flattening and abnormal origin of the right subclavian artery noticed in MRI. Arcus aorta was highly localized and right subclavian artery was originating from left subclavian artery instead of truncus brachiocephalicus. Besides, right subclavian artery found to be coursing from posterior of esophagus which in fact should be localized at the anterior. Aberrant subclavian artery should be evaluated in patients having difficulty in swallowing as one of the compressing causes of esophagus. Patient's complaints about right upper extremity were considered to cause by the course of this artery.

Disclosure: No conflict of interest declared

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**Association between cardiac CT-derived cardiac age index and coronary arterial stenosis**E.-j. Choi, S.-Y. Lee, D.-W. Jung, J.-G. Lee, Y.-J. Kim, Y.-H. Yi, Y.-H. Cho, K.-S. Choo  
Family medicine, YANGSAN PUSAN NATIONAL UNIVERSITY HOSPITAL, YANGSAN, Korea

**Background:** Hisashi Masugata et. al. proposed a new index of cardiac age derived from echocardiography which assess the cardiac morphological change due to aging and/or hypertension. Because of the correlation between cardiac age and baPWV, they suggested the cardiac age as a useful marker for testing arterial stiffness.

Index of cardiac age=  $1,000 \times VS_{ot} / BSA / (VS - AO)$

**Methods:** The Subjects of this research were who visited a health promotion center of an anonymous general hospital for regular check-up from January 2010 to July 2010. Totally 135 people, 32 females and 103 males, who underwent cardiac CT were included in the study and those who had past history of cardiovascular disease or stroke were excluded.

Each cardiac CT was confirmed by a cardio-radiologist and diagnosed whether they have any arterial stenosis. Cardiogenic parameters were measured by the cardio-radiologist and a resident of Family medicine.

**Results:** Hypertensive group's cardiac age index was significantly higher than normotensive's. Hypertensive group also had significantly thicker ventricular septum and heavier ventricular mass. When subjects were divided into to groups by their coronary artery's stenosis state, there was significant cardiac age difference between the group with coronary stenosis  $66.42 \pm 14.29$  and the group without stenosis  $55.18 \pm 13.93$ . The cardiac age showed a correlation with homocystein, the independent cardiovascular disease's risk factor. Cardiac age index's odds ratio of arterial stenosis was 1.045.

**Conclusion:** Cardiac age index can be derived from cardiac CT more objectively than from echocardiography and as it gets 1 year older, it increases cardiovascular disease risk by 1.045 (P=0.007).

Disclosure: No conflict of interest declared

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**Blood pressure trends and mortality: the Leiden 85-plus study**R. K.E. Poortvliet<sup>1</sup>, W. de Ruijter<sup>1</sup>, A. J.M. de Craen<sup>2</sup>, S. P. Mooijaart<sup>3</sup>, R.G.J. Westendorp<sup>4</sup>, W. J.J. Assendelft<sup>1</sup>, J. Gussekloo<sup>1</sup>, J. W. Blom<sup>1</sup><sup>1</sup> Public Health and Primary Care, Leiden University Medical Center, Leiden, Netherlands;<sup>2</sup> Gerontology and Geriatrics, Leiden University Medical Center, Leiden, Netherlands; <sup>3</sup> Institute for Evidence-Based Medicine in Old Age, Institute for Evidence-Based Medicine in Old Age, Leiden, Netherlands; <sup>4</sup> Netherlands Consortium for Healthy Ageing, Netherlands Consortium for Healthy Ageing, Leiden, Netherlands**Objective:** To evaluate the independent contributions of both the trend in SBP and the SBP value at age 90 to the prediction of mortality in nonagenarians.**Methods:** The trend in SBP between 85 and 90 years and SBP at age 90 years were assessed in a population-based sample of 271 participants (74 men and 197 women) aged 90 years of the Leiden 85-plus Study, an observational population-based prospective follow-up study. Primary endpoint, followed up over 5 years (median 3.6 years), was all-cause mortality.**Results:** A decreasing trend in SBP between 85 and 90 years (decline  $\geq 2.9$  mmHg/year) was associated with increased mortality compared to an average SBP trend (HR 1.45, 95% CI 1.02–2.06), independent of SBP at age 90. The effect was stronger in institutionalized participants compared to those living independently [HR 1.87 (1.10–3.19) and HR 1.30 (0.81–2.09)]. Overall, 90-year-old participants with SBP of 150mmHg or less had a 1.62 times increased mortality risk compared to those with SBP more than 150mmHg (1.21–2.20), independent of the SBP trend in preceding years. This applied to those with and without antihypertensive drugs and those with and without history of cardiovascular disease or noncardiovascular disease.**Conclusion:** In very old age, both decreasing trend in SBP over the previous 5 years and the current SBP value independently contribute to prediction of all-cause mortality. Therefore, in individual patients, all available preceding SBP measurements should be taken into account.

Disclosure: No conflict of interest declared

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**Physical activity in hypertensive patients in primary care, Brazil.**

J. Silva, G. Mano, A. Pierin

Adults health nursing, School of Nursing, University of São Paulo, São Paulo, Brazil

Hypertension is a major risk factor for cardiovascular diseases that are major causes of morbidity and mortality in the world. In the genesis of hypertension for non-modifiable factors such as heredity, but many are modifiable, such as habits and lifestyles, emphasizing physical activity. **Objective:** to study aimed to characterize physical activity in hypertensive patients in a primary health care unit in the west region of the city of São Paulo.**Methods:** We studied transverse field, descriptive quantitative approach. We used the International Physical Activity Questionnaire (IPAQ). **Results:** We studied 216 hypertensive patients (56.1±6.1 years old, 70.8% women, 56.5% white, 7.9±4.1 years of studying, 63% reported not working). Were classified as inactive 69% and on personal health assessment 68% found regular at bad. As for time spent sitting there was no distinction between the ordinary days and the weekend, 62% reported range from 2 to 6 hours, with a mean of 3.5±2.5 hours. There was an association ( $p < 0.05$ ) of physical activity: a) work, 75% of those not working were inactive vs 58.8% of those who reported working, b) age, 56.9±7.3 vs 54.1±8.8 years old, respectively, for active and inactive c) inactive participants spent more time sitting than active, 225±163.4 vs 182±123.1 min/ordinary day and 215±158.2 vs 200±145.5 min/ weekend day, respectively.**Conclusions:** Therefore, the results indicate the high lack of physical activity among hypertensive patients, however, similar to that found in the literature. Besides association with unfavorable social variables.

Disclosure: No conflict of interest declared

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**Comparison of coronary artery disease (CAD) severity with previous cardiac histories**Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, A.Aydogdu<sup>3</sup>, H.Akbulut<sup>2</sup>, S.Tapan<sup>4</sup>, C.Barçın<sup>5</sup>, K.Saglam<sup>6</sup><sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;<sup>3</sup> Department of Endocrinology, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>4</sup> Department of Biochemistry, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>5</sup> Department of Cardiology, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>6</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey**Objective:** Coronary Artery Disease (CAD) is one of the most important mortality cause among developing countries. Our aim was to evaluate severity of stenosis among CAD patients and compare with previous cardiac histories.**Methods:** Our study was performed upon 359 patients applied for coronary angiographic intervention between June 2010-June 2011 in GMMA cardiology department. Medical histories were taken by using face to face method after patients' approvals. Patients were divided into 3 groups in terms of severity of CAD(-), CAD<50%, CAD≥50%**Results:** Mean age of patients was 54.37±11.48(22-84). When the patients evaluated in terms of gender 68.2%(n=245) were male, 31.8%(n=114) were female. Of patients with Acute Coronary Syndrome (ACS) history; 32%(n=16) were in CAD<50% group, 52%(n=26) were in CAD≥50% group. Of patients with Percutaneous Transluminal Coronary Angioplasty (PTCA) history 41.4% (n=12) were in CAD<50% group, 20.7% (n=6) were in CAD≥50% group. Of patients with Coronary Artery Bypass Grafting(CABG), %36.4(n=4) were in CAD<50% group, 63.6%(n=7) were in CAD≥50% group. When previous cardiac events and intervention histories compared with degree of stenosis of CAD, statistical significance was detected (p=0.001). Of patients with no previous cardiac event histories; 43.9%(n=118) had stenosis level of <50%, 26.4%(n=71) had stenosis level of ≥50% in terms of angiography.**Conclusions:** There is a strong association with severity of CAD and previous cardiac events and interventions. Thus, if patients had had previous cardiac events or interventions before and suspicious condition occurred, cardiology consultation must be advised.**Key Words:** Coronary Artery Disease, Previous cardiac events, Coronary angiography

Disclosure: No conflict of interest declared

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**Prevalence of cardiovascular disease in family medicine practice**O. Batic-Mujanovic<sup>1,2</sup>, L. Gavran<sup>3</sup>, A. Mehmedovic<sup>4</sup>, M. Becarevic<sup>5</sup>, S. Suljic<sup>6</sup>, M. Mujcinagic Vrabac<sup>7</sup>, Z.Saric<sup>7</sup><sup>1</sup> Family Medicine Teaching Center, Health Center Tuzla, Tuzla, Bosnia-Herzegovina;<sup>2</sup> Department of Family Medicine, Faculty of Medicine, Tuzla University, Tuzla,<sup>3</sup> Family Medicine Teaching Center, Health Center Zenica, Zenica, Bosnia-Herzegovina; <sup>4</sup> Department of Family Medicine, Health Center Kalesija, Kalesija, Bosnia-Herzegovina; <sup>5</sup> Department of Family Medicine, Health Center Banovici, Banovici, Bosnia-Herzegovina; <sup>6</sup> Department of Family Medicine, Health Center Lukavac, Lukavac, Bosnia-Herzegovina; <sup>7</sup> Department of Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina**Objective:** Cardiovascular disease is leading cause of death worldwide. Significant increasing in cardiovascular morbidity and mortality has been in Bosnia&Herzegovina in the past decade. We evaluated prevalence of cardiovascular disease among patients in family medicine practice.**Methods:** Trial was conducted in Family Medicine Teaching Center Tuzla and included 162/1836 patients (72 men and 90 women), aged 36-87 years, with cardiovascular disease. We evaluated prevalence of coronary heart disease, stroke, peripheral arterial disease and abdominal aortic aneurysm among patients in primary care setting.**Results:** Prevalence of cardiovascular disease was 8,82%. There were 44,44,% men and 55,56% women (p=0,046). Mean age of patients was 68,24±8,84 years with no significant difference related to gender. One cardiovascular disease had 114 (70,37%) patients. Two cardiovascular diseases had 43 (26,54%) patients, while 5 (3,09%) had three cardiovascular diseases. Coronary heart disease had 119 (73,91%) patients. Angina pectoris was diagnosed in 91 (56,17%) patients: 42 (46,15%) men and 49 (53,84%) women (p=0,299). Heart attack had 28 (17,28%) patients: 18 (68,24%) men and 10 (35,71%) women (p=0,033). Stroke was diagnosed in 94 (58,02%) patients. Significantly more women had stroke than men (60,63%:39,36%; p=0,003). Only 2 (1,23%) patients had abdominal aortic aneurysm: 1 (1,39%) men and 1 (1,11%) women (p=1) and 4 (2,47%) patients had peripheral artery disease: 3 (4,17%) men and 1 (1,11%) women (p=1,573). Cardiovascular disease associated with diabetes had 32 (19,75%) patients.**Conclusion:** Prevalence of cardiovascular disease in primary care setting was very high. It indicates more effective preventive strategies to reduce cardiovascular morbidity and mortality.

Disclosure: No conflict of interest declared

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**Microalbuminuria as a predictor of heart failure in type 2 diabetes mellitus**E. Karić<sup>1</sup>, Z. Kušljugić<sup>2</sup>, E. Ramić<sup>1</sup>, O. Batić-Mujanović<sup>1</sup>, S. Bosankić<sup>3</sup>, A. Beganlić<sup>1</sup>, S. Selmanović<sup>1</sup><sup>1</sup> Health Care Center Primary Care Tuzla, Family medicine, Tuzla, Bosnia-Herzegovina;<sup>2</sup> University Clinical Center Tuzla, Clinics for Internal Medicine, Cardiovascular Department, Cardiology, Tuzla, Bosnia-Herzegovina; <sup>3</sup> Health Care Center Primary Care Živinice, Family medicine, Tuzla, Bosnia-Herzegovina**Objectives:** Testing the significance of microalbuminuria as a predictor of heart failure in patients with diabetes mellitus type 2**Method:** A prospective three-year controlled study.

In a period of time from 01-Feb-2007 to 01-Feb-2010, 100 patients with type 2 diabetes (average age 66 ± 10 years, 33% male, 67% female) were tested for the presence of microalbuminuria. All subjects were divided into two groups. The first group consisted of 50 patients with microalbuminuria and type 2 diabetes. The second group comprised 50 patients without the diagnosis of microalbuminuria with diabetes type 2. All patients, before entering the study, had diabetes in past 5 years.

**Results:** In the first group of subjects with microalbuminuria and type 2 diabetes mellitus, 22% developed heart failure, and in the second group 6% subjects developed the same heart problems. Heart failure occurs earlier in patients with type 2 diabetes mellitus and microalbuminuria in a three year period compared to patients with type 2 diabetes mellitus without microalbuminuria (32.5 vs.35.3, p = 0.03). Cox regression analysis showed HR 0.27 (95% CI = 0.11 to 0.90).**Conclusions:** The results show that microalbuminuria is a predictor of heart failure in patients with diabetes mellitus type 2 and microalbuminuria. Patients with type 2 diabetes mellitus and microalbuminuria significantly earlier develop heart failure as compared to those with the normoalbuminuria (NA) group. Occurrence of heart failure could be delayed with the prevention of microalbuminuria and the introduction of early therapy for modified cardiovascular risk factors.**Keywords:** microalbuminuria, heart failure, diabetes mellitus type 2.

Disclosure: No conflict of interest declared

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**Randomized trial of motivational intervention in overweight and obesity patients in primary care practice**J.J. Rodríguez Cristóbal<sup>1</sup>, J. M<sup>a</sup> Pérez Santos<sup>1</sup>, E. Quillama Torres<sup>1</sup>, R Maria Viñas Vidal<sup>2</sup>, M<sup>a</sup> M Forés Chacori<sup>2</sup>, E Rodero Pérez<sup>3</sup><sup>1</sup> ABS Florida Sud, ICS, HOSPITALET DE LLOBREGAT (BARCELONA), Spain; <sup>2</sup> ABS Sta Eulàlia Sud, ICS, HOSPITALET DE LLOBREGAT (BARCELONA), Spain; <sup>3</sup> ABS Florida Nord, ICS, HOSPITALET DE LLOBREGAT (BARCELONA), SpainThe **aim** of the study was firstly, to look at the initial weight loss and the maintenance of the weight achieved and, secondly, to see if this intervention is also more effective in reducing other (additional) cardiovascular risk factors associated with overweight and obesity.**Methods:** This 26-month follow up multi-centre trial, included 864 overweight / obese patients. Random assignment of the intervention was by Basic Health Areas (BHA). One group (the intervention Group) received the standard program of diet and exercise, as well as 32 sessions of motivational intervention delivered by a nurse trained by an expert psychologist. The control Group received only the standard program with the usual 3 monthly follow up appointments.**Results:** Differences in weight reduction between the two groups: 18.1% of patients in the control group reduced their weight by more than 5%. In the intervention group, this percentage rose to 26.9%, which is statistically significant (p = 0.0304). This was accompanied by improvements in cardiovascular risk factors. Participants in Group based motivational interventions had significantly greater improvements in cLDL, cHDL and ratio cHDL/cLDL but not in triglyceride levels. Apo A1 and Apo B, fibrinogen, and insulin were unchanged.**Conclusions:** Combining the usual care with Group based motivational interventions by a trained nurse instead of the regular follow up appointments with the doctor, offered to obese patients significantly increases the maintenance of weight loss.

Disclosure: No conflict of interest declared



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**Collective consultation for chronic conditions in Primary Health Care**

C. Baumvol Berger, M. Reolon, A. Torres

*Community Health Service, Grupo Hospitalar Conceição, Porto Alegre, Brazil*

Cardiovascular diseases are currently the most common cause of comorbidities worldwide. In Porto Alegre, a city in Southern Brazil, it is estimated that 26% of the population have systemic arterial hypertension and 8% have type II Diabetes.

**Objective:** to apply an innovative technology “collective consultation” as part of a continued program of attention to chronic conditions.

**Methods:** a list of uncontrolled hypertensive and diabetic patients was issued by the information system for each of the six surveillance areas of the health care center territory. Personal invitations and flyers were made and meetings organized with all the health care disciplines at the center (i.e. physicians, nurses, psychologists, social workers, dentists, nurse aides and nutritionists). Each surveillance area organized their own encounter with different dynamics; however, all of them included weight and height measurements, abdominal circumference, blood pressure and glucose test. Individuals that had above measurements expectations were invited back for a consultation with their physician.

**Results:** There are 1810 hypertensive patients in our territory and 557 type II diabetics. A total of 327 patients were invited to attend one of the seven organized meetings. Ninety one patients were in attendance and 34 had to schedule an additional appointment with their physicians.

**Conclusions:** The collective consultation utilized by the health care multidisciplinary team generated a powerful opportunity to co-create and recruit people in the community who do not regularly seek health care; consequently achieving a high degree of satisfaction in the process of applying this innovative method.

Disclosure: No conflict of interest declared

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**Atrial fibrillation... In a young man!**

N. André

*USF Escariz, USF Escariz, Arouca, Portugal*

**Introduction:** Atrial fibrillation (AF) is the most common cardiac arrhythmia maintained encountered in clinical practice, in patients older than 40 years. Due to the aging population, this figure is likely to double over the next 50 years. Diagnosis begins in the clinic and ends with the completion of electrocardiogram (ECG). The AF treatment aims to relieve symptoms and prevent complications, such as thromboembolism.

**Description of case:** 41 year old man, caucasian, born in Italy, residing in Portugal, 9th grade, housed in a nuclear family, phase I cycle Duvall. No personal history, family or pharmacological relevance. Resorted to Medical Consultation, presenting complaints of tiredness and palpitations. Exam Objective (EO) to emphasize that featured an arrhythmic and irregular pulse, in Cardiac Auscultation (AC) had irregular S1 and S2, no murmurs audible, no other significant alterations. Were ordered Complementary Methods of Diagnosis, as CBC and Biochemistry, Renal and Hepatic Function, ECG and echocardiogram (ECOC). The results reinforce a persistent AF, no significant alterations in the ECOC. Anticoagulation was initiated and directed the patient to the query of Cardiology.

**Conclusion:** Being very difficult to dismiss all causes of „fatigue“ and palpitations, the Family Doctor should focus on a good history and perform a good EO. FA is frequently associated with structural heart disease. The treatment of this disease can and should be started in Primary Health Care, according to risk stratification by CHADS2 Scores and CHA2DS2-VASC. A referral to hospital treatment can be performed when the clinician considers another type of treatment as cardioversion.

Disclosure: No conflict of interest declared

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### Effectiveness of an exercise program prescribed from primary care setting to improve fitness patients with cardiovascular risk

J.F. Menárguez-Puche, M. Soler-Torroja, E. Delsors-Mérida-Nicolich, P.A. Alcántara-Muñoz, D. De-Los-Santos-Feliz, R. Guillamón-Candel, D. Fernández-Garrido, J.J. Vives-Hernández, M.D. Jiménez-Martínez, M.A. Mayol-Villescas

*Centro Salud „Profesor Jesús Marín“, Murcia Health Service, Molina de Segura (Murcia), Spain*

**Aim:** To evaluate the effectiveness of an exercise program on the physical condition of patients with cardiovascular risk factors (CVRF)

**Method:** 139 patients were studied (35-65 years) from two healthcare centers. Inclusions criteria: presence of two or more CVRF and sedentary lifestyle. The ACTIVE program consisted of 30 sessions (10 weeks) strength training, flexibility and endurance. It was designed and directed by graduates in physical activity and medically supervised. Sessions were developed in municipal sports facilities.

To measure physical condition were used at the beginning and end of the program, Rockport Test (endurance), launching medicine ball (force) and Wells (flexibility).

**Results:** Mean age=50.9±8.8 years (61.4% women). At the beginning of the program elderly had less strength and aerobic endurance, but his flexibility was similar comparing of the younger. Men had more strength and better aerobic condition ( $p < 0.0001$ ) but less flexibility than women ( $p < 0.001$ )

When compared to the beginning and end of program fitness, 68.7% of patients improved in strength ( $p < 0.001$ ). The flexibility of patients increased from 3.48±8.62 to 0.12±8.06 cm ( $p < 0.001$ ).

Regarding the aerobic resistance VO<sub>2</sub> Max level; 55.4% patients improved from a mean of 30.43±7.95 mL/(kg×min) at baseline to 32.30±6.68 mL/(min×kg) at the end of the program ( $p < 0.01$ ). Fitness in its three dimensions measured simultaneously improved in 34.9% of patients.

When comparing the results by genders found that the physical condition improved in three dimensions similarly.

**Conclusion:** Effectiveness of the program was evaluated, with improvements in fitness in three dimensions measured.

The physical condition improved in both genders

Disclosure: No conflict of interest declared

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### A successful experience with hypertensive and diabetics in the Family Health Strategy in Venda Nova do Imigrante, Brazil

W. Reisman, A. Szpilman

*Medical School Department, Vila Velha University, Vila Velha, Brazil*

**Introduction:** diabetes mellitus and Systemic Hypertension are considered the most relevant challenges for the Brazilian Public Health. **Objective:** increase the treatment adherence and to the group and decrease the morbidity and mortality indicators.

**Methods:** the first intervention was the access amplification to the HyperDia group in the Family Health Unity in *Venda Nova do Imigrante, Brazil*. It was proposed to the patients the treatment corresponsibility. In the groups, were realized dynamics instead of lectures, becoming a companionship group, with rich experience exchange; organization of events, parties, field trips, physical activities, games and so on. At the end of the first year, it was given to the participants an adherence certificate to the group. And who kept the pressure and glycemic levels satisfactory received a gift.

**Results:** patient-professional bond achieved; greater adherence to the group, to the medical appointments, and to treatment, causing better diseases control. Impact analyses: In 2003, the Cardiovascular Diseases (CVD) internment was 23. Even though the intervention started in July 2006, in 2006 already, this indicator dropped down to 11. In 2011, there were 12 internments by CVD. In relation to the CVD deaths, in 2003 there were four deaths, in 2004, six, in 2005, three, in 2006, it dropped to two and it kept in two until nowadays.

**Conclusion:** it's possible to increase the adherence to the HyperDia group, increase the hypertensive and diabetics patients compensated with their conditions controlled, causing the morbidity and mortality indicators decrease.

Disclosure: No conflict of interest declared

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### Evaluation of the relationship between severity of coronary artery disease and glomerular filtration rate

Y.C.Doganer<sup>1</sup>, U.Aydogan<sup>2</sup>, P.Nerkiz<sup>2</sup>, H.Akbulut<sup>2</sup>, A.Aydogdu<sup>3</sup>, T.Cayci<sup>4</sup>, C.Barcin<sup>5</sup>, K.Saglam<sup>6</sup>

<sup>1</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Academy, Ankara, Turkey; <sup>3</sup> Department of Endocrinology, Gulhane Military Medical Academy, Ankara, Turkey; <sup>4</sup> Department of Biochemistry, Gulhane Military Medical Academy, Ankara, Turkey; <sup>5</sup> Department of Cardiology, Gulhane Military Medical Academy, Ankara, Turkey; <sup>6</sup> Department of Internal Medicine, Gulhane Military Medical Academy, Ankara, Turkey

**Objective:** Coronary Artery Disease (CAD) is the leading preventable cause of death with the correction of modifiable risk factors Chronic Renal Failure(CRF). In our study, relationship between CAD and glomerular filtration rate (GFR) is examined.

**Methods:** 88 patients, who underwent angiography electively with suspected CAD at Gulhane Military Medical Academy, Department of Cardiology between June 2010 and June 2011, were included in study. GFR was calculated in patients as an indicator of renal function. The most widely used formulation Cockcroft-Gault(CG) and Modification of Diet in Renal disease(MDRD) were used in calculation of GFR.

**Results:** Mean age of patients participating in study was 51,73±9,21. 80,7% (n=71) of the patients participating in the study were male and 19,3%(n=17) were female. In assessment of patients' GFR average by dividing into three groups according to the severity of CAD (CAD≥50%, CAD<50%, healthy), there was no statistically significant difference in two formulations (p=0.179,p=0.127). However, although it is not statistically significant, the average level of GFR decreased with increasing severity of CAD. A negative correlation was found between the ages and GFR&CG and GFR&MDRD values of patients (respectively r=-0,539,p<0,001; r=-0,361, p=0,001). A negative correlation was also found between the serum creatinine values and GFR&CG and GFR&MDRD values of patients (respectively r=-0,457 ve p<0,001; r=-0,623 and p<0,001).

**Conclusions:** Relationship between GFR and CAD severity was re-determined in accordance with previous studies. Therefore, early clinical and laboratory findings of renal failure can be detected with a very careful history and physical examination in patients admitted to primary care center.

Disclosure: No conflict of interest declared

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### Prevalence of persistent lipid abnormalities in statin-treated patients: Belgian results of the dyslipidemia international study (DYSIS)

D. Devroey<sup>1</sup>, R.P. Radermecker<sup>2</sup>, B.J. Van der Schueren<sup>3</sup>, B. Torbeyns<sup>4</sup>, R. Jaken<sup>4</sup>

<sup>1</sup> Department of Family Medicine, Vrije Universiteit Brussel, Brussels, Belgium; <sup>2</sup> Department of Medicine, CHU Sart Tilman, University of Liège, Liège, Belgium; <sup>3</sup> Laboratory and Clinic of Experimental Medicine and Endocrinology, University Hospital Leuven, Catholic University of Leuven, Leuven, Belgium; <sup>4</sup> Medical Department, MSD Belgium, Brussels, Belgium

**Objective:** This study aims to assess the prevalence and types of persistent lipid abnormalities in patients receiving statin therapy in a real-life primary care setting in Belgium.

**Methods:** This cross-sectional cohort study was designed to estimate the prevalence of all lipid abnormalities in statin-treated patients in Belgium. Total cholesterol, low density lipoprotein-cholesterol (LDL-C), high density lipoprotein-cholesterol (HDL C), and triglycerides were recorded from the patients' medical record. Patient's total cardiovascular risk and corresponding lipid treatment goals were defined based on the recent European Society of Cardiology / European Atherosclerosis Society recommendations.

**Results:** Overall, 55.8% of the 953 statin-treated patients were not at goal for LDL-C. Low HDL-C (<40mg/dl in men, <50 mg/dl in women) and elevated triglycerides (>150 mg/dl) were seen in 16.4% and 29.3% of patients, respectively. Very high risk patients were more likely to have LDL-C not at goal (70.9% of them), while 60.0% of high-risk patients and 33.7% of moderate-risk patients were not at goal for LDL-C. Use of ezetimibe was strongly associated with meeting LDL-C goals (OR 18.2, p<0.0001).

**Conclusion:** In Belgium, lipid abnormalities remained highly prevalent despite statin treatment, with more than half of all patients not reaching their LDL-C treatment goal. This finding clearly indicates that more aggressive lipid lowering treatment is required in clinical daily practice to achieve the goals of the current guidelines. This might be achieved by up-titrating statins or adding other lipid lowering drugs such as ezetimibe.

Disclosure: Bart Torbeyns and Robby Jaken are employees of MSD Belgium, a subsidiary of Merck & Co.

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**Correlation analysis of knowledge, illness perceptions and medication adherence with diastolic blood pressure among Hong Kong Chinese hypertensive patients**

K.Q.L. Liu, H.H.X. Wang, M.W.M. Kwan, C.L.S. Lee, S.W.M. Chan, M.C.S. Wong  
*The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, Hong Kong*

**Objectives:** DBP has historically taken precedence in hypertension management predicting cardiovascular complications. Factors associated with optimal hypertensive control have been addressed long but not yet touching domains regarding association among knowledge, illness perceptions and medication adherence. This study was aimed to examine the relationship between knowledge, illness perceptions, medication adherence and DBP among Hong Kong Chinese.

**Methods:** This initial cross-sectional study was conducted in one family medicine center from October to December 2012 with 587 Chinese hypertensive patients who were taking at least one antihypertensive medication. Consented subjects were face to face interviewed with a structured questionnaire incorporating demographics. Overall knowledge, illness perception and medication adherence were assessed by Hypertension Evaluation of Lifestyle and Management Knowledge Scale, Brief version of Illness perception Questionnaire, 8 itemed Modified Medication Adherence Scale, respectively.

**Results:** Knowledge ( $P<0.001$ ), illness perception ( $P=0.007$ ) and patient daily adaption ( $P=0.026$ ) were positively correlated with DBP, but gender ( $P<0.001$ ), age ( $P<0.001$ ) and MMAS ( $P=0.448$ ) were negatively correlated to DBP. With sub domains analyzed, general knowledge ( $P<0.001$ ) and lifestyle with self management ( $P<0.001$ ) still maintained positive correlation but not for monitoring and goals sub domain ( $P=0.144$ ). Understanding ( $P=0.001$ ) and emotion ( $P=0.020$ ) undertook more significantly positive correlation with DBP, other sub domains like treatment control ( $P=0.217$ ) and personal control ( $P=0.453$ ) even reversed into negative correlation although not statistically significant.

**Conclusions:** To better manage hypertension in primary care settings with effective patient education, further consideration about patients' perceptions and self care skills shall be taken.

Disclosure: No conflict of interest declared

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**Observational study in asymptomatic high blood pressure patients needing therapy**

L. Iannantuoni, C. De Vivo, G.B. D'Errico, R. Grisorio  
*Family Medicine, Training Course in General Medical Practice, Foggia, Italy*

**Objective:** To spot patients, asymptomatic and not aware of their high blood pressure condition, that due to several issues go to GP's practice, acting a "medicine of opportunity" in order to undertake individual or educational and healthy actions, when a medical check-up occurs.

**Methods:** 148 patients (68 males and 80 females) have been examined, blood pressure has been checked by using an aneroid sphygmomanometer and a stethoscopy. A questionnaire assessing age, sex, weight, waist circumference, BMI, smoking, use of alcohol, physical exercise, alimentation, familiarity with high blood pressure, comorbidity with other diseases, was given to the patients. Thus examining the risk factors for high blood pressure. Patients already having antihypertensive therapy have not been included in this work.

**Results:** 9 Patients with high blood pressure were spotted (6%); of the overmentioned 6 were males (8,8%) and 3 females (3,75%). 1 male with high blood pressure was in his 20s, 2 in their 40s, 2 in their 50s and 1 in his 60s. Within the female group one was in her 30s and 2 in their 50s.

**Conclusions:** With this work we have spotted patients needing therapy to reduce the cardiovascular long term risk and to avoid organ damage and prevent widespread. Moreover this work has permitted to run a program of preventive actions underlining the importance of checking reversible risk factors for high blood pressure.

Disclosure: No conflict of interest declared

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**Ambulatory blood pressure monitoring in diabetic patients with suspected poor blood pressure control in a general practice surgery**

D.F. Pruteanu, F. Antón García, E. Correcher Salvador, L. Pérez Ollero  
9th Health Care Area Valencia, Fuensanta Health Care Centre, Valencia, Spain

**Objective:** To determine the variation of the antihypertensive treatment in hypertensive diabetic patients who were apparently poor controlled according to their blood pressure (BP) values measured in the health care centre (HCC).

**Methodology:** We assessed 41 diabetic patients whose blood pressure values registered within the HCC during the previous six months (mean of at least three values) were above normal range ( $>130/80$  mmHg). We performed three BP measurements in all of our patients before proceeding to 24 hour Ambulatory Blood Pressure Monitoring (ABPM).

**Results:** Mean age 69.6 years old (SD 8.6). Body Mass Index 30.4 (SD 4.7). Males: 41.5%. Number of antihypertensive drugs they were on: none (12.2%), one (4.9%) and associations (82.9%). Dipper effect: 29.3%. Mean number of correct readings on each ABPM: 59; 93.1% correct readings. Systolic BP (SBP)/ diastolic BP (DBP) (mm Hg): the six previous months: 153.0/79.8. Previous to ABPM: 150.2/74.6 (No significant differences). 24 hour ABPM: 130.3/67.7. Diurnal ABPM: 132.4/72.7. There are significant differences in all cases between the HCC measurements and ABPM values,  $p=0.000$ . After performing ABPM we maintained the same antihypertensive treatment in 63.4% of the patients, we put 31.7% of the patients on higher doses and in 2 patients we diminished the doses.

**Conclusions:** 24 hour ABPM was useful to assess the antihypertensive treatment of the diabetic patients with suspected poor BP control. We maintained the same treatment in 63% of the patients as according to ABPM results, they were well controlled.

Disclosure: No conflict of interest declared

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**Comparison of the blood pressure values registered in hypertensive patients according to their way of measurement in a general practice surgery**

D.F. Pruteanu, F. Antón García, E. Correcher Salvador, L. Pérez Ollero  
9th Health Care Area Valencia, Fuensanta Health Care Centre, Valencia, Spain

**Objective:** To determine the differences of the blood pressure (BP) values according to the place of measurement and the way of registering it in hypertensive patients with poor BP control.

**Methodology:** We assessed 43 hypertensive patients who had poor BP control ( $>140/90$  mmHg) in the mean value of at least 3 measurements from the previous 6 months determined in the HCC (HCC6) as well as at home (H6). We performed three BP measurements in the HCC (HCC1) in all of our patients before proceeding to the 24 hours ambulatory blood pressure monitoring (ABPM).

**Results:** Mean age 68.6 years old (SD 11.7). Males: 42%. Mean number of correct readings for each ABPM: 56 (93.4% correct readings). Systolic BP (SBP)/ diastolic BP (DBP) (mm Hg): HCC6: 154.4/80.6; H6: 150.6/82.5; HCC1: 154.7/80.5; 24 hour ABPM: 125.3/70.2; diurnal ABPM: 128.5/72.8. There were no differences between the BP measured in the HCC (HCC6, HCC1) and at home (H6). The differences regarding both SBP and DBP between BP values prior to ABPM and 24 hour ABPM and diurnal ABPM were significant in all cases  $p=0.000$ . After ABPM, in 72.1% of the patients we maintained the same antihypertensive treatment and we had to change it for the rest of the patients.

**Conclusions:** In the assessed hypertensive patients there were no differences of the BP values registered in the HCC and at home, maybe because of the low number of cases. After ABPM we maintained the same antihypertensive treatment in 72% of the supposedly poor controlled patients.

Disclosure: No conflict of interest declared

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**Audit of a dedicated warfarin clinic in primary care**D.Molony<sup>1</sup>, S.Cronin<sup>2</sup>, E.Mulcahy<sup>2</sup>, C.Irvine<sup>1</sup><sup>1</sup> *The Red House Family Practice, Mallow Primary Healthcare Centre, Cork, Ireland;* <sup>2</sup> *The Fourth Practice, Mallow Primary Healthcare Centre, Cork, Ireland*

**Background:** Warfarin is a commonly prescribed drug with approximately 800,000 prescriptions annually in Ireland. The majority of these patients are in the older age group. Most Warfarin clinics do not monitor their overall clinic management and rely on individual assessments to guide control. The 3 group practices in Mallow Primary Healthcare Centre had 3 clinics, 1 near patient testing and two using laboratory results. The laboratory testing was a 13 step process prior to getting a result.

**Methods:** The three clinics were merged. The British Haematological Guidelines were used and a 'near testing' model was developed. CompleteGP software was used to link directly to the machines with an inbuilt calculator for Time in Therapeutic Range (TTR) using the Rosendaal Method according to British Committee for Standards in Haematology.

**Results:** 264 patients were enrolled in the warfarin clinic. Patients had a mean age of 71.8 years. 61% of patients were male. The average number of tests per patient was 19. The indications for warfarinisation were atrial fibrillation (76%), cardiac valves (10%) and DVT/PE (14%).

Using the warfarin clinic there was a 4 step process to generate a result. The average time in therapeutic range (TTR) in the clinic was 66.9%. 70% of patients reported a satisfaction rating of 100%.

**Conclusion:** A dedicated warfarin clinic using the point of care testing of INR allows for more efficient and cost effective monitoring of warfarin. It also improves accuracy of results makes overall monitoring easier and has a higher TTR.

Disclosure: No conflict of interest declared

869

**Patient, carer and professional experiences of end stage heart failure**F.S. Mair<sup>1</sup>, S. Browne<sup>1</sup>, S. Macdonald<sup>1</sup>, U. Macleod<sup>2</sup>, C.R. May<sup>3</sup><sup>1</sup> *General Practice and Primary care, University of Glasgow, Glasgow, United Kingdom;* <sup>2</sup> *Centre for Health and Population Sciences, Hull York Medical School, Hull, United Kingdom;* <sup>3</sup> *Health Sciences, University of Southampton, Southampton, United Kingdom*

**Objective:** To examine patient, carer and professional perceptions of advanced heart failure, and barriers and facilitators to improved models of care.

**Methods:** Semi-structured interviews and focus groups with advanced heart failure patients (n=30); carers (n=20); and professionals (n=65). Data analysed using Normalisation Process Theory (NPT) as the underpinning conceptual framework.

**Results:** Uncertainty is pervasive in patient and caregiver accounts. This uncertainty relates to understanding of the implications of their diagnosis; appropriate treatments and when and how to seek effective help and makes adherence more difficult. Health professionals agree this is a major problem but lack knowledge, opportunities or adequate support to improve the situation for those with advanced heart failure. Fragmented care with lack of coordination and poor communication exacerbates the problem. Poor understanding extends to the wider circle of carers and means that requests for help may not be perceived as legitimate and those with advanced heart failure are not prioritised for social or financial support and other aids and adaptations. Experiences of emergency care are uniformly poor. Polypharmacy and concomitant side effects are a major burden.

**Conclusion:** Incoherence is pervasive and adversely affects patient and caregivers' ability to enact self care strategies. Patients are heavily burdened by poorly coordinated services that offer fragmented care. There is a need for a fundamental shift in the way services are configured if longstanding deficiencies in the care for those with advanced heart failure are to be improved and the goals and needs of patients and caregivers are to be met effectively.

Disclosure: No conflict of interest declared

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**Mediterranean diet and cardiovascular risks.**

A.M. Pedro Pijuan<sup>1</sup>, K. Ibrahim Abdullah<sup>1</sup>, A. Aguado Jodar<sup>1</sup>, L. Santiago Fernández<sup>1</sup>, E. García Muñoz<sup>1</sup>, S. Perez Zamora<sup>1</sup>, E. Gonzalez Platas<sup>1</sup>, M. Sarmiento Cruz<sup>2</sup>, E. Olle Roig<sup>1</sup>, V. Grahit Vidosa<sup>1</sup>

<sup>1</sup> ABS Gaudí, Consorci Sanitari Integral, Barcelona, Spain; <sup>2</sup> CS Son Gotleu, Ibsalut, Palma de Mallorca, Spain

The objective of this study is to determinate the relationship between cardiovascular risk factors (CVRF) and the compliance of recommended Mediterranean diet. Is competence of primary care medical doctors and nurses to recommend diet in these patients. The advantages of having a wide variety of food can makes this task easy.

**Material and Methods:** Descriptive observacional study of attented patients during the month of august 2012 in a primary health center.

**Variables:** gender, age, BMI, HTA, DM, hypercholesterolemia, hypertriglyceridemia, and a validated diet questionnaire.

**Inclusion:** all patients accepted voluntary to answer the questionnaire.

**Exclusion:** Patients non Spaniards, demential and terminal patients.

Data was analysed using SSPS 15.

**Results:** We have collected a set of 49 questionnaires. Women, 67.3%. Mean age 51,18 (SD: 19.07), with BMI: mean: 24.71 ( SD: 3.78). The validated questionnaire indicates if done unhealthy (0-12points), adequate diet in some aspects (13-24points), healthy (24-36 points) observing mean: 20.80 (SD: 3,81).

The related CVRF were obtained: hypercholesterolemia 82,4%, hypertriglyceridemia 100%, HTA 76,9% and DM 66,7% as intaking a adequate diet in some aspects. In contrast presenting 17,6% hypercholesterolemia, 23% HTA and 33% DM compliance a healthy diet.

**Conclusions:** Many patients had adequate compliances diet in some aspects, therefore it can be improved.

But being so few patients we cannot observe differences between patient subgroups. We pretend to demonstrate patients with CVRF could benefit having a Good compliance of recommended diet, but we need longer studies to obtain a better understanding of these chronic patients for improvement of underlying disease.

**Disclosure:** No conflict of interest declared

932

**A prospective study of management of acute chest pain in Norwegian out-of-hours primary care**

R. A. Burman<sup>1,2</sup>, E. Zakariassen<sup>1,2,3</sup>, S. Hunskaar<sup>1,2</sup>

<sup>1</sup> National Centre for Emergency Primary Health Care, Uni Health, Bergen, Norway; <sup>2</sup> Department of Public Health and Primary Health Care, University of Bergen, Bergen, Norway; <sup>3</sup> Department of Research, Norwegian Air Ambulance Foundation, Drøbak, Norway

**Objective:** Acute chest pain is a common complaint in primary care, and diagnostic measures are often aimed at confirming or ruling out acute ischaemic heart disease. The aim of the study was to investigate management in patients with acute chest pain out-of-hours, including the use of ECG and laboratory tests, assessment of severity of illness, and the physicians' decisions on treatment and admittance to hospital.

**Methods:** Data were registered prospectively from four Norwegian casualty clinics. Data from structured telephone interviews with 100 physicians shortly after a consultation with a patient presenting at the casualty clinic with "chest pain" were analysed.

**Results:** A total of 832 patients with chest pain were registered, of which 100 patients with corresponding structured telephone interviews with the physician on-call, were included in the study. Median age of included patients was 46 years, men constituted 58%. An ECG was taken in 92 of the patients. Of the 24 patients categorised to acute level of response, 15 had a NACA-score indicating a potentially or definitely life-threatening medical situation. 50 of the patients were admitted to a hospital for further care, of which 43 were thought to have heart disease. Musculoskeletal pain was the second most common cause of pain (n=22).

**Conclusions:** Patients with chest pain presenting at out-of-hours services in Norway are investigated for acute heart disease, but less than half are admitted to hospital for probable acute coronary syndrome.

**Disclosure:** No conflict of interest declared

976

**Effect of an intervention on the perception of patients with acute coronary syndrome (acs) about his illness**J.C. Perez-Sanchez<sup>1</sup>, N. Gonzalez-Lopez<sup>1</sup>, J.A. Sanchez-Ortiz<sup>1</sup>, J.J. Gomez-Doblas<sup>2</sup>, J. Muñiz<sup>3</sup>, M. Jimenez-Navarro<sup>2</sup><sup>1</sup> Distrito Sanitario Malaga, SAS, Malaga, Spain; <sup>2</sup> Hospital Clinico Universitario, SAS, Malaga, Spain; <sup>3</sup> Cardiologia, SGS, Galicia, Spain**Objective:** Assess whether the incorporation of an item that increases the commitment of doctor and patient in his care, influences the perception and knowledge of his illness.**Desing:** Open clinical trial, randomized controlled trial. We recruited patients discharged from hospital after ACS. Were randomized to the intervention group (IG) or control group (CG). Being GI: keeping an interview between patient, doctor and a family member, in which informative material about his illness is explained and delivered, and the agreements of the parties are signed. Visit of reinforcement in two months. GC: Usual Control. It is evaluated in six months. The assessment is carried out patients by completing a questionnaire with questions ranging from strongly disagree to absolutely agree on scale of 5.**Results:** 1757 pacientes were recruited from which 1510 were followed at 6 months, 760 in the GI and 750 in the GC. 48.6% In the GI changed his opinion about the effect of tobacco as responsible for their disease compared with 44.4% in the GC with a  $p = 0,059$ . In the remaining variables there was no significant differences, although there is an improvement of knowledge in general of the GI (influence of concerns, inheritance, eating habits, alcohol)**Conclusions:** although in general there was no significant differences in changes in perception about his disease, a simple intervention that is established in the relationship and commitment to physician-patient achieves significant changes with regard to tobacco, diet improvement, increase in physical exercise and knowledge of his illness.

Disclosure: No conflict of interest declared

986

**Is there any relation between arterial hypertension and other cardiovascular risk factors and the ankle brachial index?**B. M. Morna<sup>1</sup>, L. Arbones Fincías<sup>1</sup>, N. Parellada Esquiús<sup>2</sup><sup>1</sup> Viladecans I Primary Health Care Center, Catalan Institute of Health (ICS), Barcelona, Spain;<sup>2</sup> Servei D'Atenció Primària SAP Delta Litoral, Catalan Institute of Health (ICS), Viladecans, Barcelona, Spain**Objective:** Evaluate a possible relation between Ankle-Brachial Index (ABI), arterial hypertension (AHT) and other cardiovascular risk factors (CVRF) in risk patients.**Methods:** Descriptive observational study in patients referred for ABI, during 2 years (2010-2011), in a Health Care Centre. Study variables: age, sex, CVRF (obesity, tobacco, AHT, diabetes, dyslipemia) and control level, ABI value (pathological if  $<0,9$  or  $>1,3$ ).**Results:** Doppler was applied to 211 patients, 125(59%) males. Average age 67,5 years old ( $P=0,012$ ). 37,2% of patients presented pathological ABI, 23,5% with slight alteration (ITB: 0,7-0,9), 8,2% moderate (ITB:0,4-0,69) and 1,1% severe (ITB $<0,4$ ). 7,1% were symptomatic. 27(13%) were smokers and 128(61%) never smoked. No smoker presented ABI  $>1,3$  compared to 7% in non smokers ( $p=0,01$ ). 163(77%) had hypertension, 149(71%) diabetes and 126(60%) dyslipemia with differences in ABI. 106(52%) presented obesity. ABI was normal in 68,9% of obese. 50% of patients with previous cardiovascular event had normal ABI ( $p=0,03$ ). 136(64,5%) presented bad blood pressure control (TA $>140/90$ ), with **no** relation with the ABI. 37,4% presented cholesterol alteration, 24% had ABI  $< 0,9$ , compared to 35% of those who had normal values( $p=0,02$ ). Normal values of HDL 28%, LDL 47% and tryglicerides 70%. With **no** relation with the result of ABI.**Conclusions:**

1. Neither hypertension nor its control level were significantly associated with the pathological ABI.
2. The abnormal ABI is frequent in the population with cardiovascular risk.
3. An important percentage present slight alteration of the ABI and the patients are asymptomatic.

Disclosure: No conflict of interest declared



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**Effects of educational intervention on HOMA-IR in patients with Metabolic Syndrome**A. Alves<sup>1</sup>, H. Leal<sup>2,1</sup>, L. Bohn<sup>2</sup>, A. Ramoa<sup>2,1</sup><sup>1</sup> USF Espaço Saude, ACES Porto Ocidental, Porto, Portugal; <sup>2</sup> Ciafel, University of Porto, University of Porto, Porto, Portugal

**Introduction:** Metabolic syndrome increases the risk for cardiovascular disease (CVD). The initial Diagnosis of Metabolic Syndrome (MS) in combination with other cardiovascular risk factors (CVRF) is important from an epidemiological point of view, and in the context of primary health care, to enable the identification of individuals at high risk of CVD.

The MS consists in risk factors clustering that directly induce the development of atherosclerosis and cardiovascular disease.

**Purpose:** to evaluate the effects of a lifestyle educational intervention on changes of MS components.

**Methods:** 52 patients with MS were submitted to 3 educational sessions about healthy lifestyles and cardiovascular risk plus weekly encouragement and reinforcement via sms. The patients were evaluated before intervention and 4 months after.

The homeostatic model assessment (HOMA),  $\beta$ -cell function, and insulin sensitivity were calculated by the HOMA Model Program (University of Oxford, Oxford, U.K.). HOMA-IR was calculated as (fasting serum insulin [ $\mu$ U/ml])  $\times$  (fasting plasma glucose [mmol  $\cdot$  l<sup>-1</sup>  $\cdot$  dl<sup>-1</sup>])/22.5. *P* values < 0.05 were considered statistically significant.

**Results:** Of the 52 patients with MS, 51,9% were female. Mean age of patients was 56,8  $\pm$  6,0 years. Intervention effects were statistically significant in both genders for body mass index (*p*<0,01), Arterial Systolic and diastolic pressures (*p*<0,01), low-density lipoprotein serum cholesterol (*p*<0,01) and HOMA-RI. No differences were detected in Triglycerides, waist circumference, weight and high density cholesterol.

**Conclusions:** The data suggest that a worksite approach in health promotion programs on cardiovascular risk factors can be implemented and can have a positive impact on intermediate CVD outcomes.

Disclosure: No conflict of interest declared

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**Case report: Nonischemic cause of ST-segment elevation**

M. Brkic, S. Conic, M. Stankovic, D. Melentijevic

General Practice, Health Center „Dr Simo Milosevic“, Belgrade, Serbia

**Introduction:** In primary PCI era, early diagnosis of ST-segment elevation myocardial infarction (STEMI) is crucial for patient's outcome. ST-segment elevation (STE) with consistent clinical presentation is the main criterion. However, there are conditions mimicking STEMI, that should be considered: myocarditis, pericarditis, Brugada syndrome, hyperkalemia, left ventricular aneurysm, early repolarization etc.

**Case report:** Male, Caucasian, 75 years old, ex smoker (45 pack year), with history of diabetes, arterial hypertension, hyperlipoproteinemia, previous myocardial infarction and cerebrovascular insult, with family history of coronary diseases, presented with sudden onset of dizziness, vomiting and weakness.

Heart and lungs were normal to auscultation, abdomen non tender. His blood pressure was 210/110 mmHg, glucose level 6.2 mmol/l. ECG showed old infarction in D3 and AVF leads and STE in V1-V4 leads.

As diabetics do not necessarily have chest pain, considering symptoms, risk factors and ECG finding, the case was recognized as STEMI.

After administered pre-hospital therapy, the patient was transported to Coronary unit. His troponin level was normal (0,011), as well as potassium (4,3). CT of his brain showed old multiinfarctions. Echocardiography showed pericardial adhesions, that explained STE. Vomiting and dizziness were caused by hypertensive crisis.

**Conclusion:** In some cases patient's ECG makes it difficult to determine whether STEMI is present. Nonischemic causes of STE, like pericardial adhesions, may lead to wrong diagnosis and treatment. Further studies are needed to gain ECG criteria for accurate differentiation between those conditions and STEMI. Until then, troponin level remains the most accurate, although not the fastest way to confirm STEMI.

Disclosure: No conflict of interest declared

1126

**Dose-related association of urinary cotinine concentrations on dyslipidemia among Korean males: the 2008-2010 Korea National Health and Nutrition Examination Survey (KNHANES)**G.E. Nam<sup>1</sup>, D.H. Kim<sup>1</sup>, K.H. Cho<sup>2</sup>, Y.G. Park<sup>3</sup>, K.D. Han<sup>3</sup>, Y.S. Choi<sup>2</sup>, S.M. Kim<sup>2</sup>, K.S. Lee<sup>4</sup>, B.J. Ko<sup>2</sup>, Y.H. Kim<sup>2</sup><sup>1</sup> Family Medicine, Korea University College of Medicine Ansan Hospital, Ansan, Korea; <sup>2</sup> Family Medicine, Korea University College of Medicine, Seoul, Korea; <sup>3</sup> Department of Biostatistics, Catholic University College of Medicine, Seoul, Korea; <sup>4</sup> Family Medicine, Wonkwang University College of Medicine, Sanbon, Korea

**Objective:** Results from studies whether smokers have worse lipid profiles than non-smokers are not consistent, with different results for each lipid profile according to gender and ethnicity. There have been no studies on the relationship between urinary cotinine concentrations and dyslipidemia from nationally representative data in Korea. Our objective was to examine the potential effect of cigarette smoking on serum lipid profiles by determining the correlation between urinary cotinine concentrations, as an objective biological marker of smoking, and various measures of dyslipidemia among Korean male adults. **Methods:** This study was based on data collected during the 2008-2010 Korea National Health and Nutrition Examination Survey (KNHANES). A total of 3231 Korean males aged more than 19 years were included. Urinary cotinine concentrations were measured. Smoking status was defined using questionnaire responses and urinary cotinine concentrations. We used various measures of dyslipidemia in the analysis.

**Results:** The prevalence for dyslipidemia significantly increased as urinary cotinine concentration increased. In addition, the risks of hypo-high density lipoprotein (HDL)-cholesterolemia, hypertriglyceridemia, hyper-non-HDL-cholesterolemia and high ratios of total cholesterol (TC) to HDL-C, low density lipoprotein cholesterol (LDL-C) to HDL-C, and triglyceride (TG) to HDL-C significantly increased according to urinary cotinine concentration after adjusting for confounding factors.

**Conclusions:** We found a significant dose-related association of smoking as assessed by urinary cotinine concentration on various dyslipidemic measures including HDL-C, TG, non-HDL-C, and ratios of TC/HDL-C, LDL-C/HDL-C, and TG/HDL-C among Korean male adults.

Disclosure: No conflict of interest declared

1127

**Diastolic blood pressure as a risk factor for total and cardio-vascular mortality in Korean elderly population.**S.-G. Park<sup>1</sup>, Y.-M. Kwon<sup>2</sup>, Y. Jhang<sup>3</sup>, H. K. Lee<sup>3</sup>, Y.J. Go<sup>3</sup>, H.-J. Yoon<sup>4</sup>, B. Cho<sup>3</sup>, M.-S. Park<sup>3</sup><sup>1</sup> Family medicine, HAUNDAE PAIK HOSPITAL, PUSAN, Korea; <sup>2</sup> Family medicine, SAM YOOK MEDICAL CENTER, SEOUL, Korea; <sup>3</sup> Family medicine, SEOUL NATIONAL UNIVERSITY HOSPITAL, SEOUL, Korea; <sup>4</sup> Medical Engineering, SEOUL NATIONAL UNIVERSITY, SEOUL, Korea

**Objective:** Several studies have shown that DBP below a certain threshold is frequently associated with increased mortality and coronary events. However, these findings have several limitations. So, we sought to delineate the role of DBP on total and CV mortality in healthy elderly population after adjusted the effect of pulse pressure and high SBP.

**Methods:** A retrospective cohort study of 3,574 elderly subjects 65 or older undergone health check-ups at one Health Promotion Center on between May 1995 and December 2007 was carried. We merged baseline data with the mortality data from the national death certificate files, and assessed the relationship between total, cardiovascular(CV) mortality and DBP by Cox proportional hazard models. Furthermore, we also conducted stratified analyses by SBP range and previous hypertension medication.

**Results:** During a mean follow-up period of 6.7 years, the 321 deaths recorded, of which, 72 cases (22.4%) were due to CV disease. On a stratified analysis by SBP (<140 and ≥140mmHg), DBP<70mmHg was an independent predictor of total mortality in the population with SBP<140 only [HR=1.59; 95% CI=1.04-2.44]. When we conducted stratified analysis by hypertensive medication, DBP<70mmHg was an independent predictor of total mortality [HR=2.57; 95% CI=1.04-6.38] in the group with HTN medication.

**Conclusions:** The present study shows that mortality was also higher in subjects with DBP<70mmHg in subjects with either normal SBP(<140mmHg) or in those on antihypertensive treatment. With these results, we suggest that doctors should pay attention to not only SBP control but also, to overzealous DBP control after BP medication.

Disclosure: No conflict of interest declared

1176

**Czech ABI Project – Early detection of atherosclerosis in primary care setting**J. Vojtíšková<sup>1</sup>, B. Seifert<sup>1</sup>, D. Karetová<sup>2</sup>, K. Roztočil<sup>3</sup>

<sup>1</sup> Institute of General Practice, First Faculty of Medicine, Charles University of Prague, Prague, Czech Republic; <sup>2</sup> 2nd Department of Medicine, First Faculty of Medicine and General University Hospital, Prague, Prague, Czech Republic; <sup>3</sup> Transplant Surgery Department, Institute for Clinical and Experimental Medicine, Prague, Prague, Czech Republic

**Background:** Peripheral arterial disease (PAD) is an atherothrombotic process associated with a substantially elevated risk of cardiovascular events, which is often underdiagnosed and undertreated. Individuals with symptomatic and even asymptomatic forms of PAD should be identified so that therapeutic interventions could be performed.

**Methods:** The ankle-brachial index (ABI) was measured (by oscillometric method – boso ABI) by 99 general practitioners in the Czech Republic in 6 885 adults aged 50 years or older with the presence of at least 1 risk factor of atherosclerosis (or established other vascular disease), and in all aged over 60 presenting for a preventive examination. The primary outcome was the prevalence of PAD based on an ABI < 0.9.

**Results:** Prevalence of PAD was 13.7% in the set of 6 885 patients (mean age 66,4 yrs; 52% of women, 48% of men). The prevalence of PAD was increasing progressively with age, from 4.5% in the 50-55yrs group to 20.4% in patients aged over 80. Most patients were asymptomatic (65.5%), with 18.6% and 11.5% being in Fontaine´s stages IIa and IIb, respectively; 4.5% had critical limb ischemia. Hypertension was present in 89,2% of patients, dyslipidemia in 74,3%, diabetes in 44,4%, nicotine use (active or former) in 46,3%. Coronary heart disease was known in 29.3%.

**Conclusions:** ABI measurement by general practitioners is a feasible method substantially improving detection of the early phase of atherosclerosis in the primary care setting. The prevalence of PAD in the population at-risk is 13.7% and most patients are asymptomatic (65,5%).

Disclosure: No conflict of interest declared

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**New onset palpitation in the primary care setting: case series of Holter study**

L.K. Chiang, L.V. Ng

Family Medicine and General Outpatient Department, Kwong Wah Hospital, Kwong Wah Hospital, Hong Kong, Hong Kong

**Introduction:** Palpitations are non-specific and represent one of the most common symptoms in general medical settings, reported by as many as 16% of patients. Using Holter in primary care enabled an earlier detection of arrhythmia, including some potential serious arrhythmias and speeded up their management.

**Objectives:** To examine the outcomes of new onset palpitation for patients in the primary care setting.

To investigate the characteristics that was predicting a significant cardiac arrhythmia.

**Methodology:** Patients presented with newly onset palpitation for less than 3 months were recruited. Those patients needed urgent referral to medical specialist for further management or had known cause of palpitation were excluded. Biochemical investigation included full blood picture, thyroid function test, resting electrocardiography and Holter monitoring were arranged for all patients. The Holter outcomes were analysed.

**Results:** 26 male and 76 female patients with mean (SD) age 61.2 (17.5) and 55.5 (13.2) years old respectively had completed Holter monitoring. 38% of them enjoyed good past health, while others had at least one chronic disease, including diabetes, hypertension or cardiovascular disease. 33 cases (32%) had significant Holter findings. The 4 leading significant findings were paroxysmal supraventricular tachycardia (21%), frequent ventricular ectopics (21%), ventricular ectopics in bigeminy or trigeminy (15%) and paroxysmal atrial fibrillation (12%) respectively. The patients with age more than 65, ischaemic heart disease and stroke were more likely to have significant cardiac arrhythmia.

**Conclusion:** One third of new onset palpitation for primary care patients had significant cardiac arrhythmia which need referral for specialist care.

Disclosure: No conflict of interest declared

1336

**The importance of consultation of hypertension prevention and control**J. Antunes<sup>1</sup>, J. Bordalo<sup>2</sup>, C. Sebe<sup>2</sup>, A. Neves<sup>1</sup><sup>1</sup> UCSP Ílhavo I, ACES Baixo Vouga II, Ílhavo, Portugal; <sup>2</sup> USF Flor de Sal, ACES Baixo Vouga II, Aveiro, Portugal

**Introduction:** The consultation of hypertension prevention and control (CHPC) identify and monitor the hypertensive patients (HP) in primary care. These consultations are done by nurses and doctors working together performing teachings and health education. Nowadays there's no CHPC in every health centers.

**Objective:** Compare HP followed in CHPC with those followed occasionally.

**Methodology:** Retrospective study. Inclusion criteria: HP with at least one consultation, ECG and analyzes in 2011. Statistics SPSSv17®.

**Results:** Evaluated 248 HP, 120 followed in CPHC and 128 followed occasionally. There are no significant differences in age and sex.

Of the 120 HP, 70.8% with excess weight, 9.2% smoking, 24.2% diabetic, 83.3% with dyslipidemia, 3.3% with chronic renal failure (CRF) and 15.8% with complications. Of the 128 HP, 81.3% with excess weight, 5.5% smoking, 53.1% were diabetic, 80.5% with dyslipidemia, 3.9% with CRF and 31.3% with complications.

The HP followed in CHPC had arterial pressure (AP) mean 136/77mmHg, risk SCORE average of 2.4 and 11.7% with microalbuminuria. Those followed occasionally had AP mean 146/79mmHg, SCORE risk average of 3.3, 22.7% with microalbuminuria.

The groups showed statistically significant difference in diabetics (p=0.000), microalbuminuria (p=0.001), AP systolic (p=0.000) and SCORE risk (p=0.002).

**Conclusion:** The results of the SCORE risk, microalbuminuria and mean blood pressure showed better control of those followed in CHPC. This consultation is important not only in surveillance according guidelines, such as in identification of risk factors and encouraging healthier lifestyles reducing the impact of disease progression

Disclosure: No conflict of interest declared

1344

**Correlation of HbA1c levels with mortality and morbidity in patients with ischemic stroke**E. Linardoutsou<sup>1</sup>, C. Verras<sup>1</sup>, I. Gkaitartzakis<sup>1</sup>, A. Dimitriadou<sup>1</sup>, E. Fousteris<sup>2</sup>, G. Tsilimidos<sup>1</sup>, K. Botsio<sup>1</sup>, H. Helioti<sup>3</sup>, G. Bellos<sup>4</sup>, A. Melidonis<sup>2</sup><sup>1</sup> Department of General Practitioner, Tzaneio, General Hospital, Piraeus, Greece; <sup>2</sup> Department of Internal Medicine – Diabetes Center, Tzaneio, General Hospital, Piraeus, Greece; <sup>3</sup> Department of Nefrology and Renal Unit, Department of General Practitioner, Tzaneio, General Hospital, Piraeus, Greece; <sup>4</sup> Health Center of Koropi, Gennimatas, General Hospital, Athens, Greece

**Objective:** It has been suggested that subjects with elevated glycosylated hemoglobin A1c (HbA1c) have increased risk of cardiovascular disease. Our purpose was to investigate the correlation of HbA1c admission levels and the outcome of patients with ischemic stroke (IS).

**Methods:** Recruitment period was December 2011-November 2012, where patients presented at the Emergency Department with IS and were admitted to the hospital. Full medical history was documented for each subject as long as with the HbA1c measurements within 24 hours at admission. They categorized in 4 groups according to their HbA1c levels: Group A <6,2%, Group B 6,2-7%, Group C 7-8%, Group D >8%. The statistical analysis based on the correlation between outcome (mortality & morbidity) and HbA1c levels, using the chi-squared test (SPSS20).

**Results:** Participants were 211 patients (63% males, mean age 78±7 years) and 79 (37,4%) of the patients were diabetics. Mortality and morbidity rates for all subjects were 12,3% & 87,7% respectively. Each group showed respectively the following rates: Group A: 8,7% & 91,3%, Group B: 16,2% & 83,8%, Group C: 11,8% & 88,2%, and Group D: 16,7% & 83,3%. Finally, mortality and morbidity correlated negatively with HbA1c levels ( $\chi^2=2,487$ ,  $p>0,05$ ).

**Conclusion:**

HbA1c admission levels showed no impact on the outcome of patients with ischemic stroke. This finding might be attributed to the fact that HbA1c is a marker of a short-term glucose control (3 months maximum). However, atherogenesis through poor glycemic control – and thus cardiovascular disease, such as ischemic stroke – is on a more long-term basis.

Disclosure: No conflict of interest declared

1352

**Results of evaluation of non traumatic chest pain in Emergency service**R. Rodriguez Calveiro<sup>1</sup>, S. Fernández Barbeira<sup>2</sup>, J. L. Delgado Martín<sup>3</sup>, E. Paredes Galán<sup>2</sup><sup>1</sup> Emergency Service, Meixoeiro Hospital, Vigo, Spain; <sup>2</sup> Cardiology Service, Meixoeiro Hospital, Vigo, Spain; <sup>3</sup> Family Care, Sárdoma´s Health Care, Vigo, Spain

**Objectives:** Our objective is to determine safety of highs given from Emergency service with chest pain and the percentage of income among patients commented to guard of Cardiology.

**Material and Methods:** We conducted a retrospective study of all entries to the emergency for four weeks, spread over 2009. We prospectively analyzed all patients with chest pain evaluated by Cardiology´s guard during 2009. Were followed for 6 months looking at the computer databases Health Service seeking new emergency visits and new diagnoses in the outpatient.

**Results:** In the 4 weeks analyzed were quantified 200 patients evaluated for chest pain, the Emergency department was discharged to 166, of which only one (0.6%) readmitted within 6 months with NSTEMI (no patient was readmitted STEMI or PTSD or acute aortic syndrome or myopericarditis)

During 2009, Cardiology´s guard was alerted for 530 patients, it was discharged to 47.2%. Of these 250 highs of Cardiology : it was discharged 72.4% with the diagnosis of coronary no pain, 6.1%with pericarditis and 21.5% with diagnosis of stable angina.

Admitted 280 patients, there are 96.4% with a cardiac diagnosis and 3.6% in other services with bowel or breathing diseases.

**Conclusions:** Highs of Emergency service are safe (0.6% readmission for cardiovascular disease).

About patients commented with Cardiology´s guard, 51% were admitted with a cardiac diagnosis.

Disclosure: No conflict of interest declared

1356

**Usefulness of troponin for the diagnosis of acute coronary syndrome in emergency service.**R. Rodriguez Calveiro<sup>1</sup>, S. Fernández Barbeira<sup>2</sup>, J. L. Delgado Martín<sup>3</sup>, E. Paredes Galán<sup>2</sup><sup>1</sup> Emergency Department, Meixoeiro Hospital, Vigo, Spain; <sup>2</sup> Cardiology Department, Meixoeiro Hospital, Vigo, Spain; <sup>3</sup> Family Care, Sárdoma´s Health Care, Vigo, Spain

**Objectives:** To assess the usefulness of troponin for the diagnosis of acute ischemic heart disease in the Emergency department.

**Methods:** We retrospectively analyzed all entrances to the emergency department with chest pain for 4 weeks (weeks 6, 19, 32 and 41 of 2009). We prospectively studied all patients assessed for that reason by cardiologist guard in 2009. We analyzed the final diagnosis of the patients with positive troponin (cutoff of our laboratory: 0.09 ng / dl) making two groups:  $\leq 1$  ng / dl and  $> 1$  ng / dl. We consider final diagnosis as reflected in the high income report or report emergency if patient is not entering.

**Results:** There was discharged from the emergency to 166 patients during the 4 weeks, all had negative troponin. Cardiologist were alerted to value 530 patients, of which 40% (212) had positive troponin.

In patients with troponin  $> 0.09$  and  $\leq 1$  ng / dl, there were following diagnoses: 68.4% acute ischemic heart disease or myocarditis (MECC), 2.6% acute aortic syndrome (SdAo), 21.1% non-coronary pain, 2.6% pulmonary thromboembolism and 5.2% pneumonia or gastrointestinal disorders.

In the group of troponin value  $> 1$  ng / dl were diagnosed 90.4% (MECC) and 9.6% non-coronary pain.

**Conclusions:** When the values of Troponin are between 0.09 and 1 ng / dl, 28.9% of diagnoses are non-coronary pathology.

Disclosure: No conflict of interest declared

1360

**Frequency and clinical characteristics of patients assessed in the emergency department with chest pain.**

R. Rodríguez Calveiro<sup>1</sup>, S. Fernández Barbeira<sup>2</sup>, J. L. Delgado Martín<sup>3</sup>, E. Paredes Galán<sup>3</sup>

<sup>1</sup> Emergency Department, Meixoeiro Hospital, Vigo, Spain; <sup>2</sup> Cardiology Department, Meixoeiro Hospital, Vigo, Spain; <sup>3</sup> Family Care, Sárdoma´s Health Care, Vigo, Spain

**Objectives:** Our objectives were to determine frequency of nontraumatic chest pain in the emergency department and describe their clinical characteristics.

**Material and Methods:** We conducted a retrospective study of all entries to the emergency department for four weeks, spread over 2009. We quantified total admittances during those four weeks and analyzed 200 patients who had nontraumatic chest pain.

**Results:** In the 4 weeks analyzed there were quantified 3824 adult emergency entries of which 200 were for nontraumatic chest pain (5.2%). Cardiologist guard was advised to value 17%.

The mean age of patients was 58 years (percentiles 10: 30 and 90: 81 years), 42.7% women. The prevalence of risk factors were: hypertension 43%, 24% dyslipidemia, 12% diabetes and 30% smoking.

They had previously been assessed for chest pain 20%, 13% diagnosed with ischemic heart disease and 7% of non-coronary pain. Of these had a surgical revascularization 2% and percutaneously 6%.

We classified characteristics of pain Braunwald scale: 62% had no property, a 29% one, 4.5% two and 3.5% three. 95% of repeated troponins were negative.

**Conclusions:** 5.2% of emergency entries are for chest pain. One in five had been assessed for chest pain. The risk profile is very low (91% with pain non suggestive of ischemic heart disease, 95% with negative troponin).

Disclosure: No conflict of interest declared

1420

**Prevalence of atrial fibrillation and associated risk factors**

J. Araújo, B. Pereira, L. R. Soares, S. T. Braga, U. Mesquita  
USF Terras de Souza, ACES Tâmega II – VSS, Paredes, Portugal

**Objective:** Determine the Atrial Fibrillation (AF) prevalence in the primary health care center of USF Terras de Souza – Portugal – and associated risk factors.

**Methods:** Observational, descriptive and cross-sectional study. The population was selected by convenience, non randomly, and included all the patients registered at USF Terras de Souza with the medical record of K78 (by ICPC-2). The data was collected at 30th of June of 2012. Patients with the medical record of atrial flutter were excluded. The descriptive analysis was made with Microsoft Office Excel 2007®.

**Results:** 155 patients were included in our study, corresponding to a prevalence of 0.9% of AF at USF Terras de Souza. Gender was equally distributed, with ages within 41-92 years, with an increase of AF with age, being the group of 70 to 79 years the most representative (43%). The study identified Arterial Hypertension (71%), Overweight (46%), Heart failure (45%), Diabetes (31%), Obesity (29%) and Valvular Heart Disease (28%), as the major risk factors associated to AF. It was also verified that in patients with AF, Coronary Disease was present in 17%, and that 14% of patients with AF had excessive alcohol consumption and 10% had COPD.

**Conclusion:** Given the importance of AF as a risk factor for stroke and the limited number of studies in Portugal, this study allows a better characterization of the pathology and patients who suffer from it, as well as the associated risk factors, in order to a more effective performance in primary prevention.

Disclosure: No conflict of interest declared

1470

**Broken heart**C. Salgueiro<sup>1</sup>, E. Silva<sup>1</sup>, S. Gonçalves<sup>2</sup>, F. Bastos<sup>1</sup><sup>1</sup> Family Health Unit São Miguel-O-Anjo, ACES do Ave III – Famalicão, Braga, Portugal; <sup>2</sup> Family Health Unit São João de Braga, ACES do Cávado I – Braga, Braga, Portugal

**Background:** Takotsubo cardiomyopathy (TCM) or Broken Heart Syndrome is an acute cardiac syndrome that involves transient left ventricular apical akinesis (with peculiar apical ballooning appearance, chest pain or dyspnea, ST-segment elevation and minor elevations of cardiac enzyme levels – mimicking acute coronary syndrome(ACS).

**Case Presentation:** A 86-year-old woman was admitted to the Emergency Department with sudden onset chest pain occurring after learning of her sister's death. The EKG showed T-wave inversion in leads V1–V3 and a mild troponin elevation. She was admitted by the cardiology service with suspected ACS.

A transthoracic echocardiogram revealed moderate systolic dysfunction of the LV with hypokinesis of the mid-apical segments. Coronary catheterization showed 40% stenosis of the anterior descending coronary artery. A diagnosis of TakoTsubo syndrome was made.

**Conclusion:** Takotsubo cardiomyopathy is a relatively rare condition that has only recently been widely appreciated. It typically presents with chest pain, ST-segment elevation on electrocardiogram, and elevated cardiac enzyme levels consistent with a myocardial infarction.

However, when the patient undergoes cardiac angiography, left ventricular apical ballooning is present and there is no significant coronary artery stenosis.

Acute stress has been indicated as a common trigger for the transient LV apical ballooning syndrome, especially in postmenopausal women. The present report is a typical example of stress-induced takotsubo cardiomyopathy in a Caucasian Portuguese postmenopausal woman.

Disclosure: No conflict of interest declared

1508

**A comparison of patients' perceived cardiovascular risk with their minimum ascertainable risk using a simple self-complete questionnaire**

E. Richardson, C. Bradley

Department of General Practice, University College Cork, Cork, Ireland

**Introduction:** Studies have shown that patient education regarding cardiovascular health is inadequate. Also the role of self assessment and monitoring in the management of cardiovascular disease has not been explored before even though it has been suggested that it may be advantageous in cardiovascular risk stratification.

**Aim:** To investigate patient knowledge of cardiovascular risk and understanding of cardiovascular risk factors and compare this to their minimum actual risk. By using only self ascertainable risk factors, this project also aims to explore the possibility of self risk assessment and monitoring in the future.

**Method:** 200 questionnaires surveying estimated risk, demographics, and cardiovascular risk factors were distributed. Minimum actual cardiovascular risk was measured using SCORE risk chart formula. Data was analysed using SPSS.

**Results:** 71% overestimated risk by more than 1%. 47.1% overestimated risk by 20% or more. No association was found between estimated risk and actual risk.

Average estimated risk among those with and without risk factors were similar. Significant P values were found in the analysis of average estimated risk in categories of sex, age and smoking. Larger proportion of underestimations and smaller proportion of correct estimates in males, older patients and smokers.

**Conclusions:** The overestimation of cardiovascular risk camouflages an underlying misappreciation of risk factors. This implies that patient knowledge of overall risk percentage alone is not advantageous and also that patient education is inadequate. Furthermore, as it is possible to measure minimal risk using only self ascertainable risk factors, self risk assessment should be considered in the future.

Disclosure: No conflict of interest declared

1514

**Hypertension in primary care: where are we?**

C. Silva, C.P. Mendes, A. Pinheiro Torres, A. Delgado, C. Almeida  
USF Famílias/USF Salvador Machado, ARS Norte, Santa Maria da Feira, Portugal

**Objective:** To study the hypertensive population of two Family Health Units by characterizing the patients followed in the medical consult.

**Methods:** Observational, transversal, descriptive study with analytic component. We extracted an aleatory systematic sample constituted by 532 patients of a total of 4246 hypertensive patients. Variables included were gender, age, body mass index (BMI), blood pressure (BP), total cholesterol, LDL-cholesterol (LDL-C), HDL-cholesterol (HDL-C), cardiovascular (CV) risk factors – diabetes, smoking, obesity, dyslipidemia, damage to target organs, diseases associated and anti-hypertensive and anti-dyslipidemic treatment.

**Results:** 435 patients were studied, mainly female (58.16%), with average age of 66.31 years old and duration of the diagnosis of 8.65 years in average. About CV risk factors: diabetes 27.36%, 60.23% dyslipidemia, BMI>25 kg/m<sup>2</sup> 76.78%, smoking 6.90%. The most frequent pathologies associated were Stroke (22 patients) and Heart Failure (19 patients). 31.49% of patients had LDL-C within recommended levels. From 1128 BP measurements registered, 53.01% of the systolic BP and 82.45% of diastolic BP were in the recommended levels. The most used classes were: diuretics overall (59.77%), ACEIs in monotherapy (8.05%), Diuretic+ACEI (20.46%) in association, ACEI+Diuretic+CCB (4.83%) in triple therapy. In anti-dyslipidemic therapeutics, 45.74% of patients were treated with statins, 28.8% used other anti-dyslipidemic drug.

**Conclusions:** There is a high prevalence of CV risk factors in hypertensive patients, and most patients (68.51%) have the LDL-C under control. Most have a systolic hypertension and the combined therapy is preferred. There's a need to implement preventive and therapeutic oriented measures, aiming CV risk reduction and optimization of BP control.

Disclosure: No conflict of interest declared

1536

**Betablockers following acute myocardial infarction at USF Mactama practice**

M.T. Silva, A. Duarte, A. Henriques, J. Gabriel, M. Teixeira, R. Botto, S. Rei, S. Duarte, S. Pacheco, S. Neto  
USF Mactamã, ACES X – Cacém / Queluz, Lisbon, Portugal

**Introduction:** Betablockers (BB) prescription is commonly recommended by several organizations following acute myocardial infarction (AMI), namely the European Society of Cardiology and the American Heart Association. Long term BB usage increases life expectation in 20% to 25%, reducing mortality by cardiac cause, sudden death and new AMI events.

**Objective:**

Characterization of the USF Mactamã users diagnosed with AMI.

Characterization of the BB prescription following AMI on users of the USF Mactamã.

**Methodology:** An observational, transversal and descriptive study has been conducted. The population includes every signed user to the USF Mactamã up to March 31, 2011, having been selected those diagnosed with AMI between April 1, 2001 and April 30, 2011.

**Results:** In total of 20,120 users of USF Mactamã, 83 AMI diagnosed individuals were identified, 61 of male gender and the majority's age ranging from 60 to 69 years old. Hypertension was found the most prevalent comorbidity. The majority of individuals were being prescribed with the current preconized treatment following AMI: BB, AEIC / ARA, reductase HMG-CoA inhibitor antiagregant. 67 individuals were prescribed with BB, 63 of whom under a therapeutically dose.

**Discussion:** Most individuals with AMI diagnosis were being treated with BB, cardioselective being the most prevalent. Most AMI diagnosed individuals presented multiple cardiovascular risk factors.

Use of BB reduces mortality due to cardiac cause or recurring AMI, therefore presenting itself as an important secondary form of pharmacological prevention and, hence, purporting for quality in population health care.

Disclosure: No conflict of interest declared



1675

**Descriptive study of the physical activity and weight control in the general population with or without cardiovascular pathology**

M.A. Sarlat, A. Bonillo, M. Fuentes, B. Álvarez

*Magoria Primary Care Center, Institut Català de la Salut (ICS), Barcelona, Spain***Objective:** Determine the level of physical activity and weight control in the general population with and without cardiovascular pathology**Methods:** Questionnaires were given to patients coming to 4GP practices. The data included Age (inclusive criteria was 35-65 years old), gender, fat body mass (group 1:FBM $\leq$ 24,9; group 2: FBM: 25-29,9; group 3:FBM $\geq$ 30), physical activity questionnaire (active/passive), cardiovascular pathology (group A: healthy; group B:Cardiovascular Risk Factors (CVRF):(Diabetes, HTN, smoker, dyslipidemia), group C: cardiovascular pathology present (stroke, infarct, peripheral artheriopatya).**Results:** We studied 218 patients, average age 51.3 years old, 62.35% were women. Healthy patients (34,8%), with Cardiovascular Risk factors (CVRF) (58,8%), active illness (6,4%). From the total only 40% were physically active. From patients in Group B and C 65% were physically inactive. The patients with Cardiovascular Risk Factors were overweight in 68% of the cases (37,5% overweight only; 30,5% obesity) were as the patients with a established pathology that were overweight in 92.8% (64,2% overweight only; 35,8% obesity).**Conclusions:** Lack of physical activity as well of obesity existed in high numbers in both, populations wherever they had active pathology or not or were at risk. Preventative measures are needed to target this problem.

Disclosure: No conflict of interest declared

1699

**Control of cardiovascular risk factors in general practice.**

L. Kozlovska, A. Lejnicks, V. Dzerve, I. Neborakova, I. Tavare

*DEPARTMENT OF FAMILY MEDICINE, RIGA STRADIN'S UNIVERSITY, RIGA, Latvia***Introduction:** Unattained aims of the control of arterial hypertension(AH) remain an open subject to discussions and research worldwide.**Objectives:** To analyze the control of cardiovascular risk factors in general practices.**Methods:** 112 general practitioners' (GPs') took part in this epidemiological study. 2900 patients with AH were observed and inquired about cardiovascular risk factors and their perception about reaching the aims of AH in general practices of Latvia.**Results:** GPs' assessment about reaching the aims of the control of AH matches with the real situation. Patients, assessing their control of AH, were divided in 2 groups: those suffering from diabetes mellitus (512)- did not note their assessment in 47% cases, those without diabetes mellitus(835) - considered they often attained the recommended aims.

73% had raised systolic blood pressure(SBP), 45%- raised diastolic blood pressure(DBP)- 2079 and 1302 patients did not reach the aims of the control of AH. Patients with diabetes mellitus did not reach the aims of the control of AH in 88.2%(SBP) and 55.1%(DBP). 13.7% (406 of 677) had microalbuminuria.

**Conclusion:**

- GPs adequately assess their patients' control of AH.
- Patients' perception about reaching aims of control of AH does not always matches with the real one.
- It is of a great importance to improve collaboration between GPs' and patients, reeducate them regularly to raise their compliance in treatment.

Disclosure: No conflict of interest declared

1715

**Prevention of stroke in non-valvular atrial fibrillation with dabigatran: Safety and effectiveness**

J. Paz Galiana, D. Gaitán Román, B. Pérez Villardon, L.A. Calleja Cartón, J.P. García Paine

**Goal:** To assess the effectiveness and safety of patients treated with dabigatran, a direct thrombin inhibitor.

**Material and Methods:**

**Design:** Descriptive longitudinal

**Location:** Cardiology Unit.

**Subjects:** patients with non-valvular AF in which a treatment with Dabigatran was started from November 2011-December 2012

**Measurement:** Age, gender, safety and effectiveness, with a mean follow-up of 10.9 months.

**Findings:** A total of 117 patients were included, 55.6% women, mean age 72.4 years, 103 were older than 65 years (88%). The average CHADS<sub>2</sub> score was 2.29 (0-6), CHA<sub>2</sub>DS<sub>2</sub>-VASc 3.97 (0-8), HASBLED 1.55 (0-4). Dabigatran dose was 110mg in 74.5%, and 150mg in 26.5%. The mean follow-up was 10.9 months, >12 months in 41.2%. During the follow-up, 3 MACE occurred: 2 mild hemorrhages and 1 stroke (attributed to an erratic medication intake). The average follow-up creatinine was 0.9 mg/dl. 9 patients (7.7%) withdrew this anticoagulant treatment: 3 patients due to uncontrollable dyspepsia, 1 patient due to liver enzyme elevation, 1 patient due to repetitive nose-bleed, 1 patient due to progressive kidney failure, 1 patient due to diarrhea, 1 patient due to dyspnea that was attributed to the treatment, 1 patient due to drug interaction with droneredona.

4 patients reported dyspepsia at the beginning of the treatment that was transient and improved increasing the dose of gastric protector. 21 patients (17.9%) underwent any type of surgery during the treatment without events, following the protocol management of dabigatran depending on the type of surgery and renal function.

**Conclusion:** The use of dabigatran for thromboembolic events prevention in patients with non-valvular atrial fibrillation is an effectiveness strategy. It is managed in high-risk patients, also being a safety treatment. Its main limitation is the dyspepsia derived from its composition with tartaric acid.

Disclosure: No conflict of interest declared

1717

**Prognostic repercussion of diabetes mellitus in patients admitted for non-ST-segment-elevation acute coronary syndrome**M. Suau-Anechina<sup>1</sup>, M.A. Ramirez-Marrero<sup>2</sup>, E. Doña-Díaz<sup>3</sup>, J. Torres<sup>4</sup>, M. de Mora-Martin<sup>2</sup>

<sup>1</sup> Department of Emergency, DCCU Rincon de la Victoria, Malaga, Spain; <sup>2</sup> Department of Cardiology, Hospital Regional Carlos Haya, Malaga, Spain; <sup>3</sup> Department of Neumology, Hospital de Alta Resolución de Benalmadena, Malaga, Spain; <sup>4</sup> Department of Family Care, Centro de Salud de Carranque, Malaga, Spain;

**Introduction:** Diabetes Mellitus (DM) is one of the most important cardiovascular risk factors. Our aim was to analyze the prognostic repercussion of DM in patients admitted to hospital for non-ST-segment-elevation acute coronary syndrome (NSTEMI), both in the intrahospital phase and after long-term follow-up (median of 24 months).

**Methods:** We analyzed 715 consecutive patients (40.3% diabetics) admitted to our center for NSTEMI, from January 2004 to December 2005. Intrahospital mortality rates were studied, as well as after follow-up, readmission for ACS, coronary revascularization and arrhythmic events or long-term heart failure (HF).

**Results:** The diabetic patients were older, more HT (72.6% vs 56.7%, p=0.0001) and dyslipemia (59.7% vs 44.7%, p=0.0001). Diabetic patients showed greater rates of multi-vessel disease (73.7% vs 49.4%, p=0.0001) and left ventricular systolic dysfunction (29.7% vs 22.2%, p=0.01). There were greater prescription of ACE inhibitors and/or ARA-II in diabetic patients (69.8% vs 51.6%, p=0.0001). Diabetic patients presented higher mortality, both intrahospital (7.3% vs 4.4%, p=0.07) and after follow-up (11.9% vs 5.9%, p=0.005). This mortality rate was higher in those patients who did not receive coronary revascularization treatment (71% vs 29%, p=0.001), with no readmission for ACS (24.6% vs 17.9%, p=0.02) and CI (16.2% vs 5.4%, p=0.0001). After adjustment, DM was found to be an independent predictor of intrahospital mortality (OR 3.08, 95% CI, 1.43-6.62).

**Conclusions:** In our study, the diabetic patients exhibited greater associated comorbidity. DM predicted greater intrahospital mortality risk, but not after long-term follow-up. The diabetic patients who did not receive coronary revascularization treatment had a worse long-term prognosis

Disclosure: No conflict of interest declared

1719

**Risk factors related to a cardiogenic syncope**

M. Suau-Anechina<sup>1</sup>, M.A. Ramirez-Marrero<sup>2</sup>, E. Doña-Diaz<sup>3</sup>, J. Torres<sup>4</sup>,  
M. de Mora-Martin<sup>2</sup>

<sup>1</sup> Department of Emergency, DCCU Rincon de la Victoria, Malaga, Spain; <sup>2</sup> Department of Cardiology, Hospital Regional Universitario Carlos Haya, Malaga, Spain; <sup>3</sup> Department of Neumology, Hospital de Alta Resolucion de Benalmadena, Malaga, Spain; <sup>4</sup> Department of Family Care, Centro de Salud de Carranque, Malaga, Spain

**Introduction and aims:** Syncope is a frequent reason for hospital emergency care, associated with a fatal prognosis according to their origin. Our objective was to analyze the clinical profile of patients evaluated by a Syncope Unit (US).

**Material and methods:** Prospective analysis of all patients consecutively referred to the US, from June 2009 to October 2011.

**Results:** We included 303 patients, 47.5% women, mean age  $56.7 \pm 20.6$  years. 46.3% had hypertension, 17.2% diabetes mellitus, 9.7% a history of ischemic heart disease. There was prodrome in 69% of cases. The baseline ECG was abnormal in 29.8%, the prevailing existence of AV block (31.3%), followed by bundle branch block (25%). 97.7% of the patients had no structural heart disease by echocardiography. Tilt test was performed in 59.6%. It was established the diagnosis of neurally-mediated reflex syncope in 67.8% of cases, 8.2% neurological syncope, 6.6% orthostatic, 7.7% cardiogenic syncope and 9.8% is still unknown. 10 patients received a pacemaker. Cardiogenic syncope was associated with an increased prevalence of age  $\geq 40$  years (100% vs. 0%,  $p = 0.01$ ), male gender (71.4% vs. 28.6%,  $p = 0.05$ ) and baseline abnormal ECG (85.7% vs. 14.3%,  $p = 0.0001$ ). After adjustment, male sex and the presence of an abnormal ECG predicted an increased risk of cardiac origin of syncope (OR 4.22, 95% CI, 0.86 to 10.74 and OR 3.12, 95%, 2, 78 to 6.69, respectively).

**Conclusions:** Cardiogenic syncope is associated with male gender, age over 40 years and baseline ECG pathology.

Disclosure: No conflict of interest declared

1720

**Patients admitted with diagnosis of stable angina pectoris: outcome of cardiac catheterization**

L.A. Calleja Cartón, D. Gaitán Román, B. Pérez Villardon, J. Paz Galiana,  
J.P. García Paine

**Goal:** To assess the clinical characteristics of patients referred for coronary angiography with diagnosis of stable angina.

**Material and Methods:**

**Design:** Descriptive longitudinal

**Location:** Cardiology (angiography) Unit.

**Subjects:** Patients referred for coronary angiography from January 2011-August 2011 with stable angina pectoris.

**Measurement:** Cardiovascular risk factors (CVRF), Canadian cardiovascular society functional classification of angina (CCS class), left ventricular ejection fraction (LVEF), ischaemia tests performed, the treatment and the results of the coronary angiography.

**Findings:** 159 patients were included, males (59.7%), mean age of 65.9 years. CVRF: 84.3% had high blood pressure, 69.2% dyslipidemia, 44% current smokers, 37.1% diabetes, 10.7% family history of ischemic disease. CCS class: II in 57.9%, III in 40.9% and IV in 1.3%; frequent angina defined as having more than 1 episode a week in 39.6%, and dyspnea as angina equivalent in 28.9%. LVEF was  $< 50\%$  in 5.2%. A previous ischaemia test was performed in 62.9%: exercise treadmill test (21.4%), cardiac gammagrapy (24.5%), stress echocardiography (0.6%), cardiac computer tomography (5%),  $\geq 2$  ischaemia tests (9.4%). Tests were conclusive in 83% and concordant with the coronariography results in 51%. Coronariography results were: normal coronary arteries in 25.1%, diffuse non-obstructive coronary artery disease in 14.5%, slow flow in 3.1%, milking in 0.6%, one-vessel disease in 34.5%, two-vessel in 10.1%, three-vessel or left main stenosis in 10.7%. Left anterior descending coronary artery was the most frequent involved (35.6%). A percutaneous coronary intervention was performed in 43.4%, and coronary artery bypass grafting in 5.7%. The revascularization was complete in 88.5%; in 50.4% were used drug eluting stents. During the in-hospital stay, 6 had any complication.

**Conclusion:** Patients suspected of estable angina pectoris have a high comorbidity. Frequently they have non-obstructive coronary artery disease (43,3%). The prognositic implications of stable angina pectoris with no-obstructive CAD are unknown.

Disclosure: No conflict of interest declared

1729

**New cardiovascular biomarkers in women**

A. Rodriguez-Guerrero, M. Fabregate, J. Saban-Ruiz, A. Bravo-Malo, M. Martinez-Abad  
*Unidad de Patologia Endotelial, Hospital Ramon y Cajal, Madrid, Spain*

**Background:** The C3 complement factor is an acute phase reactant, secreted by activated macrophages at inflammation sites and adipocytes, associated with atherosclerosis and cardiovascular risk. The evidence indicates the role of inflammatory processes in all stages of atheroma formation, including infiltration of inflammatory cells in the intima and secretion of cytokines.

**Aims:** correlation between serum C3 convertase levels and REGICOR model.

**Methods:** Population: 332 subjects with C3 determinations in their first visit.

C3 convertase measured by nephelometry (mg/dl).

Cardiovascular risk assessed according to the REGICOR model, (Framingham function calibrated for Spanish population).

Continuous variables described as mean (SD: standard deviation). Pearson's correlation coefficient. Student's t-test. Levene test.  $\alpha=0.05$ .

**Results:** Population: aged 55.5 (10.7) range 35 to 74 years, 59.0 % males, 55.1% hypertensives, 22.9% smokers, 27.7% with Type 2 diabetes mellitus.

C3 serum levels ranged from 65 to 216 mg/dl. Mean 133.1 (SD:26.4). No significant differences were found in C3 levels between males and females. C3 levels were not correlated to age.

10-years coronary risk in overall population: 4.6% (3.6), range: 0.1 to 23.1. Males had higher risk than females (5.4(4.0) vs. 3.5 (2.6);  $p<0.001$ ).

C3 was positively correlated to coronary risk ( $r=0.167$ ;  $p=0.003$ ) in our whole population. In females, C3 was linearly related to coronary risk in every age group below 65 y.o.

**Conclusions:** High levels of C3 convertase are correlated with increased risk of primary cardiovascular event in the overall population and come forward as good predictors of cardiovascular risk in young patients and very significantly in perimenopausal women.

Disclosure: No conflict of interest declared

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**A case of myalgias**

A. Valente, M. Neves  
*Medicina Geral e Familiar, USF Caldãmbrega, Vale de Cambra, Portugal*

**Introduction:** Antidyslipidemic therapy with Statins is the key in people with high or very high cardiovascular risk and in most people with diabetes. These drugs are generally well tolerated and serious side effects, such as rhabdomyolysis are rare (<0.1%). Myalgias are the most common side effect (2-11%).

**Case description:** 56 years old male, married, with a history of hypertension, type 2 diabetes mellitus with retinopathy, dyslipidemia and ischemic heart disease. Sedentary, ex-smoker and with alcohol consumption of 168 grams/week. Usually medicated with ezomeprazol 20mg, gliclazide 30mg, sitagliptin+metformin 1000mg+50mg, metformin 1000mg, perindopril 10mg, chlorthalidone 50mg, atenolol 50mg, acetylsalicylic acid 150mg and rosuvastatin 10mg. Admitted in the health unit with myalgias and muscle weakness since a year ago. An analytical study was requested, which revealed a normocytic normochromic anemia, LDL-c 75mg/dl, triglyceride 283mg/dl, a positive fecal occult blood test, normal CPK and thyroid function. Side effect of rosuvastatin was the possible cause, so the dose was decreased, however the symptoms persisted. After suspension of the Rosuvastatin, symptoms disappeared. New treatment with Pravastatin 20mg was started, but symptoms reappeared, which compromised the treatment adherence.

**Discussion:** This case shows the associated challenges in the approach of a patient with very high cardiovascular risk in which the onset of muscle pain, associated with statin use, compromised its adherence to therapy. The importance of this case lies not only with the side effects of drugs, but also with the need to find alternative therapies (pharmacological and nonpharmacological) for the control of lipid profile.

Disclosure: No conflict of interest declared

1750

**Characterization of our hypertensive patients.**

I. Coelho, N. Veiga, C. Pires, A. M. Correia, L.S. Correia, A.J. Lemos  
*USE, Grão Vasco, Viseu, Portugal*

**Objective:** Characterization of the patients who attend hypertensive consultations in our Portuguese Family Health Unit. (FHU)

**Methods:**

Observational, descriptive, cross-sectional study.

Population: all the patients in our FHU

Sample: all the hypertensive patients (coded with K86 and K87 by the ICPC-2) that are followed in hypertensive consultations (n = 1879)

Study variables: age, gender, body mass index (BMI), systolic blood pressure (SBP) and diastolic blood pressure (DBP), abdominal perimeter (AP), LDL cholesterol, microalbuminuria.

A descriptive and inferential statistical analysis of the data was performed using SPSS v.18.0 software.

**Results:** The prevalence of hypertension in our FHU is 13.04%, 54.55% females (p > 0.01). Obesity and overweight were present in 47.26% and 23.90% of the hypertensive patients respectively. The AP was greater than 94cm in 69.57% of men and greater than 80cm in 91.90% of women (p < 0.01). SBP  $\geq$  140 mmHg and DBP  $\geq$  90 mmHg were present in 8.47% and 2.35% of hypertensive patients.

34.49% of patients had LDL cholesterol values above 115 mg/dl and 28.48% had microalbuminuria values increased.

**Conclusions:** Of all the parameters analyzed, weight change and AP are the most prevalent; therefore it's important to create programs that promote the implementation of healthy lifestyles.

Hypertension is a modifiable major cardiovascular risk factor. General practitioner's play a crucial role in monitoring and controlling blood pressure, as well as other associated risk factors.

Disclosure: No conflict of interest declared

1761

**The success of treatment of arterial hypertension in obese patients related to gender**

S. Milovancevic, J. Vukotic, L. Bunjak, B. Grujic  
*General practice, Health centre Zvezdara, Belgrade, Serbia*

**Objective** of this research was to determine the success of treatment of arterial hypertension in obese patients in relation to gender.

**Methods:** The prospective, twelve month long research, included 125 patients, aged 18-60 years, (mean 46), 74 women and 51 men, without previously established Hypertension but with present obesity. The diagnosis of obesity was based on BMI > 30 kg/m<sup>2</sup> and waist circumference higher than 80cm for women and 94cm for men. For diagnosis of hypertension, blood pressure was measured for at least three separate occasions /SBP > 140 mmHg and DBP > 90 mmHg/. Beside medicaments therapy, all patients were advised to increase physical activity, to apply certain dietetic methods, and to quit smoking.

**Results:** At the beginning of therapy, average value of BMI was 30.38-men and 30.85-women. Waist circumference was 90.2 for women and 104.2 for men. Hypertension was established in 56 patients (44.8%), in 31 women (41.8%) and 25 men (49.0%). Percentage of smokers was high 65%. After 12 month and after changes in dietary behavior and physical activity only 34 patients (27.2%) have hypertension. 13 women (17.6%) and 21 men (41.2%) still had hypertension. Waist circumference was reduced for 3.99%. BMI was reduced for 4.25% and it decreased its value on 29.11 kg/m<sup>2</sup>. Recommendations related with hygienic-dietetic therapy gave results with smokers – 25% quit smoking.

**Conclusions:** This research showed that success hypertension treatment is significantly better in obese women than in obese men, primarily, because of better adherence to the recommendations by women. It has been confirmed by many studies done so far.

Disclosure: No conflict of interest declared

1773

**Association of factors anthropometric and lifestyle with prehypertension.**

F.G. Márquez Celedonio, A. Chávez Negrete, E. Soler Huerta, E. Guillén Salomón, A.V. Blanco Cornejo  
*Unidad de Medicina familiar 61, Instituto Mexicano del Seguro Social, Veracruz, Mexico*

**Objective:** To determine the association of anthropometric and lifestyle related to the health of a representative sample of the port of Veracruz and its association with prehypertension.

**Methodology:** Analytical cross-sectional survey in a representative population of individuals over 18 years in the city of Veracruz, Veracruz, obtained by two-stage sampling, cluster. We explored sociodemographic, lifestyle and eating habits for the association with prehypertension. Anthropometric variables were measured for weight, height and body mass index (BMI). X2 analysis, ANOVA, Tukey test, odds ratios, and 95%.

**Results:** We included 1707 subjects, 686 (39.7%) men and 1042 (60.3%) women; normotensive 784 (45.9%), prehypertensive 577 (33.8%) and hypertension 346 (20.3%). Mean weight was 68 382 +14.2 kg in normotensive, prehypertensive and 76,990 74,437 +15.9 +15.00 hypertension ( $p < 0.05$ ), BMI 26.3 normotensive +5.0, 28.2 +5.1 and 29.4 +5.9 prehypertensive hypertension ( $p < 0.05$ ); circumference +13.8 87.2 inch waist in normotensive, prehypertensive and 93.8 +13.2 92.6 +12.2 hypertension ( $p < 0.05$ ). Association with prehypertension, 95% overweight RM 1.54 (1.09-2.18), obese 2.05 (1.59-2.64). Exercise practiced 274 (37%) compared with 142 normotensive (25.9%) prehypertensive ( $p < 0.05$ , 95% CI 0.46 to 0.76 RM 0.59). Smoking in 98 (14.0%) and 98 normotensive (18.8%) prehypertensive ( $p < 0.05$  95% CI 1.03-1.42 RM 1.42). Alcoholism in 113 (16.2%) normotensive and 137 (26.0%) prehypertensive ( $p < 0.05$  RM 1.86 1.40-2.49 95% CI).

**Conclusions:** The prehypertension had higher weight, BMI and waist circumference than normotensive. Overweight, obesity, smoking and alcohol are associated with increased risk of prehypertension and physical activity protective effect.

Disclosure: No conflict of interest declared

**3.3. RESPIRATORY PROBLEMS**

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**Can B-type natriuretic peptide be used as a prognostic marker in elderly pneumonia patients?**

D. Usuda, T. Kanda  
*Department of General Medicine, Kanazawa Medical University, Himi Municipal Hospital, Himi, Japan*

**Objective:** Pneumonia is the leading infectious cause of death, especially amongst the elderly in developed countries. No systematic assessment to date has used B-type natriuretic peptide (BNP) levels as a prognostic marker for pneumonia.

**Methods:** We investigated 90 pneumonia patients and categorized their pneumonia as either community-acquired pneumonia (CAP), aspiration pneumonia (AP), nursing healthcare-associated pneumonia (NHCAP) or pneumonia with acute heart failure (PAHF). Patients who were diagnosed with pneumonia and admitted to our hospital were enrolled in this study and their BNP levels determined within one month of admission. Age, sex, outcome (dead or alive), and BNP, C-reactive protein (CRP), creatinine, and fasting plasma glucose levels were also collected from all patients included. A two-sample t-test was used to relate each parameter and outcome for all pneumonia categories.

**Results:** The mean age of all patients (51 male and 39 female) was 82.3±8.0 years. A total of 30 patients had CAP, 21 AP, 24 NHCAP, and 15 PAHF. BNP levels were significantly higher in non-survivors than in survivors for CAP ( $p=0.0001$ ) and AP ( $p<0.03$ ), and fasting plasma glucose levels were also significantly higher in non-survivors than in survivors for CAP ( $p=0.008$ ). No significant difference was observed as regards the other markers.

**Conclusions:** BNP levels were the most powerful and independent predictors of death in patients with CAP or AP. As such, systematic screening of BNP in hospitalized elderly patients with pneumonia may help to identify those with a poor prognosis.

Disclosure: No conflict of interest declared

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**Treatment outcome of patients with extrapulmonary tuberculosis in private tertiary centers with private-public mixed DOTS in Iloilo City, Philippines**

K.J.P. Caratao, F.C. Praire

*Family Medicine, St. Paul's Hospital, Iloilo City, Philippines*

**Objective:** Extrapulmonary tuberculosis (EPTB) is recognized as a high burden case especially in the Philippines. It is the reason we would like to determine the treatment outcome of patients with EPTB enrolled at Private-Public Mixed DOTS (PPMD) Centers in private tertiary hospitals in Iloilo City, Philippines.

**Methods:** A retrospective chart review from St. Paul's Hospital (SPH) and Iloilo Doctors' Hospital (IDH) PPMD Centers was conducted enrolling 42 subjects diagnosed with EPTB from May 2003 to May 2011. Descriptive method was applied. Data gathered was encoded in the SPSS. Descriptive statistics used were the total, mean, mode, frequency and percentage. Inferential statistics used included the t-test and analysis of variance.

**Results:** Majority of the respondents from SPH were 20-39 years old, female, diagnosed by histopathology, underwent Category I treatment, and from urban areas. While those from IDH were 20-39 years old, both male and female, diagnosed by histopathology, underwent Category I and III treatment, and from urban areas. Fever and mass were common associated manifestations. Majority were from cervical lymph nodes, followed by spine and abdomen. Most were diagnosed by resident physicians, followed by infectious specialists and pulmonologists.

**Conclusion:** The patients' results enrolled at SPH on treatment for EPTB had satisfactory outcome while those enrolled at IDH had average outcome, thus a need for further education and improvement. Patients' treatment outcome in both PPMD Centers (SPH and IDH) were all treatment completed, and did not differ significantly when grouped according to age, gender, diagnostic criteria, category of treatment and location.

Disclosure: No conflict of interest declared

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**Nursing development to prevention of ventilator associated pneumonia**

S. On-chan, P. Khamoun

*Neurosurgery Ward, Khonkaen Hospital, Khonkaen Province, Thailand*

**Objective:** To study of Nursing Development to Prevention of Ventilator Associated Pneumonia.

**Methods:** Participatory Action Research in all Healthcare workers of Neurosurgery ward, including Head, nurse, aids and worker from May 2009 through April 2010.

**Results:** A development of PDCA cycle, three phase including beginning developing and monitoring. Binning phase from May 2009 through April 2009, analyze incidence of infection, relative factor of nursing care patient of ventilator, review and test efficacy of all HCWs washing hand before working, head of bed setting. Developing phase from May 2009 through October 2009, mouth care and suction, isolate, use of PPE and educate relative for preventing the transmission of MDR. Monitoring phase from November 2009 through April 2010, establish Bunddle of nursing including hand washing, evaluate of cuff pressure every time, signing HOB, disinfectant solution for hand washing case by case, increase of mouth care to two time per time, all join had disinfectant by alcohol, store breathing equipment in closed, singing of water in Nebulizer, infection control information for patient and relative admit of infection and non infection, record data system.

**Conclusions:** Ventilator Associated Pneumonia in developing and monitoring phase release from 21.81 to 17.28 incidence per ventilator days (less 20.8%) Nursing care of participate of all HCWs and collaborate of relative in development and monitoring survey. Patient get efficacy and safety care

Disclosure: No conflict of interest declared

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**Developing the competency of nurse to practice in the prevention and infection control for patients in Neurosurgery ward. Khon Kaen Hospital**

S. On-chan, S. Maneewan, P. Chowdon, P. Khamoun

*Neurosurgery ward., Khon Kaen Hospital, MOPH, Khon Kaen, Thailand*

**Objective:** To studied the performance of nurses working in prevention and infection control in Neurosurgery ward.

**Methods:** An action research approach between June 2011 – December 2011. The target group were all nurses in Neurosurgery ward. The study found that the PDCA (plan–do–check–act) cycle (1) Early stage. Planning, brainstorming, problem analysis, analysis of the infection. Factors involved in the care of patients requiring mechanical ventilation. (2) Process. The workshop. Organized knowledge. (3) Monitoring. The system of record. Test the knowledge about the diagnosis of infection in hospitals. (4) The final solution. Enhance the knowledge of the hospital infection control nurses. Content analysis was used

**Results:** The study revealed that infection rates of VAP were decreased, there was 13.80 per 1000 ventilator days. The performance of nurses for the prevention and infection control, the development and ongoing monitoring allows patients to receive effective services and safety from infection.

**Conclusions:** The VAP bundle is one of the guidelines for care to prevention VAP. For the standards of care for patients thus increase staffing of nurses, novice nurses must have experience in surveillance, prevention and controlling infection in hospitals. Khon Kaen Hospital has a policy for all nurses that practice on patient care is infection control ward nurse; ICWN to take care infection control in the hospital

Disclosure: No conflict of interest declared

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**Evaluation of the motivation of family doctors in providing care to patients with chronic obstructive pulmonary disease**

O. Korzh, S. Krasnokutskiy, E. Lavrova

*General Practice-Family Medicine, Kharkov Medical Academy of Postgraduate Education, Kharkov, Ukraine*

**Objective:** To identify and provide further understanding on the factors affecting the motivation and quality of care provided by family doctors to patients with chronic obstructive pulmonary disease (COPD).

**Methods:** A qualitative research approach was employed using structured interviews. 84 family physicians were interviewed in this study. In addition, they completed the special designed questionnaire. The study group was gender-balanced with different age, length of the years of work.

**Results:** It has been shown that three main themes emerged from the analysis of the present study: 1) motivation of family doctors, 2) teamwork, 3) family doctors training. Within these themes, twenty-one different barriers and facilitators/motivators to improve the quality of care in patients with COPD at primary care level were identified and further explored. More motivated physicians had a more confident and optimistic approach of COPD, looked more empathetic and supportive towards patients and were characterized by lower rates of patients with COPD exacerbations. Despite the large efforts of the health bodies in Ukraine to strengthen the role of primary care in the management of non-communicable diseases including COPD, still patients with COPD prefer to receive their care from secondary/tertiary settings.

**Conclusions:** The care in patients with COPD at primary care level is influenced by many factors including patient, family doctor and organization. Our finding highlighted the importance of developing appropriate training for family doctors on the communication skills with emphasis on the skills needed for the behavioral changes and patient-centered approach.

Disclosure: No conflict of interest declared



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**Efficacy and safety of QVA149 versus glycopyrronium and tiotropium in severe to very severe chronic obstructive pulmonary disease (COPD): the SPARK study**A. D'Urzo<sup>1</sup>, J. Wedzicha<sup>2</sup>, M. Decramer<sup>3</sup>, J. Ficker<sup>4</sup>, D. Niewoehner<sup>5</sup>, T. Sandström<sup>6</sup>, A. Taylor<sup>7</sup><sup>1</sup> Family and Community Medicine, University of Toronto, Toronto, Canada; <sup>2</sup> Centre for Respiratory Medicine, University College London, London, United Kingdom; <sup>3</sup> Respiratory Division, University Hospital, University of Leuven, Leuven, Belgium; <sup>4</sup> Klinikum Nuernberg, Department of Respiratory Medicine, Allergology, Sleep Medicine, Nuernberg, Germany;<sup>5</sup> Lungmottagningen, MedicinCentrum, Norrlands Universitetssjukhus, Umea, Sweden;<sup>6</sup> VA Medical Center, Pulmonary Section 111N, Minneapolis, MN, United States; <sup>7</sup> Novartis Pharmaceuticals, Novartis Pharmaceuticals, East Hanover, NJ, United States

**Introduction:** Long-acting muscarinic antagonists (LAMAs) or long-acting  $\beta_2$  agonists (LABAs) are recommended for maintenance therapy in (COPD). There is a strong rationale for using a LABA/LAMA combination for symptomatic patients receiving monotherapy. We compared the efficacy of dual bronchodilation with QVA149 (indacaterol/glycopyrronium fixed-dose combination) with that of glycopyrronium and tiotropium.

**Methods:** This was a 64-week, multicenter, randomized, active-controlled study. Patients aged  $\geq 40$  years with severe/very severe COPD (GOLD stage III/IV airflow limitation) and  $\geq 1$  COPD exacerbation in the past year received double-blind QVA149 110/50  $\mu\text{g}$  or glycopyrronium 50  $\mu\text{g}$  (both via Breezhaler<sup>®</sup> device), or open-label tiotropium 18  $\mu\text{g}$  (via Handihaler<sup>®</sup> device). All treatments were once daily. Study objectives included evaluation of rates of all COPD exacerbations, trough forced expiratory volume in 1 s ( $\text{FEV}_1$ ), health status and safety.

**Results:** 2224 patients were randomized to QVA149 (n=741), glycopyrronium (n=741) or tiotropium (n=742). For all COPD exacerbations, QVA149 resulted in a rate reduction of 15% versus glycopyrronium  $p=0.001$  and 14% versus tiotropium  $p=0.001$ . There were improvements in trough  $\text{FEV}_1$  with QVA149 versus glycopyrronium and tiotropium, with treatment differences ranging from 60–80 mL during Weeks 4–64 (all  $p<0.001$ ). QVA149 also resulted in significant improvements in SGRQ total score at Week 64 compared with glycopyrronium (mean difference  $-2.07$ ,  $p<0.01$ ) and tiotropium (mean difference  $-2.69$ ,  $p<0.001$ ).

**Conclusions:** In the SPARK study, QVA149 significantly reduced all exacerbations compared with glycopyrronium and tiotropium, as well as providing clinically relevant improvements in bronchodilation and health status that exceeded those seen with tiotropium and glycopyrronium.

Disclosure: Dr D'Urzo has received research, consulting and lecturing fees from GlaxoSmithkline, Sepracor, Schering Plough, Altana, Methapharma, AstraZeneca, ONO pharma, Merck Canada, Forest Laboratories, Novartis Canada/USA, Boehringer Ingelheim (Canada) Ltd, Pfizer Canada, SkyePharma, and KOS Pharmaceuticals

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**Treatment and degree of control of the asthmatic patients in primary care. ASMDUAL Study**V. Lopez-Marina<sup>1</sup>, P. Rubinstein<sup>2</sup>, D. Rodriguez Vargas<sup>1</sup><sup>1</sup> Primary Care Center of Piera, Catalan Health Institute, Piera (Barcelona), Spain; <sup>2</sup> Martorell Medical Center, Catsalut, Martorell (Barcelona), Spain

**Objectives:** To describe drug therapy, side effects and degree of control of the asthmatic patients.

**Methods: Methodology:** descriptive cross-sectional catalonian multicenter study, with 55 doctors (family practitioners, pneumologists, allergists and internists) of 20 primary care centers that passed a self-administered survey to their asthmatic patients during april/2012. **Variables:** sex; age; smoking; treatments; adverse effects (AE); degree of control (DC), self-perceived and by the Asthma Control Test ( $\text{ACT} \leq 19$  insufficient control and  $>19$  sufficient control). **Statistics:** mean (X), standard deviation (SD), percentages, T-Student independent and Fisher Exact test.

**Results:** 578 asthmatics, 70.1% women and age ( $X \pm \text{SD}$ )  $47.3 \pm 17.5$  years. 12.8% smokers, 78.7% think that tobacco harms them with  $p>0.05$  for the DC. **Treatments:** 89.1% takes some treatment; 47.9% salbutamol, 27.6% budesonide/formoterol, 18.3% budesonide, 16.8% fluticasone/ salmeterol, 12.8% montelukast, etc;  $p>0.05$  for the DC. **AE:** 14.1% of AE; 35.5% tachycardia, 46.7% neuromuscular, 20.9% oropharyngeal, etc;  $p>0.05$  for the DC. **DC:** 68.5% self-perceived good control; 53.7%  $\text{ACT} > 19$ ; 70.6% of correlation between self-perceived good control and  $\text{ACT} > 19$  ( $p<0.0001$ ); if  $\text{ACT} \leq 19$ , is affected: 69.5% normal life ( $p<0.0001$ ), 68% work ( $p<0.0001$ ), 72% student activity ( $p<0.003$ ), 76.5% sexuality ( $p<0.0001$ ), 55.6% sport activity ( $p<0.0001$ ), 66.1% holidays ( $p<0.0001$ ).

**Conclusions:** Asthmatics are middle aged women and the tobacco harms them. 90% take drugs (inhalers), with 14% of AE (tachycardia, neuromuscular effects, etc). 68.5% reported self-perceived good control but only the 53.7% has enough control by the ACT, affecting more than 60% of the patients with insufficient control various activities of their normal life.

Disclosure: No conflict of interest declared

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### Results of the study on patients referred for suspected sleep apnoea from Primary Care to Pulmonology

J. Fernández-Lahera, M. Lerín, A Gonzalez, S. Rojas, F.G. Ríó  
Pulmonology and Primary Care, University Hospital La Paz. Area 5, Madrid, Spain

#### Objectives:

1. To study the characteristics of patients referred for suspected obstructive sleep apnoea syndrome (OSAS).
2. To assess the results of the sleep study.

**Material and methods:** Included 105 patients referred to Pulmonology from Primary Care during 2011. We recorded the patients anthropometric, clinical and comorbidity characteristics. Patients underwent sleep studies (respiratory polygraphy or polysomnography).

**Results:** Included 70 males (68%) and 34 females (32%), 57±12 years, BMI 31±5 kg/m<sup>2</sup>, neck circumference: 42 ± 5 cm, Mallampati degrees (I: 10%; II: 18%; III: 26%; IV: 46%). Epworth sleepiness scale: 9±5.

Most common comorbidities: arterial hypertension 40%, diabetes 9.5%, dyslipidaemia 41%, smoking 26%, ex-smokers 27%, heart disease 14%, respiratory 24%, neurological 6% and psychiatric 18%.

Sleep study: mean apnoea-hypo-apnoea index (AHI) 32.4±25/h, desaturation index 30.7±23/h and mean saturation 91.7%±3%.

OSAS severity: healthy 11%, mild 18%, moderate 25% and severe 46%.

Initial therapeutic approach: CPAP or BIPAP in 65% of patients, observation for 28% and further testing for 7%.

We found significant positive correlations between the AHI and age (r=0.21), BMI (r=0.36) and neck circumference (r=0.48). We found no correlation with the Epworth scale or with the Mallampati score.

#### Conclusions:

- 1) Of the sleep studies conducted, only 11% had a normal AHI (46% severe). Therefore, confirmation of the initial clinical suspicion of patients by family physicians with the sleep study was very high.
- 2) Treatment with CPAP was initiated in 65% of the patients.
- 3) The most common comorbidities in order were HBP, dyslipidaemia, smoking, lung diseases, psychiatric, cardiac and neurological.

Disclosure: No conflict of interest declared

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### Tobacco and primary attention staff. Prevalences 2011

J. Bernad Suarez<sup>1</sup>, A. Vazquez Duran<sup>1</sup>, J. Gerard Perez<sup>1</sup>, C. Sanchez Lopez<sup>1</sup>, L. Bernad Marin<sup>2</sup>, C. Santamaria Colomer<sup>2</sup>, M. Muñoz Ribo<sup>1</sup>, A. Montoliu<sup>1</sup>, S. Criville<sup>1</sup>, C. Viñas Silva<sup>1</sup>  
<sup>1</sup> CAP DR MASRIERA, INSTITUT CATALA DE LA SALUT, VILASSAR DE MAR, Spain; <sup>2</sup> UNITAT DOCENT.FACULTAT DE MEDICINA, UNIVERSITAT AUTONOMA DE BARCELONA, BADALONA. HOSPITAL CAN RUTI, Spain

#### Purpose:

- detect prevalence of smoking.
- know the attitude of health personnel regarding variables such as family history, age, sex, attempts/cease...
- to define the interest of staff on the cease-smoking habit.

**Material:** Sample: the staff of in our ABS; first week in November 2011. Cross-sectional descriptive study on prevalence/attitude of the staff on Tobacco-Dependence. Smoker=smokes daily; ex-smoker=smoker over six months and do not smoke for more than six months. Non-smoker rest.

**Methods:** The survey is pooled from Danilo 2003) / Masfer(2004), adding Test-Fagerström -modified; study history and smoking habit. Total privacy and anonymity in surveys. Analysis of statistical data: test-chi-2

#### Results:

- a)-43 surveys were collected from 59(= 72,9% response),16males (37,2%)-27 females (62,8%)
- b)-14 physicians(7females),Nursing 11(10females),10 administrative staff (8 females),6-medical transportation(6 men),2 cleaners women).
- c)-9 smokers (prevalence =20,9%),17 ex-smoker(39,5%),17 non-smokers(39,5%).
- d)-Prevalence by segments: Administrative= 20%; Nursing= 18,8%; doctors=21,4%. Transportation-health=33,3%. No differences by sex/staff
- e)-Increased prevalence in 31-40 years (33,3% of smokers) and in 51-60 years (44,4% of smokers)
- f)-Smokers:average consumption=10,3 cigarettes / day(16 women,men 5,8).
- g)-Prime cigarette=17,1 years (15,5-in ex-smokers);reach 5 cigarette / day=19,5 years 18,3.ex-smoker)
- h)-Percentage parents-smokers= 77,7% (smokers)-70,6% (ex-smokers)-52,9% (non-smoking).
- i)-Tobacco dependence: high=0%; mean=22,2=77,8% low.
- j)-Intent-cessation = 55,6%(75 females/4 men).
- k)-The 77,8% of smokers want a program of treatment in centre.

#### Conclusions:

- Smoking is significantly smaller in our medical and nursing according Survey / Tobacco / 2010/ Spain.
- The Transportation-health staff has prevalence very high.
- The antecedent parent-smokers smoking are associated with smoker.
- The desire of treatment program(78%) isn't associated to intention to attend the program(67%)

Disclosure: No conflict of interest declared

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**The effects of using practice guidelines for ventilator removal at the surgical intensive care unit and the accident-surgery ward of Songkhla Hospital**

P. Ingkawaniij, P. Chittrakul, S. Sikkaphun, A. Chamnoghphak  
*Surgical Intensive Care Unit and the Accident-surgery Ward of Songkhla Hospital, MOPH, THAILAND, AMPORE MUAUN, SONGKHLA, Thailand*

**Objective:** To compare the length of time for ventilator removal, and the incidence of ventilator-induced lung inflammation before and after the use of the practice guidelines for ventilator for ventilator removal

**Methods:** This quasi-experimental study employed two groups of subjects measured after the experiment taking place during October 2010-February 2011. The subjects were 50 ventilator patients; the instruments were: a clinical chart of practice guidelines for ventilator removal for health personnel, and records of observation on the use of the guidelines for ventilator removal. The data were analyzed using the descriptive statistics.

**Results:** After the use of the clinical chart as guidelines for ventilator removal, it was found that the number of days for ventilator removal reduced from 5.9 days to 3.3 days. The incidence of ventilator-induced lung inflammation reduced from 14.3 times per 1,000 ventilator days to only 7.5 times per 1,000 ventilator days.

**Conclusions:** The clinical chart for ventilator removal was practice guidelines for ventilator removal that the Infection prevention and control unit jointly made with a multidisciplinary group for patient safety. Personnel had the same practice guidelines resulting in clear work standards.

Disclosure: No conflict of interest declared

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**“Not everything that whistles is asthma”**

A. Caamaño, P. Rodriguez Casal, C. Rial, S. García Álvarez  
*Primary Care, SERGAS, Pontevedra, Spain*

Female, 74 years old. She had a personal history of asthma, hypertension and dyslipidemia. She was a farmer. She had pets like dogs, cats, hens and pig. She went to Primary Care because she had irritative cough and dyspnea for duration of six months, but it has worsened in the last week. Occasionally, she woke up at night with cough and dyspnea. No orthopnea concerns or symptoms of gastro-esophageal reflux. The physical examination revealed the presence of diffuse wheezes in both hemi thorax and crackles in right basal on auscultation. The basal saturation was 97%. We did a chest radiograph, which was normal. The spirometry test had restrictive pattern without functional improvement after bronchodilator test. Differential diagnosis: asthma, idiopathic pulmonary fibrosis, COPD and hypersensitivity pneumonitis. The patient was referred to the pulmonary service. After biopsy and TC the diagnosis of hypersensitivity pneumonitis was confirmed. Hypersensitivity pneumonitis or extrinsic allergic alveolitis is a group of diseases characterized by immune inflammatory reaction affecting the terminal bronchioles, the alveoli and pulmonary interstitial and it is associated with intense exposure and/or repeated exposure to organic dusts. It is important to make an accurate medical history, physical examination and spirometry, which brings us to a suspected diagnosis at Primary Care. Treatment consists primarily of recognition, elimination of the etiologic agent and use of corticosteroids.

Disclosure: No conflict of interest declared

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**Pleuritic pain in side**

C. Rial, S. García Álvarez, A. Caamaño, P. Rodríguez-Casal  
*Primary Care, SERGAS, Pontevedra, Spain*

32-year-old female went to emergency room because she had pain in left hemi-thorax. This pain appeared with the profound inspiration, the cough and the burping, which it radiates up into the neck. She had neither dyspnea nor fever. He had spontaneous abortion 1 week ago. The physical examination is unremarkable. In the laboratory test appeared an alteration in the coagulation test, with levels of D Dimer was 853. Chest radiography did not show pathology. CT-angiography of thorax showed an occlusive defect in a segmental branch of the left lower lobe artery. They started treatment with heparin and warfarin, and she was admitted in Respiratory Department.

A new complete coagulation test showed a homocysteine levels (9.49), anticardiolipin antibodies (IGG= 4.5, IGM=6.8) and lupus anticoagulant testing positives. Eco-Doppler of the lower limbs, abdominal ultrasound and echocardiography did not show pathological findings.

She was discharged from the hospital with follow in the respiratory, haematology and gynaecology units.

Differential Diagnosis: thrombosis, venous thrombosis, arterial thrombosis and thrombotic microangiopathies.

The antiphospholipid syndrome (APS) is characterized by the occurrence of venous or arterial thrombosis or of specific pregnancy morbidity, in the presence of laboratory evidence of antiphospholipid antibodies (aPL). APS occurs as a primary condition or in the setting of an underlying systemic autoimmune disease, particularly systemic lupus erythematosus (SLE). The presence of aPL in the serum of patients with SLE has been identified as an independent risk factor for premature death. Proper clinical suspicion is necessary for correct treatment can begin as soon as possible.

Disclosure: No conflict of interest declared

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**Tobacco and perception of asthma control in Catalunya. ASMAADUAL Study.**

P. Rubinstein Aguñin<sup>1</sup>, P. Gonzales Flores<sup>2</sup>, J. Sellares<sup>3</sup>, L. Casas<sup>4</sup>, V. Lopez Marina<sup>5</sup>, N. Rodriguez Valdivia<sup>1</sup>, M. Mourelo Cejeiro<sup>6</sup>, A. Brau Tarrida<sup>7</sup>, M. De la Poza<sup>8</sup>, ASMAADUAL GROUP<sup>1</sup>

<sup>1</sup> *Pneumologia, Hospital General de Catalunya, Barcelona, Spain;* <sup>2</sup> *Instituto Catalán de la Salud, ABS La Farigola, Barcelona, Spain;* <sup>3</sup> *Pneumologia, Hospital Clinic i Provincial, Barcelona, Spain;* <sup>4</sup> *Pneumologia, Hospital Sant Joan de Deu, Reus, Spain;* <sup>5</sup> *Instituto Catalán de la Salud, ABS Píera, Barcelona, Spain;* <sup>6</sup> *Instituto Catalán de la Salud, ABS Gòtic, Barcelona, Spain;* <sup>7</sup> *Instituto Catalán de la Salud, ABS La Mina, Barcelona, Spain;* <sup>8</sup> *Instituto Catalán de la Salud, ABS Carles Ribas, Barcelona, Spain*

Tobacco's laws have been recently actualized in 2011. The objective of our study was to describe the perception of control of asthma symptoms in relation to exposure to tobacco smoke in adult asthmatic patients in Catalonia

**Material and Methodology:** 55 doctors of the 4 provinces of Catalonia participated. The first 20 asthmatic

adult patients filled a 100-questions-questionnaire, between February and April 2012 and analyzed centrally with a SAS 9.0 program.

**Results:** 578 patients participated. Women 399 (70%), age 47 years (17.5), 95% from urban and 5% rural areas.

79% (446) of patients believe that smoking is harmful to their asthma. According to the Asthma Control Test (ACT), those patients with insufficient control of asthma (ACT<20) have greater perception of prejudice (p 0.0125). 69% (379) note differences to no longer be exposed to cigarette smoke, without differences between well and poorly controlled patients (p 0.17). 84% (470) believes that the „new anti-smoking Spanish law“ has been beneficial for asthma control, with no differences according to the ACT (p 1.00).

**Conclusions:**

1. The majority of patients believe that tobacco is harmful to their asthma control, being significantly higher in patients with worse control according to ACT.
2. The stop being exposed to tobacco smoke is beneficial in the perception of symptoms regardless of the degree of asthma control.
3. The new legal regulation of tobacco consumption is positively valued by asthmatic patients in Catalonia.

Disclosure: No conflict of interest declared

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### Clinical and epidemiological features of asthmatic patients in Catalonia. ASMDUAL Study

P. Gonzales Flores<sup>1</sup>, P. Rubinstein Aguñin<sup>2</sup>, V. Lopez Marina<sup>3</sup>, S. Sanchez Casco<sup>1</sup>, X. Garcia<sup>4</sup>, T. Navarro Sierra<sup>5</sup>, Y. Sanz Gonzalez<sup>6</sup>, S. Riera<sup>6</sup>, C. Galván<sup>7</sup>, ASMDUAL GROUP<sup>2</sup>

<sup>1</sup> Instituto Catalán de la Salud, ABS La Farigola, Barcelona, Spain; <sup>2</sup> Pneumologia, Capio Hospital General de Catalunya, Barcelona, Spain; <sup>3</sup> Instituto Catalán de la Salud, ABS Píera, Barcelona, Spain; <sup>4</sup> Medicina, Centre Mèdic Martorell, Barcelona, Spain; <sup>5</sup> Insituto Catalán de la Salud, ABS Ripollet, Barcelona, Spain; <sup>6</sup> Instituto Catalán de la Salud, ABS Gavà, Barcelona, Spain; <sup>7</sup> Instituto Catalán de la Salud, ABS Cornellà, Barcelona, Spain

**Objective:** To determine the main clinical features and epidemiological group of asthmatic patients of diverse populations of Catalonia

**Methodology:** Observational and descriptive study. We held from January to April 2012 in health institutions in Catalonia. We proceeded to apply a 100 questions survey to the first 20 patients that had asthma. The asthma control was calculated on the basis of the ACT (Asthma Control Test). The results were analyzed using the statistical package SAS version 9.

**Results:** Were recruited 578 patients, of which 399 (70%) were women. The median age was 47.3 (17.5); 259 (46%) patients were diagnosed by their family doctor, while 189 (34%) were diagnosed by a pulmonologist.

Regarding the use of complementary tests: 423 (74%) had allergies tests made and 591 (91%) had a spirometry carried out at least in the last year.

With regard to the control of asthma: 427 (75%) were controlled in the scope of care primary. 392 (68.5%) according to the ACT asthma was well-controlled (ACT > 20).

Regarding to medication cumplimentation, 159 patients (45%) for those who responded the question forgot to take their medication for asthma, and 118 (33.2%) left them voluntarily in some occasions.

#### Conclusions:

1. Analyzed patients group has good control of asthma according to the ACT (68,5%)
2. There is an elevated number of patients that non-compliance with treatment (78%)
3. Asthmatic patients in this study have a high percentage of complementary tests (92% spirometers and 74% allergy testing)

Disclosure: No conflict of interest declared

1039

### Comparing the care for community-acquired pneumonia in day-hospital and hospital settings

Z. Lazzat, Z. Julia, K. Alima, S. Gaziza

Centre of Continue Professional Development, West Kazakhstan Marat Ospanov State Medical University, Aktobe, Kazakhstan

**Objective:** To determine what kind of resources for treating children with community-acquired pneumonia (CAP) in day-hospital (primary care centre) and in hospital settings is used.

**Methods:** During a 10-months period 38 cases in day-hospital and 244 cases in hospital with CAP were investigated. The volume and costs of care in both settings were explored.

**Results:** Complete blood count, urinalysis, chest X-ray were investigated in all patients, sputum analysis was investigated only in hospital. 28% of children in hospital received more than 1 antibiotic, whereas in the day-hospital, this indicator was 10.5%. All patients in hospital received expectorants for treating CAP versus 2,6% of children with cough medicines in day-hospital. Most commonly used types of antibiotics in both settings were cephalosporins, penicillins, macrolides. Physiotherapy (electrophoresis, ultra-high-frequency therapy) and inhalations with ambroxol were prescribed to all patients, but postural drainage and massage were used only in hospital. The mean direct cost of pneumonia treated in the day-hospital setting was 60 euros, whereas the mean cost of cases treated as in-patients was 360 euros. All children in both environments were successfully treated equally.

**Conclusion:** The cost of treatment of CAP is six times greater in the hospital versus day-hospital. The volume and costs of medical care is increased by low-effective interventions. The experience of day-hospital therapy was perceived as more rational and cost-effective.

Disclosure: No conflict of interest declared

1098

**Nebulized hypertonic saline solution for acute bronchiolitis in infants**P. Chaves<sup>1</sup>, M. Carvalho<sup>2</sup>, A. Pedro<sup>3</sup><sup>1</sup> Family Medicine, UCSP Monte Abraão, Lisbon, Portugal; <sup>2</sup> Family Medicine, UCSP Buraca, Lisbon, Portugal; <sup>3</sup> Family Medicine, USF Arco-Iris, Lisbon, Portugal

**Objective:** To review recent evidence on the effects of nebulized 3% hypertonic saline solution (HS) for acute bronchiolitis in infants. Acute bronchiolitis is the most common cause of lower respiratory tract infection in the first year of life. Airway edema and mucus plugging are the predominant features of acute bronchiolitis. Nebulized HS, improves muco-ciliary function. An intervention that could reduce pathological changes is beneficial, and hypertonic saline solution is low cost to produce

**Methods:** We searched the National Guidelines Clearinghouse, Cochrane Library, Medline, Clinical Evidence, bandolier, Dynamed, for Clinical Practice Guidelines, systematic reviews and randomized controlled trials, publish in the last 10 years with MeSH terms *hypertonic saline solution*, *Nebulizers and vaporizers* and *viral bronchiolitis*. The Oxford Center for Evidence-based Medicine- Levels of Evidence was used to access the quality of studies, the levels of evidence and the strength of recommendations.

**Results:** Five articles were selected. These included one systematic review, three randomized controlled trials and one retrospective study. Three studies (evidence level 1A, 1b, 2b) conclude that nebulized 3% HS is efficient and safe for infants with moderate to severe bronchiolitis. The remaining two articles (level 1b, 2b) did not result in any statistically benefit.

**Conclusions:** The use of nebulized 3% HS is controversial. Clinical trials are heterogeneous with regard to study design but current evidence suggests that in children with acute bronchiolitis nebulized 3% HS may provide a cheap, effective therapy, with a low rate of adverse effects (Strength of recommendation B).

Disclosure: No conflict of interest declared

1155

**Treatment and degree of control of asthma in primary care. ASMAADUAL Study**V. Lopez Marina<sup>1</sup>, P. Rubinstein Aguñín<sup>2</sup>, P. Gonzales Flores<sup>3</sup>, A. Pedro Pijoan<sup>4</sup>, J. Seuba<sup>5</sup>, N. Perallons Solans<sup>6</sup>, M. Mourelo Cejeiro<sup>7</sup>, A. Brau Tarrida<sup>8</sup>, M. De la Poza<sup>9</sup>, ASMAADUAL GROUP<sup>2</sup>

<sup>1</sup> Instituto Catalán de la Salud, ABS Piera, Barcelona, Spain; <sup>2</sup> Pneumologia, Capio Hospital General de Cataluña, Barcelona, Spain; <sup>3</sup> Instituto Catalán de la Salud, ABS La Farigola, Barcelona, Spain; <sup>4</sup> Instituto Catalán de la Salud, ABS Gaudí Sagrada Família, Barcelona, Spain; <sup>5</sup> Medicina, Centre Mèdic Casteldefells, Barcelona, Spain; <sup>6</sup> Instituto Catalán de la Salud, ABS Polinya, Barcelona, Spain; <sup>7</sup> Instituto Catalán de la Salud, ABS Gòtic, Barcelona, Spain; <sup>8</sup> Instituto catalán de la Salud, ABS La Mina, Barcelona, Spain; <sup>9</sup> Instituto Catalán de la Salud, ABS Carles Ribas, Barcelona, Spain

**Objective:** To describe the pharmacological treatment, adverse effects and degree of control of asthmatics.

**Methodology:** Descriptive, cross-sectional study, multicentric across Catalonia; 55 physicians (family, Allergists, pulmonologists and internists) from primary care centers that became a self-administered survey their asthmatic in february to April, 2012. Variables: sex; age; smoking; treatments; adverse effects (AE); degree by the Asthma Control Test and control (ACT ≤ 19 insufficient control, and > 19 good control (GC)). Statistics: mean (X), standard deviation (SD), percentages, T-Student independent and test exactly of Fisher.

**Results:** Asthmatic 578, 70% women and age (X±DE) 47, 3±17, 5 years. 12.8% smoke. Treatments: 89% takes any treatment; salbutamol 48%, budesonide/formoterol 28%, 18% budesonide, fluticasone/salmeterol 17%, 13% montelukast, etc; p < 0.05 for the GC. Adverse effects: 14.1% had AE; tachycardia 35.5%, neuromuscular 47%, oropharyngeal 21%, p < 0.05 for the GC. GC: good control perception 68.5%; ACT < 19 53.7%; 70.6% correlation between good control perception and ACT > 19 (p < 0.0001); Asthma affects usual diary activities 69.5% more frequently on poor controlled patients (p < 0.0001), 68% work (p < 0.0001), 72% student activity (p < 0.003), 76.5% sexuality (p < 0.0001), 55.6% sport activity (p < 0.0001), 66.1% holiday (p < 0.0001).

**Conclusions:** Asthmatics are middle-aged and it hurts them tobacco.

90% takes drugs (inhalers), 14% showing adverse effects.

A 68.5% regard good control perception, but according to the ACT only 53.7% presents sufficient control, with involvement by more than 60% of patients with insufficient control.

Disclosure: No conflict of interest declared

1157

**Knowledge and attitudes of the public on Chronic Obstructive Pulmonary Disease (COPD)**

F.S. Lim

*Disease Management Department, National Healthcare Group, Singapore, Singapore***Objective:**To determine the knowledge and attitudes of the public on Chronic Obstructive Pulmonary Disease**Methods:**Face-to-face interviews using questionnaires were conducted at 10 different locations near major transport/shopping centres. Participants' sampling proportions were ascertained based on the general population's distribution in terms of gender, age and race.**Results:**

402 people were surveyed; 49% were male while 51% were female.

16% were 15-19 years old, 17% 20-29 years old, 21% 30-39 years old, 20% 40-49 years old, 16% 50-59 years old and 9% 60 years old and above.

90% of all responders have NOT heard of COPD: 87% of smokers have NOT heard of COPD while 91% of non-smokers have NOT heard of COPD.

72% thought smoking was the main cause of COPD (among the smokers, 61% thought so, compared with 76% among non-smokers). 56% thought the most important thing one could do to prevent COPD was quitting smoking or not smoking.

66% responded incorrectly that COPD only affected those 40 years old and above. Asked what possible symptoms of COPD were, 56% said breathlessness, 54% said chronic cough, 22% said wheezing and 14% said increased sputum production.

20% of respondents were regular smokers, of which 59% have thought about stopping smoking. Of the regular smokers who have thought about quitting smoking, 59% were planning to stop smoking in the next one month.

**Conclusions:**More effective public health education on COPD is needed to improve the public's knowledge on COPD.

Smoking cessation efforts could be stepped up for smokers in view of the high proportion of smokers who have thought of quitting.

Disclosure: No conflict of interest declared

1182

**Control of asthma in patients using anticholinergics drugs. ASMAADUAL Study**P. Gonzales Flores<sup>1</sup>, P. Rubinstein Aguñin<sup>2</sup>, N. Perallons Solans<sup>3</sup>, X. Garcia<sup>4</sup>, A. Pedro Pijoan<sup>5</sup>, T. Navarro Sierra<sup>6</sup>, Y. Sanz Gonzalez<sup>7</sup>, S. Riera<sup>7</sup>, C. Galvan<sup>8</sup>, ASMAADUAL GROUP<sup>2</sup><sup>1</sup> *Instituto Catalán de la Salud, ABS La Farigola, Barcelona, Spain;* <sup>2</sup> *Pneumologia, Capió Hospital General de Cataluña, Barcelona, Spain;* <sup>3</sup> *Instituto Catalán de la Salud, ABS Polinya, Barcelona, Spain;* <sup>4</sup> *Medicina, Centre Mèdic Martorell, Barcelona, Spain;* <sup>5</sup> *Instituto Catalán de la Salud, ABS Gaudí Sagrada Família, Barcelona, Spain;* <sup>6</sup> *Instituto Catalán de la Salud, ABS Ripollet, Barcelona, Spain;* <sup>7</sup> *Instituto Catalán de la Salud, ABS Gavà, Barcelona, Spain;* <sup>8</sup> *Instituto Catalán de la Salud, ABS Cornellà, Barcelona, Spain***Objectives:**

1. Determine the degree of asthma control in population samples of different basic areas of health in the metropolitan area of Barcelona.
2. Quantify the degree of asthma control in patients that are using Anticholinergics drugs.

**Methodology:** Cross-sectional descriptive study. From February to April 2012 we recruited asthmatic adults patients from Catalunya attended in the Primary Assistance level. Demographic variables were obtained control of asthma, treatments, exacerbations and use of new technologies for the control of asthma among others. The statistical significance level was 5%. We used the statistical package SAS version 9.0 for the analysis.**Results:** 578 patients participated, with an average age of 47.3 years (DE 17.5), being the percentage of women of 70%. According to the score of the Asthma Control Test (ACT), the average score was 19.2. Control was: adequate or optimum 292 (53.7%) and insufficient 250 (46.3%),  $p = 0, 0048$ . Related to treatments: 507 (89,1%) refers to be taking daily medication for asthma. 39 patients receive anticholinergics every day (20 tiotropium and 19 ipratropium)As for patients taking anticholinergics, 23 (59%) have their asthma well-controlled, without significant differences between ipatropio and tiotropium ( $p = 0, 1485$ ).**Conclusions:**

1. The control degree of asthmatic patients studied was 53.7%.
2. The degree of asthma control in patients who use anticholinergic was 59%.
3. There is no difference on ACT between patients receiving ipratropium and tiotropium.

Disclosure: No conflict of interest declared

1386

**Prevalence of chronic obstructive pulmonary disease and association with other co-morbidities: results from an academic primary care unit in crete, greece**C. Lionis<sup>1</sup>, A. Bertias<sup>1</sup>, G. Duijker<sup>1</sup>, D. Kounalakis<sup>1</sup>, E. Lintovoi<sup>1</sup>, K. Chliveros<sup>1</sup>, E. Symvoulakis<sup>1</sup>, M. Titaki<sup>2</sup>, A. Almpantaki<sup>2</sup>, A. Koutis<sup>1</sup><sup>1</sup> Clinic of Social and Family Medicine, University of Crete, Heraklion, Greece; <sup>2</sup> Primary Care Unit of Heraklion, Municipality of Heraklion, Heraklion, Greece

**Introduction:** An academic Primary Care Unit (PCU) primarily has been recently developed in urban Heraklion with the aim to provide primary care services to local residents with low income or with no insurance during an austerity period for Greece. Chronic Obstructive Pulmonary Disease (COPD) and its co-morbidities has received a growing interest in the literature. This practice-based research reports on COPD co-morbidities resulted from the analysis of the patient records available in this PCU.

**Methods:** A retrospective analysis of the ICPC-2 electronic patients records (EPR) of patients visiting the PCU was conducted. Chronic co morbidity to the COPD diseases or conditions that they searched were: Coronary Heart Disease (CHD), Heart Failure (HF), Diabetes Mellitus (DM), Anaemia, Osteoporosis and Depression.

**Results:** Since April 2011, 851 adults (652 females, 199 males) with a median age of 66 years (min 18; max 104; InterQuartile Range 21) were registered in the EPR system. Sixty-two patients (7.3%) were diagnosed with COPD. Among these patients, 23 (37.1%) suffered also from CHD, 14 (22.6%) from DM, 24 (38.7%) from Osteoporosis, and 7 (11.3%) from Depression. Prevalence of COPD was associated increasing age [P-Value<0.0001; Odds Ratio (OR) 1.04 per 1 year; 95% Confidence Interval (CI) from 1.02 to 1.07], male gender (P-Value<0.0001; OR 3.2; 95% CI from 1.9 to 5.5) and the number of other co-morbidities (P-Value=0.045; OR 1.39; 95% CI 1.01 to 1.92).

**Conclusion**

This paper adds the complexity of COPD management and it underlines the importance of the treatment of COPD co morbidities.

Disclosure: No conflict of interest declared

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**Pregnancy and asthma – management review**C. Duarte<sup>1</sup>, S. Carvalho<sup>2</sup>, I. Coelho<sup>2</sup>, L. Carreira<sup>3</sup>, E. Pinto<sup>3</sup>, J. Diez-Carvalho<sup>4</sup><sup>1</sup> MGF, USF Viseu Cidade, Viseu, Portugal; <sup>2</sup> MGF, USF Grão Vasco, Viseu, Portugal; <sup>3</sup> MGF, USF Viriato, Viseu, Portugal; <sup>4</sup> MGF, Centro de Saúde de Gouveia, Gouveia, Portugal

**Introduction:** Asthma is one of most frequent chronic pathologies during pregnancy, affecting 3 to 8% women and linked to a higher risk of maternal and fetal complications like perinatal death, intra-uterine growth restriction, pre-eclampsia and congenital malformations. This occurs mainly in poorly controlled cases which reinforce the need to better asthma management during pregnancy.

**Objectives:** Review the evidence available about the effects of asthma in pregnancy and the principles of pharmacological management of asthma during pregnancy.

**Methods:** Bibliographic search Pubmed/Medline, UpToDate and Cochrane Library using keywords “Asthma” and “Pregnancy” in Portuguese and English between 1997 and 2012.

**Results:** There’s a direct link between the severity and worsening of asthma during pregnancy. There’s currently no evidence showing higher adverse pregnancy outcomes linked to the use of inhaled  $\beta_2$ -agonists, teofiline and inhaled corticosteroids in therapeutic doses. Regarding oral corticosteroids, although they appear slightly associated with peri-natal complications, their use in moderate to severe asthma is safer than the absence of treatment.

**Conclusions:** The diagnosis of asthma in pregnant is straightforward. However, the doubts arise when it comes to treatment choices in spite of the countless studies about their safety. There is a step-by-step therapeutic approach based on the recommendations of the National Asthma Education Program of the Working Group on Asthma and Pregnancy, anyhow, a criterious and individual evaluation of the pros and cons of pharmacological management constitute a challenge in the clinical practice needing a constant scientific up-to-date.

Disclosure: No conflict of interest declared



1442

**Tuberculosis – an unusual case**F. Mateus<sup>1</sup>, J. Araújo<sup>2</sup><sup>1</sup> Family Medicine, USF S.Martinho, Penafiel, Portugal; <sup>2</sup> Family Medicine, USF Terras de Souza, Paredes, Portugal

**Objective:** Highlight Family Doctors (**FD**) role as an important Primary Health Care (**PHC**) factor on the Endobronchial Tuberculosis (**ET**) diagnosis, a rare type of pulmonary tuberculosis (**PT**).

**Methodology:** A literature review was conducted through UpToDate and Pubmed databases published between 2008 and 2012, using MeSH terms: “tuberculosis”; “endobronchial tuberculosis”; “pregnancy”.

**Results:** A 27 year old pregnant, residing in **PT** endemic area with a childhood history of bronchial asthma came to the **FD** with dragging cough, mild fever and asthenia being immediately sent to the local Pulmonology Diagnostic Center (**PDS**), with suspicion of **PT**. Having a negative clinical evaluation was still sent to the pulmonology consultation where a bronchial fibroscopy (BFC) was performed. All results proved to be normal, being interpreted as *pregnancy-induced asthma*.

At 16 weeks of pregnancy, showed at ER with a bulging cervical. An excisional cervical ganglion biopsy revealed a *lymph node tuberculosis*; Followed a period of 9 months of antituberculosis treatment.

Patient continued to be followed at **PDS** and 6 months after delivery, during a chest X-ray routine, a suspicious image was shown being sent to pulmonology; a BFC was done revealing a bronchial tumor mass, compatible with **ET**.

Restarted antituberculosis therapeutic and steroids presenting clinical and radiological improvements.

**Conclusions:** **ET**, among other rare forms of **PT**, assumes an increasingly prominent role. **PT** is among the three leading causes of death among women aged 15–45 years in high burden areas. The **PHC** assumes a key role in early detection and orientation of this disease.

Disclosure: No conflict of interest declared

1650

**Tuberculosis and general practitioner role in its diagnosing.**

A. Doka

Q. SH N2, Shoqata e mjekut te familjes, Lushnje, Albania

Actually, the last three years, we had an increasing number of patients with TB. 35 new cases with TB were diagnosed in our city with 180.000 people in 2011. This is one of these cases where we helped on diagnosing TB.

A 23 years old man presented in general practitioner because of high fever, which has begun nearly two months before. He smokes, but didn't use alcohol or any drugs. He denied to have any contacts with TB patients and he didn't have TB in his family. He referred to our pulmonologist and performed fibrobronchoscopy and bronchial lavage, which resulted negative, but Mantu was positive. He performed also CT where a solitary nodule has been seen. Later he presented to infectious disease specialist, because of high fever and after one month they decided to treat him with ciprofloxacin and amikacin. He stopped to take medicine, but he continued to have lost of weight and 2-3 episodes of fever which resolved spontaneously. After one year he presented to GP again, because of high temperature 40° C. I consulted the patient with our pulmonologist again, where smear was positive for TB, on chest X ray we saw destruction in upper left lobe and high gamma interferon. Treatment with antibiologic drugs was successful.

Disclosure: No conflict of interest declared

1668

**Device for detecting obstructive respiratory pathology: COPD6**R. Pinto<sup>1</sup>, E. Grau<sup>2</sup>, M. Arteaga<sup>3</sup>, L. Roig<sup>4</sup>, R. Martínez<sup>4</sup>, A. Pérez<sup>1</sup>, N. Montellà<sup>5</sup><sup>1</sup> Family Medicine, EAP Granollers 4sud (Sant Miquel), Granollers, Spain; <sup>2</sup> Family Medicine, EAP Palau de Plegamans, Palau de Plegamans, Spain; <sup>3</sup> Family Medicine, EAP Vilanova del Vallès, Vilanova del Vallès, Spain; <sup>4</sup> Family Medicine, EAP La Garriga, La Garriga, Spain; <sup>5</sup> Family Medicine, ABS Granollers centre, Granollers, Spain**Objectives:**

- Evaluate whether or not the COPD-6 detects airway obstruction in smokers / ex-smokers  $\geq 40$  years, treated in primary care (PC) using spirometry as a reference.
- Compare the percentage of obstruction detected with the quotient FEV1/FEV6 under recommended threshold (0.70) and a higher ratio (0.75).

**Methods:** A descriptive, cross-sectional multicenter validation of a diagnostic test. From June 2011 to April 2012. Smokers / former smokers  $\geq 40$  years with no diagnosis of COPD treated at two centers in AP. Study variables: sex, age, BMI, smoking, packet rate / year spirometric parameters: FEV1, FVC, FEV1/FVC pre and post bronchodilator (PBD), COPD6 parameters: FEV1, FEV6, FEV1/FEV6 and GOLD classification.

**Results:** N: 218. 61.5% men. Average age 56.6 years. Smokers 50%. Smoking index 28.6. BMI: 28% normal weight, 44% overweight, 25% obese. Spirometric COPD Diagnosis: 21.5% (GOLD stage: 39% mild, 52% moderate, 7% severe and very severe 2%). PBD 8% positive. Obstruction: 17% and 25% COPD6 spirometry. In relation to the detection of clogging, FEV1/FEV6  $< 0.70$  with 56.36% COPD6 sensitivity, specificity 96.32%, 83.78% PPV, NPV 83.7%. If cutoff  $< 0.75$ , sensitivity 83.6%, specificity 85.9%, PPV 66.7%, NPV 94%.

**Conclusions:** The COPD6 is not a useful tool for detecting obstruction with the cutoff recommended by the manufacturer ( $< 0.70$ ), however, if set at 0.75 would be a good screening test.

Therefore, the COPD6 can help improve the underdiagnosis of COPD in AP.

Disclosure: No conflict of interest declared

**3.4. DIGESTIVE PROBLEMS**

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**The prevalence and treatment of constipation in the primary care**B. Aidukiene, K. Simanauskas, N. Burokiene, V. Kasiulevicius, V. Sapoka  
Faculty of Medicine: Clinic of Internal Diseases And Family Medicine, Vilnius University, Vilnius, Lithuania

**Aim:** the aim of our cross-sectional study was to evaluate causes, diagnostic, treatment features of constipation in the primary care.

**Methods:** was made random interviews of people between 20-80 years old. For interview was used questionnaire of KESS (*The Knowles- Eccersley- Scott- Symptom scoring system*) for the diagnostic of constipation and 13 questions to assess the risks. Pilot testing of questionnaire validity was carried out, the overall Cronbach alpha coefficient was 0.978. Software: SPSS 13.0..

**Results:** was interviewed 120 people, of which 41.67% were established constipations. The average age of patients with constipation was 53.27 years old (SD 12.63) and the healthy group- 35.76 years old (SD 10.94) ( $p < 0.05$ ). No differences were observed between men and women. The educational groups incidence of constipation was: high education - 31.34%, secondary- 45% and basic- 84.62%.

Higher consumption of fiber food, fluid were correlated with lower incidence of constipation, as well as higher levels of physical activity ( $p < 0.05$ ) and not found correlation between frequency, regularity of eating ( $p > 0.05$ ).

In assessing treatment, laxatives were used by 45% of all respondents, only 38% of patients with constipation reported seeing the physician and 12.9% weren't seeing a physician and weren't using any treatment.

**Conclusions:** Determined risk factors are correlated with higher incidences of constipation. We found no differences of morbidity between gender, different, than age and education groups. Patients don't seek a physician often and are treated independently.

Disclosure: No conflict of interest declared

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**A rare cause of abdominal pain, appendicitis epiploicae**A. Parlak<sup>1</sup>, A. Aytakin<sup>2</sup>, S. Develi<sup>3</sup><sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey

28 years old male patient was admitted to the emergency department with complaints of left lower quadrant abdominal pain existing for 2 days, nausea and vomiting. Patient's fever was 37.4°, heart rate was 94 beats / min and arterial blood pressure was 110/60 mmHg. The patient had no diarrhea. In abdominal examination, bowel sounds found to be normoactive, muscular defense in the left lower quadrant noticed and rebound tenderness suspected to be positive. There was no Mc Burney point tenderness; psoas and obturator tests also were negative. Further investigation revealed that nausea and vomiting had begun after the onset of pain. Patient's condition was evaluated to be compatible with diverticulitis. In complete blood examination, white blood cell count was 16.500/mm<sup>3</sup>, erythrocyte sedimentation rate was 35 mm/h and urinalysis evaluated as normal. In abdominal x-ray no pathology observed. The patient underwent abdominal ultrasonography (USG). In abdominal USG in the left lower quadrant, a finding compatible with edema on the descending colon was observed. Then abdominal computed tomography (CT) of patient was taken. In abdominal CT, density increase was observed compatible with inflammation of distal part of the descending colon in fat plans. In addition, ring shaped high density area which deriving from the medial wall of the distal colon, containing tissue in fat density, considered to be thickened visceral peritoneum was detected. Current situation was evaluated as appendicitis epiploicae which located in the distal part of the descending colon, caused by inflammation of peritoneal fat projections.

Disclosure: No conflict of interest declared

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**Irritable bowel syndrome management in the family medicine practice**

A.M. Slanina, D. Felea

Family Medicine Department, University of Medicine and Pharmacy „Gr. T. Popa“, Iasi, Romania

**Objective:** Irritable Bowel Syndrome (IBS), though frequent, has a non standardized treatment. Our goal was to evaluate the prevalence, the clinical use of diagnosis tools and the treatment approaches in a primary care setting.

**Material and method:** A total of 200 IBS patients have been diagnosed using the symptoms based questionnaire and the Rome III criteria, with subclassification based on the Bristol scale. The quality of life questionnaire (QoL-IBS) has been applied in selected patients. The treatment comprised three levels: level I – dietary measures, level II – added food supplements (fibers, pancreatic enzymes, lactobacilli and bulking agents) and level III – added pharmacological agents. Periodic evaluation for recurrences was performed.

**Results:** The incidence was 2.9%, with average age 31.28 years and female dominance. The most frequent was the constipation predominant type (IBS-C 32.5 %). The average score of QoL was 60.92, the lowest for IBS-C – 52.24, and the highest for IBS-A – 69. The treatment started on level I in 33% of patients, on level II in 36% and on level III in 31%. Level III led to the highest score of treatment efficacy with mebeverine at 2 weeks of treatment and trimebutine at 3 months. Full remission is present in 9.5% of patients, 53.5% presenting 1 to 3 recurrences.

**Conclusions:** IBS is frequent in the family medicine practice due to the contemporary diet. Diagnosis is facilitated by the use of questionnaires, and the treatment is based on dietary measures as well as on pharmacologic agents.

Disclosure: No conflict of interest declared

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**Ultrasound Incidental Pancreatic Cysts**A.Zacharof<sup>1</sup>, A.Mavrokefalos<sup>2</sup>, E.Kritikos<sup>3</sup>, C.Barbatis<sup>4</sup>

<sup>1</sup> 1st Department of Internal Medicine, Hellenic Red Cross Hospital, Athens, Greece; <sup>2</sup> Radiology Department, Hellenic Red Cross Hospital, Athens, Greece; <sup>3</sup> 1st Department of Surgery, Hellenic Red Cross Hospital, Athens, Greece; <sup>4</sup> Pathology Department, Hellenic Red Cross Hospital, Athens, Greece

**Objective:** Widespread use of abdomen ultrasound has led to the identification of patients with asymptomatic cystic lesions of the pancreas.

**Material and Methods:** One hundred twelve patients with pancreatic cystic lesions seen in our Department during 10 years (2000-2009).

**Results:** Seventy-eight (36.7%) of 112 patients was asymptomatic. Incidental cysts were smaller ( $3.3\pm 1.9$  vs  $4.6\pm 2.7$  cm;  $P<0.001$ ) and were found in older patients ( $65\pm 13$  vs  $56\pm 15$  years;  $P<0.001$ ). Seventy-eight percent of the asymptomatic patients and 87% of those with symptoms underwent surgery. Seventeen percent of asymptomatic cysts were serous cystadenomas; 28%, mucinous cystic neoplasms; 27%, intraductal papillary mucinous neoplasms; and 2.5%, ductal adenocarcinomas. The respective numbers for symptomatic cysts were 6%, 13%, 33%, and 10%. Ten percent of asymptomatic patients had a variety of other cystic lesions, and in 12%, no definitive cytologic or pathologic diagnosis was obtained.

Overall, 17% of asymptomatic patients had in situ or invasive cancer, and 42% had a premalignant lesion. When evaluated as a function of size, only 1 (3.5%) of 28 asymptomatic cysts smaller than 2 cm had cancer compared with 13 (26%) of 50 cysts larger than 2 cm ( $P<0.04$ ). Pseudocysts comprised only 3.8% of asymptomatic cysts compared with 19.4% of symptomatic cysts ( $P<0.003$ ).

**Conclusions:** Routine abdomen Ultrasound is common to find incidental pancreatic cysts. They occur in older patients, are smaller than symptomatic cysts, and are unlikely to be pseudocysts. More than half of them are either malignant or premalignant lesions and therefore cannot be dismissed.

Disclosure: No conflict of interest declared

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**Management of iron deficiency anaemia in primary care**

L. Horgan, T. Heffernan, A.Russell

Cork Road Clinic, Mallow Primary Healthcare Centre, Mallow, Cork, Ireland

**Background:** Iron Deficiency Anemia (IDA) occurs in 2-5% of men and postmenopausal women in the developed world. 4-13% of gastroenterology clinic referrals arise from a diagnosis of IDA made in primary care. Blood loss from the gastrointestinal tract is the commonest cause in men and postmenopausal women. IDA is suggested by a serum Haemoglobin concentration below the appropriate reference range in combination with a serum ferritin of  $<15\mu\text{g/dl}$  (in the absence of inflammatory disease).

**Methods:** A search was performed of Complete GP software package of patients on oral iron therapy and charts were reviewed. The Guidelines for the Management of Iron Deficiency Anaemia. GUT. 2011 and NICE Referral Guidelines for Suspected Cancer were used. An educational meeting was held to inform all practice staff.

**Results:** 62.7% of patients (9.3% male, 25.5% postmenopausal) diagnosed with IDA, failed to receive further serological/radiological/invasive investigations. 46% of patients did not have a follow up FBC at three months. Of the patients who had a follow up FBC 79% continued taking oral iron therapy despite normalization of their haemoglobin. 4.6% of patients diagnosed with IDA had coeliac serology results recorded. In 25.6% of patients IDA had been further investigated with a lower and/or upper GI tract scope.

**Conclusion:** This study has identified a hesitancy among general practitioners to refer cases of IDA for GI tract investigations. The failure to promptly investigate IDA can potentially stunt the early diagnosis of GI malignancy. With the educational intervention there will be increased awareness among practitioners of this.

Disclosure: No conflict of interest declared

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**Coeliac disease in seniors**L. Kukuckova<sup>1</sup>, K. Dostalova<sup>2</sup>, S. Moricova<sup>2</sup>, V. Sucha<sup>3</sup>

<sup>1</sup> Department of long term ill, Derer´s Hospital, University Hospital, Slovak Society of General Practice, Bratislava, Slovakia; <sup>2</sup> Faculty of Public Health, Slovak Medical University, Bratislava, Slovakia; <sup>3</sup> Department of long term ill, Derer´s Hospital, University Hospital, Bratislava, Slovakia

Prevalence of coeliac disease is 1:70 – 1:550 in the world. There is a significant lack of data on the frequency of the disease in the older population. Some authors point out that up to 20% of patients with coeliac disease are diagnosed after the age of sixty.

We present a case report of 83 year old polymorbid patient referred to the hospital for loss of appetite, diarrhea and weight loss lasting for 6 weeks. Despite of diet, use of probiotics and antidiarrheal drugs the diarrhea persisted.

We performed blood tests, abdominal sonography, computer tomography of the abdomen. Infectious etiology was excluded. Gastroscopy revealed antrumgastropathy and bulbopathy, biopsy for histological examination was taken. Because of the evidence of enterorrhagia colonoscopy and CT enteroclysis, but both examinations didn´t explain the etiology of diarrhea. Enterobiopsy results have shown a significant intraepithelial lymphocytosis consistent with MARSH I. The antibody testing with a focus on celiac disease and inflammatory bowel disease were negative. The genetic test for HLA DQ 2 (present in more than 90% of patients with coeliac disease) was positive. 14 days after beginning the gluten free diet the clinical condition improved and the diarrhea ceased. Due to polymorbidity of patient (chronic kidney disease and coronary artery disease) diagnosis had to be specified during hospitalization.

Many patients remain undiagnosed because of frequent occurrence of extraintestinal symptoms and polymorphic clinical symptoms. General practitioners shouldn´t forget about coeliac disease in differential diagnostic process in seniors with diarrhea.

Disclosure: No conflict of interest declared

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**Is it necessary to observe duodenal papilla in routine upper endoscopic surveillance? A comparison between expert and non-expert.**

B.K. Son, S.B. Ahn, Y.K. Jo, S.H. Kim, Y. Jo, Y.S. Park

Department of Internal Medicine, Eulji university School of Medicine, Eulji hospital, Seoul, Korea

**Objective:** It is not easy to observe descending part of the duodenum technically because it might cause complication such as perforation. We aimed to evaluate whether 2 endoscopists (expert vs. non-expert) could achieve a similar inspection level the major duodenal papilla.

**Method:** We conducted esophagogastroduodenoscopy (EGD) using forward-viewing endoscope from May to September in 2012. The examiners consisted of one endoscopy expert and one non-expert. We divided patients into five groups according to the inspection level.

**Results:** A total of 364 EGD were performed, of which 169 patients were examined by expert, and 195 patients were examined by non-expert (Mean age: 56.15±12.42, F:M 127:237). There was significant difference in the length of inserted endoscope for inspection of the major papilla between two examiners (68.83±5.73cm vs. 71.43±8.32,  $p=0.001$ ) Expert achieved higher rate of full inspection of the major duodenal papilla (group 1) (66.9% vs. 35.9%,  $p<0.001$ ). While group 5 (major papilla not inspected) was significantly higher in non-expert (4.7% vs. 18.5%,  $p<0.001$ ) despite entering descending part of the duodenum. Expert diagnosed papillitis in 3 patients and performed biopsies for the suspicion of papilla adenoma in 2 patients. Non-expert diagnosed papillitis in 1 patient.

**Conclusion:** We could hardly find significant lesions in descending part of the duodenum. However, considering significant differences of the inspection level of the major duodenal papilla and length of the inserted endoscope according to the proficiency of endoscopist, non-specialists need to give an effort to shorten the endoscope for the effective inspection of the major duodenal papilla.

Disclosure: No conflict of interest declared

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**Benefits of an early detection of helicobacter pylori**

M. Menéndez-Suárez, B. Velayos-Jimenez, E. Castro-Manrique, F. Lozano-de Pando, V. Bachiller-Sanz, M.S. García-Roca, T. González-Torres, N. Redondo-Gallego, G. Fernández-Pérez, R. Aller-de la Fuente  
Gastroenterology, Hospital Clínico Universitario, Valladolid, Spain

**Objectives:** Appraise the early detection of Helicobacter Pylori utility in the Digestive Service.

Assess the ability to treat the disease immediately after the performance of a gastroscopy, without having to visit the General Practitioner a second time.

**Methods:** During a period of 29 months all patients referred from Primary Care to the Digestive Service of the Clinic University Hospital of Valladolid requiring the performance of Rapid Urease Test became part of the study.

In all cases the result was checked after 5 minutes and subsequently collated with the final result at 24 hours.

**Results:** A total of 165 gastroscopies requiring Rapid Urease Test were performed. 90 patients resulted positive at 5 minutes, of which 62 tested final positive. 75 patients resulted negative at 5 minutes, of which 68 tested final negative.

Diagnostic yield: 78.8%

Sensitivity: 89.9%

Specificity: 70.9%

Positive predictive value: 68.8%

Negative predictive value: 90.6%

**Conclusions:** An early diagnosis can be made within 5 minutes of Rapid Urease Test performance.

Patients can go home with a prescribed treatment, to be started at 24 hours in cases of a positive result, or no treatment when negative. If final result is does not correspond with the early diagnosis, the endoscopist would make the appropriate changes through phone call.

This would save time and costs to the Primary Care Service. It also means comfort for patients as they would not need to get a new appointment for result or treatment.

Disclosure: No conflict of interest declared

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**The presence and frequency of dyspepsia and GERD among middle-aged population**

L.Mitic<sup>1</sup>, I.Mitic<sup>1</sup>, V.Veljovic<sup>2</sup>

<sup>1</sup> General medicine, Institute for occupational health, Ns, Serbia; <sup>2</sup> Occupational medicine, Institute for occupational medicine, Nis, Serbia

**Objective:** The aim of our study was to analyze the presence and frequency of digestive symptoms and complications of dyspepsia and GERD, which developed as the consequence of stress and inadequate food intake (fast food, alcohol, carbonated drinks).

**Methods:** For the period of 3 months in 2012, we analyzed 30 patients, of both sexes (f:m=19:11), middle-aged (40-73 years), in our out-patient department. All of them had digestive symptoms. They completed specially made questionnaire for dyspepsia and GERD self-assessment. We also used the data from medical charts.

**Results:** We have determined that the main role in 53% of all cases had social-economic factors (stressful jobs, smoking, alcohol, wrong food). We found that the average duration of symptoms were 3 weeks and the most common were: loss of appetite 15 pts(50%), nausea 20 pts(66,6%), epigastric pain 20 pts(66,6%), weight loss 14 pts(46,6%), heartburn 17 pts(56,6%), vomiting 6 pts(20%), melena 4 pts(13,3%).83,3% of all patients had 2 or more symptoms,53,3% were positive on Helicobacter pylori. The most common complications were: erosion of gastric lining 4 pts(13,3%),erosion of duodenal bulb 2 pts(6,6%), polyps 2 pts(6,6%), gastric cancer 1 patient(3,3%).

**Conclusions:** Our study showed the high prevalence of dyspeptic syndrome and GERD among middle-aged population. There is also a correlation between these conditions and stress and inadequate nutrition. Dyspeptic syndrome and GERD can cause serious complications, which can lead to shorter life expectancy, so it is important to constantly educate patients of its preventable causes, such as harmful effects of fast-food, smoking, alcohol and stressful situations.

Disclosure: No conflict of interest declared

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**Evaluation of body parameters in patients with nonalcoholic fatty liver disease**T. Akyol<sup>1</sup>, A. Tanoglu<sup>2</sup>, U. Aydogan<sup>3</sup>, O. Sari<sup>3</sup><sup>1</sup> Gastroenterology, Corlu Military Hospital, TEKIRDAG, Turkey; <sup>2</sup> Gastroenterology, GATA Haydarpaşa Training Hospital, Istanbul, Turkey; <sup>3</sup> Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Nonalcoholic fatty liver disease (NAFLD) is a frame classification for a group of diseases noticeable as accumulation of intrahepatic fat regarded as steatosis, usually as the result of insulin resistance/metabolic syndrome without significant alcohol use. In NAFLD, clinical course to cirrhosis can be prevented with lifestyle changes, reduced daily calorie intake, some drugs but especially over all of them with close monitoring from primary care physicians to specialists. In this study we aimed to evaluate the anthropometric indexes, which can be highly interventional by primary care physicians, in patients with NAFLD and control group.

**Methods:** 46 patients (40 (87%) male and 6 (13%) female) with histological diagnosis of NAFLD and 26 healthy control were included to study. Age, weight, height, body mass index (BMI), waist circumference, hip circumference and waist to hip ratio were determined according to WHO criteria in all groups.

**Results:** Mean age was 37,43±9,45 in study group and 31,35±6,76 in control group (p=0.002). Mean BMI was 30,06±4,62 and 24,18±2,59 (p=0,001), mean waist circumference was 106,09±8,97 cm and 90,43±7,81 cm (p=0.001), mean hip circumference was 106,38±8,32 cm and 99,36±7,27 cm (p=0.008), mean waist to hip ratio was 0,99±0,05 and 0,91±0,06 (p=0.001) for study and control group respectively.

**Conclusions:** Weight, height, body mass index (BMI), waist circumference, hip circumference and waist to hip ratio are closely related with NAFLD and metabolic syndrome. The closely monitoring of these anthropometric indexes in primary care can diagnose NAFLD in early stages and can prevent clinical course to cirrhosis.

Disclosure: No conflict of interest declared

1170

**Esophageal ulcer development after a single dose of doxycycline: a case report**S. Sayin<sup>1</sup>, H. Ataseven<sup>1</sup>, S. Sayin<sup>2</sup><sup>1</sup> Department of Gastroenterology, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey; <sup>2</sup> Department of Family Physician, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey

**Objective:** Although it is not so frequent in medical literature, drug-induced esophageal injury is important due to its possible complications. Doxycycline can cause esophageal irritation if not taken with sufficient water or just before going to sleep.

**Case report:** In this case report, a 24-year-old female patient who had been prescribed doxycycline for acne treatment was presented. She was admitted with difficulty in swallowing, painful swallowing, epigastric pain, which had begun after taking the first oral dose before going to sleep. There was no personal history related to using salicylate, nonsteroidal anti-inflammatory drugs, alcohol or cigarette smoking. The patient's physical examination was normal except for epigastric tenderness. Routine blood count, urine analysis and chest X-ray were normal. Endoscopic examination showed superficial ulcerations in the area of 2 cm of the mid esophagus. Based on the endoscopic findings, the patient was diagnosed as drug-induced esophageal injury resulting from doxycycline treatment. Doxycycline treatment and oral intake was stopped. Intravenous fluid therapy, sucralfate and lansoprazole treatment were started. In the following days, the patient's complaints disappeared gradually.

**Conclusion:** Doxycycline can cause chemical esophagitis. As in our case, independently of the duration of drug use, even after a single dose, esophageal ulcer may develop. Drug-induced esophagitis is a preventable cause of morbidity. It is well-established that the cause of mucosal injury is usually found to be caused by inadequate fluid intake with medicine or consuming it just prior to bedtime. The patients are be noticed about the side effects of the drugs.

Disclosure: No conflict of interest declared

1309

**Plummer Vinson syndrome- case report**M. Klačar<sup>1</sup>, G. Ilic<sup>2</sup><sup>1</sup> General Medicine, Health Center Dr Simo Milosevic, Belgrade, Serbia; <sup>2</sup> General Surgery, Clinical Hospital Center Zemun, Belgrade, Serbia

Plummer Vinson syndrome, also known as sideropenic dysphagia presents as a triad of dysphagia, iron-deficiency anemia and esophageal web or webs. Most of the patients are white women, in the fourth to seventh decade of life. The dysphagia is usually painless, limited to solids and sometimes causes weight loss.

**Objective:** To describe clinical presentation of Plummer Vinson syndrome.

**Methods:** The analysis of patient's medical record.

**Case report:** A thirty-three years old woman presented to Health Center "Dr Simo Milosevic" in October 2012 with seven months long history of progressive dysphagia of solid food. She had an associated history of menorrhagia and sideropenic anemia. She had lost seven kilograms during this period.

Laboratory values revealed a WBC of  $4.6 \times 10^9/l$ , RBC  $3.2 \times 10^{12}/l$ , hemoglobin 88 g/l, hematocrit 0.285 l/l, serum iron 2.2. Abdomen ultrasound showed an anechogenic oval formation (3 cm) and one cystic formation (25 mm), both in right liver lobe. CT scan confirmed the first one to be hemangioma and the second one to be simple liver cyst. Contrast esophagograph showed 5mm wide stricture in the cervical esophagus with dilation proximal to the obstruction. The attempt to pass esophagogastroscope failed. The stricture was pronounced benign and the patient was diagnosed with Plummer Vinson syndrome. She was treated with parenteral iron supplementation followed by esophageal balloon dilatation which led to disappearance of symptoms.

**Conclusions:** Cervical dysphagia is the rarest type of dysphagia. It is important that this syndrome be differentiated from other possible causes of dysphagia.

Disclosure: No conflict of interest declared

1357

**"From the generalized asthenia to wilson's disease..."**S.Gonçalves<sup>1</sup>, E.Silva<sup>2</sup>, C.Salgueiro<sup>2</sup><sup>1</sup> ACES Cávado I – Braga, USF S. João de Braga, Braga, Portugal

**Background:** Wilson's disease(WD) is an autosomal recessive hereditary disease in which there is a toxic accumulation of copper in tissues, especially the liver, brain, kidneys and cornea. The classic presenting triad involves the liver, neurological and ophthalmological disease. The incidence rate is 1 in 30,000 and symptoms typically appear between 5 and 40 years, although cases have been reported in older people.

**Case description:** Male, 17years, Caucasian, single, student, nuclear family, phase VI Cycle Duvall. In July/2010, consulted the family practitioner with a 5 month history of generalized asthenia. On physical examination hepatomegaly (1cm below the costal margin) and mild splenomegaly were noted. Liver function tests and abdominal ultrasound revealed elevated ALT, AST and gamma-GT, confirmation of hepatomegaly with diffusely increased parenchymal echogenicity, all suggestive of WD.

The patient was followed by Gastroenterology who noted increased serum and urine copper, and diminished ceruloplasmin. Keiser-Fleischer rings were negative and a liver biopsy revealed hepatic fibrosis with mild inflammatory lesions, with 1000µg/g of copper in the parenchyma. Treatment with D-penicillamine and pyridoxine was commenced but changed to Zinc Acetate and Trientine following a allergic reaction. The patient was managed by neurology, whose physical examination and imaging revealed no changes. A family study was performed to screen for WD, which proved negative.

The patient has been asymptomatic for one year with close monitoring and regular therapeutic adjustments.

**Discussion:** WD is very rare and its diagnosis difficult. It can be fatal without lifelong pharmacological management and liver transplantation may also be necessary.

Disclosure: No conflict of interest declared



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**Thirty years of nonspecific complaints: doctors also get sick**

D. Boleto, S. Espadana, C. Pinheiro, A. Hortelao, C. Penedo, M. Silva  
*USF Emergir, USF Emergir, Lisboa, Portugal*

**Introduction:** Extranodal marginal zone B cell lymphoma (MALT), is an extranodal lymphoma that arises in a number of epithelial tissues, including the stomach, lung, small bowel, thyroid, and elsewhere. It constitutes about 5 percent of all non-Hodgkin lymphomas, remains localized to their site of origin for prolonged periods and originates unspecific symptoms which often delays the diagnostic.

**Description:** The case refers to a 39 years woman, caucasian, medical doctor by profession. Personal history of tobacco use, Vitiligo, dorsal scoliosis, cyclothymia, gestational diabetes and iron deficiency anemia in the last 4 years.

She reported frequent complaints since the age of 10, including vomiting, diarrhea, heartburn and abdominal cramps. These complaints led to major changes in her daily life with frequent absences to work, progressively more restrictive diets, performing multiple exams and consultations with different doctors without evidence of any improvement. In early 2012 she repeated the abdominopelvic TC showing swelling and thickening of the jejunum, and after resection and based on anatomopathological report the diagnosis was a primary small intestinal B-cell lymphoma (MALT). She initiated combined chemotherapy, with the disappearance of all gastrointestinal symptoms.

**Conclusion:** This case relates a long period evolution of a rare but debilitating disease. The patient felt neglected in some periods, probably related to her profession and previous diagnosis of cyclothymia, with frequent association of her symptoms with depressive complaints. Nevertheless, the long evolution in this tumour type, associated with nonspecific symptoms, reveals the difficulty in the diagnosis of this rare disease.

Disclosure: No conflict of interest declared

1605

**Information on Irritable Bowel Syndrome: What patients don't know and what they would like to know**

C.E. Flik<sup>1</sup>, Y.R. van Rood<sup>2</sup>, N.J de Wit<sup>1</sup>

<sup>1</sup> *Julius Center for health Sciences and Primary Care, University Medical Hospital, Utrecht, Netherlands;* <sup>2</sup> *Department of Psychiatry, Leiden University Medical Hospital, Leiden, Netherlands*

**Introduction:** The selection of a good control group is a notorious methodological problem in designing a Randomized Controlled Trial on psychological therapies for Irritable Bowel Syndrome (IBS). A good control condition has all components of the experimental intervention, except the active component and is attractive and of benefit to the patients. Educational programs might fulfil these criteria, so educational needs and wishes of IBS patients have to be determined.

**Objective:** The aim of this review is to systematically determine patients' educational needs on basis of the knowledge and misconceptions they have about their disease and their reported wishes for information.

**Methods:** A systematic review in Medline, Cochrane, Embase, PsycInfo and Cinahl of studies that collected data on the knowledge and educational needs of IBS patients about their disease, was performed. Studies published in full text in the English language and published in peer reviewed journals, concerning adult IBS patients diagnosed according to the Manning, Rome I, II or III criteria, were selected.

**Results:** 7 studies involving 1760 patients were included. Patients appear to have a lot of misconceptions about the etiology and course of their condition. On the whole, they feel badly informed. Most patients realize that their information is inadequate and like to have a basic explanation of IBS, causes and prognosis, treatment and self-management possibilities. The doctor is the most preferred information source.

**Conclusion:** An educational program satisfying the educational needs of patients fulfills the prerequisites of a good placebo control condition.

Disclosure: No conflict of interest declared

1611

**Medical costs of Irritable Bowel Syndrome patients in primary care in the Netherlands**C.E. Flik<sup>1</sup>, W. Laan<sup>1</sup>, A.J.P.M. Smout<sup>2</sup>, N.J. de Wit<sup>1</sup><sup>1</sup> Julius Center for Health and Primary Care, University Medical Hospital, Utrecht, Netherlands;<sup>2</sup> Department of Gastroenterology and Hepatology, Academic Medical Center, Amsterdam, Netherlands

**Introduction:** Irritable bowel syndrome (IBS) is a frequent condition, often leading to invalidating complaints. So far direct healthcare costs associated with IBS in the Netherlands are unknown.

**Aim:** The aim of the current study is to compare cost and volume of healthcare consumption for patients diagnosed with IBS in primary care, with health care expenditure for patients without IBS.

**Methods:** All patients diagnosed with IBS by a general practitioner between 2006 and 2009 were extracted from the database of a Dutch health insurance company and compared to a control group of individuals without IBS. Direct medical costs, consisting of general practitioner consultations, drug prescription and specialists, care were compared. Specialist costs were further divided into costs for IBS, other chronic diseases, other functional disorders and all other disorders.

**Results:** Data of 326 non-referred IBS patients and 652 controls were included in the analysis.

Mean medication costs per year are 1.3 times higher after IBS diagnosis, and increase over the years, whereas for controls they stay about the same. The number of general practitioner visits rise and stay high, from 6,5 to 8 visits, whereas for controls they stay about the same (4.5 visits). For hospital specialists costs rise and stay high for both groups. Total mean annual costs for the cases rise +486 Euro, for controls +171 Euro.

**Conclusion:** For non-referred IBS patients, the rise in costs mostly can be ascribed to costs for "non-IBS" -medication, hospital specialist costs for "other diagnoses" and slightly more GP-visits a year.

Disclosure: No conflict of interest declared

1753

**Ogilvie's Syndrome: an unusual case of abdominal distention.**

M.B. Morna, L. Arbones Fincias

Primary Health Care Center, Catalan Institut of Health, Barcelona, Spain

Ogilvie's Syndrome (OS) or Pseudo-obstruction of the colon is an acute, massive distention of colon and cecum without any evidence of mechanical obstruction.

Woman 74 years old, history of Alzheimer Dementia and diabetes treated with metformine. Admitted in Emergency for dyspnea, intake rejection and constipation. On examination stand out: basal crepitations in both lungs, distended and tympanic abdomen without bowel sounds. No pain on palpation. Blood test: glucose 210mg/dl, creatinine 157mmol/L, Na 158mmol/L, K3,3mmol/L. Abdomen radiology: big distention of ascending colon and sigmoid. With suspicious of OS were initiated fluid therapy, potassium replacement and rectal probe placement noticing decrease of abdominal distension and improvement of general status.

**Discussion:** OS is a rare entity associated with different clinical or surgical pathologies (sepsis, trauma, pelvic and abdominal surgery, neurological disease). Etiology is unknown but probable explanation is imbalance in the regulation of colonic motor activity by the autonomic nervous system. Symptoms have acute debut with bloating, nausea, vomiting, constipation or diarrhea. Diagnosis is based on clinical history, physical examination and abdominal radiology which show segmentary dilatation of cecum, ascending and transverse colon. Most important complication: the perforation of the cecum when its diameter is 9-12cm in abdominal radiology, with increase of mortality from 25% to 72%.

The treatment is early colonic decompression by general measures and drugs to lower colon distension (neostigmine 2.5mg ev), if these are not effective resort to surgery and endoscopic techniques.

**Conclusion:** Given the high mortality rate, we must keep OS in mind for early diagnosis and treatment.

Disclosure: No conflict of interest declared

### 3.5. DIABETES AND METABOLIC PROBLEMS

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#### Relationship between obesity and related clinical disorders at one primary health care center in Amman /Jordan: A case-control study

M. Tarawneh<sup>1</sup>, O. Alsmadi<sup>2</sup>

<sup>1</sup> Family Medicine, Royal Medical Services, Amman, Jordan; <sup>2</sup> Family Medicine, Ministry of Health, Amman, Jordan

**Objective:** to identify the relationship between obesity and related clinical disorders.

**Methods:** one thousand obese adults were compared to an equal number of normal-weight attendees, (matched by sex, residency, and age) aged 18 years and older. The study was conducted between February 2010 and February 2011 in an urban area. The data was collected using a specially designed questionnaire. Obesity was measured using body Mass Index (BMI).an EPINFO software program was used to gather and analyze data. Student T-test was used for comparison continues variables. A P-value of 0.005 was considered significant.

**Results:** male subjects were more obese in the young age groups and in the fifties, while post menopause women were likely to be more obese than were women in their reproductive years. Obesity was associated with low levels of education, unemployment, low family income, physical inactivity and family history. There was a highly significant relation between obesity and some chronic diseases such as T2DM, Hypertension, heart diseases, respiratory disorders and osteoarthritis.

**Conclusion:** health care providers should emphasis on the morbidity of the obesity.

**Key words:** obesity, Body Mass Index, related clinical disorders.

Disclosure: No conflict of interest declared

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#### Type 2 Diabetes; Can we diagnose before it happens?

N. Sharma

General Practice, Mornington Health Centre, Dunedin, New Zealand

**Background:** Diabetes is a group of metabolic disorders characterized by elevated blood sugar due to either a defect in insulin secretion or lack of insulin action or both. In New Zealand, it is estimated that more than 220,000 people are currently suffering from diabetes. It is believed that with one new diagnosis there is another one with diabetes but not yet recognized. It is associated with high degree of mortality mainly due to cardiovascular complications. The number of deaths attributed to diabetes is expected to be more than 2100 in 2011. It is believed that pre-diabetes state is the driving force behind diabetes epidemic. It is estimated about 70% of pre-diabetes patients become type 2 diabetic in about 4-6 year period. Majority of them may have cardiovascular complications including stroke, heart attack, kidney failure and most importantly, blindness before becoming diagnosed as being diabetic.

**Objective:** To detect individuals at risk of future disease and to implement program(s) to reduce the risk of progression to disease.

**Methodology:** People aged 20 to 70, registered at Mornington Health Centre with impaired fasting blood glucose level between 5.6 to 6.9 mmol/l, high risk patients will be divided into the groups namely; with symptoms and without symptoms, life style plus metformin, without metformin and none.

**Conclusion:** Type 2 diabetes imposes significant direct and indirect costs on individuals and society. Furthermore there is visibly a lack of prospective study on prediabetes, its progression, management and cost-effectiveness. Hence it is an epidemic that requires urgent action.

Disclosure: No conflict of interest declared

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**Thyroid dysfunction in type 2 diabetic patients**

J. Diaz-Benito

*Primary Health Care, Navarre Health Service, Pamplona, Spain*

**Objective:** While there is no consensus about population screening for hypothyroidism there is compelling evidence to support case-finding for hypothyroidism in those with autoimmune disease, such as type 1 diabetic patients. The present study has been made to estimate the prevalence of thyroid dysfunction in type 2 diabetic patients. In the British Whickham survey 9.3% of women and 1.2% of men had serum TSH values over 10  $\mu$ IU/ml. The Colorado thyroid disease prevalence survey, using an upper normal TSH value of 5  $\mu$ IU/ml, reported a prevalence of 8.9%.

**Methods**

**Design:** cross-sectional study. Subjects: 194 type 2 diabetic patients attending our primary health care service last year, who had determined serum free thyroxine and TSH concentrations. The upper and lower limits of the normal TSH reference range were 5.5 and 0.35  $\mu$ IU/ml, respectively. Multiple clinical, demographic and laboratory parameters were measured.

**Results:** Mean age was 70.8 year (SD 11.7), and 49.5% were women. Thyroid dysfunction was present in 18 patients (9.27%; 95% confidence interval, 5.2 – 13.34). Women were more likely than men to develop thyroid disorders, with a statistically significant difference ( $X^2 = 4.1$ ;  $p < 0.05$ ). The most common thyroid disorder was hypothyroidism (8.76%).

**Conclusions**

The prevalence of thyroid dysfunction in our type 2 diabetic patients was 9.27%.

Disclosure: No conflict of interest declared

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**Quality of life in patients with type 2 diabetes mellitus**

K. Stanetić, S. Savić, G. Tešanović

*Department of Family Medicine, Primary Health Center Banja Luka, Banja Luka, Bosnia-Herzegovina*

**Objective:** To evaluate the quality of life in patients suffering from type 2 diabetes mellitus in relation to the duration of the disease, the degree of glycemic control and presence of diabetic polyneuropathy.

**Methods:** A prospective – descriptive study was conducted by interviewing patients with diabetes mellitus type 2, registered with two family medicine practices in Primary Health Center Banja Luka during the period of 01.08 – 31.12.2011. General questionnaire that contained data on age, sex, disease duration, blood glucose, HbA1c values, complications were used. The questionnaire SF-36 were used for assessing the quality of life.

**Results:** The study included 42 (44%) male, 53 (56%) female patients. In relation to the duration of disease, statistically significant differences between the formed groups in any of the functional areas were not found. Among patients in the groups formed according to the degree of glycemic control statistically significant differences were found in the areas: vitality ( $p=0.006$ ), emotional functioning ( $p=0.008$ ), social functioning ( $p=0.040$ ) and pain ( $p=0.042$ ). Quality of life in patients with diabetic polyneuropathy was significant lower in relation with patients without this complication in the areas: physical functioning ( $p=0.007$ ), limitations in performing daily activities due to physical health problems ( $p=0.014$ ), limitation in social activities due to emotional problems ( $p=0.038$ ), vitality ( $p=0.037$ ), emotional functioning ( $p=0.045$ ) and general state of health ( $p=0.024$ ).

**Conclusion:** The duration of the disease does not affect the quality of life, but degree of glycemic control and presence of polyneuropathy is affecting the quality of life in patients included in our study.

Disclosure: No conflict of interest declared

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### Vertically analysis of management antidiabetic agents of 3201 patients with type 2 diabetes in Beijing communities: Beijing Community Diabetes Study-9

H.J. Fu, S.Y. Yuan, G.Wan, L.X. Zhu, M.X. Yuan, G.R. Yang

Department of Endocrinology, Beijing Tongren Hospital, Capital Medical University, Beijing, China

**Objective:** To analyze the impact of antidiabetic drugs adjustment on blood glucose through three years management of type2 diabetic patients.

**Methods:** 3201 patients with T2DM from 15 community health service centers in Beijing were randomly selected. According to drugs adjustment, the patients were divided into four groups: 255(8.0%) added insulin, 641 (20.0%) added OHA, 1621 (50.6%) used the same hypoglycemic drugs all the time and 684(21.4%) reduced antidiabetic drugs during the management.

**Results:** HbA1c level in four groups respectively dropped from (8.3±1.9) %, (7.4±1.7) %, (6.8±1.3) %, (7.2±1.5) % to (7.5±1.5) % (p<0.01), (7.0±1.3) % (p<0.01), (6.7±1.2) % (p<0.05), (7.1±1.4) % (p>0.05); The rate of reaching target HbA1c goal was significantly higher in the group who added OHA than other 3 groups. The good BG control of 4 groups in different educational background (from low to high) were 63.2%, 65.7%, 72.0% respectively (p<0.01). Logistic multi-regression analysis showed that adding insulin, adding OHA, income, change of BMI, and age were independent risk factors for a decrease in HbA1c, with OR value of 0.452, 0.803, 0.719, 0.955 and 1.075.

**Conclusions** By management hypoglycemic drugs actively, patients with T2DM showed significant improvement in HbA1c. Low-literacy and low-income groups were still the primary focus.

Disclosure: No conflict of interest declared

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### Elderly type 2 diabetic patient: Lipidic profile in the primary care setting

F. Prazeres

Centro Saúde de Aveiro, Centro Saúde de Aveiro, Aveiro, Portugal

**Background:** Reduction of dyslipidemia in diabetics is essential to minimize cardiovascular disease. In regards to target lipid levels and guidance on the initiation of a statin, guidelines vary, especially when addressing the elderly diabetic patient.

**Objective:** Determine lipidic profile of elderly type 2 diabetic patients in a primary care setting.

**Methods:** 43 elderly type 2 diabetic patients (≥75 years) attending a diabetic consultation in a primary care unit were included in this study. From the patient files were collected data from the last 3 months regarding BMI, waist circumference, fasting serum lipid profile, HbA1c and prescription of lipid lowering drugs.

**Results:** The sample was formed by 30 females and 13 male patients. 76.7% had HbA1c<7%. Mean age was 80.9 years (SD=4.4), BMI 29.2kg/m<sup>2</sup> (SD=4.4), waist circumference 101.9cm (SD=12.2). Eleven patients (25.6%) weren't receiving any cholesterol lowering medications (64.7% were taking a statin, 2.3% a fibrate and 4.7% both agents). Mean total cholesterol was 168.5 mg/dL (SD=33.2), LDL-C 94.5 mg/dL (SD=28.2), HDL-C 50.3 mg/dL (SD=14.6), and triglycerides 120.2 mg/dL (SD=44.9). Target values of LDL-C<100mg/dL were attained by 58.1%, 41.9% had HDL-C>50mg/dL and 76.7% had triglycerides<150mg/dL. 76.7% had a BMI>25kg/m<sup>2</sup> and 39.5% were obese (BMI>30kg/m<sup>2</sup>). Diabetics with a BMI>25kg/m<sup>2</sup> had worse serum lipid profiles. There was a significant negative correlation between BMI, total cholesterol ( $r_s=-0.396$ ,  $P=0.009$ ), LDL-C ( $r_s=-0.338$ ,  $P=0.028$ ) and HDL-C ( $r_s=-0.334$ ,  $P=0.030$ ).

**Conclusion:** This descriptive study shows a reasonable lipidic control in this subgroup of elderly type 2 diabetic patients. Nonetheless, preventive strategies to lower body weight are still needed.

Disclosure: No conflict of interest declared

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**Benefits of physical therapy modalities for peripheral arterial disease in diabetes type 2 patients.**G. A. Matarán-Peñarrocha<sup>1</sup>, A. M. Castro-Sánchez<sup>2</sup>, M. E. Aguilar-Ferrándiz<sup>3</sup>, C. Moreno-Lorenzo<sup>4</sup><sup>1</sup> *Medicina Familiar y Comunitaria, Servicio Andaluz de Salud, Jódar-Jaén, Spain;*<sup>2</sup> *Departamento de Enfermería, Fisioterapia y Medicina, Universidad de Almería, Almería, Spain;*<sup>3</sup> *Facultad de Ciencias de la Salud, Universidad de Jaén, Jaén, Spain ;* <sup>4</sup> *Facultad de Medicina, Universidad de Granada, Granada, Spain*

**Objective:** The objective of this study was to determine the effects of a program of 3 physical therapy modalities on blood circulation in patients with type 2 diabetes with peripheral arterial disease.

**Method:** A randomized controlled trial was undertaken. Sixty-eight patients with type 2 diabetes with Leriche-Fontaine stage I or IIa peripheral arterial disease were randomly assigned to an exercise or placebo group. For 20 weeks, the exercise group underwent treatment comprising 3 exercises at proximal, medium, and distal segments of the lower limbs, and the placebo group received sham treatment with disconnected ultrasound equipment. Peripheral arterial disease was determined by evaluating the ankle/brachial index (ABI), Doppler flow velocity, blood parameters, cardiovascular risk score, and heart rate during exercise test.

**Results:** After 20 weeks of treatment, significant differences between groups were found in the following: right (P <.039) and left (P <.023) ABI; Doppler flow velocity (cm/s) in the right (P <.010) and left (P <.026) posterior tibial artery and in the right (P <.012) and left (P <.022) dorsalis pedis artery; and fibrinogen (P <.045), hemoglobin (P <.021), cholesterol (P <.012), high-density lipoprotein cholesterol (P <.031), and HbA1c (P <.034) values. There was no significant difference in low-density lipoprotein cholesterol values (P <.110) between the groups.

**Conclusion:** A program of these physical therapy modalities improves ABI, Doppler flow velocity, and blood parameters in patients with type 2 diabetes.

Disclosure: No conflict of interest declared

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**The effect of fluoxetine and orlistat in the treatment of the Binge Eating Disorder (BED) obesity**

Y.H. Shen

*Family Medicine, Yuan's General Hospital, Kaohsiung, Taiwan*

**Objectives:** The short term efficacy of medication treatments for binge-eating disorder (BED) obese outpatients remains unknown. This study examined the effects of fluoxetine and orlistat either with fluoxetine (cognitive behavioral therapy (CBT) + fluoxetine) or with orlistat (CBT + orlistat) for BED.

**Research design and methods:** 50 obese women with BED participated in the study. They were divided into the fluoxetine (CBT + fluoxetine) group (n=25, BW=78.2±8.4kg) and orlistat (CBT + orlistat) group (n=25, BW=72.1±3.6kg). The subjects in fluoxetine group received fluoxetine once daily for 3 months. The subjects in orlistat group received orlistat twice daily for 3 months. Their body weight (BW), body fat (BF), and waist circumference (WC) were measured and compared before and after the intervention.

**Results:** Subjects among the fluoxetine group had a greater reduction of WC (10.5cm, 11.7%) than those among the orlistat group (5.1cm, 5.9%). Furthermore, BW also decreased more in the fluoxetine group (8.7kg, 11.1%, respectively) than the orlistat group (4.1kg, 5.7%, respectively). There is little change of BF either in fluoxetine or in orlistat group. As for the side effects, there are 30% obese women using fluoxetine presents with nausea during the first month and 20% presents with mild malaise and fatigue during the last two months.

**Conclusions:** The combination of fluoxetine and CBT can be effective for the obese outpatients with BED. However, the longer term efficacy remains unknown. Other research should be considered for the evaluation of the long term effect of fluoxetine and CBT for the BED obesity.

Disclosure: No conflict of interest declared

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**The effects of diabetic foot care through diabetes center**

A. Alkhier Ahmed, E. Alsharief, A. Alsharief

*Primary health care, National Guard Health Affairs, Jeddah, Saudi Arabia*

**Introduction:** The cost burden of diabetic foot complications falls on the healthcare sector, people with diabetes, their families and the communities as whole. The reduction of these costs and improvements in the quality of life of people with diabetic foot require attention to quality of diabetic foot care programs. Standardization of the care is the first initial step to start successful diabetic foot care program.

**Methodology:** Review the current practice of diabetic foot care at Gurayat diabetes center. Design new foot care program. Design case control study to detect the efficacy of the new program.

**Result:** The frequency of hospital admission, hospital admission days and the rate of amputation were decreased significantly between those followed under the old program in comparison with the new program ( $P < 0.05$ )

**Conclusion:** Comprehensive program covering all aspect of care is more beneficial than program ignore the patient needs

Disclosure: No conflict of interest declared

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**A patient-focused, team-based process for improving care and health status in a defined population of diabetics**

S. Hagedorn

*Employee and Community Health, Mayo Clinic, Rochester, United States*

**Objective:** to create a patient-focused, team-based process for improving care and health status in a defined population of diabetic patients.

**Methods:** Over two decades we have utilized numerous quality improvement methods to improve diabetes care. Since concentrating on a patient-focused, team-based approach we have achieved far more progress in the last three years than we did in the preceding fifteen years. A crucial early step was developing an electronic registry that enables us to identify our diabetic patients, establish what services they need, and identify whether or not they are receiving those services in the appropriate time frame. By establishing RN care managers, transferring them to our most complex patients, and then establishing non-RN panel managers we have learned multiple important lessons about what work tasks and process steps are needed to improve care for our diabetics.

**Results:** We have improved our diabetic „All or Nothing“ score (Hemoglobin A1c  $< 8$ , Blood Pressure  $< 140/90$ , and LDL  $< 100$  from 15% in 2008 to 45% in 2012 across a population of 1200 diabetics served by 170 primary care providers in five different clinical sites.

**Conclusions:** Through focusing on patients identity and needs (registry functions) and employing a broad-spectrum team to provide care, it is possible to make significant improvements in glucose, blood pressure, and lipid control in a defined population of diabetic patients.

Disclosure: No conflict of interest declared

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**Physical exercise prescription as part of weight loss and weight gain prevention programs**

A. Cruz-Ferreira, E. Loureiro, I. Pimentel

*Primary Care Unit of Mealhada, ACES Baixo Mondego, Mealhada, Portugal*

**Objective:** To review the physical exercise prescription recommendations as part of weight loss and weight gain prevention programs.

**Methods:** using Pubmed as our data source, we searched for guidelines, meta-analysis, reviews and systematic reviews published between January 2002 and September 2012, in English and Portuguese. We used MeSH terms: exercise, obesity and weight loss. The strength of Recommendation Taxonomy was used to assess the quality of the studies and assign evidence levels and a strength of recommendation (SOR) score.

**Results:** Of 807 articles identified, 23 were selected. The American College of Sports Medicine 2010 recommend a minimum of around 45 minutes of moderate to intense exercise, five days a week to prevent weight gain (SOR A). However, to maintain weight loss, the same guideline recommends over 60 minutes of moderate to intense physical exercise, five to seven days a week (SOR A). All the remaining articles enforce the role and benefits of physical exercise prescription for obese and overweight. It is, also, clearly stated that patients should choose the most adequate exercise to their likes and capacities in order to promote program adherence.

**Conclusions:** Daily physical exercise of moderate intensity seems to be associated with good results in maintenance of weight loss and weight gain prevention programs. The results obtained in this paper should encourage family physicians to make an adequate exercise prescription for their obese patients.

Disclosure: No conflict of interest declared

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**Usefulness of insulin resistance and metabolic syndrome for evaluation of metabolic obese but normal weight**

D.-w. Jeong, S.-Y. Lee, Y.-H. Cho

*family medicine, yangsan pusan national univeristy hospital, yangsan, Korea*

**Background:** We compared the usefulness of insulin resistance and metabolic syndrome for evaluation of metabolic obese but normal weight

**Method:** This is a cross-sectional study by 1574 patients who visited a Health Promotion Center of National University of Pusan from 2 January, 2006 to 30 December, 2011. We diagnosed metabolic obese but normal weight (MONW) by using insulin resistance (MONW-IR) and metabolic syndrome (MONW-MetS). We analyzed the association of each MONW who excluded overlaps with all of both IR and MetS and high risk group by Framingham risk score (FRS). We analyzed the association of each MONW who excluded overlaps both IR and MetS and Atherosclerosis group by pulse wave velocity. Each MONW assessed odds ratio of high risk group by Framingham risk score (FRS) and Atherosclerosis group by pulse wave velocity

**Results:** All of both MONW showed significant correlation to High risk group by Framingham risk score and Atherosclerosis group by pulse wave velocity. High risk group by Framingham risk score were 61.8% of MONW-IR and 77.8% of MONW-MetS. Atherosclerosis group by PWV were 44.1% of MONW-IR and 72.2% of MONW-MetS. MONW-Met (OR; 6.718; 95% Confidence interval [CI], 2.20~20.509) had higher Odds ratio (OR) of High risk group by Framingham risk score than MONW-IR (OR; 3.114; 95%, CI, 2.20~20.509). MONW-Met (OR; 6.679; 95% CI, 2.367~18.845) had higher Odds ratio of Atherosclerosis group by pulse wave velocity than MONW-IR (OR; 2.012; 95% CI, 1.013~3.3995), too.

**Conclusion:** As shown above, CVD risk and atherosclerosis, even though in normal weight, are increased by having high IR or having MetS

Disclosure: No conflict of interest declared



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### The effect of using monofilament 'I care your feet' innovation at Primary Care Unit Songkhla Hosp

S. Chuavallee

Primary Care Unit Songkhla Hospital, MOPH, AMPHOUR MOUNG SONGKHLA, Thailand

**Objective:** The purpose of this study to study the effect of using monofilament 'I care your feet' Innovation at Primiry Care Unit Songkhla Hospital

**Methods:** The target population of this developmental study was all 196 diabetes patients. The study used the PDCA (plan-do-check-act) cycle. The data were collected using an observation form that had been tested for its content validity. The data were analyzed with descriptive statistics

**Results:** Beginning the obvious diabetes foot care network in the Songkhla town which include the authorities and community leaders and use Monofilament 'I care your feet' innovation in 195 diabetes patients. We found that there are 139 low riskers, 15 moderate riskers, 6 high risker and 1 very high risker. The examinees are very satisfied the device for 100 percent.

**Conclusions:** The Primary Care Unit is a necessary role of caring the diabetes patients in part of screening, educating along with solving. This apparatus produces to verify the patients' toes feeling frequently and continuously for preparing to get into the risk of wound and conscious their feet treat. Providing the good quality equipment for checking the feet of diabetes patients very useful

Disclosure: No conflict of interest declared

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### Recommended antidiabetic treatment done by Family Physicians in Bosnia and Hezegovina

L. Gavran<sup>1</sup>, O. Batić-Mujanović<sup>2</sup>, A. Alic<sup>1</sup>, S. Prasko<sup>2</sup>, I. Gledo<sup>1</sup>, B. Gajanović<sup>1</sup>

<sup>1</sup> Family Medicine Teaching Centre, Primary Health Care, Zenica, Bosnia-Herzegovina; <sup>2</sup> Family Medicine Teaching Centre, Primary Health Care, Tuzla, Bosnia-Herzegovina

**Objective** of this study was to explore recommended treatment to diabetics patients type 2 (DMT2) for experimental and control group of Family Physicians (FPh) after comprehensive proper timing started, changed, add or improved treatment.

**Methods** of researching for experimental FPh group was based on applications of model for quality care improvement focused on physicians training and education. Ten FPh (5 from experimental and 5 from control group) were involved in study.

**Results** of this study showed that prevalence of diabetes mellitus in family practice was 6.6%. There were no statistically significant differences between groups for patients: years of age (61,39±10,01 vs. 62,30±9,26) and sex: man 94 (49,2%) vs. 97 (50,8%), female 155 (50,2%) vs. 154 (49,8%). Get advice about diet 113 (43%) patients control group vs. 58% (145) in experimental group. Physically active were 129 (51,4%) patients control group vs. 166 (67%) in experimental group. Prescribed metformin had 166 (66%) patients experimental group vs. control group 85 (34%). FPh experimental group more frequent recommended and give the insulin than control group of FPh 54 (21, 7%) vs. 18 (7, 2%) (p<0,001). Combine oral and insulin prescription were given frequently by control groups of FPh 97% vs. 52% (X<sup>2</sup>=18,01; df=1; p<0,001). HbA1C (AS±SD) level were significantly lower (<0,001) in experimental (7,37±1,43) vs. control group (8,51±1,84) of patients.

**Conclusion** Interventions done from models for improving of quality of care for DMT2 patients stimulated FPh control group to implement treatments by recommended guidelines.

**Key words:** Family Physicians, interventions, antidiabetic treatment.

Disclosure: No conflict of interest declared

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**The prevalence of poor glycaemic control in a resource limited setting.**R. Lamprey<sup>1</sup>, H. Lawson<sup>2</sup>, G. Wontumi<sup>3</sup>, A. Doodo<sup>4</sup>, M. Kissenger<sup>3</sup>, D. Nortey<sup>1</sup>, N. Tetteh<sup>5</sup>, B. Nkum<sup>6</sup><sup>1</sup> Family Medicine, Korle Bu Teaching Hospital, Accra, Ghana; <sup>2</sup> Community Health, University of Ghana Medical School, Accra, Ghana; <sup>3</sup> Public health unit, Korle Bu Teaching Hospital, Accra, Ghana; <sup>4</sup> Centre for Tropical Pharmacology & Therapeutics, University of Ghana Medical School, Accra, Ghana; <sup>5</sup> General Internal Medicine and Pediatrics, Massachusetts General Hospital, Boston, United States; <sup>6</sup> Internal Medicine, Komfo Anokye Teaching Hospital, Kumasi, Ghana**Objective:** Worldwide, the direct and indirect cost of diabetes mellitus in terms of morbidity, lost productivity, healthcare costs and mortality are enormous. Adequate glycaemic control can prevent some complications of diabetes thus improving outcomes and reducing costs associated with the disease.

We sought to determine the prevalence of glycaemic control in patients with type II diabetes in a resource-limited setting

**Methods:** Patients receiving routine diabetic care between (April 2010-December 2010) at the Korle Bu Polyclinic in Ghana were identified from the Diabetes registry. Eligible subjects were recruited by contacting all persons listed in the register by telephone and inviting them to participate. A structured questionnaire was administered to document the socio-demographic characteristics of the subjects. Hb1Ac measurements were used to assess glycaemic control in each patient.**Results:** 153 subjects met the study criteria. The demographic characteristics were as follows: Mean age ( $\pm$  SD) 57.3yrs ( $\pm$  12.5) with 40.5% (n=62) aged 61 years and above. 34%(n=52) were males. The mean HbA1c was  $8.7\% \pm 2.7$ . At Hb1Ac cut off levels of 6.5%, 7%, 7.5%, and 8%, the percentages of the study population that had adequate glycaemic control were 21.6% (n=32), 33.8% (n=50), 43.2% (n= 64), 53.4% (n=79) respectively.**Conclusions:** Glycaemic control in patients with type II diabetes attending the Korle Bu Polyclinic was poor with only 33.8% of patients achieving HbA1c  $\leq$  7%. These patients may therefore be at an increased risk for cardiovascular complications. Strategies to achieve better glycaemic control in type II diabetics in resource-limited settings are warranted.

Disclosure: No conflict of interest declared

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**Life style and cardiovascular factors of first detected abnormal fasting glucose group and diabetes group**

S. Shin, A. Han, Y. Kim, B. Goo, H. Park

family medicine, Wonkwang University Hospital, Iksan, Korea

**Objective:** This study aims to evaluate life style managements and cardiovascular factors of diabetes patients by comparing with normal group or first detected abnormal fasting glucose group.**Methods:** 1535 individuals were divided into three groups according to diabetes history and 12 hours of fasting blood glucose: diabetes group(30 persons), (first detected) abnormal fasting glucose group(96 persons) and normal group(610 persons). Life style factors such as smoking, alcohol, exercise and cardiovascular risk factors such as fasting blood sugar, total cholesterol, high density lipoprotein cholesterol, triglyceride, low density lipoprotein cholesterol, highly sensitive C-reactive protein, homocystein of each individuals were obtained by retrospective medical review. The mean differences between groups were analyzed by ANCOVA.**Results:** In drinking status, the value of diabetic group(73.3%) was higher than abnormal fasting glucose group(58.3%) and normal group(47.6%). The frequency of drinking was higher in the diabetic group( $1.5 \pm 1.5$ ) than normal group( $0.8 \pm 1.1$ ). In systolic BP, both diabetes group( $132 \pm 13.3$ ) and abnormal fasting glucose group( $131.7 \pm 17.2$ ) were higher than normal group( $121.1 \pm 16.1$ ). In TG, both diabetes group( $157.4 \pm 84.7$ ) and abnormal fasting glucose group( $152 \pm 103.1$ ) showed no difference, but higher than normal group. Diabetic patients( $1.7 \pm 2.3$ ) showed higher value( $1.7 \pm 2.3$ ) in high-sensitivity C-reactive protein than normal group( $0.8 \pm 1.2$ ) and abnormal fasting blood glucose( $0.9 \pm 0.9$ ).**Conclusions :** The actual management of life style and cardiovascular risk factors of diabetic patients found to be insufficient. Optimal strategies are required to manage the life style and cardiovascular risk factors of diabetic patients.

Disclosure: No conflict of interest declared

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**The knowledge, attitudes and behaviors of the insulin dependent diabetic patients about insulin usage:**U. Arıkan<sup>1</sup>, F.G. Cihan<sup>1</sup>, S. Civi<sup>2</sup>, R. Kutlu<sup>2</sup>, S. Ecirli<sup>3</sup><sup>1</sup> Family Medicine, MoH Konya Education and Research Hospital, Konya, Turkey; <sup>2</sup> Family Medicine, Necmettin Erbakan University, Meram Medical Faculty, Konya, Turkey; <sup>3</sup> Internal Medicine, MoH Konya Education and Research Hospital, Konya, Turkey

**Objective:** The aim of this study was to assess the knowledge, attitudes and behaviors of the insulin dependent diabetic patients about insulin usage.

**Methods:** This cross-sectional analytic survey was conducted on 153 patients. The participants were diagnosed as DM at least 6 months ago and were using insulin for at least 6 months. A questionnaire including the sociodemographic features, knowledge, attitudes and behaviors was carried out. Descriptive, Chi-square and odds ratio tests were performed.

**Results:** Male participants, participants with diabetic parents and who know their last HbA1C value had higher knowledge points. Knowledge points increased parallel to education level. Participants with higher knowledge scores were 5.85 times more actively making exercise. As the patients are getting older their knowledge scores were decreasing besides lower attitudes and behaviors scores. Participants who can define HbA1C had higher attitudes and behaviors scores. Higher attitudes and behaviors scores were related with education level, ability of self monitoring of blood glucose.

**Conclusions:** DM and its complications can be life threatening and worsen the quality of life. In order to plan an effective treatment, physicians should know the patients' data level, awareness of DM and attitudes and behaviors towards their illness. Family physicians are dealing with the patient continuously in a multidisciplinary approach and play an important role on patient education. According to our research, it is important to plan a tailor-made treatment and follow-up for each diabetic person considering his/her sex, education level, family and personal history of diabetes and physical activity.

Disclosure: No conflict of interest declared

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**High-grade esthesioneuroblastoma presenting as SIADH: A review of atypical manifestations**A. Vañez Baños, P. Lozano Gago, M.F. Ramirez Espinosa  
Hospital Clinico Universitario San Juan, AVS, Alicante, Spain

We present the case of 30-years old female who consulted per astenia exercise related; on the course of the study, hyponatremia was detected, and more diagnoses test were performed, so the diagnose of esthesioneuroblastoma was established. Esthesioneuroblastoma (ENB) is a neuroendocrine tumor that typically manifests as advanced stage malignancy in the superior nasal cavity. The hallmark symptoms include nasal obstruction and epistaxis, which result from local tissue invasion. Atypical clinical features can also arise and must be considered when diagnosing and treating ENB. These can include origin in an ectopic location, unusual presenting symptoms, and associated paraneoplastic syndromes. The case described here reports a nasal cavity ENB with atypical clinical features that occurred in a young female. Her tumor was low grade, appeared to arise primarily from the middle nasal cavity, and presented as syndrome of inappropriate antidiuretic hormone (SIADH). She also wanted to be pregnant shortly after diagnosis, which had implications on her surgical management. We review the atypical features that uncommonly occur with ENB and the clinical considerations that arise from these unusual characteristics.

Disclosure: No conflict of interest declared

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**Prevalence of depression in patients diagnosed with diabetes mellitus**

F. Bonventi, A. Santos, A. Manfredini, M. Chudo

*Medicine, Universidade Cidade de São Paulo, São Paulo, Brazil*

**Objective:** To estimate the prevalence of depression by using the Beck Inventory in patients diagnosed with Diabetes Mellitus (DM), assisted by a Basic Health Unit (BHU) in Guarulhos, São Paulo (SP), Brazil.

**Methods:** The study was accomplished at BHU with diabetic patients enrolled in the HiperDia (Diabetics and Hipertensive Monitoring System). In order to identify which of them had in their records hypothesis or diagnosis of depression, or use of anti-depressants, we firstly analysed the medical records patients. In the lack of these datas, the patients were requested to attend the BHU for HiperDia activities and to fulfill the Beck Depression Inventory, depending on the results, they were classified according to the severity or absence of depression

**Results:** 78 medical records were analysed, 10 of them had depressive information. 68 patients were requested to attend the BHU, just 31 of them went there. The average was 63,1 years old (68% were women). According to the results, the patients were classified in different levels of depression: 35% had no depression or mild depression, 39% had mild to moderate depression, 13% had moderate to severe depression and 13% had severe depression.

**Conclusion:** The Beck inventory is practical and easily applicable and resulted from mild to severe depression in 65% of the cases, so, to detect the early symptoms, the basic care team can use the Beck inventory as a support health tool and in others researches, depressive symptoms were related to a poor glycemic control and impairment of quality of life.

Disclosure: No conflict of interest declared

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**The impact of a structured diabetic care programme with intensive intervention for Hong Kong Chinese population in a primary care setting**

C. Cheung, J. Liang

*Family Medicine and Primary Health Care, New Territories West Cluster, Hospital Authority, Hong Kong, Hong Kong*

**Introduction:** Diabetes mellitus is a growing problem locally, the disease and its complications create a great burden to the patients and the health care system. In 2011, The local government had launched a new structured chronic disease model named Risk Assessment and Management Program of Diabetes Mellitus (RAMP-DM) to enhance the diabetic care.

**Method:** All diabetic patients (6027) in a regional primary care clinic were eligible for the programme. They were recruited in a voluntary basis. Patients will be stratified as low, medium, high and very high risk after the structured assessment.

The very high risk group will be intensively managed by an experienced family physician with extended consultation session and care manager. A multidisciplinary team will back up and support if needed.

**Results:** Till 30 Sep 2012, 3557 patients were assessed and 196 patients were stratified as having very high risk which have been recruited to be managed intensively.

The intensive managed group have an average number of extended consultation session and nurse session 3.14 and 4.2 respectively and have their diabetic cares significantly improved (82%)

The improved parameters have included HbA1c, systolic blood pressure and lipid level (LDL-C) (  $p < 0.005$  )

**Conclusion:** The structured programme is a preferred way to stratify the diabetic risk. An intensive intervention can therefore be further provided to those very high risk patients to enhance their diabetic care with comprehensive management. Through risk minimisation, complications can be prevented and their quality of life can be improved.

Disclosure: No conflict of interest declared

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**The relationship between A1c levels, treatment modalities, complications, comorbid diseases and frequency of hospital contacts in type 2 diabetic patients.**

A. Ergisi, B. Dogan, C. Ulus, O. Emiroglu, Z.A. Saglam  
Family Medicine, Istanbul Medeniyet University, Goztepe Training and Research Hospital,  
Istanbul, Turkey

**Objective:** To determine the relationship between HbA1c levels, complications, treatment modalities and associating comorbid diseases and the frequency of hospital contacts in type 2 diabetic patients (T2DM).

**Research and method:** T2DM patients (n:195) admitting to Istanbul Medeniyet University-Goztepe Training and Research Hospital between 1-31/October/2012 were consecutively enrolled. Answers were obtained by asking open-ended survey questions. Chi-square and percentiles were used (SPSS 15.0). Statistical significance was at  $p < 0.05$ .

**Results:** Mean age of the patients were [Female/Male]: (99/96)  $50.3 \pm 12.2 / 48.1 \pm 10.2$  years. The frequency of hospital contacts was the most common in patients who had the disease for  $\leq 5$  years (55.3%) and the least in patients suffering for  $\geq 20$  years (3.3%) ( $p < 0.05$ ) (Table 1). The frequency of hospital contacts was the most in patients receiving oral antidiabetics (OAD) (61.8%) and the least in patients receiving insulin (16%). When insulin was added as a combination therapy the frequency was 22% ( $p = 0.042$ ) (Table 2). Surprisingly if the patient had any diabetic complication, the frequency of admission was significantly less ( $p < 0.05$ ) (Table 3). A1c levels and presence of comorbid diseases didn't significantly effect the frequency of hospital contact as well ( $p > 0.05$ ) (Tables 4 and 5).

**Discussion:** It is noteworthy that patients with high A1c levels, with complications and comorbid diseases and who are under insulin therapy care less for their follow-ups. During the first five years which is also the time they are mostly under OAD therapy they frequently see the doctor. But the longer patients have the disease, they take less care of their follow ups and treatments. The importance of regular follow ups should be emphasized in patient education programmes.

Disclosure: No conflict of interest declared

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**Sarcopenic obesity is associated with risk of insulin resistance and diabetes mellitus**

K.D. Koh, Y.S. Yoon, Y.J. Yang, E.S. Lee, J.H. Lee, M.W. Chun, S.K. Jung  
Family Medicine, Inje University Ilsan Paik Hospital, Goyang, Korea

**Objective :** Obesity and sarcopenia were associated with insulin resistance (IR) and type 2 diabetes (DM). Coexistence of obesity and sarcopenia would increase the risk of IR and DM. We evaluated the effects of sarcopenia and obesity on IR and DM.

**Methods :** We included 11208 adults (men 4805, women 6403) aged  $\geq 40$  years from the Korea National Health and Nutrition Examination Survey 2008-2010. Dual energy X-ray absorptiometry used to measure appendicular skeletal muscle (ASM). Sarcopenia was defined as ASM divided weight. Obesity was defined by waist circumference. We evaluate association between sarcopenia, obesity, and sarcopenic obesity (SO) with IR and DM.

**Results :** The prevalences of sarcopenia, obesity, and SO were 13.7, 14.7, and 14.0% in men and 13.8, 15.8, and 16.8%, respectively, in women. HOMA-IR of normal, sarcopenia, obesity, SO were  $2.1 \pm 0.03$ ,  $2.7 \pm 0.1$ ,  $3.2 \pm 0.1$ , and  $3.5 \pm 0.1$ . in men,  $2.1 \pm 0.0$ ,  $3.2 \pm 0.1$ ,  $2.4 \pm 0.1$ , and  $3.4 \pm 0.1$ , respectively, in women. The multivariate-adjusted odds ratio (OR) for IR in subject with SO compared with normal group was 6.89 (95% confidence interval 5.30-8.94) in men and 4.91 (4.04-5.96) in women. The OR for DM were 2.72 (2.01-3.68) in man and 2.52 (1.91-3.33) in woman. Men aged  $\geq 65$  years with sarcopenia showed significantly increased OR for DM 3.42 (2.21-5.31), but women with sarcopenia did not show significant association with DM both age  $< 65$  and aged  $\geq 65$  years.

**Conclusions :** Our study showed SO was significantly associated with risk of IR and DM. In addition, sarcopenia was significantly associated with DM in men aged  $\geq 65$  years but not in women.

Disclosure: No conflict of interest declared

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**Bad glycoregulation as a risk factor for acute and chronic complications of diabetes mellitus**D. Melentijevic<sup>1</sup>, S.S. Melentijevic<sup>2</sup>, S. Conic<sup>1</sup>, M. Brkic<sup>1</sup>, M. Markovic<sup>1</sup>, M. Stankovic<sup>1</sup>, J. Dinic<sup>1</sup><sup>1</sup> Primary health care, DZ Dr Simo Milosevic, Belgrade, Serbia; <sup>2</sup> Department of anesthesiology, Hospital Center Zvezdara, Belgrade, Serbia

Diabetes ketoacidosis (DKA) and the hyperglycemic hiperosmolar state (HHS) are two most serious acute complications of diabetes mellitus (DM). Bad glycoregulation is precipitating factor for acute complications and lead to chronic complications of DM. Chronic complications prolonge treatment of DM and increase mortality and disability.

**Objective:** To determine previous glucoregulation and presence chronic complications in patients with DKA i HHS.

**Methods:** In this cross-sectional study we used medical history of patients who were hospitalized in Hospital Center in Belgrade, KBC Zvezdara Belgrade, Department of endocrinology in peroid 2007-2010 because of DKA and HHS. Data were analyzed by descriptive and analiticaly statistics methods, and software program SPSS.

**Results:** There were 56 patients, 54 hospitalized for DKA, 2 patients for HHS; 29 women, 27 men of average years 51,8±18,8. Average blood glucose on admission in hospital was 32±8,85mmol/l in patients with DKA, 60,35±15,14 for HHS (t(54)=3,72, p<0,01). HbA1c in patients with DKA 11,6±2,52, in patients with HHS 11,2±1,7 (t(54)=0,25,p>0,05). Chronic complications were present in more than half patients 36(64,9%). Polyneuropathy was the most common 55,5%, then coronary heart disease 27,7%, retinopathy 25%, CVI 11,1%, neuropathic foot and diabetic nephropathy 8,3%. Patients with chronic complications had HbA1c 11,51±2,58, without complications 11,8±2,37 (t(54)=0,41, p>0,05). Deficiency is an adequate control group.

**Conclusions:** Long-term bad glycoregulation is present in patient with acute and cronic complications of diabetes. We should think about it in our daily work, and imperative should be education and adequate glycemic control in primary care.

**Key words:** bad glycoregulation, HbA1c, complications of diabetes

Disclosure: No conflict of interest declared

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**The effect of insulin resistance on cardiometabolic risk markers among adolescents in Taiwan**C.Y. Lee<sup>1,2</sup>, W.T. Lin<sup>3</sup>, C.T. Haung<sup>4,1</sup>, C.H. Lee<sup>2</sup><sup>1</sup> Department of Family Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan;<sup>2</sup> Department of Public Health, Kaohsiung Medical University, Kaohsiung, Taiwan; <sup>3</sup> Department of Public Health, National Yang Ming University, Taipei, Taiwan; <sup>4</sup> School of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan

**Objective** Insulin resistance (IR) has a vital role in the pathogenesis between obesity and atherosclerotic diseases. Evidence showed that metabolic risk markers in youth increase risks of type 2DM and cardiovascular diseases in adult life. While the prevalence of obesity among adolescents in Taiwan has increased in recent decades, the effect of IR on cardiometabolic risk markers among obese adolescent remains inadequately recognized.

**Methods** We conducted a large-scale study to clarify such concerns for adolescents in Taiwan. A total of 2727 representative junior-high school students who were multistage-sampled from 36 different urbanization-level of schools participated in this study and offered blood samples (response rate, 73%). Demographic, health behavioral factors, anthropometric outcomes and cardiometabolic risk markers (including fasting glucose, triglyceride (TG), high density lipoprotein cholesterol (HDL-C), and blood pressure) were measured. Adolescents with homeostasis model assessment of insulin resistance (HOMA-IR) >75 percentile was considered presence of IR. We defined metabolic syndrome by using ATP III criteria for youth for further analysis. Data was analyzed using survey-data modules adjusted for the complex survey design.

**Results** Values for HOMA-IR, as well as triglyceride, systolic and diastolic blood pressure increased significantly as increasing BMI level, while HDL-C decreased with increasing BMI. Controlling for BMI and covariates, individuals with insulin resistance was associated with higher risk of having high triglyceride level (OR 1.9), low HDL-C (OR 2.4), high blood pressure (OR 1.7), and metabolic syndrome (OR 3.9).

**Conclusions** Insulin resistance is associated with increased of cardiometabolic risk independent of BMI among adolescents.

Disclosure: No conflict of interest declared

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**Comparison of lipid parameters before and after metformin treatment**A.Simsek<sup>1</sup>, U.Aydogan<sup>2</sup>, Y.C.Doganer<sup>3</sup>, H.Yaman<sup>4</sup>, K.Saglam<sup>5</sup>

<sup>1</sup> Cigiltepe Family Health Center, Ankara Mevki Military Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>3</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>4</sup> Department of Biochemistry, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>5</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Metformin became the most prescribed drug used in Diabetes Mellitus (DM) and Prediabetes patients. Not only glucose regulation but also multiple systems are effected from this drug. One principal benefit of metformin seems on lipid parameters. We aimed to compare the difference of lipid parameters of patients before and after metformin treatment.

**Methods:** 30 patients with newly diagnosed DM (n=17) and prediabetes (n=13) received metformin were included the study in GMMA (Gulhane Military Medical Academy) between 2009 November – 2010 May. Written consent form of patients and ethical approval of study were received. In the beginning and after 3 months of therapy, level of total cholesterol, low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol and triglyceride was measured.

**Results:** Mean age of patients was 54.73±9.63. 46.7%(n=14) of patients were male, 53.3%(n=16) of patients were female. Total cholesterol levels were decreased from 217.03±16.71mg/dL to 192.53±14.98 mg/dL (p<0.001); LDL cholesterol levels were decreased from 139.13±16.34 mg/dL to 115.96±15.60 mg/dL (p<0.001); triglyceride levels were decreased from 172.40±54.19 mg/dL to 149.80±49.01 mg/dL (p= 0.001). Contrary to decreases HDL cholesterol levels were increased from 43.40±9.27 mg/dL to 45.50±11.17 mg/dL (p=0.008). Differences between parameters of lipid panel before and after metformin treatment was significant in terms of statistical.

**Conclusions:** Beneficial effect of metformin on lipid profile can be associated with decrease of insulin resistance. According to studies, this effect is not permanent and is not related with therapeutic effectiveness of metformin.

**Key Words:** Metformin treatment, Lipid parameters, Beneficial effect

Disclosure: No conflict of interest declared

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**Maternal diabetes or hypertension and lifestyle factors may be associated with metabolic syndrome: a population-based study in Taiwan**T.-H. Chen<sup>1</sup>, H.-Y. Chuang<sup>1,2</sup>, Y.-W. Chiu<sup>2,3</sup>, C.-T. Huang<sup>1,2</sup>

<sup>1</sup> Department of Family Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan;

<sup>2</sup> School of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan;

<sup>3</sup> Department of Family Medicine, Kaohsiung Municipal Ta-Tung Hospital, Kaohsiung, Taiwan

**Objective:** Early detection and interventions for metabolic syndrome (MetS) are the most cost-effective methods for preventing many chronic diseases. There have been discordant findings in various countries due to different genetics and lifestyles. The goal of this study was to investigate the association of MetS with parental diseases, a Chinese-style diet, and rural-urban regional differences with a large-scale epidemiological survey in Taiwan.

**Methods:** Data were obtained from the Taiwanese Survey on Hypertension, Hyperglycemia, and Hyperlipidemia (TWSHHH), a cross-sectional population-based study with multi-stage stratified random sampling conducted by the Taiwan Bureau of Health Promotion in 2002. Public health nurses visited homes to conduct the survey, including blood drawing and an interview. Multiple logistic regression analysis was used for exploring the factors associated with MetS.

**Results:** 6591 people completed data for analysis. Our results revealed that older age, male gender, and maternal diabetes or hypertension were significantly associated with MetS. Eating poultry with skin and fat and eating a bean-free diet contributed to higher risk of MetS. People who exercised regularly and the residents of the Taipei metropolitan area had a lower risk of MetS.

**Conclusions:** People with maternal diabetes or hypertension should pay attention to their cardiovascular health and prevention of MetS. We suggest that eating skinless and low-fat poultry, eating more beans, and exercising regularly may decrease the risk of MetS. We should make an effort to advocate for health promotion, including lifestyle modification, especially among the high-risk population and among residents in rural areas with limited medical resources.

Disclosure: No conflict of interest declared

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**Comparison of the serum total Vitamin B12, homocysteine and holotranscobalamin levels before and after metformin treatment**A.Simsek<sup>1</sup>, U.Aydogan<sup>2</sup>, Y.C.Doganer<sup>3</sup>, H.Yaman<sup>4</sup>, K.Saglam<sup>5</sup>

<sup>1</sup> Cigiltepe Family Health Center, Ankara Mevki Military Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>3</sup> Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>4</sup> Department of Biochemistry, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>5</sup> Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Objective:** Metformin, one of the most prescribed drug used in Diabetes Mellitus (DM) and Prediabetes patients, can cause to vitamin B<sub>12</sub> malabsorption which is poorly recognized by the majority of physicians. Its known that total serum vitamin B<sub>12</sub> is a late, relatively insensitive and unspecific biomarker of deficiency compared to holotranscobalamin (holoTC). In our study we aimed to evaluate the vitamin B<sub>12</sub> status of type 2 DM and prediabetes patients after treatment with metformin for 3 months by measuring serum total vitamin B<sub>12</sub>, homocysteine and holoTC levels.

**Methods:** A total of 30 patients with newly diagnosed DM (n=17) and Prediabetes (n=13) received metformin were included the study in GMMA (Gulhane Military Medical Academy) between 2009 November – 2010 May. In the beginning and after 3 months of therapy, total serum vitamin B<sub>12</sub>, homocysteine and holoTC measurements were performed.

**Results:** Mean age of patients was 54.73±9.63. After 3 months of metformin therapy, subjects demonstrated a significant decrease in serum total vitamin B<sub>12</sub> (297.33±67.07 vs. 236.42±43.31 pg/dL, p<0.001) and holoTC (38.26±13.04 vs. 29.11±9.54 pg/dL, p<0.001). There was a significant increase in serum homocysteine (10.29±2.28 vs. 11.96±2.84, p<0.001) levels. After the treatment with metformin, according to serum total vitamin B<sub>12</sub> levels 2 (%6.66) of the patients, according to serum holoTC 16 (%53.3) of the patients had vitamin B<sub>12</sub> deficiency.

**Conclusions:** As a result, compared to serum total vitamin B<sub>12</sub>, holoTC measurement is more sensitive and specific biomarker of vitamin B<sub>12</sub> deficiency which is seen more than we thought to be after metformin treatment.

Disclosure: No conflict of interest declared

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**Spouses of patients with diabetes mellitus type 2 are at an increased risk of high blood glucose levels**G. L. Yahaya<sup>1</sup>, A. A. Roberts<sup>2</sup>, V. A. Inem<sup>2</sup>

<sup>1</sup> Department of Family Medicine, Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria; <sup>2</sup> Department of Community Health & Primary Care, College of Medicine University of Lagos, Lagos, Nigeria

**Introduction:** Diabetes mellitus type 2 is a growing threat in developing countries already burdened with high levels of infectious diseases, Trauma, and Mental Health issues. This study aims to determine whether spouses of patients with diabetes mellitus have higher random blood glucose (RBG) levels as well as the benefit of RBG testing as a targeted screening tool.

**Methodology:** The survey employed a cross-sectional comparative study of spouses' of diabetics and non-diabetics attending the general out-patient department of the Lagos State University Teaching Hospital (LASUTH), Ikeja. A modified WHO STEPS Surveillance Instrument and a one-touch Glucometer were used to collect data. Blood pressures and BMI were measured and correlated to blood glucose levels.

**Results:** Prevalence of high RBG was 7% among spouses of diabetics and 3.3% among spouses of non-diabetic patients. Mean RBG was 5.57 Mmol/L and 7.7 Mmol/L within the age group 40 – 49 years and 50 – 59 years respectively among spouses of diabetic patients compared to 5.4 Mmol/L and 5.5 Mmol/L within the same age group among the spouses non-diabetics. Spouses of patients with diabetes mellitus had higher systolic and diastolic blood pressures and BMI compared to spouses of non-diabetics.

**Conclusion:** Being male, married to a diabetic patient, lower educational levels and higher body mass index are significantly associated with higher random blood glucose in the spouses of diabetic patients. Random blood glucose measurements are an effective screening tool and spouses of diabetic patients can benefit from targeted screening in controlled clinical settings.

Disclosure: No conflict of interest declared



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**Primary health care incretines usage study**A. Sánchez Calso<sup>1</sup>, V. González Llorente<sup>1</sup>, L. de la Rosa<sup>1</sup>, A. Martín Martín<sup>1</sup>, M. C. Antón Sanz<sup>2</sup><sup>1</sup> Galapagar Health Centre, Medicina Familiar y Comunitaria, Galapagar. Madrid, Spain;<sup>2</sup> Alpedrete Health Centre, Medicina Familiar y Comunitaria, Alpedrete. Madrid, Spain

**Objective:** Describing incretines usage, – DPP-4 and GLP-1 analogous inhibitors -, in an unselected population of patients with diabetes mellitus (DM) type 2. Knowing the influence of incretines in their metabolic control.

**Methods:**

**SUBJECT:** Patients of our Health Centre diagnosed with DM type 2 and treated with incretines for at least 3 months.

**TYPE OF STUDY:** Retrospective observational of prescription / indication.

**STUDY VARIABLES:** age, sex, body mass index (BMI), prescription source and reason, incretine type and dose, HbA1c at the beginning of treatment and after 3 - 6 months.

**STATISTICAL ANALYSIS:** SPSS for Windows.

**Results:** 136 patients with DM type 2 treated with incretines. 61.02% male. Average age 66.24 years old; range: 39-92. Average BMI 30.85 Kg/m<sup>2</sup>. 52.2% of prescribes incretines in health centre, 45.58% in specialized and 2.2% unknown. 56.61% treated with sitagliptin, 20.58% with vildagliptin, 8.82% with linagliptin, 6.61% with exenatide, 5.88% with liraglutide and 1.47% with saxagliptin. Prescription reason: 55.88% no control with standalone metformin or associated with sulfonylurea, 13.23% metformin intolerance, 12.5% no control with metformin and insulin, 18.39% other reasons. 46.32% of prescriptions such as triple therapy, 44.85% double therapy, 6.61% monotherapy and 2.2% quadruple therapy. 19.85% associated with insulin.

**Conclusions:** Usage of incretines in diabetic patients type 2 in our environment improves the metabolic control in unselected samples. Incretines user profile in our environment: male, obese, aged between 60-70 years old, insufficient control with standalone metformin or associated to sulfonylurea and sitagliptin indicated as second or third drug.

Disclosure: No conflict of interest declared

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**Cardiovascular risk profile of diabetics treated with incretines in primary health care.**A. Sánchez Calso<sup>1</sup>, L. de la Rosa<sup>1</sup>, A. Martín Martín<sup>1</sup>, V. González Llorente<sup>1</sup>, M. C. Antón Sanz<sup>2</sup><sup>1</sup> Galapagar Health Centre, Medicina Familiar y Comunitaria, Galapagar. Madrid, Spain;<sup>2</sup> Alpedrete Health Centre, Medicina Familiar y Comunitaria, Alpedrete. Madrid, Spain

**Objectives:** Knowing the cardiovascular risk profile in a population of patients with diabetes mellitus (DM) type 2 treated with incretines. Describing the usage of drugs for these patients metabolic control.

**Methods:**

**SUBJECTS:** Patients diagnosed with DM type 2 in our Health Centre and treated with incretines for at least 3 months.

**TYPE OF STUDY:** Retrospective observational.

**STUDY VARIABLES:** Age, sex, body mass index (BMI), arterial hypertension, dyslipidemia, smoking, scoring low risk Score, HbA1c at the beginning of treatment and after 3-6 months.

**STATISTIC ANALYSIS:** SPSS for Windows.

**Results:** 136 patients with DM type 2 treated with incretines. 61.02% male. Average age 66.24 years; range: 39-92 years. Average BMI 30.85 Kg/m<sup>2</sup>. 75.73% has HTA, 63.97% have specialized dyslipidemia and 21.63% are smokers. 56.61% treated with sitagliptin, 20.58%, vildagliptin, 8.82% with linagliptin, 6.61% with exenatid, 5.88% with liraglutid and 1.47% with saxagliptin. Arterial hypertension: 61.02% treated with renin-angiotensin system inhibitors (31.61% with angiotensin converting enzyme inhibitors –IECA- and 26.47% with angiotensin II receptor blockers –ARA II-), 40.44% with diuretics and 16.17% with calcium antagonists. Dyslipidemia: 50.73% treated with estatinas and 12.5% with fibrates. 47.79% of diabetics are anti-aggregated/ anticoagulated. Average scoring according to South European countries low risk SCORE table: 3.12 (moderate risk). 19.85% have incretine associated to insulin.

**Conclusions:** Incretines user cardiovascular risk profile in our environment: male, obese, aged between 60-70 years old, non smoker, with HTA treated with IECA or ARA II, and with hypercholesterolemia treated with estatinas, non anti-aggregated/anti-coagulated and with SCORE scoring moderate risk.

Disclosure: No conflict of interest declared

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**Effectiveness of multidisciplinary team approach technique on controlling HbA1C in diabetes mellitus patients**

E. Chanwanpen

*Community and Family Medicine, Sichon Hospital, Nakhonsithammarat, Thailand*

**Objective:** The purpose of this study was to determine the effect of multidisciplinary team approach technique on health behaviors and HbA1C level in type 2 diabetes mellitus patients with uncontrolled blood sugar.

**Methods:** This quasi-experimental study was set up from April 2010 to September 2010. Two group pre-and post-test design was used. The total sample included 60 diabetic patients who had fasting blood sugar equal or greater than 200mg% or HbA<sub>1</sub>C > 7.5 the patients was divided equally into study and control group. The research instruments consisted of the assessment and evaluation tools including a demographic data form and group activities record. Quantitative data were analyzed using descriptive statistics. Independent t- test was used to examine the difference between pre-and post-test scores.

**Results:** The results showed those 6 months after attending the multidisciplinary team health education technique, the mean scores of total HbA<sub>1</sub>C level in study group was lower than the control group ( $p < 0.05$ ). In study group, the mean of HbA<sub>1</sub>C decreased from 9.42 to 6.54 ( $p < 0.05$ ). But in control group, no significant change of the mean of HbA<sub>1</sub>C decreased from 9.16 to 8.43.

**Conclusion:** The findings from this blood sugar study could be used to change behaviors in diabetic patients with uncontrolled, especially patients with had high HbA<sub>1</sub>C

Disclosure: No conflict of interest declared

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**The impact of diabetic HbA1c test on the occurrence of chronic kidney disease in type 2 diabetic patients**Pi-I Li<sup>1,2</sup>, Chih-Ching Chang<sup>2</sup>*<sup>1</sup> Department of Family Medicine, Chi-Mei Medical Center, Tainan, Taiwan; <sup>2</sup> Department of Environmental and Occupational Health, National Cheng Kung University, Tainan, Taiwan*

**Objective:** Adherence to proposing HbA1c test guideline can be effective in slowing disease progression and risk reduction of complication, but little is known about the relationship between timely intervention of the test that meet the guideline and chronic kidney disease (CKD). The purpose of this study is to assess the association between adherence to proposing HbA1c test guideline and CKD in type 2 diabetic patients.

**Methods:** The incidence cases were the patients with type 2 diabetes mellitus identified from National Health Insurance Research Database (NHIRD) during 1999-2003. Cox regression was employed to evaluate the association between adherence to proposing HbA1c test guideline and CKD.

**Results:** A total of 16628 patients were identified as newly diagnosed diabetes and 3987 (24.0%) of them developed CKD during the following period. The average duration of the following period was 6.85 years. Among 16628 patients, 8% followed the practice guideline for *first two years* of the following period and 23% followed the practice guideline for two years before censor date. Comparing to patients not adherence to proposing HbA1c test guideline for two years before censor date, the hazard risk of CKD of adherence to proposing HbA1c test guideline were 0.306 (95% CI=0.279-0.337).

**Conclusions:** Quality of care assessment should include care processes such as HbA1c testing. The study results and study methods may be of use to Type 2 diabetic patients in assessing the quality of care for diabetic patients.

Disclosure: No conflict of interest declared

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**The creation of clinical protocol and standard of diabetes management in primary care in Ukraine**

V. Tkachenko, G. Lysenko

*Institute of Family Medicine, National Medical Academy of Postgraduate Education named after P.L. Shupik, Kiev, Ukraine*

**Objective:** In Ukraine diabetes' management is still conducted by endocrinologists, which have large loading. Now Ukrainian health system is under intensive reformation on family medicine' principles that supposes passing of diabetes' management to general practitioners (GPs).

**Methods:** statistic analyse of diabetes care for its improvement.

**Results:**The diabetes' morbidity increases annually on 6-8% in Ukraine, prevalence was 3342,4/100000 in 2011. Over 75% patients have complications at the moment of diagnosis. The patients with high risk remain without enough attention. The GPs' quantity was 2,0/10000 in 2011 and increases annually, when endocrinologists' quantity is 0,36. The experience of countries with GPs' diabetes care showed reduction of morbidity, costs of health system, improvement of diabetes' control and life quality. Thus GPs can improve diabetes care in Ukraine. The diabetes care can be improved by facilitation of diabetic self-management, reducing mortality, morbidity and hospitalization, improvement early detection of complications by effective surveillance. The reducing the costs of diabetes may be achieved through: effective primary prevention, the prevention of complications, the implementation of agreed standards of care, the reduction of inappropriate hospitalization; the analyses of costs and benefits of management, the engaging people with diabetes in self-care programs. We created clinical protocol and standard of diabetes' management in primary care, quality indicators, the manual of diabetes prevention in primary care, which are based on international guidelines and underlay at National guidance. These documents are on assertion in the Ukrainian Health Ministry.

**Conclusions:** We proposed medico-technological documents that helps Ukrainian GPs to improve diabetes primary care.

Disclosure: No conflict of interest declared

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**Charcot arthropathy: the importance of surveillance of a diabetic patient**

J. O. Silva, L. Silva, L. Sousa, M. A. Nunes, R. M. Barbosa

*Unidade de Saúde Familiar de Valongo, USF Valongo, Valongo, Portugal*

**Objective:** Analyze and describe a clinical case concerning Charcot arthropathy (CA).

**Methods:** Patient interview and clinical process consultation.

**Results:** 44 year old man, belonging to a nuclear family, in Duvall's cycle stage 4 and Graffar's class III, with obesity, hypertension and type 2 diabetes mellitus with complications (diabetic retinopathy) uncontrolled by therapeutic failure and lack of surveillance. The patient went to urgent consultation (UC) with erythema and edema of the leg and right foot with 4 days of evolution, without pain or history of trauma. Was prescribed antibiotics (ATB) on suspicion of erysipela. He returned several days later with plantar ulcerations with signs of infection that were devalued by the patient. He was referenced to the UC of Diabetic Foot in a central hospital and was hospitalized for CA and plantar fasciitis and underwent surgical debridement of the wound. After discharge the patient recurred to the consultation worried about his clinical situation, referring strict compliance with the prescribed treatment and preventive measures suggested.

**Conclusions:** It is essential to promote an appropriate screening measures and patient awareness of the consequences of a poor metabolic control. The patient described this episode as „the turning point“, with greater awareness of the negative influence of their previous attitude in his personal and family dynamics. In this case, as well as in all GPs clinical practice, a patient-centered approach is essential in order to allow adopting effective measures for the prevention, diagnosis and treatment.

Disclosure: No conflict of interest declared

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**Clinical trial using ubiquitous health care system in Korea: Smartcare project for metabolic syndrome**B.J. Oh<sup>1</sup>, B.L. Cho<sup>1</sup>, H.C. Choi<sup>1</sup>, C.H. Lee<sup>2</sup><sup>1</sup> Family Medicine, Seoul National University Hospital, Seoul, Korea; <sup>2</sup> Bio & Health Group, LG Electronics, Seoul, Korea

**Objective:** This study is performed as part of a study conducted by the Ministry of Knowledge Economy and Ministry of Welfare in 2010 designed as a progressive business which involves some medical centers in cooperation with LG Electronics to manage chronic diseases through smart phones. Specifically, we aim to evaluate the beneficial effect of weight loss in obese patients with metabolic syndrome receiving smartcare services in addition to routine health care services in comparison to patients receiving routine medical services only.

**Methods:** The target participants were comprised of obese patients with metabolic syndrome over 20 years. The enrolled patients were divided into two groups; 1) subject population were those receiving routine health care in addition to remote health monitoring and healthcare services, 2) control population were those receiving traditional outpatient healthcare services. They were randomly assigned to either group, and the subjects were required to make a total of 4 visits to the hospital for 24 weeks.

**Results:** Although there appears to be a greater effect of weight loss in the subject population, its statistical significance has yet to be proven. In addition, the small sample size may bring about concerns on its representativeness of the whole population.

**Conclusions:** Through an interim appraisal of the yet to be completed trial of 24 weeks, a positive trend in a way to effectively manage weight, an important factor in metabolic syndrome, with the smartcare system can be observed. With the completion of the study, a greater difference in weight reduction can be expected.

Disclosure: No conflict of interest declared

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**Co-morbidities and risk factors for stroke**R. Njeri Mbugua<sup>1,2</sup><sup>1</sup> Research and Care Training Programme, Kenyatta National Hospital, NAIROBI, Kenya;<sup>2</sup> Research, Kenya Medical Research Institute, NAIROBI, Kenya

**Objectives:** Stroke is one of the most common causes of morbidity and mortality the world over. Established risk factors such as arterial hypertension, diabetes mellitus, cigarette smoking, hyper-lipidaemia, micro-vascular rupture, male gender, age and observed

**Background:** Stroke is one of the most common causes of morbidity and mortality the world over. Established risk factors such as arterial hypertension, diabetes mellitus, cigarette smoking, hyper-lipidaemia, micro-vascular rupture, male gender, age and observed co-morbidities such as sickle cell disease, HIV/AIDS infection and cerebral malaria are increasingly being encountered in the tropics. **OBJECTIVES:** To determine pathological sub-types, risk factors, in-hospital period prevalence and in-hospital outcome of stroke. **DESIGN:** Hospital-based retrospective study. **SETTING:** The Nairobi Hospital, Nairobi, Kenya. **SUBJECTS:** Patients with recorded diagnosis of stroke/cerebral vascular accident; as per WHO criteria for diagnosis of stroke, all gender and age > or = 18 years were studied. **RESULTS:** A total of 2629 patients were admitted to the division of medicine at the hospital during study period. Eighty patients had diagnosis of stroke; giving an in-hospital period prevalence of 3042/100,000. Mean age was 61.3 years, mode; 63 years, range 34-95 years. Males were 43 (53.8%), M to F ratio 1.2:1 stroke sub-types: Ischaemic stroke 68 (85%), haemorrhagic stroke seven (8.8%). In five patients (6.3%) no evidence of stroke sub-type was on-record. Established risk factors for stroke included hypertension and diabetes mellitus. Hypertension was found in 64 patients (80%) and diabetes-mellitus in 27 (33.7%). Twenty three patients (28.8%) had both hypertension and diabetes-mellitus. Co-morbidities were observed and included mitral-stenosis, cardiac-arrhythmias cardio-myopathy, HIV/AIDS, Left Ventricular Hypertrophy (LVH), infective endocarditis, atrial septal aneurysm, carotid plaques with or without stenosis and hyper-homocystenemia. Mean hospital stay was 12.5 days; range 22-70 days. Seventy five patients (93.8%) were discharged and four (5%) died in hospital. All patients who died had anterior circulation ischaemic stroke as per Trial of Org 10172 in Acute Stroke Treatment (TOAST) classification. **CONCLUSION:** Ischaemic stroke is the most common pathological sub-type observed in this study. Hypertension is the leading observed risk factor for stroke. Hospital period prevalence for stroke of 3042/100,000 was found. Seventy five patients (93.8%) were discharged and four (5%) died in hospital.

such as sickle cell disease, HIV/AIDS infection and cerebral malaria are increasingly being encountered in the tropics.

**Methods:** To determine pathological sub-types, risk factors, in-hospital period prevalence and in-hospital outcome of stroke. Hospital-based retrospective study. Kenyatta National Hospital. Patients with recorded diagnosis of stroke/cerebral vascular accident were studied.

**Results:** A total of 2629 patients admitted to the division of medicine during study period. Eighty patients had diagnosis of stroke; giving an in-hospital period prevalence

of 3042/100,000. Mean age was 61.3 years, mode; 63 years, range 34-95 years. Males were 43 (53.8%), M to F ratio 1.2:1 stroke sub-types: Ischaemic stroke 68 (85%), haemorrhagic stroke seven (8.8%). In five patients (6.3%) no evidence of stroke sub-type was on-record. Established risk factors for stroke included hypertension and diabetes mellitus. Hypertension was found in 64 patients (80%) and diabetes-mellitus in 27 (33.7%). 23 patients (28.8%) had both hypertension and diabetes-mellitus. Co-morbidities were observed and included mitral-stenosis, cardiac-arrhythmias cardio-myopathy, HIV/AIDS, Left Ventricular Hypertrophy (LVH), infective endocarditis, atrial septal aneurysm, carotid plaques with or without stenosis and hyper-homocystenemia.

**Conclusion:** Ischaemic stroke is the most common pathological sub-type observed in this study. Hypertension is the leading observed risk factor for stroke. Hospital period prevalence for stroke of 3042/100,000 was found. 75 patients (93.8%) were discharged and four (5%) died.

Disclosure: No conflict of interest declared

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### Using ankle brachial index in patients with high cardiovascular risk

L.A. Calleja Cartón, C. Ruiz Álvarez, J. Paz Galiana, J.P. García Paine, F. Muñoz Cobos, B. Castillo Trillo

*El Palo Health Center, Malaga Sanitary District, Málaga, Spain*

**Goal:** To determine the frequency of Low Ankle Brachial Index (<0'9) in high risk patients, which involves: Cardiovascular Disease (CVD), Diabetes Mellitus (DM), high cardiovascular risk (determined by SCORE > 5%), symptoms of lower limb ischemia. To determine factors associated with Low ABI.

**Design:** Transversal descriptive study.

**Subjects:** Patients with peripheral arteriopathy risk: CVD, DM, high cardiovascular risk (determined by SCORE > 5%), symptoms of lower limb ischemia) examined in primary care service.

**Consecutive sampling.** Sample size=126 patients for a confidence level of 95% and alpha=0.05, Precision 93%

**Variables:** Dependent variable: ABI. Independent variables: age, sex, CVD, DM, Hypertension, dyslipidemia, smoking, HbA1C, LDL, Body Mass Index (BMI), treatment.

**Analysis:** Linear regression multivariate analysis to determine associated factors with low ABI. Patients with ABI > 14 (13 patients) were excluded.

**Results:** 126 patients were included, with an average age of 66.39 years old. 63.5% were men. 76.2% present DM, 58.7% present Hypertension, 55.2% Dyslipidemia, 27.8% were smokers and 26.2% presented CVD. 79.4% had normal pedal pulse exploration, whereas 20.6% had no palpable pedal pulse. HbA1c average 7.17, LDL average 115.12, BMI average 30.8. 85.85% of patients had normal ABI and 14.15% had low ABI (<0'9). The 60% take antiplatelet treatment and the 2.4% are anticoagulated. Multivariate analysis model selected explains 95.9% of variance and it shows statistical significant relationship between high value of ABI and higher HbA1c moreover no palpable pedal pulse and lower value of ABI.

**Conclusions:** A significant percentage of high risk patients had low ABI. ABI value is related with HbA1C values and alteration in pedal pulse exploration.

**Key words:** Ankle Brachial Index, Cardiovascular Risk, Peripheral arterial disease

Disclosure: No conflict of interest declared

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**The quality of life in patients with diabetes in Turkey**

E.M. Koc<sup>1</sup>, T.E. Yilmaz<sup>1</sup>, I. Sencan<sup>1</sup>, I. Kasim<sup>1</sup>, R. Kahveci<sup>1</sup>, B. Cakir<sup>2</sup>, N. Yardim<sup>3</sup>, S. Guler<sup>4</sup>, A. Ozkara<sup>5</sup>

<sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Public Health, Hacettepe University, Ankara, Turkey; <sup>3</sup> Turkey Public Health Agency, Ministry of Health, Ankara, Turkey; <sup>4</sup> Endocrinology and Metabolic Diseases, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>5</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** In our day, diabetes mellitus (diabetes) and non-infectious chronic diseases sharing the same risk factors are posing a substantial health concern.

The Turkish Diabetes Epidemiology Study (TURDEP II) found that incidence of diabetes among Turkish adults had increased to 13.7%. Among other chronic diseases, diabetes, is currently estimated to affect five million patients in Turkey. An important leap will be possible by implementing the actions conceived under the Diabetes Prevention and Control Program of Turkey (DIABTURK)(2011-2014) which is designed to prevent and control diabetes, a spreading disease with significant consequences.

The vision of DIABTURK is to have a high quality of life in patients with diabetes. In this context we planned a study to determine the level of quality of life in diabetes patients and to identify related risk factors. These studies would be milestones of future studies which will increase the effectiveness.

**Methods:** We used a questionnaire, developed by us, about socio-demographic properties and health, ADDQoL 19 questionnaire and EQ5D questionnaire to obtain the quality of life in patients with diabetes. Questionnaires were applied to 300 patients for the pilot study.

**Results:** Results will be announced at WONCA 2013 World Conference.

**Conclusions:** Obtaining the difficulties, level of quality of life and risk factors in diabetes patients is important to prevent diabetes and its complications, to ensure availability of better care and to improve the quality of life for patients with diabetes, and to reduce premature mortalities.

Disclosure: No conflict of interest declared

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**Physical activity and diabetes**

A. Alves<sup>1</sup>, H. Leal<sup>1,2</sup>, A. Ramoa<sup>1,2</sup>

<sup>1</sup> USF Espaço Saúde, ACES Porto Ocidental, Porto, Portugal; <sup>2</sup> CIAFEL, University of Porto, Porto, Portugal

Inadequate physical activity has been recognised as an independent risk for premature development of coronary heart disease. In addition to its cardiovascular benefits, exercise can also improve glycemic control. Treatment of patients with type 2 diabetes mellitus includes education, evaluation for micro and macrovascular complications, normalization of glycemia and control of cardiovascular and other long-term risk factors.

The aim of this study about the prevalence of CVRF in type 2 diabetic patients and to evaluate the influence of self-reported physical activity in cardiovascular risk factors in a group of type 2 diabetic patients

**Methods:** Retrospective study of 43 type 2 diabetic patients. The patients were splitted in 2 groups, sedentary and non-sedentary group. A statistical analysis was made of all data collected

**Results:** of the 43 diabetic patients, 51,2% were female. Mean age was 57,4. For CVRF, 68,9% was sedentary, 83,5 had hypertension, 77,8% had dyslipidemia, 16,3% were smokers and 95,6% has metabolic syndrome. There were no statistically difference between the sedentary and non-sedentary groups.

**Conclusions:** this study confirms that DM2 is frequently associated with other CVRF with high prevalence. The self reported inactivity was not related with greater risk factors. More studies with objective measurements of physical activity are required.

Disclosure: No conflict of interest declared

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**The effects of the period of breastfeeding on the development of diabetes in women**B. Inal<sup>1</sup>, Y.K. Turkmen<sup>2</sup>, C.I. Sonmez<sup>3</sup><sup>1</sup> Family Medicine, Başakşehir State Hospital, Bahçeşehir Outpatient Clinic, İstanbul, Turkey;<sup>2</sup> Family Medicine, Dumlupınar University Medical School, Kütahya, Turkey; <sup>3</sup> Family Medicine, Ankara Atatürk Training and Research Hospital, Ankara, Turkey

The Effects of the Period of Breastfeeding on the Development of Diabetes in Women

**Aim:** In this study, we made a research on the effects of breastfeeding, especially the effects of the period of breastfeeding on the development of type-2 diabetes in women.

**Method:** 410 type-2 diabetic and 410 non-diabetic participants were included. The non-diabetic participants were chosen among those whose levels of blood glucose and results of oral glucose tolerance test had been normal for 3 months. All of the participants were questioned concerning their education, the number of children, age of first labor, length of breastfeeding time, disease duration.

**Results:** The total period of breastfeeding was 18 months for the diabetic participants, and 22 months for the non-diabetic participants ( $p > 0,05$ ). When we categorized the period of breastfeeding as “at least 3 months at a time” or “6 months at a time”, similar rates were found out for both groups for the period of “at least 3 months at a time”, but the rates for “6 months at a time” were higher in the non-diabetic participants than in the diabetic participants ( $p > 0,05$ ).

**Conclusion:** The rates of breastfeeding of “at least one child” for the period of “at least 6 months” were found out to be higher in non-diabetic participants. We found out that the development of diabetes decreased meaningfully when the period of breastfeeding was “more than 6 months at a time”.

Disclosure: No conflict of interest declared

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**Low-salt diet in patients with hypertension and type 2 diabetes controlled primary health care in Castilla y León (Spain)**L. Sierra-Martínez<sup>1</sup>, R. Martínez-Fuerte<sup>2</sup><sup>1</sup> Gamazo Health Center, Valladolid Este Primary Assistance Gerency, Valladolid, Spain; <sup>2</sup> Pilarica Gamazo Health, Valladolid Este Primary Assistance Gerency, Valladolid, Spain

**Objective:** Knowing the habit of consuming low-salt diet in patients with hypertension and type 2 diabetes mellitus controlled on Primary Health Care. To provide comprehensive care and continuous.

habit of consuming low-salt diet in patients with hypertension and type 2 diabetes mellitus controlled in Primary Health Care

**Methodology:** The authors conducted a cross sectional study applied to selected patients ( $n=104$ , 52 males (M) and 52 women (W)) chosen by non-probability sampling in a row, among Type 2 Diabetic patients attending our clinic included in the Service Care for diabetic patients Portfolio Services Primary Sacyl. They made history of presence / absence of a history of Hypertension, and yes / no, salt added to foods. Data are collected in an Excel spreadsheet and analyzed using SPSS 9.0 for Windows.

**Results:**

1-DM2 patients age: 90-95 (1M,0W), at 85-90 (1M, 2W), 80-85 (7M, 5W), 75-80 (7M, 7W), 70-75 (4M,11W), 65-70 (10M,10W), 60-65 (16M, 9W), 55-60 (2M, 3W), 50-55 (4M,5W).

2-Prevalence of: – Arterial Hypertension (AH): 58.6% (60 patients, 29M, 31 W).

3- Add salt to foods: 71.15% of men (37 yes, 15 no) and 76.92% of women (40 yes, 12 no)

**Conclusions:**

It is concluded that 58.6% of diabetic patients have a history of hypertension. 71.15% of men and 76.92% of women adds salt to food. Therefore it must implement an improvement plan of care by developing prevention, promotion, treatment and rehabilitation of hypertension associated with diabetes from the Primary Care

Disclosure: No conflict of interest declared

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**Efficacy of lorcaserin in the treatment of obesity**T. Magalhães<sup>1</sup>, G. Ferreira<sup>2</sup>, J. Ferreira<sup>3</sup><sup>1</sup> Family Medicine, UCSP Oliveira do Douro, Porto, Portugal; <sup>2</sup> Family Medicine, USF BrásOleiro, Porto, Portugal; <sup>3</sup> Family Medicine, USF Novo Sentido, Porto, Portugal

**Objective:** Evaluate the efficacy of the novel agent lorcaserin, a 5HT-2C receptor agonist, in the treatment of obesity.

**Methods:** Literature review, using Mesh keyword “lorcaserin”, in Pubmed, Cochrane Library, TRIP database, DARE, Bandolier and references of selected articles, in English, Spanish and Portuguese languages, without temporal restrictions. Evaluation of evidence levels and strength of recommendations was performed using SORT (Strength of Recommendation Taxonomy).

**Results:** Of the 76 articles found, 5 were selected. One study evaluated diabetic patients, during 1 year, and found a statistically significant weight reduction versus placebo. Three studies on obese and overweight adults found similar results after a 12 weeks/one/two-year follow-up. One small study also replicated these results, and demonstrated this reduction was related to a reduced energy intake. Adverse effects included headache, back pain, nasopharyngitis, dizziness and nausea, as well as hypoglycemia in diabetic patients. Cardiac valvulopathy and pulmonary artery pressure incidence did not seem to increase when compared to placebo.

**Conclusions:** Lorcaserin is effective in reducing weight in obese, overweight or diabetic adults (SOR B) in conjunction with lifestyle counseling, and has been recently approved by the United States Food and Drug Administration. However, data regarding long-term outcomes, such as efficacy, and especially safety, is limited. As such, more, long-term trials are needed before considering widespread use of lorcaserin in the treatment of obesity.

Disclosure: No conflict of interest declared

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**The role of primary care units in the early diagnosis of hypertension and diabetes mellitus in Sao Paulo – Brazil**

L.F. Benati, N. C. Costa, A.W. Lourenco, R.P. Santos, F.H. Benati

MEDICAL, SPDM – MEDICINA DA FAMILIA, SAO PAULO, Brazil

**Objectives:** Conduct community action and how many of those suffering from hypertension and / or diabetes mellitus, so it can create a regional drug counseling and monitoring of these patients the level of basic health unit.

**Results:** Of the 2,700 users, 2,000 were women. The average age of women was 60 years and men 65 years.

The DM was recorded in 1304 users, ie 48.15%.

SAH is altered users in 1124, equaling 40.8%.

Obesity was reported by users of 1692, 59.3% is 1 (one) case of morbid obesity.

Users with DM + SH were 411, or 14.8%

OBESITY users were 682 + DM, ie 22.23%.

Patients users with hypertension and obesity were 680, or 22.23%.

**Conclusions:** In this work we could see that almost half of the population was measured arterial hypertension, and 31% of these patients were unaware of the patients had hypertension. It was also possible to describe that 38% of patients had diabetes mellitus, and 21% were unaware of their condition. This work serves as an important point to be verified by health organizations, the importance of education and prevention work has been carried out by primary care units.

Disclosure: No conflict of interest declared



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**Diabetes mellitus – the importance of etiologic diagnosis**P. Chaves<sup>1</sup>, A. Pedro<sup>2</sup>, M. Carvalho<sup>3</sup><sup>1</sup> Family Medicine, UCSP Monte Abraão, Lisbon, Portugal; <sup>2</sup> Family Medicine, USF Arco-Iris, Lisbon, Portugal; <sup>3</sup> Family Medicine, UCSP Buraca, Lisbon, Portugal

**Objective:** Other specific types of Diabetes mellitus (DM) comprise a heterogeneous group of disorders in which endocrinopathies are included. We describe a case of DM secondary to acromegaly, enhancing the importance of etiologic diagnosis in Diabetes. Acromegaly results from persistent hypersecretion of growth hormone (GH). The prevalence of DM in acromegaly is unknown but ranges from 19% to 56%.

**Case Report:** 31 years old male, with no prior medical history, presents for a follow-up in our General Practitioner appointment in May 2012, because of new-onset DM. This diagnosis was made by a General Practitioner, in April 2012. Ambulatory medication: metformin, sitagliptin and rosuvastatin. He had the follow abnormal laboratorial tests: HbA1c: 14,1%, fasting glucose: 310mg/dL, triglycerides: 1104 mg/dL. He reported physiognomic alterations from some years ago, in particular mandibular prognathism, enlargement of the hands and feet, swollen lips and tongue, and complained about excessive sweating. We suspected of acromegaly and in July the diagnostic was confirmed by measurement of serum GH: 52,7 ng/mL and the presence of a pituitary macroadenoma in the computed tomography. In November 2012 elective transsphenoidal adenomectomy was performed. Laboratorial improvement was notable.

**Conclusions:** DM is common in acromegaly, but is also common in the general population. This fact jointly with the insidious nature of acromegaly may contribute to diagnosis delay. The primary care provider has an important role in recognizing clinical manifestations of this condition in its early stages and initiating the appropriate diagnostic workup.

Disclosure: No conflict of interest declared

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**Metformin: therapeutic weapon for Polycystic ovary syndrome?**

R. Cunha

ACES Cávado I, USF Bracara Augusta, Braga, Portugal

Polycystic ovary syndrome (PCOS) is a frequent endocrinopathy, resulting from many factors. Hirsutism, acne and menstrual irregularities are some of its symptoms; infertility and diabetes are some of its complications. In cases of obesity and other metabolic disorders, metformin is, along with lifestyle changes, the first line therapy for PCOS.

DRMC, caucasian, 15 years old, student; Family APGAR: moderate dysfunction; Duvall Cycle: class VI; Graffar's Classification: class I. January/11: attends the consultation due to facial hair excess. Past history: menarche at the age of 11. Family history: 5 sisters, „chubby and hairy“. Physical examination: score 18 of the *Ferriman-Gallwey scale* (FG); body mass index (BMI): 28. April/11: increased facial and periauricular hair and appearance of facial and back acne. Worsening of FG score to 21; increase in BMI. Clinical analysis: hyperandrogenemia; pelvic ultrasonography: „consistent with polycystic ovaries“. Combined oral contraceptive (COC) Diane 35 was prescribed. December/11: worsening of facial hair and „heavy legs“. Improvement in FG score to 18. COC was changed to yasminelle and androcur was added. April/12: no changes on FG score; worsening of IMC. Metformin was introduced; other medication was suspended. August/12: improvement of hirsutism and of BMI.

The growing epidemic of obesity seems to influence the rising prevalence of PCOS in society. Regarding the family component of the PCOS, and having a privileged family knowledge, FP should suspect, diagnose and treat patients and their families, early and improved enough to minimize the symptoms and prevent the complications.

Disclosure: No conflict of interest declared

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**Low bone mineral density is associated with metabolic syndrome in South Korean men but not in women: The 2008-2010 Korean National Health and Nutrition Examination Survey**Y.-H. Kim<sup>1</sup>, D.-H. Kim<sup>1</sup>, K.-H. Cho<sup>1</sup>, Y.-S. Choi<sup>1</sup>, S.-M. Kim<sup>1</sup>, G.-E. Nam<sup>1</sup>, S.-H. Lee<sup>1</sup>, B.-J. Ko<sup>1</sup>, Y.-G. Park<sup>2</sup>, K.-D. Han<sup>2</sup><sup>1</sup> Department of Family Medicine, Korea University College of Medicine, Seoul, Korea;<sup>2</sup> Department of Medical Statistics, Catholic University College of Medicine, Seoul, Korea

**Objective:** This study examined the relationships between bone mineral density (BMD) and metabolic syndrome (MS) in South Korean adults.

**Methods:** A total of 14,485 adults (6,659 men and 7,826 women) in the Korea National Health and Nutrition Examination Survey conducted from 2008 to 2010 were analyzed. We used multivariable regression models to examine the relationship between low BMD and MS. We calculated homeostasis model assessment and insulin resistance (HOMA-IR). MS was defined according to AHA/NHLBI criteria for Asians. BMD was measured at the lumbar spine (LS), femur neck (FN), total hip (TH), trochanter, and intertrochanter.

**Results:** After adjustment for age, body mass index (BMI), tobacco and alcohol use, and regular exercise, the TH and FN BMD were significantly lower in men with MS than in men without MS ( $p < 0.05$ ). However, there were no differences in premenopausal and postmenopausal women. In men, BMD was positively correlated with BMI, and high density lipoprotein cholesterol, but was negatively correlated with insulin, HOMA-IR, and triglyceride at all three sites ( $p < 0.05$ ). Along with an increase of BMD (0.1 g/cm<sup>2</sup>), the odds ratios (ORs) for obesity and abdominal obesity were all greater than 1 at all sites in both genders. The ORs for hypertension and MS were 0.937 (0.879-0.998) and 0.899 (0.840-0.962), respectively at FN, and the OR for diabetes mellitus was 1.103 (1.017-1.196) at LS in men. In postmenopausal women, the OR for hypertension was 1.133 (1.029-1.246) at LS.

**Conclusions:** Low BMD was especially associated with MS in South Korean men.

Disclosure: No conflict of interest declared

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**Psychosocial factors relating to poorly controlled diabetic patients at primary medical center, faculty of medicine, thammasat university (kukot)**

P. Bunnag

Thammasat University, Faculty of Medicine, Pathumthani, Thailand

**Objective :** To study psychosocial factors in poorly controlled diabetic patients in primary medical center.

**Material and method :** Qualitative cases study were done in 10 poorly controlled diabetic patients (HbA1C >10) at Kukot primary medical center in Pathumthani province. We applied in-depth interviews to our participants and used analytic induction to analyzed information that were divided for 8 aspects such as 1) self-efficacy 2) chronic stress 3) depression 4) social support 5) doctor-patient relationship 6) finance and occupation 7) High risk situation 8) diabetic knowledge.

**Result:** Three participants had worse self-efficacy due to chronic stress, depression and low social supports. Those factors affected poorly controlled diabetes mellitus. Other seven poorly diabetic patients who had rather good self-efficacy were influenced by inappropriate hard working, low financial status and high risk situation. Their earn-money works may have priority over their diabetes mellitus. Causes of chronic stress and depression were low socioeconomic status, familial conflicts and low social supports. There were positive doctor-patient relationships in all our participants, but good relationships were not exactly support positive behavior to achieve target plasma glucose as same as good diabetic knowledge.

**Conclusion:** All factors were related each other. Truly advantages for poorly controlled diabetes patients in primary care center are holistic healthcare by a specific team and getting support from local administration include the government.

Disclosure: No conflict of interest declared

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**Association between vitamin D status and metabolic syndrome risk among Korean population: Based on the Korean National Health and Nutrition Examination Survey 2008-2010**

J.Y. Kim, H.R. Lee

Family Medicine, GANGNAM SEVERANCE HOSPITAL, Seoul, Korea

**Objective:** Previous reports have shown that metabolic syndrome and some metabolic syndrome components are associated with serum 25-hydroxyvitamin D [25(OH)D]. We aimed to assess the association between the clinical range of vitamin D status (deficiency and insufficiency) and metabolic syndrome in the South Korean population.

**Methods:** In this cross-sectional study, we assessed 18,313 adults from the Korean National Health and Nutrition Examination Surveys (KNHANES), 2008–2010. Subjects were separately classified into 3 groups of serum 25(OH)D as deficiency (25(OH)D <20ng/mL), insufficiency (20 ≤ 25(OH)D <30ng/mL), and normal (25(OH)D ≥ 30ng/mL). Logistic regression was used to determine odds ratios (OR) for metabolic syndrome after adjusting for multiple confounders.

**Results:** The prevalence of vitamin D deficiency was 63.4% and insufficiency was 29.3%. Those in the insufficiency group of serum 25(OH)D had 23% higher odds [OR = 1.23; 95% confidence interval (CI) 1.07, 1.42] and deficiency group of serum 25(OH)D had 30% higher odds (OR = 1.30; 95% CI 1.13, 1.49) for metabolic syndrome as compared to those in the normal group. High homeostasis model assessment of insulin resistance (HOMA-IR) (OR = 1.29; 95% CI 1.13, 1.47 for insufficiency group, OR = 1.54, 95% CI 1.36, 1.75 for deficiency group) were the main component associated with serum 25(OH)D. High blood pressure and hypertriglyceridemia were also closely correlated components of metabolic syndrome according to serum 25(OH)D status.

**Conclusions:** We conclude that serum 25(OH)D deficiency and insufficiency are associated with elevated risk of metabolic syndrome.

Disclosure: No conflict of interest declared

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**Frequency of metabolic syndrom parameters in patients with nonalcoholic fatty liver disease (NAFLD)**A. Tanoglu<sup>1</sup>, T. Akyol<sup>2</sup>, O. Sari<sup>3</sup>, U. Aydogan<sup>3</sup><sup>1</sup> Gastroenterology, GATA Haydarpaşa Training Hospital, Istanbul, Turkey; <sup>2</sup> Gastroenterology, Corlu Military Hospital, Tekirdag, Turkey; <sup>3</sup> Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey

**Introduction:** NAFLD commonly associated with the metabolic syndrome, obesity, diabetes, and hyperlipidemia. NAFLD is closely related with insulin resistance. Especially 80% of patients with the metabolic syndrome have NAFLD. We evaluated the frequency of metabolic syndrom parameters in patients with NAFLD.

**Methods:** 46 patients with biopsy proven diagnosis of NAFLD were included to study. The metabolic syndrome is defined as the coexistence of three or more of the following findings: (1) increased waist circumference. (2) hypertriglyceridemia. (3) hypertension. (4) elevated fasting plasma glucose. (5) low high-density lipoprotein (HDL) cholesterol level. Waist circumferences, lipid panels, blood pressures, fasting glucose levels, body mass indexes, insulin levels of all participants were determined.

**Results:** 40 patients were (87%) male and 6 were (13%) female. Mean BMI was 30,06 ± 4,62. In the view of BMI, 24 patients were overweighted (52,1%) and 17 were obese (37%). Mean waist circumference was 106,09 ± 8,97 cm. Waist circumference was increased in 37 patients (80,4%). Insulin resistance was diagnosed in 30 patients (76,9%). Mean triglycerides levels was 150,45 ± 77,33, mean total cholesterol levels was 198,5 ± 46,69 and mean HDL levels was 41,67 ± 10,58. As a result, in 13 patients (29,5%) hypertension, in 12 patients (27,3%) impaired fasting glucose or diabetes, in 29 patients (63%) hyperlipidemia and finally in 24 patients (52,2%) metabolic syndrom was diagnosed.

**Conclusions:** Metabolic syndrom parameters are commonly seen in patients with NAFLD. So, especially in primary care, patients with hypertension, hyperlipidemia, diabetes and also overweighted patients should be evaluated for metabolic syndrom and particularly for a preventable and treatable disease of NAFLD.

Disclosure: No conflict of interest declared

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**Diabetes mellitus prevalence among residents of state nursing homes in Ankara**U. D. Dursun<sup>1</sup>, I. Kasım<sup>1</sup>, S. Sumer<sup>1</sup>, I. Sencan<sup>1</sup>, T. E. Yılmaz<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Ozkara<sup>2</sup><sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Nursing home inhabitants are mostly geriatric people with relatively low functional capability, high chronic disease prevalence and complications according to their peers. Nursing homes are mainly state organizations in Turkey. It's predicted that prevalence of diabetes mellitus (DM) will be doubled in 20 years. Above 60 years of age diabetics will be two third of all diabetic population in 2025. Diabetic geriatric people have high risk of amputations, myocardial infarction, end stage renal disease because of diabetic complications. In geriatric age death from hyperglycemic coma and hypoglycemic attacks are more likely according to younger patients. The aim of this study is to detect prevalence of DM in state nursing homes in the province of Ankara. Determining prevalence of diabetes mellitus in state nursing homes will enlighten our future perspective.

**Method:** All individuals in state nursing homes in Ankara province were included in the study. Fasting glucose levels (FG) of individuals without a previous diagnosis of DM, were obtained. Further tests are run, if necessary. The DM diagnosis is made according to current guidelines of Turkish Endocrinology and Metabolism Association. Known diabetic patients were accepted as DM.

**Results and Conclusion:** The analysis of this study is still in process. The results will be presented during the conference. As the prevalence of nursing home inhabitants is not known, the results of this study would be expected to help clinicians and policy makers to take related actions.

Disclosure: No conflict of interest declared

1221

**Diabetes mellitus care quality and quality of life of diabetics in state nursing homes of Ankara**S. Sumer<sup>1</sup>, I. Kasım<sup>1</sup>, U. D. Dursun<sup>1</sup>, I. Sencan<sup>1</sup>, P. Doner<sup>2</sup>, R. Kahveci<sup>1</sup>, A. Ozkara<sup>3</sup><sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Family Medicine, Public Health Center, Kilis, Turkey; <sup>3</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** Diabetes mellitus is a well-known chronic disease having high morbidity and increased prevalence in the world, which is true for Turkey as well. Parallel to increasing life expectancy, management of diabetes is drawing higher attention. The diabetic population in nursing homes is a special group that needs further attention. Diabetics in geriatric age group have higher tendency for co-morbidity that would affect quality of life. This study aims to determine disease specific quality of life of residents living in state nursing homes in Ankara (second biggest city of Turkey with more than 4 million inhabitants). Quality of diabetes management in these institutions is further explored.

**Methods:** We used ADDQol disease specific quality of life scale with face to face interviews. We included all diabetic patients in all state nursing homes in Ankara province of Turkey. The patients who could not cooperate or did not want to join the study were excluded. We also used Diabetes Recognition Program adult measures performance criteria and scoring tools developed by National Committee for Quality Assurance (NCQA) for assessing the quality of diabetes management.

**Results and Conclusions:** The data for this study is still being analyzed. Results will be discussed during the conference. Findings are expected to give us an idea about how elderly diabetic patients are managed in nursing homes and their quality of life, which would further lead to related policy actions.

Disclosure: No conflict of interest declared

1290

**Prevalence of type 2 diabetes in obese patients**

I. Lentzas, G. Tzavara, A. Neofotistou, V. Bellou, M. Bellou, A. Seretis, V. Karagiorga, G. Mantzouranis

*General Practice, Health center of Simopoulo, Simopoulo, Greece*

**Introduction:** Abdominal obesity enhances the risk of developing type 2 diabetes according to the body mass index (BMI). Thus 40% of patients with BMI > 35 kg/m<sup>2</sup> develop diabetes. The goal is to prevent the occurrence of diabetes by: early identification of obese patients, weight loss and surveillance of body weight maintaining BMI < 29.9 kg/m<sup>2</sup>.

**Materials and methods:** The study included 100 obese patients divided in 2 groups: Group A – 50 obese patients with BMI media 36.2 kg/m<sup>2</sup>, they were subjected to a hypo caloric diet and physical activity according to their cardiovascular status. Group B – 50 obese with a BMI media 36.6 kg/m<sup>2</sup> who refused hypocaloric diet and physical activity. In both groups the following examinations were performed at 9 and 12 months: fasting plasma glucose, 2 hours postprandial plasma glucose, oral glucose tolerance test and body weight control.

**Results:** After 12 months of treatment group A patients lost weight (BMI = 30.7 kg/m<sup>2</sup>) and type 2 diabetes prevalence was 11%, while in group B, BMI enhanced to 37.1 kg/m<sup>2</sup> and 25.3% developed type2 diabetes.

**Conclusions:** Lack of appropriate treatment leads to a two times higher prevalence of type 2 diabetes among obese patients

Disclosure: No conflict of interest declared

1293

**Compliance with hypolipidemic therapy and diet of patients with hyperlipidemia**

A. Katsanaki, G. Mantzouranis, I. Lentzas, G. Tzavara, C. Sambazioti, A. kamaratos

*General Practice, Rion Medical University Hospital, Patra, Greece*

**Purpose:** To investigate if patients who visit a hospital or health center regularly comply with their hypolipidemic therapy. Specifically, if they followed their doctor's instructions, and to evaluate the results.

**Methods and Material:** 300 patients were evaluated (144 males and 156 females) of which 254 were Christians and 46 were Muslim, aged 53-87 years. We examined how strictly they followed the programmed examination and conformed to their doctor's instructions, the diet and the therapy. These parameters were related to the sex, religion and the history of coronary disease.

**Results:** 161 patients (55%) had a history of hypertension, 30% of them without treatment or uncontrolled, 42% were smokers, 86% obese or overweight (most of which were Christians and women) and 23% had a history of early appearance of coronary disease (87 had had PTCA or CABG) and 82 (28%) diabetes mellitus. Only 29% of the patients claimed to take systematic hypolipidemic therapy. Half of the patients mostly male (73%) stopped the follow-up after the first appointment. It was mostly women and Muslim who did not conform to dietary and pharmaceutical instructions.

**Conclusion:** It appears that high risk Muslims conform better than high risk Christians. Only 8% of the patients who participated in the study were conscientious and faithful with their therapy.

Disclosure: No conflict of interest declared

1308

**Barriers to adherence to anti hyperglycemic medications: a three lingual study**R. Brand<sup>1</sup>, C. Solbach-Sabach<sup>1</sup>, O. Cohen-Castel<sup>2</sup>, K. Agay-Shay<sup>3</sup>, K. Karkabi<sup>2</sup><sup>1</sup> Department of Family Medicine, Clalit Health Services, Haifa, Israel; <sup>2</sup> Division of Family Medicine, Rappaport Faculty of Medicine, Haifa, Israel; <sup>3</sup> School of Public Health, Haifa University, Haifa, Israel

**Introduction:** Adherence of diabetic patients to medical treatment has long been a critical issue in diabetes treatment, as mean adherence rates stand on 60 to 70 prevents on most studies. This study is a cohort study focusing on barriers to adherence in three sub-populations in Israel.

**Aim of study**

This study investigated the main barriers to adherence of diabetic patients in three different sub-populations in Israel. Adherence rates with correlation to those barriers are the subject of our yet to be finished study.

**Methods:** 355 diabetic patients on oral anti-hyperglycemic treatment were subjected to a telephone interview concerning central barriers to adherence. Comparison between three sub-populations in Israel (Jewish, Arabic and Russian immigrant Jews) concerning those barriers is described.

**Results:** 355 diabetic patients on oral hypoglycemic treatment completed a full telephone interview concerning adherence barriers. Our questionnaire was composed of five parts: general health perception and main information source about diabetes, barriers to adherence including doctor-patient related issues, patients' beliefs concerning diabetes, knowledge questionnaire and demographic information. The study presents our results for each part of the questionnaire including comparison between three sub-populations in Israel.

**Conclusion:** Several differences between sub populations in Israeli society concerning barriers to adherence to oral hypoglycemic treatment were revealed. This could focus GPs' work with those patients in order to rise adherence rates. Correlation between barriers and adherence rates are the subject to our ongoing study.

Disclosure: No conflict of interest declared

1330

**Behind a dental implant: pleomorphic adenoma of parotid gland**J. Antunes<sup>1</sup>, J. Bordalo<sup>2</sup><sup>1</sup> UCPS Ílhavo 1, ACES Baixo Vouga II, Ílhavo, Portugal; <sup>2</sup> USF Flor de Sal, ACES Baixo Vouga II, Aveiro, Portugal

**Introduction:** The pleomorphic adenoma (PA) is the most common benign tumor of the parotid gland, accounting approximately 60 to 70%, which incidence is higher between the 4th and 6th decades of life. Clinically, it presents as a single nodular lesion with well-defined margins, lobulated surface, hardened, mobile and painless on palpation

**Summary:**Female, 48 years old, Caucasian. Relevant medical history: heavy smoker, hypertension and hyperthyroidism. Went to the family physician (FP) because of toothache and palpable nodule about 5 mm, painless, mobile, without inflammatory signs and located 2cm above the angle of the jaw. The patient noticed that the nodule had increased in the weeks before the consultation and associate to a dental implant done in the previous month. Because of it, was considered an inflammatory adenomegaly due to the dental treatment. She was treated with anti-inflammatory and advised to monitor its changes. Return to the FP because of the persistence and a slow increasing of the nodule. Was requested an ultrasound that revealed a pleomorphic adenoma of the parotid gland. The biopsy confirmed the diagnosis.

**Conclusion:** In this case, the overlapping events – the dental implant and the appearance of the nodule – interfere with the initial approach to patient. What seemed to have a direct and causal relation turn on the diagnosis of a pleomorphic adenoma. It's essential that the FP be aware of the different pathologies that are associated with the appearance of nodules in that location

Disclosure: No conflict of interest declared

1363

**Prediabetes and metabolic syndrome parameters as risk factors of cardiovascular disease**

L. Marković, B. Šoškić, N. Trajković

General medicine, Health center New Belgrade, Belgrade, Serbia

Prediabetes is considered impaired fasting glucose status (IFG) and impaired glucose tolerance (IGT). People with prediabetes are at risk populations, not only for the development of type 2 diabetes but also cardiovascular disease (CVD).

**Objective:** The aim of this study was the identification of some parameters of the metabolic syndrome which represent a risk for the development of CVD in patients with prediabetes.

**Methods:** We examined 54 subjects with prediabetes, 30 women and 24 men mean age  $48.3 \pm 8.6$  years. They were divided into 2 groups: those with impaired IFG (fasting glucose  $\geq 6.1$  and  $\leq 6.9$  mmol/l) and the second with impaired IGT (confirmed 2-hour oral glucose tolerance test-OGTT). Everyone has a certain BMI, measured waist circumference, blood pressure, lipid profile, fasting glucose and glycated hemoglobin (HbA1c).

**Results:** In the group with IFG were 29 subjects, 16 women and 13 men, mean BMI  $30.70 \pm 3.25$  kg/m<sup>2</sup>, waist circumference  $102.3 \pm 8.6$  cm, systolic blood pressure  $144.8 \pm 12.6$  mmHg diastolic  $83.7 \pm 10.2$  mmHg. The mean value of triglycerides was  $2.7 \pm 0.6$  mmol/l, LDL cholesterol  $4.8 \pm 1.2$  mmol/l HDL cholesterol  $1.1 \pm 0.2$  mmol/l. Glycemia average value was  $6.5 \pm 0.2$  mmol/l, and HbA1c was  $6.13 \pm 0.22\%$ . In the group with IGT were 25 subjects, 14 women and 11 men, mean BMI  $30.12 \pm 4.17$  kg/m<sup>2</sup>, waist circumference  $103.7 \pm 8.2$  cm, systolic blood pressure  $143. \pm 10.7$  mmHg diastolic  $82.5 \pm 9.7$  mmol/l, triglycerides  $2.5 \pm 0.3$  mmol/l, LDL cholesterol  $4.9 \pm 0.8$  mmol/l, HDL cholesterol  $1.0 \pm 0.1$  mmol/l, glucose  $6.6 \pm 0.3$  mmol/l and HbA1c  $6.37 \pm 0.12\%$ .

**Conclusion:** Patients with prediabetes both groups (and IFG and IGT) had no significant differences, the present parameters of metabolic syndrome, which pose a risk for cardiovascular disease, so we need as early as possible to identify and act on them by changing lifestyle and medication, and thus prevent onset of cardiovascular disease and diabetes, which is an additional risk factor for CVD.

Disclosure: No conflict of interest declared

1367

**Skipping breakfast and overweight, is there a relationship?**S. Calejo Rios<sup>1</sup>, M Ines Monteiro<sup>2</sup>, F Nunes<sup>2</sup>, M Costa<sup>2</sup>, L Gomes<sup>2</sup><sup>1</sup> MGF, USF Sem Fronteiras, S. Paio de Oleiros, Portugal; <sup>2</sup> Pediatrics, CHEDV, Santa Maria da Feira, Portugal

**Introduction:** The importance of breakfast (Bf) has been recognized long time ago. Recently, was established a relationship between the skipping breakfast and overweight / obesity in children and adolescents in Europe.

**Objectives:** To characterize the habits of breakfast and study the association between skipping Bf and overweight/obesity in a pediatric population.

**Methodology:** Applying a questionnaire for children and adolescents (aged 6 to 18 years), present in the waiting room of the consultation of Pediatrics, between March and May 2012. We evaluated the characteristics of breakfast and sociodemographic variables (gender, age, BMI, family type).

**Results:** We collected 400 surveys. The average age was 11.3 years, with 56.2% of respondents were male, 69.5% belongs to nuclear families. On the day of the interview, 94.8% of the subjects ingested Bf, and in most cases consisting of cereal with milk (41.4%). Of the 5.3% who did not take Bf, said the main reason was lack of time (38.1%). It was found in 24.7 respondents were obese and 22.1% were overweight. Of those who did not take Bf, 55% were overweight/obese, with a slight predominance of females. There were no statistically significant relationships between BMI and intake and type of Bf, family type, sex or age.

**Discussion:** We were pleasantly surprised by 94.8% of the children had taken the Bf on the day of the interview. However, 46.8% of respondents were obese / overweight, reflecting the world and portuguese reality, which demonstrates the ineffectiveness of preventive measures adopted, so it should be improved.

Disclosure: No conflict of interest declared

1428

**Is non alcoholic fatty liver disease is a fore teller of pre diabetes?**

S. Nagusah, M. Satyajit, S. Sa

FAMILY MEDICINE, SUNDARAM MEDICAL FOUNDATION, Chennai, India

**Objective:** To find if non alcoholic fatty liver disease is a fore teller of pre diabetes.**Design:** cross sectional study**Setting:** Sundaram Medical Foundation, Shanthi colony, Anna nagar, Chennai Tamil nadu (community based hospital)**Patients:** consecutive sample of 1560 patients who came for executive health check up during time period of Jan 2012 to Dec 2012**Inclusion criteria:** ultrasound positive for fatty liver,**Exclusion criteria:** alcoholic, positive viral hepatitis markers**Results:** Of the 1560 patients who came for executive master health check up during the period from Jan 2012- December 2012. Around 398 subjects (males-278, females-120) between the age group of 31-60 yrs were found to be having NAFLD by ultrasound. Majority of the sample population (94) were already diabetic and were on treatment. Around 74 subjects are newly diagnosed diabetics during this EHC. The number of pre diabetics in this NAFLD subjects are 94 impaired fasting glucose, 8 are impaired glucose tolerance, 56 had both IFG and IGT. Only 72 had normal blood sugar levels.**Conclusions:** There seems to be very high prevalence of NAFLD in type 2 diabetes and from this study we come to know that NAFLD is also highly prevalent in pre diabetics too, Is NAFLD A FORE TELLER FOR PRE DIABETES ?

Disclosure: No conflict of interest declared

1436

**NAFLD and dyslipidemia**

S. Nagusah, M. Satyajit, S. Sa

family medicine, sundaram medical foundation, Chennai, India

**Objective:** To find the prevalence of Dyslipidemia in non alcoholic fatty liver disease.**Design:** cross sectional study**Setting:** Sundaram Medical Foundation, Shanthi colony, Anna nagar, Chennai Tamil nadu (community based hospital)**Patients:** consecutive sample of 1560 patients who came for executive health check up during time period of Jan 2012 to Dec 2012**Inclusion criteria:** ultrasound positive for fatty liver,**Exclusion criteria:** alcoholic, positive viral hepatitis markers**Results:** of the 1560 subjects who came for executive health check up around 398 were diagnosed to have NAFLD on ULTRASOUND. 95 patients were already diabetic on treatment.

on analyzing the rest of the sample (303), we see that 182 had normal triglyceride levels, 58 were borderline, 63 had high TGL levels.

around 86 had normal HDL levels, 212 had low levels of HDL and only 5 had high levels of HDL.

**Conclusions:** We come to know that NAFLD has high prevalence of dyslipidemia.

Disclosure: No conflict of interest declared



1468

**Deficiency of vitamin B12 in diabetic patients treated with metformin – evidence on screening?**

I. Pires, A. Santos

*Family and General Medicine, USF S. João do Porto, Oporto, Portugal*

**Objective:** Metformin is the drug most often prescribed as first-line treatment of type 2 diabetes mellitus (T2DM). Symptoms of gastrointestinal intolerance are the most common side effect described, however, treatment with metformin is associated with decreased absorption of vitamin B12 (VB12) putting the patient at risk of a deficiency of this vitamin. The aim of this review is to evaluate the available evidence on screening for VB12 deficiency in diabetic patients treated with metformin.

**Methods:** Survey of clinical practice guidelines (CPG), systematic reviews, meta-analyses, and original studies (OS) at sites of evidence-based medicine using the keywords “vitamin B12 deficiency” and “metformin”.

**Results:** A total of 62 articles were obtained and 8 were selected: 7 OS and 1 CPG. The guideline supports the clinical importance of the assay of VB12 in the study of neuropathy especially in patients taking metformin for long periods. All OS underscore the need for screening, demonstrating that patients with (T2DM) diabetes treated with metformin have a greater risk VB12 deficiency compared to subjects not treated with metformin, values dependent on the dose and duration of treatment.

**Conclusions:** Currently the evidence points to an increased importance of evaluating VB12 deficiency for patients with peripheral neuropathy. Several studies suggest the screening of VB12 deficiency in diabetic patients regularly treated with metformin for long periods and / or high doses. Since VB12 deficiency is an analytical outcome more studies are required to demonstrate the clinical relevance of this secondary effect of metformin and what its best approach is.

Disclosure: No conflict of interest declared

1481

**Are the group educations effective in type 1 diabetics?**B. Dogan<sup>1</sup>, G. Feyizoglu<sup>2</sup>, A. Ergişi<sup>1</sup>, O. Emiroglu<sup>1</sup>, T. Ozturk Uzun<sup>1</sup>, O. Kostek<sup>3</sup>, A. Oguz<sup>3</sup>

<sup>1</sup> Family Medicine, Istanbul Medeniyet University Goztepe Research and Training Hospital, Istanbul, Turkey; <sup>2</sup> diabetes nurse, Istanbul Medeniyet University Goztepe Research and Training Hospital, Istanbul, Turkey; <sup>3</sup> internal medicine, Istanbul Medeniyet University Goztepe Research and Training Hospital, Istanbul, Turkey

Are the group educations effective in type 1 diabetics?

**Objective:** The aim of the study was to determine the effectiveness of group therapy in type 1 diabetic patients.

Research design and method

A total of 105 patients who were admitted to Istanbul Medeniyet University Goztepe Research and Training Hospital's Diabetes Clinic were enrolled. The groups configured randomly with 10 to 15 patients who admitted to Diabetes Clinic consequently. Nutrition and exercise education were given to the groups. Calculation of insulin requirements depending on their carbohydrate consumption were educated with case examples. Statistical analyses were made by using the software SPSS for Windows V15.0.

**Results:** Total of 105 patients with type 1 diabetes enrolled in the study. The mean age of diabetes was 13,02. The mean age was 35,2 for males (50 patients) and 34.5 for females (55 patients). The mean HbA1c was 8,4% for the whole group. There were no significant differences in HbA1C levels between pre and post-education periods ( $p=0.48$ ,  $p=0.0056$ ,  $p=0,5$  respectively). The HbA1C level differences of males and females were also not significant ( $p=0.10$ ,  $p=0.08$ ,  $p=0.74$ ,  $p=0.43$ ,  $p=0.22$  respectively). The education status of patients did not change the effect of diabetes education on HbA1C levels.

**Conclusion:** Although the education of diabetic patients is the first and the most important step of diabetes management, making this education on the groups configured with large number of patients may not result with better glycemic control.

Disclosure: No conflict of interest declared

1492

**Evaluation of lipid profile in patients with non nonalcoholic fatty liver disease (NAFLD)**O. Sari<sup>1</sup>, A. Tanoglu<sup>2</sup>, T. Akyol<sup>3</sup>, U. Aydogan<sup>1</sup><sup>1</sup> Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>2</sup> Gastroenterology, GATA Haydarpasa Training Hospital, Istanbul, Turkey; <sup>3</sup> Gastroenterology, Corlu Military Hospital, Tekirdag, Turkey

**Introduction:** NAFLD is associated with hyperlipidemia. Hypertriglyceridemia and mixed dyslipidemia associated with a five fold risk of NAFLD. The prevalence of hyperlipidemia connected with NAFLD is changing from 30% to 90%. With a strong connection to the metabolic syndrome, low HDL cholesterol levels are also commonly observed in patients with NAFLD. In this study we compared the lipid parameters of patients with NAFLD and healthy controls.

**Methods:** 72 participants (62(86,1%) male and 10(13,9%) female) were included to study. 46 participants (patients with NAFLD) were named as study group and 26 were named as healthy control group. After 12 hours fasting triglycerid, total cholesterol, low-density (LDL) cholesterol and high-density (HDL) cholesterol levels were evaluated in all participants.

**Results:** Mean age was 37,43±9,45 in study group and 31,35±6,76 in control group. Mean total cholesterol levels were 208,69±49,74mg/dl and 181,04±35,21mg/dl, mean triglycerid levels were 167,16±76,56mg/dl and 121,54±71,11mg/dl, mean HDL levels were 41,70±11,44mg/dl and 41,61±9,15mg/dl, mean LDL levels were 135,87±40,09mg/dl and 115,11±32,73mg/dl in NAFLD group and control group respectively. In NAFLD group total cholesterol levels (p=0,015), triglycerid levels (p=0,009) and LDL levels (p=0,028) were statically significantly higher than control group. In view of HDL, there was no statically significant difference (p=0,973) between two groups.

**Conclusions:** An outstanding risk factor of NAFLD is precisely hyperlipidemia. Because patients with NAFLD are at increased risk of adverse cardiovascular events. It is important to draw attention to reducing kalori intake, lifestyle changings and use of statins appear to carry additional therapeutic benefits in patients with NAFLD from primary care to specialists.

Disclosure: No conflict of interest declared

1546

**The role of kayu putih family medicine clinic in diabetes mellitus management**

D. Friska

Kayu Putih Family Medicine Clinic, Community Medicine Department, Faculty of Medicine, University of Indonesia, Jakarta, Indonesia

**Background:** Diabetes Mellitus is one of chronic progressive and degenerative diseases, which its prevalence is increasing.

Kayu Putih Family Medicine Clinic is a primary health service clinic which has developed diabetes clinic for primary setting. As we run based on family medicine and community medicine approach, we don't only focus in patient management but also from health prevention and early detection involving family and community participation.

This paper shows some roles and activities in Diabetes Management which have been done by Kayu Putih Family Medicine Clinic

**Objectives:** Diabetes Management with family medicine concept in primary care health services

**Methods:** Kayu Putih Family Medicine Clinic do diabetes management with patient's centered, family focused and community oriented concept.

As using patient's centered approach we educate using effective communication, not only care about their diabetes but care holistically including family condition. Clinic does comprehensive approach using five levels of prevention, so it's not only curative but start from education, prevention and early detection.

Using family focused approach, we always try to involve the member of the family for diabetes management starting from participation of family member to identity risk factor and screening activity for family member.

Using community approach, we try to arouse community involvement in early detection for diabetes by having Posbindu activity. In Posbindu activity we involve community cadars to do early detection including diabetes detection

**Conclusion:** Kayu Putih Family Medicine Clinic do diabetes management with family medicine approach to have better condition for patients and their family

Disclosure: No conflict of interest declared

1567

**Association of relative muscle mass with the factors of metabolic syndrome**S. Kim<sup>1</sup>, G.-H. Park<sup>2</sup><sup>1</sup> department of Family medicine, Kangwon National University Hospital, Chuncheon, Korea;<sup>2</sup> Department of Dermatology, Asan Medical Center, Seoul, Korea

**Objective:** It was reported decreased relative muscle mass was related with insulin resistance and prediabetes in US. The aim of this study is to investigate the association of relative muscle mass with cardiovascular disease risk factor using the nationally representative sample of Korean adults.

**Methods:** This is a cross-sectional study using the data of the 13,003 subjects who participated in the Korean National Health And Nutrition Examination Survey (KNHANES) in 2008-2010. Multiple linear regression analysis for survey design was used to explore the association between relative muscle mass and the factors of metabolic syndrome and HOMA-IR with adjustment for confounding factors. We also conducted multiple logistic regression analysis for survey design to investigate the relationship of relative muscle mass with metabolic syndrome.

**Results:** In comparison with subjects in the first quintile of relative muscle mass, the odds ratio (95% confidence interval) for metabolic syndrome for subjects in the fifth quintile was 0.292 (0.183, 0.467) in the age<60 group and 0.155 (0.088, 0.272) in the age≥60 group respectively after adjusting for confounding variables. Relative muscle mass was inversely associated with SBP, DBP, serum TGs, FBS and HOMA-IR in both age<60 and age≥60 group, showing significant liner trend.

**Conclusions:** Decreased relative muscle mass was inversely associated with the prevalence of metabolic syndrome, and the factors of metabolic syndrome except HDL-C. The causal relationship is not exactly known and would be elucidated through further longitudinal study.

Disclosure: No conflict of interest declared

1578

**Beyond patient empowerment: an innovative model in chronic disease patient engagement**

L. Ng, L.K. Chiang, L.K. Wong, L.M. Yip, K.F. Tsang

General Out-patient and Family Medicine department, Kwong Wah Hospital, Hong Kong, Hong Kong

**Objective:**To provide a platform for recognition and appreciation of diabetic and/ or hypertensives patients' achievement and progress of their self-management skills in attaining better outcomes for chronic disease management. To establish chronic disease patient support group to reinforce patients' ownership in chronic disease self-management, strengthen patients-families-carers' support and heighten awareness of the community towards its prevention and management.

**Methods:**Education and Empowerment: Issuing personal Chronic disease booklet to increase patients' sense of belongings and engagement with individual goal setting and periodic review by health care providers. The targets of diabetic control indicators and practical tips were comprehensively reinforced for DM patients. Target blood pressure readings and home BP monitoring was advised for hypertensive patients. Regular educational talks and patient sharing involving multi-disciplines. Integration and Practice: Beside standardized management protocol and annual complication assessment, patients with poor glycemic control and/or suboptimal BP control are arranged comprehensive care to identify deficits in chronic disease management and formulate individualized goals. Models and Incentives: Different categories of appreciation and recognition would be awarded to DM and/or hypertensive patients through various platforms whenever they demonstrated effort, improvement or achievement in chronic disease self-management. They not only serve as role models but also provide channels for mutual encouragement for patients-carers. Establishment of Hong Kong Primary Care for Chronic Disease Association – Patient Support group actualizing patients' ownership and advocacy for chronic disease patient-carer empowerment and promotion towards its prevention and management.

**Results:** This clinic-model consecutively showed one of the best performances in diabetic and hypertension control among 23 primary care clinics since 2009 using target indicators e.g. BP-control, glycemic index (up to 72% of DM patients' HbA1c <7%) and others. Our primary care team also garnered "Most Caring Heart" award.

Disclosure: No conflict of interest declared

1601

**Effects of dietary advice and metformin therapy in diabetic overweight patients**

L. Bunjak, B. Grujic, S. Milovancevic, J. Vukotic

GENERAL PRACTISE, HEALTH CENTER ZVEZDARA, Belgrade, Serbia

**Objective:** Obesity has been shown to increase the risk of some chronic diseases, such as diabetes mellitus (DM). The aim was to determine obesity and diabetes mellitus type 2 and evaluate the efficiency of the metformin therapy and treatment of overweight by lifestyle modification and dietary advice.

**Methods:** Prospective research lasted for 8 months, included 187 patients, aged 20-75 years (mean 62,4) with DM type 2, and obesity, chosen by random selection. The treatment of overweight was based on educational, advice about desirable dietary practices. Over a period of 8 months BMI and glucoses were measured at check ups (n=4).

**Results:** Overall prevalence of obesity was 74,2% being dominant in women 69,6%. Mean BMI was 32,6. 72,1% were diabetic patients. Mean glucoses in blood was 7,4 mmol/l (women) and 7,1 mmol/l (men). 8 months treatment with dietary measures and metformin therapy in diabetic overweight patients, shows a reduction in BMI and glucose levels. BMI was 29,1 (women) and 28,7 (men) reduced 4,2% and glucoses 5,8 mmol/l (women) and 5,6 mmol/l (men), reduce 10,2%. Analyses were done in SPSS program ( $p < 0,05$ ).

**Conclusion :** It is important for general practitioners to take seriously their role in the primary prevention, treatment of obesity and DM. Key tool weight loss programs is the patients motivation and desire to lose weight. GPs are in an excellent position to administer health promotion packages in order to reduce the morbidity and mortality in the high risk population.

Disclosure: No conflict of interest declared

1628

**Association between metabolic markers and serum 25-hydroxyvitamin D level**

S. Choi

Family medicine, CHA school of medicine, Seoul, Korea

**Object** Vitamin D is known to have diverse effects on various metabolic markers. We investigated multiple roles of vitamin D by comparing metabolic markers with serum 25-hydroxyvitamin D level.

**Methods** We investigated 3,399 women at Ajou University Hospital from March 1st, 1997 to February 28th, 2005. Blood pressure, 25-hydroxyvitamin D, fasting glucose, uric acid, albumin, lipid profile, high sensitive C-reactive protein (hs-CRP), homocysteine, white blood cells (WBC), insulin-like growth factor-I (IGF-I) and insulin-like growth factor binding protein 3 (IGFBP3) were measured.

**Results** We divided the subjects into normal vitamin D group and vitamin D deficiency group with 25-hydroxyvitamin D level cutline of 20 ng/ml. The mean age was significantly older, body mass index and body fat were significantly lower in normal vitamin D group ( $p=0.042$ ,  $p=0.012$  and  $p=0.001$ , respectively). Lean body mass was significantly higher in normal vitamin D group ( $p=0.004$ ). After age adjustment, systolic blood pressure was significantly higher in normal vitamin D group ( $p=0.041$ ). Uric acid and IGFBP3 were significantly higher in normal group ( $p=0.018$  and  $p=0.001$ , respectively). IGF-I was significantly higher in normal vitamin D group after age adjustment ( $p=0.013$ ). Fasting glucose, lipid profile, albumin, WBC, hs-CRP, and homocysteine were not significantly different between two groups.

**Conclusions** With further investigations on the multiple roles of vitamin D, one could expect various uses of vitamin D not only for bone metabolism but also for general metabolism and hormone secretion.

Disclosure: No conflict of interest declared

1634

**Diabetes and smoking: a deadly combination**

M. Rali, A. Chan

SOUTHSIDE FAMILY MEDICINE RESIDENCY, HOFSTRA-NSLIJ SCHOOL OF MEDICINE, BAY SHORE, NY, United States

**Objective:** To find out if we, as physicians are doing good for smoking cessation in smokers having Diabetes.

**Methods:** A Retrospective analysis of 40 cases of Diabetic patients at continuity residency clinic, was done to find out the incidence of smoking and whether smoking cessation issue was addressed effectively by treating Physicians. Analysis was also done for associated Comorbidities and methods for smoking cessation. It is an ongoing study and plan is to analyze total 100 cases.

**Results:** 25% of Diabetic patients were smokers. Associated comorbidities in the form of Hypertension(38%),Hyperlipidemia(31%),MI(15%),COPD((8%)and PVD(8%) were noted. Issue of smoking cessation was addressed in only 40% of patients by Physicians. In 67% of patients only smoking cessation counseling was done as compared to Medications in 33 % of patients.

**Conclusion:** Smoking cessation needs to be addressed more effectively to prevent increase in morbidity and mortality. The incidence of smoking in Diabetics in our study is 25% and issue was addressed in only 40% of cases. All patients should be thoroughly evaluated for smoking and smoking cessation counseling and methods. Even when patients are not motivated or have been unsuccessful to quit, Physicians still should address smoking cessation at each clinic visit. Physicians are busy and lack time to discuss about smoking but may be they can schedule another appointment to discuss about smoking cessation and educate patients the risks of smoking and offer various options to quit and the support they need.

**ASK, ASSESS, ADVISE, ASSIST, ARRANGE AND ORGANIZE**

Disclosure: No conflict of interest declared

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**Treatment of cardiovascular risk factors of diabetes patients in primary care – is there really an evidence performance gap? – results from a Swiss GP network**F. Mikulicic, K. Wiotzek, C. Chmiel, S. Djalali, O. Senn, T. Rosemann, M. Vecellio  
Institute for General Practice, University of Zurich, Zurich, Switzerland

**Objective:** Evidence-performance-gaps between guidelines and treatment in daily practice have been reported, especially in primary care. The aim of this study was to assess a possible performance gap in comparing current treatment with guidelines under consideration of differences of these real life patients with patients in large clinical trials, namely UKPDS, ACCORD, ADVANCE, STENO-2 and VADT.

**Research Design and Methods:** Cross-sectional study in a primary care setting. Data were extracted from an internet based clinical information system. Patients with newly diagnosed type 2 diabetes (less than 6 months) were excluded from analysis.

**Results:** 21 GPs collected data on 541 patients (32% female, mean age 68±12 years) with type 2 diabetes. With respect to age, disease duration, comorbidities and polypharmacy our study population was comparable to baseline data of patients in ACCORD, ADVANCE and VADT. Patients in UKPDS and STENO-2 differed in age and disease duration. With 39,4% receiving an ACE-inhibitor, 41,6% receiving a statin and only 41,4% being treated with Aspirin, current pharmacological treatment recommendations were not applied to many patients. Nevertheless, LDL-level (2.6±1mmol/l), systolic (135±16mmHg) and diastolic (136±17mmHg) blood pressure were lower than in the reference studies. The GHb-levels (7.3±1.2%) of patients in our study was lower than in all other studies, with pre-existing type 2 diabetes.

**Conclusion:** Taking into consideration the results of recent large clinical trials, which indicated that very strict treatment goals are of no additional benefit, most patients in Swiss primary care would not benefit from a pharmacological treatment intensification regarding GHb, BP and cholesterol.

Disclosure: No conflict of interest declared

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**Independent new biomarker of insulinresistance**

A. Rodriguez-Guerrero, M. Fabregate, J. Saban, M. Martinez, A. Bravo  
*Unidad de patologia endotelial, Hospital Ramon y Cajal, Madrid, Spain*

**Objective:** The aim of the study was to investigate the correlation between serum C3 convertase levels and HOMA model.

**Methods:** Population: 369 subjects who had serum C3 determinations in their first visit.

C3 convertase was measured by nephelometry (mg/dl). Outliers were excluded (mean  $\pm$  3-fold SD). Biochemical parameters of glucose were measured by an HITACHI autoanalyzer, insulin levels (uU/mL) by immunometric assay (Immulite DPC).

HOMA (Homeostasis Model Assessment) score: fasting insulin (uU/ml) x fasting plasma glucose (mmol/L)/22.5.

Continuous variables described as mean (SD:standard deviation). Pearson's correlation coefficient. Multivariate linear regression. student's t-test.  $\alpha=0.05$ .

**Results:**

Population: aged 55 (14.6) range 17 to 90 years, 58.5% males, 53% hypertensives, 20% smokers, 25% with Type 2 diabetes mellitus.

C3 serum levels ranged from 65 to 236 mg/dl. Mean 133.3 (SD:25.7). No significant differences were found in C3 levels between males and females. C3 levels were not correlated to age.

Insulin resistance HOMA score: 2.5 (1.84), range: 0.4 to 11.

C3 was significantly correlated to insulin resistance ( $r=0.37$ ;  $p<0.001$ ) in our whole population:

In males ( $r=0.3$ ;  $p<0.001$ ) and in females ( $r=0.43$ ;  $p<0.01$ ).

In females, C3 was linearly related to insulin resistance in every age group above 44 y.o.

Lineal correlation between C3 and HOMA remains statistically significant after adjustment by BMI, sex and age (standardized B coefficient

**Conclusions:** High levels of C3 convertase are correlated with increased risk of insulinresistance in the overall population of our study in both sex. C3 come forward as predictor of insulinresistance (independent of age, gender and BMI).

Disclosure: No conflict of interest declared

**3.6. GENITO-URINARY PROBLEMS**

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**Quality of life of patients with recurrent nephretic colics**

G. Stratiotis, G. Fioretos, M. Sotiraki, E. Efthymiou, E. Gkalitsiou, S. Giannakaki  
*GENERAL MEDICINE, HOSPITAL, PIREAS, Greece*

Symptoms of depression and anxiety are significantly associated with recurrent episodes of renal lithiasis.

**Methods and results:**We studied 32 cases which were out patients with cnfirmed nephrolithiasis,through history,physical examination,images,and other laboratory exams,who presented themselves with at least 3 episode a 4- year period time.Anxiety was evaluated by the TAI(Trait Anxiety Inventory) and depression by BDI(Beck Depression Inventory)methods.Quality of life was measured by the dimentions of the SF-36questionnaire. 60% of the patients showed anxiety above the average and 36.5% had moderate depression.The SF-36 was shown that the quality of life of 82% of the patiens was significanttly impaired.There was a linear correlation between depression( $p.0.001$ ),anxiety( $p.0.001$ )and the number of recurrent episodes.

In conclusion there is an association between reccurent nephretic colics with anxiety, depression and the quality of life of the patients.

Disclosure: No conflict of interest declared

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**Talking about urinary incontinence in a rural environment**

J.A. Pascual López, A. Pérez Carrillo, P. Martínez Lopez, C. Martínez Delgado, Y. Mejía Alvarez, D. López Giraldo, A. Corbalán Hernández, M.E. Peña, K. Espinal, M.M. Arcos Rivera  
CENTRO DE SALUD DE CALASPARRA, SERVICIO MURCIANO DE SALUD, CALASPARRA, Spain

**Objectives:** To determine the prevalence of urinary incontinence (UI) in people over 64 years of age, the profile of these patients and the attention of this disease in our environment.

**Methodology:** Descriptive study using surveys on age, sex, appearance, type and previous diagnosis of UI, medical care by hospital specialists, current treatments and existence of predisposing factors. The sample size was calculated with the Statcalc programme and the sample was obtained by a systematic random process.

**Results:** The prevalence of UI in people older than 64 years in our environment is 49.4% (95% confidence interval, 43 and 55; 18-37 in men and 47-62 in women). 7% is of stress, 41% urgency and 52% mixed. Less than 10% of the sample had been asked by the existence of UI, and only 21% of patients with UI have been attended to by the doctor due to it. 14% of the UI have been assessed by a specialist, 41% receive treatment (52% absorbent, 41% pharmacological, 5% rehabilitative and 0% surgery). Of all UI, the 31% present neuropsychiatric diseases 26% diabetes and 75% drugs consumption that may cause urinary incontinence.

**Conclusions:** The prevalence of UI in our environment is higher than the one reported in other studies. The low levels of consultation and specialized referral of this pathology are surprising as is the small percentage of surgical and rehabilitative treatments. The major consumption of drugs related to UI makes us think about the role of polypharmacy in this high prevalence.

Disclosure: No conflict of interest declared

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**Significant association of elevated concentration of plasma YKL-40 with disease severity in patients with pelvic inflammatory disease**

S.-H. Lee<sup>1</sup>, M.-C. Lee<sup>2</sup>, M.-S. Lee<sup>2</sup>

<sup>1</sup> School of Nursing, Chung Shan Medical University, Taichung, Taiwan; <sup>2</sup> Institute of Medicine, Chung Shan Medical University, Taichung, Taiwan

**Introduction:** To date, no study reports the implication of YKL-40 in pelvic inflammatory disease (PID). Therefore, we investigate the levels of plasma YKL-40 in patients with PID and further associate its expression with the severity of disease.

**Methods:** We designed a hospital-based case-control study with approximate 1:1 ratio and consecutively recruited 64 patients with PID and 70 control women. We collected blood samples from 64 women with PID before and after they received treatment and 70 control women to detect levels of plasma YKL-40 and C-reactive protein (CRP) as well as white blood cell and neutrophil counts.

**Results:** The results revealed that levels of plasma YKL-40 were significantly elevated in patients with PID as compared to those in controls (38.36 vs. 21.69 ng/ml,  $P = 0.001$ ) but the significant difference was restricted to women aged 30 years or old after age stratification (56.75 vs. 23.61 ng/ml,  $P \leq 0.001$ ). It declined significantly after they received treatment (median: 38.36 vs. 27.54 ng/ml;  $P \leq 0.001$ ). Although both plasma YKL-40 and CRP were elevated in patients with tubo-ovarian abscess, PID patients with surgery exhibited higher YKL-40 concentration than those without surgery (median: 82.05 vs. 30.19 ng/ml,  $P = 0.005$ ) and only plasma YKL-40 was significantly associated with the length of the hospital stay ( $P \leq 0.001$ ,  $R = 0.604$ ).

**Conclusion:** We conclude that once individuals are diagnosed to have PID, YKL-40 may act as a biomarker to predict the severity and clinical outcome of the disease.

Disclosure: No conflict of interest declared

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**The management of patient with benign prostatic hypertrophy in the setting of general practice through the quick prostate test**

L. Iannantuoni, C. Muscarella, C. Niro, G. B. D' Errico  
Family Medicine, Training Course in Family Medicine, Foggia, Italy

The general practitioner needs symptoms questionnaire efficient and suitable for its setting for a correct urological anamnesis of patients. Currently the only validated test is the I-PSS used by 3-5% of general practitioners and 15% of urologists.

**Objectives:** Evaluate the efficiency of a new test the QPT in the management of patients with BPH in pharmacotherapy and its applicability in the setting of general practice.

**Materials and Methods:** 70 men with BPH in pharmacotherapy aged 50 years were enrolled. The 44% of the patients was subjected to QPT and the effectiveness and appropriateness of therapy was verified. The 39% was subjected to both QPT and I-PSS and in this group a significant correlation between positive QPT and the increase of I-PSS score was observed. Patients with 1 or 2 positive responses to QPT had a I-PSS score between 8 and 19, patients with 3 positive responses to QPT had a I-PSS score between 20 and 35. The general practitioners who participated to the study expressed through a questionnaire the level of satisfaction about the QPT according to the parameters time and easy of application 80% of them expressed a level of maximum satisfaction.

**Conclusions:** The QPT demonstrated efficiency for results, for suitability, for easy and time of administration. Therefore could be a good test for the monitoring of patients with BPH in medical therapy.

Disclosure: No conflict of interest declared

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**Risk factors of chronic kidney disease in nursing home residents**

L.H. Chen<sup>1</sup>, C.F. Mu<sup>2</sup>, C.Y. Hsu<sup>2</sup>

<sup>1</sup> Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan;

<sup>2</sup> Department of Community Medicine, Puli Christian Hospital, Puli, Taiwan

**Objective:** The prevalence of end-stage renal disease (ESRD) in Taiwan is the highest in the world, hemodialysis accounts about 7% of the expenditure of the National Health Insurance. However, those who with chronic kidney disease (CKD) in nursing home have not identified yet. The objective of this study is to investigate the risk factors of CKD in nursing home.

**Method:** The residents from 3 nursing home, who received health examination between January and June 2012, age 55 years or greater were enrolled in this study. None of them received hemodialysis or kidney transplantation. They were categorized into two subgroups according to estimated glomerular filtration rate (GFR): <60 and ≥60 ml/min. Advanced CKD is defined as estimated GFR less than 60 ml/min. Risk factors are evaluated by recommendations of National Kidney Foundation. They are body mass index (BMI), waist circumference, blood pressure, fasting glucose, and lipid profile. All parameters are compared by Student's t-test.

**Results:** Among 53 nursing home residents (17 males, 36 females), 16 (30.3%) had estimated GFR below 60 ml/min, and 9 (56.3%) of them had BMI higher than 25 kg/m<sup>2</sup>. The residents with advanced CKD had significantly higher BMI, waist circumference, triglyceride and lower high-density lipoprotein cholesterol (HDL-C). Central obesity was observed in 10 (62.5%) with advanced CKD.

**Conclusion:** Higher BMI, waist circumference, triglyceride and lower HDL-C are risk factors for nursing home residents with advanced CKD. Monitoring BMI and waist circumference is a simple but effective way to suspect presence of CKD.

Disclosure: No conflict of interest declared



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**Prevalence of lower urinary tract symptoms and their effect on quality of life in portuguese males: a pilot study**

A. Cruz-Ferreira, E. Loureiro, I. Pimentel

*Primary Care Unit of Mealhada, ACES Baixo Mondego, Mealhada, Portugal*

**Objective:** To assess the prevalence and associated bother of lower urinary tract symptoms (LUTS) in adult males of a Portuguese Primary Care Unit(PCU) clinical file, using current guidelines and definitions, as no previous population-based studies evaluating the prevalence of LUTS in Portugal had been yet conducted.

**Methods:** A pilot cross-sectional, population representativestudy was conducted by direct interview of 105 adult males over 40 years old from a clinical file of Mealhada PCU. They wererandomly selected and asked to complete both International Prostate Symptom Score (IPSS, defined using the American Urological Association Symptom Index) and Quality of Life (QoL) questionnaire, as recommended by the Portuguese Health Organization to evaluate LUTS and its impact in quality of life in male adults. Descriptive statistics were used to summarize and present the data.

**Results:** The mean age (range) of the participants was 64,09(40–89) years. Overall, 48,07% had an IPSS higher than 8, indicating moderate-to-severe LUTS. Quality of Life decreased as LUTS severity increased. Twenty two percent of the participants with moderate LUTS reported a bad quality of life (QoL scores higher then 3), while half of those with severe LUTS reported the same complains, 14,29% of wich had QoL scores of 6.

**Conclusions:** Moderate-to-severe LUTS were common in this population. As LUTS adversely affected quality of life, improved treatment options and increased public awareness of LUTS are needed to combat this problem. Further and broader studies should be conducted to evaluate LUTS prevalence and impact in Portugal.

Disclosure: No conflict of interest declared

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**We consult our patients about erectile dysfunction?**J.A. Pascual López<sup>1</sup>, A. Pérez Carrillo<sup>1</sup>, Concepción Martínez Delgado<sup>1</sup>, F. Hernández Benítez<sup>2</sup>, Y. Mejia Alvarez<sup>1</sup>, D. López Giraldo<sup>1</sup>, A. Corbalán Hernández<sup>1</sup>, P.M. Martinez Lopez<sup>1</sup>, I. Gómez Gómez<sup>3</sup>, M.M. Arcos Rivera<sup>1</sup>

<sup>1</sup> CENTRO DE SALUD DE CALASPARRA, SERVICIO MURCIANO DE SALUD, CALASPARRA, Spain; <sup>2</sup> SERVICIO DE URGENCIAS SAN ANDRES, SERVICIO MURCIANO DE SALUD, MURCIA, Spain; <sup>3</sup> SERVICIO DE FISIOTERAPIA. CENTRO DE SALUD DE LA UNIO, SERVICIO MURCIANO DE SALUD, UNION, Spain

**Objective:** The aim of the study is to determine the profile of patients with erectile dysfunction (ED) in our environment

**Methods:** We carried out a questionnaire on all the men who came for a week to consultations in four medias of medicine. They completed the SHIM survey (IIEF abbreviated questionnaire for the screening of ED), as well as the alcohol consumption, expressed in standard drinks per week (UPW). In addition the patients with ED are asked if they have been consulted about this, the attitude of the medical personal and drug consumption probably related to this.

**Results:** The study indicates that the prevalence of ED in our population is 16.35%, of which only 35.3% has consulted with their family doctor, having performed a study 50% of them and referred to a specialist and scheduled treatment to 67%. In addition the weekly UPW is 20.65 in patients with DE UBE and 11.3 in the rest of the population which statistically significant data. Studied using student's t with  $p < 0.0001$ . 41.18% of patients with ED take 2 or more drugs probably related to this condition.

**Conclusions:** ED is highly prevalent in our media with a very small percentage seeking assistance, and who in addition to chronic diseases and medication related to them, have a significantly higher alcohol consumption than the general population.

Disclosure: No conflict of interest declared

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**Impact of urinary urge incontinence on patient-reported-outcomes in non-institutionalized patients with overactive bladder in the community**J. Angulo<sup>1</sup>, F. Brenes<sup>2</sup>, I. Lizarraga<sup>3</sup>, D.Arumi<sup>4</sup>, J. Rejas<sup>5</sup><sup>1</sup> Urology, Getafe University Hospital, Madrid, Spain; <sup>2</sup> Primary Care, LLeFià Primary Care Health Centre, Badalona, Spain; <sup>3</sup> Medical, Pfizer SLU, Madrid, Spain; <sup>4</sup> Medical, Pfizer PIO, Madrid, Spain; <sup>5</sup> Health Economics and Outcomes Research, Pfizer SLU, Madrid, Spain

**Objective:** To explore the severity of urinary urge incontinence (UUI) in terms of the number of daily UUI episodes on patient-reported-outcomes (PRO) of subjects with overactive bladder (OAB) in the general population in Spain.

**Methods:** Secondary analysis of a cross-sectional web-based study conducted in the general population,  $\geq 18$  years, through a battery of PRO questionnaires administered using an online method. Probable/possible OAB subjects were identified using a validated algorithm and a score  $\geq 8$  in the OAB-V8 screening tool. PRO questionnaires included assessment of health-related-quality-of-life (EQ-5D), daily-living and working activities (WPAI), sleep disturbances (MOS-sleep) and life-satisfaction (LISAT-8 checklist). Patients were grouped according to the number of UUI episodes in 0, 1, 2-3 or 4+.

**Results:** 396 patients [52.5% women, mean age: 55.3 (11.1) years, OAB-V8 mean score: 14.5 (7.9)] were included in analysis; 203 (51.3%) with 0 episodes, 119 (30.1%) with 1, 52 (13.1%) with 2 or 3, and 22 (5.6%) with 4 or more episodes. A linear and significant adjusted association was observed between UUI episodes and the impact in the score of PRO assessments; the higher the number of daily episodes the worst the score in PRO instruments. Subjects with more episodes showed poorer health profile and self-validated quality-of-life, more lost-working days-equivalents, worse patient life satisfaction and more sleep disturbances and lower slept hours per day.

**Conclusion:** Severity of probable/possible OAB as per the number of daily episodes of UUI was significantly associated with poorer patient self-perceived health status and quality-of-life in the general population in Spain.

Disclosure: No conflict of interest declared

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**Severity of urinary urge incontinence and healthcare resources utilization in non-institutionalized patients with overactive bladder in the community**J. Angulo<sup>1</sup>, F. Brenes<sup>2</sup>, I. Lizarraga<sup>3</sup>, D.Arumi<sup>4</sup>, J. Rejas<sup>5</sup><sup>1</sup> Urology, Getafe University Hospital, Madrid, Spain; <sup>2</sup> Primary Care, LLeFià Primary Care Health Centre, Badalona, Spain; <sup>3</sup> Medical, Pfizer SLU, Madrid, Spain; <sup>4</sup> Medical, Pfizer PIO, Madrid, Spain; <sup>5</sup> Health Economics and Outcomes Research, Pfizer SLU, Madrid, Spain

**Objective:** To explore the severity of urinary urge incontinence (UUI) in terms of the number of daily UUI episodes on healthcare resources utilization (HRU) of subjects with overactive bladder (OAB) in the general population in Spain.

**Methods:** Secondary analysis of a cross-sectional web-based study conducted in the general population,  $\geq 18$  years, through a battery of HRU questions asked using an online method. Probable/possible OAB subjects were identified using a previously validated algorithm and a score  $\geq 8$  in the OAB-V8 questionnaire. HRU questions included assessment of concomitant medication used as a consequence of OAB/UUI, pad utilization, and medical office visits. Patients were grouped according to the number of UUI episodes in 0, 1, 2-3 or 4+.

**Results:** 396 patients [52.5% women, mean age: 55.3 (11.1) years, OAB-V8 mean score: 14.5 (7.9)] were included in analysis; 203 (51.3%) with 0 episodes, 119 (30.1%) with 1, 52 (13.1%) with 2 or 3, and 22 (5.6%) with 4 or more episodes. A linear and significant adjusted association was observed between UUI episodes and HRU; the higher the number of daily episodes the higher in HRU. Subjects with more episodes had more frequently medical visits with both primary care ( $p=0.001$ ) and specialist ( $p=0.009$ ) physicians, use of both day ( $p<0.001$ ) and night ( $p<0.001$ ) absorbents, anxiolytic medicines ( $p=0.021$ ) and antibiotics for UTIs ( $p=0.05$ ).

**Conclusion:** Severity of probable/possible OAB as per the number of daily episodes of UUI was significantly and linearly associated with more frequent healthcare resources utilization in the non-institutionalized general population in Spain.

Disclosure: No conflict of interest declared

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**More than a simple chest pain...**

J. Machado, N. Pinto

*USF Viver Mais, USF Viver Mais, Maia, Portugal*

**Background:** The testicular germ cell tumors account for 0.8% of all tumors affecting man being the most common malignant disease from 15 to 35 years old. It represents between 30-40% of all testicular tumors.

**Case description:** We report the case of a man aged 37, a computer technician. With irrelevant personal history, ex-smoker since 2008. On January 20 he comes to an open consultation (CA) complaining of chest pain with 8 days of evolution, with nonspecific characteristics and refractory to analgesia. The physical examination only revealed decreased breath sounds in the left lung base. Were placed as diagnostic hypotheses: parapneumonic pleural effusion and penumothorax. It was requested chest x-ray and prescribed analgesia. On January 22 he comes back with chest x-ray revealing opacity in lower lung field of the left lung associated with obliteration of the costophrenic angle. It was requested chest tomography that revealed suspected image of parapneumonic pleural effusion. Antibiotherapy was prescribed and the patient was referred to a pneumology consultation with the suspicion of metastatic image. In the Pneumology consultations was made the diagnosis of mixed germ cell tumor with pleural metastasis and the patient was submitted to total orchidectomy and chemotherapy

**Discussion:** This case is somehow complex for its atypical presentation through a complaint as common as chest pain. The role of the family physician as articulator care plays a vital role for the proper monitoring and treatment of this patient.

Disclosure: No conflict of interest declared

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**Microorganisms rare and “special” urine in women in our primary care center**JP. García Paine<sup>1</sup>, J. Paz Galiana<sup>1</sup>, L.A. Calleja Cartón<sup>1</sup>, T. González Granda García<sup>2</sup>, JM. Santa Cruz Talledo<sup>1</sup>, B. Palop Borrás<sup>3</sup><sup>1</sup> *El Palo Health Center, Málaga Sanitary District, Málaga, Spain;* <sup>2</sup> *Clinical Analysis, Carlos Haya Hospital, Málaga, Spain;* <sup>3</sup> *Microbiology, Carlos Haya Hospital, Málaga, Spain*

**Objective:** Evaluate the characteristics of positive urine cultures, less frequent and requiring repeated in women over 13 years our primary focus.

**Material and methods:**

*Design:* longitudinal descriptive

*Area of study:* Urban Health Centre with two rural clinics.

*Subjects:* Women aged over 13 years who present in urine culture positivity and that have been made in the same year three or more urine cultures. Microorganisms are also selected having a frequency less than 2% of patients in group entity.

*Measurements:* We evaluates positive urine cultures, in female patients over 13 years old, which have been requested by our health center from July 2009 in June 2012. Included those with three or more We evaluates positive urine cultures, in the same year and microorganisms with a frequency of less than 2%. We measured age, the microorganism that is isolated.

**Results:** We analyzed 202 urine cultures with the desired characteristics. The mean age was 63.28 years (standard deviation 23.6). 100% are women. 30 different microorganisms are isolated. In patients requiring repeated urine, the most common pathogen *Escherichia coli* is isolated with 22.3% of the total sample. Of germs with a frequency of less than 2% *Klebsiella oxytoca* stand being 7.9% of these, followed by *Staphylococcus aureus* and *Morganella Morgani* with 7.4% each.

**Conclusion:** The *Escherichia coli* is the most common pathogen causing repeat urine cultures in this patient group. The *Klebsiella oxytoca* is the germ with the highest incidence rate in the subgroup of less than 2%. To know less frequent bacterial ecology of our environment is also important to decide a adequate empirical treatment.

Disclosure: No conflict of interest declared

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**Microorganisms and susceptibility to positive urine cultures requested by health center**

J. Paz Galiana<sup>1</sup>, LA. Calleja Cartón<sup>1</sup>, JP. García Paine<sup>1</sup>, T. González-Granda García<sup>2</sup>, JM. Santa Cruz Talledo<sup>1</sup>, B. Palop Borrás<sup>3</sup>

<sup>1</sup> El Palo Health Center, Malaga Sanitary District, Málaga, Spain; <sup>2</sup> Clinical Analysis, Carlos Haya Hospital, Malaga, Spain; <sup>3</sup> Microbiology, Carlos Haya Hospital, Málaga, Spain

**Goal:** To learn about the most common organisms and antibiotic sensitivity of positive urine cultures in our primary care center from July 2009 to June 2012.

**Material and Methods:**

**Design:** Descriptive longitudinal

**Location:** Urban Health Centre with two rural clinics.

**Selection Criteria:** Urocultures requested from July 2009 to June 2012.

**Subjects:** Positive urine cultures requested by the health center during the period of three years (July 2009-June 2012).

**Measurement:** Age, gender, most frequent type of microorganism, and antibiotic sensitivity.

**Findings:** 1783 positive urine cultures are included, mean age 62.51 (age range 0-105 years) of whom 74.4% were women and 25.6% men. 38 different microorganisms are isolated. The most common were: *Escherichia Coli* (55.4%), *Klebsiella Pneumoniae* (12.7%), *Enterococcus Faecalis* (10.2%), *Proteus Mirabilis* (4.6%), *Streptococcus Agalactiae* (3.9%). 21 organisms are isolated within 5 patients. ***Escherichia Coli*, *Klebsiella Pneumoniae* and *Proteus Mirabilis*** have a sensitivity greater than or equal to 90% amikacin, cefoxitin, cefepime, cefuroxime acetyl, amoxicillin-clavulanate, piperacilina-tazobactam, aztreonam, ceftazidime, cefotaxime, imipenem, meropenem and ertapenem. The ***Enterococcus Faecalis* and *Streptococcus Agalactiae*** also exhibit increased sensitivity to 90% for fosfomicin, amoxicillin-clavulanate. Fosfomicin is sensitive to *E. Coli*, *Klebsiella Pneumoniae* and *Streptococcus Agalactiae*.

**Conclusion:** The ***Escherichia Coli*** is the most common organism in general. A first choice as empiric antibiotic treatment can begin with Fosfomicin therapy, and cefuroxime, amoxicillin / clavulanate acid as good therapeutic alternatives. Knowing the bacteriological map of the area can reduce treatment failures.

Disclosure: No conflict of interest declared

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**Evolution, in time, of the microorganisms in the urine cultures ordered by a city health center**

LA Calleja Cartón<sup>1</sup>, JP García Paine<sup>1</sup>, J Paz Galiana<sup>1</sup>, T González-Granda García<sup>2</sup>, JM Santa Cruz Talledo<sup>1</sup>, B Palop Borrás<sup>3</sup>

<sup>1</sup> Palo Health Care, Málaga Sanitary district, Málaga, Spain; <sup>2</sup> Clinical Analysis, Carlos Haya Hospital, Málaga, Spain; <sup>3</sup> Microbiology, Carlos Haya Hospital, Málaga, Spain

**Goal:** Learning about the time evolution of the most common organisms, from urine cultures in our primary care center from July 2009 to June 2012.

**Material and Methods:**

**Design:** Descriptive longitudinal

**Location:** Urban Health Centre with two rural clinics.

**Selection Criteria:** Urocultures requested from July 2009 to June 2012.

**Subjects:** Positive urine cultures requested annually by the health center during the period of three years (July 2009-June 2012).

**Measurement:** Age, gender, most frequent type of microorganism, percentage changes over time.

**Findings:** 1783 positive urine cultures (336 in 2009, 678 in 2010, 518 in 2011 and 251 in 2012) are included, the average age 62.51 (0-105 years) of whom 74.4% were women and 25.6% men. The most common organisms and their evolution in percentage were: *Escherichia Coli* (2009 to 58.6% 2010 to 54.4% 2011 to 53.1% 2012 to 58.2%), *Klebsiella Pneumoniae* (2009-15, 5% from 2010 to 11.4% from 2011 to 13.5% from 2012 to 10.8%), *Enterococcus Faecalis* (2009 to 9.5%, from 2010 to 10.2% from 2011 to 10.8%; 2012 -10.0%), *Proteus Mirabilis* (2009 to 3.3% 2010 to 5.3% 2011 to 4.8% 2012 to 4.0%), *Streptococcus Agalactiae* (2009-not identified; 2010 - 4.6% from 2011 to 4.2%, from 2012 to 6.8%).

**Conclusion:** Knowing microorganisms in urine and its evolution over time can be useful for the treatment of our patients. The most common organisms are *Escherichia Coli*, *Klebsiella Pneumoniae*, *Enterococcus Faecalis*, *Proteus Mirabilis* and *Streptococcus Agalactiae*, highlighting the emerging growth of *Streptococcus Agalactiae* being more prevalent each year.

Disclosure: No conflict of interest declared

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**Hydroxyzine in interstitial cystitis – what is the best evidence?**J.A.B.Barros<sup>1</sup>, C.M.Neves<sup>2</sup>, J.P.F.G.Santos<sup>3</sup><sup>1</sup> USF Maresia, ULS Matosinhos, Matosinhos, Portugal; <sup>2</sup> UCSP Senhora da Hora, ULS Matosinhos, Matosinhos, Portugal; <sup>3</sup> USF Lagoa, ULS Matosinhos, Matosinhos, Portugal

**Objective:** Interstitial cystitis (IC) is a chronic bladder condition, poorly known, disabling and worsened by ingestion of certain foods. IC affects mostly women aged between 30 and 70 years with an estimated prevalence of 2,5%. The diagnosis is clinical and one of exclusion. Treatment involves behavioral and hygiene-dietetic measures, pharmacological (including hydroxyzine) and surgical interventions. The purpose of this study is to review the available evidence on efficacy and safety of hydroxyzine in IC's treatment in woman.

**Methods:** A search was conducted for clinical guidelines (CG), systematic reviews (SR), meta-analyses and randomized controlled trials in Medline, evidence-based medicine websites, the Index of Portuguese Medical Journals, and references of selected articles, published between January 2001 and December 2012, in English, Portuguese and Spanish languages, using the MeSH terms *interstitial cystitis* and *hydroxyzine*. The *Strength Of Recommendation Taxonomy* (SORT) scale of the *American Family Physician* was used for assigning levels of evidence (LE) and strength of recommendation (SR).

**Results:** 72 articles were found and 3 were selected for this review: 2 CG, on the management of IC, recommends hydroxyzine as a standard therapy with a SR B; 1 SR considers hydroxyzine one of the best therapeutic options in IC (LE 2). The adverse event most frequently described was sedation.

**Conclusions:** The evidence reveals that hydroxyzine in symptomatic IC is an effective and safe therapy (SR B). Sedation is the most common adverse event, although not superior to placebo. Therefore, IC is a frequent and unknown condition, with a simple, safe and inexpensive treatment.

Disclosure: No conflict of interest declared

1082

**Antibiotic prophylaxis in children with vesicoureteral reflux: what is the evidence?**J. Couto<sup>1</sup>, J. Santos<sup>2</sup><sup>1</sup> USF Ribeirão, ACeS Ave III, Famalicão, Portugal; <sup>2</sup> USF Arco do Prado, ACeS Porto VII, Vila Nova de Gaia, Portugal

**Objective:** Determine if Antibiotic Prophylaxis (AP) prevent recurrence / intensity of the symptoms of Urinary Tract Infections (UTI) and minimize the renal lesions (RL), in children with vesicoureteral reflux (VUR).

**Methods:** Search of clinical practice guidelines, systematic reviews (SR), meta-analysis (MA), randomized controlled trials (RCT), published between 05/2007 and 05/2012, using the MeSH terms: *Vesico-Ureteral Reflux*, *Urinary Tract Infections* and *Antibiotic Prophylaxis*. The *Strength of Recommendation Taxonomy* (SORT) scale of the *American Family Physician* was applied to assess the level of evidence (LE).

**Results:** We found 151 articles and five were selected for analysis (two guidelines, one SR and two RCT). The Nice's guideline (2007) showed no reduction in symptoms of UTI and LR (LE 2). The guideline of AUA (2010) recommended the AP for children under 1 year old with history of febrile UTI (LE 2). The SR (2011) showed a decrease in symptoms and UTI, and a modest reduction in the risk of new / progressive RL (LE 2). The RCT (2009) concluded that the use of low doses is associated with a decrease in UTI (LE 1). The ECAC (2011) revealed that prophylaxis reduces the rate of recurrent UTI and new RL, in girls (LE 1).

**Conclusions:** Our search showed that AP has modest benefits reducing the number of UTIs and, in some studies, the LR (SOR B).

Disclosure: No conflict of interest declared

1230

**Evaluation and continuous quality improvement of empirical antibiotic treatment in women with acute uncomplicated cystitis**A. I. Silva<sup>1</sup>, C. Almeida<sup>2</sup>, D. Oliveira<sup>3</sup>, L. Alvares<sup>2</sup>, M. Neves<sup>4</sup>, N. André<sup>5</sup>, S. Sousa<sup>6</sup>

<sup>1</sup> Medicina Geral e Familiar, USF Nova Salus, Vila Nova de Gaia, Portugal; <sup>2</sup> Medicina Geral e Familiar, USF Famílias, Santa Maria da Feira, Portugal; <sup>3</sup> Medicina Geral e Familiar, UCSP Lordelo do Ouro, Porto, Portugal; <sup>4</sup> Medicina Geral e Familiar, USF Calâmbrega, Vale de Cambra, Portugal; <sup>5</sup> Medicina Geral e Familiar, USF Escariz, Arouca, Portugal; <sup>6</sup> Medicina Geral e Familiar, USF Alto da Maia, Maia, Portugal

**Objective:** Assess and ensure the quality of medical records and prescription of empirical antibiotic treatment (EAT) of acute uncomplicated cystitis in pregnant and non-pregnant women, according to portuguese guidelines.

**Methods:** Dimension studied: Technical-scientific quality; Study unit: Women 18-44 years old with at least one visit to the studied Functional Units (FU) in which the U71 code of ICPC-2 had been applied and EAT had been prescribed. Data type: Process. Data sources: MIM@UF<sup>®</sup> and SAM<sup>®</sup>. Study type: Internal and retrospective. Evaluation periods: 01/01/2012 to 31/03/2012 and 01/06/2012 to 31/08/2012. Quality indicators: percentage (%) of non-pregnant women with fosfomicin, nitrofurantoin or amoxicillin+clavulanate (A+C) prescription; % of pregnant women with fosfomicin or A+C prescription; % of women with fosfomicin 3g (1sachet) prescription; % of women with A+C 500/125mg prescription; % of women with prescription of an antibiotic different from those recommended; % of women with record of the reason of prescription of a different antibiotic. Data collection, recording and processing: Microsoft Excel<sup>®</sup> 2007. Intervention type: Educational.

**Results:** Eighty records were obtained initially and 94 at the reevaluation. The adequacy of the antibiotic prescription occurred in 63 and 88% of the non-pregnant women, respectively; increased from 83 to 100% of the pregnant women, respectively. The recommended dosage of fosfomicin increased from 30 to 69% and the prescription of A+C 500/125mg remained 0%.

**Conclusions:** There was improvement of all quality indicators except for the prescription of A+C 500/125mg and the justification for the prescription of an antibiotic not recommended. Corrective measures were implemented.

Disclosure: No conflict of interest declared

1478

**Renal cysts: management in primary care**P Pereira<sup>1</sup>, H Cadavez<sup>2</sup>

<sup>1</sup> USF Covelo, USF Covelo, Porto, Portugal; <sup>2</sup> UCSP Ermesinde I, UCSP Ermesinde I, Ermesinde, Portugal

**Introduction:** Renal cysts are a common finding on routine radiological studies. Based on careful clinical assessment, imaging studies and selected screening laboratory tests, family physicians can diagnose most of these masses and determine the need for referral.

**Objectives:** The objective of this review is to present an overview of the renal cyst classification system and an approach to simple and complex renal cysts in adults for primary care physicians.

**Methods:** A literature review has been made using MEDLINE, Cochrane Library, UpToDate, Medscape Reference and guidelines from the European Urology Association, American Urological Association and Canadian Urological Association.

**Results:** Renal cysts may be classified as simple or complex. Ultrasonography is helpful for simple cyst identification, but provides limited information with increasingly complex renal cysts and solid masses. Using CT scan findings, the Bosniak renal cyst classification system was created. Based upon characteristics with CT scanning, cystic renal masses are placed into one of five different categories.

**Conclusions:** Simple cysts are benign and no follow-up is required. Based on CT scanning Category I and II renal cysts do not require further imaging or follow-up. Patients in Category IIF, because of the approximate 5% malignant risk, do require periodic imaging. Combination of ultrasound and MRI should be considered as follow-up for Bosniak IIF. For Category III (50% malignant risk) and category IV (75% to 90% malignant risk), surgical excision is recommended.

Disclosure: No conflict of interest declared

**1569****To study the role of Allopurinol, Hydrochlorothiazide, Antibiotics, Pyridoxine and dipotassium hydrogen citrate in dissolving moderate size stones present in urinary tract**

L.K. Singh, S.N. Jha, T.O.P. Singh, A.K. Sinha  
*Family Medicine, Private, Jamui, India*

Allopurinol, a uricosuric drug; Hydrochlorothiazide, a thiazide diuretic, Vit. B6, Antibiotics for struvite stones has been shown to dissolve small sized stones.

**Objective:** To study the efficacy of all these drugs in our setup to provide non-surgical management.

**Design:** Patients and investigators including those assessing outcomes and performing analyses were informed of the trial, as the drugs are also useful for treating other ailments and well documented.

Setting: Four private practices

**Patients:** Persons aged 16-65 years of age were subjected to this trial.

**Intervention:** After 8 weeks, patients were randomly assigned to receive placebo or the aforesaid drugs at recommended dosages.

**Measurement:** By ultrasound and X ray

**Results:** Higher proportions of patients on these drugs experienced relief in symptoms and most of them were stone free after 3 months of therapy.

**Limitation:** The number of patients were limited but the result was encouraging to prescribe these drugs for the ailment.

**Conclusion:** All these drugs showed marked improvement and only a few were advised for surgery.

**Primary Funding source :** Nil.

Disclosure: No conflict of interest declared

**1652****Benign prostatic hyperplasia: diagnosis and treatment in primary care**

M.M. Forés, D. Planchuelo, N. Trecet, R. Viñas, S. Riesgo, I. Zamora, M. Bandrés, M. Fernández  
*ABS Santa Eulalia Sud, INSTITUT CATALA DE LA SALUT, BARCELONA, Spain*

**Background:** Benign prostatic hyperplasia (BPH) is one of the most common disorder in general population. Prevalence in Spain is estimated between 15 and 25% in people over 50 year old. Otherwise, its influence in patients quality of life is remarkable. General practitioners have to be able to identify symptoms in order to reach a correct diagnosis and to indicate a proper treatment.

**Aim:** Our aim was to perform a systematic review of previous literature on BPH management in primary care (PC).

**Methods:** We reviewed literature published on PUBMED regarding BPH diagnosis and current treatment concepts and options for BPH between 2002 and 2012. We specially focused on Spanish institutional guidelines.

**Results:** Authors describe management strategies for BPH approaching in primary care. Consensus guidelines have been created by Spanish associations of urologists and general practitioners to approach BPH in PC. They are specially useful for diagnostic testing, initiation of treatment and to refer the patient to urologists when necessary.

**Conclusion:** PC is the first stage for the detection of patients with BPH. GP has to be able of making a correct diagnosis and treatment. It is essential to improve quality of life, to reduce morbidity associated with BPH and the waiting list of urologists. Accordingly, consensus protocol is likely to be an indispensable tool in the GP daily routine.

Disclosure: No conflict of interest declared

1653

**Benign prostatic hyperplasia in primary care: experience based on Spanish consensus protocol**

M.M. Forés, D. Planchuelo, N. Trecet, J. Amezquita, A. Martínez, A. Guardia  
ABS Santa Eulalia Sud, Institut Català de la Salut, L'Hospitalet de Llobregat (Barcelona), Spain

**Background:** Benign Prostatic Hyperplasia (BPH) is the most frequent benign tumor affecting men over 50 years old. BPH prevalence oscillates between 10 and 40% depending on age and country according to a recent descriptive study in Europe. In Spain, the prevalence rate is around 12% in men over 40 years old and 40% of them have a poor quality of life. From 2009, a standardized protocol in diagnosis and management of BPH was introduced in Spanish primary care. The purpose of these guidelines, created by Spanish Urology and Family Medicine associations, was to improve quality of life and to reduce morbidity related to BPH.

**Objective:** To evaluate if Spanish consensus protocol based on guidelines was being correctly used in primary care.

**Methods:** We are retrospectively reviewing medical records of 240 patients with a BPH diagnosis between 2009 and to 2012 in our primary care center. Variables analysed include demographic characteristics (age, tobacco use, chronic illness), digital rectal examination, urine test, renal function, PSA, IPSS, ultrasound examination, diagnosis made by general practitioner (GP) or urologist, referral to urologist and annual check-up.

**Discussion:** BPH correct identification and diagnosis would lead professionals to a better management, treatment and it would also increase quality of life. Our hypothesis aims to demonstrate that BPH Spanish protocol is poorly followed by general practitioners. It could be explained by a low knowledge of the consensus protocol among GPs but also because of the short time we have in the surgery for each patient.

Disclosure: No conflict of interest declared

1725

**Urethral cavernous hemangioma mimicking urethral caruncle**

A. Alves, C. Oliveira, M. Cunha, R. Silva

**Objective:** Hemangiomas are benign lesions resulting from abnormal proliferation of blood vessels that can occur in any vascularized tissue. Most commonly found in the liver and skin, it has also been described at various genitourinary sites. The urethra is an extremely rare place for the development of these lesions and the vast majority of the reported cases occur in male patients. With this report the authors intend to describe a case of hemangioma occurring in a postmenopausal woman that presented itself with the clinical signs of an urethral caruncle.

**Methods:** Data were gathered from clinical records using the electronic medical record system SAM.

**Results:** A 58- year- old postmenopausal woman, presented with intermittent, self-limited gross hematuria. The patient reported the appearance of a slowly growing periurethral mass in the last few months. Physical examination showed a erythematous solid lesion, friable, with about 2 cm in diameter protruding around the urethral meatus. She had been conservatively treated with a topical estrogen cream for two months with no clinical improvement. The patient was therefore referred to the Urology department and was submitted to surgical excision of the entire lesion. Histopathology revealed a cavernous hemangioma of the urethra. The patient is totally asymptomatic with no signs of recurrence after one year of follow up.

**Conclusions:** Because of their rarity, urethral hemangiomas are often clinically misdiagnosed as common urinary tract lesions, especially urethral caruncles. Although benign in nature, they tend to recur and extend unless completely excised.

Disclosure: No conflict of interest declared



1731

**Modifiable risk factors analysis of chronic kidney disease onset in adults served by the family health strategy**

F.K. Melchior Silva Pinto, J.H. Vieira Pedroso, S.R. Rodrigues Batista, A. Naghettini, E.R. Silva Pereira, C.C. Justino de Oliveira, A. Queiroz, T. Fonseca

**Objectives:** Our goal is to detect modifiable risk factors through interaction with primary health care (PHC). **Methodology:** Transversal population-based study through the evaluation of primary data-questionnaire with multiple choice questions applied. The risk factors considered were weight excess (overweight and obesity), hypertension, history of familiar chronic kidney disease and diabetes mellitus. **Results:** 378 individuals were evaluated, 285 of which entered the study group, 33,7% were men and 189 women. Our results showed 108 hypertensive (37,9%), 30 diabetics (8,9%), 56 with CKD familiar history (19,6%) and 141 overweight (52,4%). In this asymptomatic population were found 23 people with increased albuminuria (>30mg/L), 8 women and 6 men with decreased FCG (<60). **Conclusions:** The results showing 8,07% of the analysed population with microalbuminuria, a major risk factor for CKD, and 4,91% already showing signs of the disease (FCG <60) even asymptomatic, are very alarming. These results show that CKD along with other chronic degenerative diseases are gaining ground on world stage and becoming an even bigger public health challenge. The high prevalence of modifiable risk factors, mainly overweight and hypertension, demonstrate that is not only possible but essential, in PHC, the intervention in these factors to prevent these numbers from increasing even more.

Disclosure: No conflict of interest declared

1785

**Macroscopic asymptomatic hematuria in elderly and the usefulness of ultrasound in primary care.**

T. Lepenos, M. Liarou, A. Champla, C. Tamvakos, I. Dalivigkas, C. Vallilas, A. Papavasileiou, A. Makrogianni, K. Tsevas, D. Zavos  
*HEALTH CENTRE AMFIKLEIA - LAMIA HOSPITAL, ESY-NATIONAL HEALTH SYSTEM OF GREECE, AMFIKLEIA, Greece*

**Aim:** to awaken the general practitioners in the investigation of asymptomatic gross hematuria in elderly.

**Design and Method:** The year 2011 11 patients (9 men and 2 women) had visited the health center of Amfikleia with asymptomatic macroscopic haematuria. All patients were over 65 years old and they had recurrent episodes of gross hematuria. Clinical evaluation of these patients involved general urine examination, urine culture, imaging studies (ultrasonography).

**Results:** Of the 11 patients, 7 (63.6%) suffered from papillomas bladder, 2 (18.1%) bladder stones, 1 (9%) angioliopoma and 1 (9%) bladder cancer.

It is important to mention that most of the diagnostic tests and renal ultrasonography were performed in Health Center of Amfikleia.

**Conclusions:** The general practitioner should always investigate the asymptomatic haematuria and work out with other clinicians to resolve the problem of the patient. The diagnostic value of ultrasonography improves the medical knowledge and skills of the General Practitioner and offers more security and solutions to the clinical practice.

Disclosure: No conflict of interest declared

## 3.7. WOMEN'S HEALTH

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### Cognitive investigation on menopausal disorders

L. Iannantuoni, G. B. D'Errico, R. Grisorio, L. Mazzeo  
*Family medicine, training course in family medicine, Foggia, Italy*

The study is to evaluate the incidence of the subjective disturbances of menopause (hot flashes, irritability, sleep disorders, weight gain).

A scale of 1 to 10 (VAS scale) which evaluates the subjective entity of the disturbance felt, was administered to a sample of 142 women, aged between 34 and 90.

The sample was divided into 2 groups:

- patients in physiological menopause (119);
- patients in iatrogenic menopause (23).

Patients in physiological menopause were divided into 4 subgroups:

- a- early menopause;
- b- premature menopause;
- c- natural menopause;
- d- late menopause.

In early menopause the patients complain of less significant symptoms than other subgroups.

In premature menopause the patients complain of more significant hot flashes and sleep disorders compared to the previous group as well as, in the 40% of cases, a significant weight gain.

Spontaneous menopause causes severe hot flashes in 51.8% of patients and significant weight gain in 26%.

In late menopause 60% of patients report suffering or having suffered from severe vasomotor disturbances, 25% of women report significant changes in mood and 50% report relevant weight gain.

Women in iatrogenic menopause suffer the most serious incidence of hot flashes, as many as 65.2% attributed to the disorder a severe and/or serious degree.

The study confirmed the predominance of vasomotor disorders of all other subjective symptoms and showed that these disorders are more important in late menopause and in iatrogenic menopause.

Disclosure: No conflict of interest declared

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### Development of a Chinese childbearing attitude questionnaire for infertile women

S.-H. Lee, M.-C. Lee

*School of Nursing, Chung Shan Medical University, Taichung, Taiwan*

The purpose of this study was to report the second phase of instrument development, which is a culturally sensitive questionnaire of childbearing attitudes to assess the psychosocial responses of infertile women using a nonexperimental quantitative design to investigate 238 women who are undergoing in vitro fertilization treatment. Data collection and relevant planning occurred in two phases: in-depth interviews of women to generate items for the questionnaire and establishing the questionnaire's content and construct validity. Through factor analysis, five factors were extracted from the "attitude toward childbearing questionnaire": gender identification with self and society, insurance of marriage and inheritance, happy family life, spiritual investment, and continuing the family line and procreation. The total variance of these five factors were 64.31%. The Cronbach's  $\alpha$  and test-retest reliability were between 0.72-0.87 and 0.60-0.76, respectively, demonstrating acceptable internal consistency and stability. The information obtained through the questionnaire could be used to provide infertile women with personal counseling and appropriate psychological support during and after assisted reproductive technology.

Disclosure: No conflict of interest declared

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### The difference between early and normal menopause symptoms in Turkish women

Ü. Zeynep Avşar, T. Set, A. Sattar Khan, Ü. Avşar

**Background & Objective:** The average age for stopping menstruation varies among different geographical areas. However most of literature suggested 40 to 44 years of age is early menopause while 45 to 55 age group is considered normal period for menopause. We sought to find out that these different age groups affect symptoms of menopause in Turkish women.

**Method:** It was a cross sectional analytical study design conducted at Ataturk University Hospital in Erzurum, Turkey during January to June 2012. We approached to all women visited to family practice units during the study period and filled a pre-tested questionnaire. We divided all subjects into two groups: early and normal menopause and compare them as regard to their symptoms.

**Results:** The total 288 women have participated in the study. The mean age was  $54.17 \pm 5.2$  whereas the mean age stopping menstruation was  $47.57 \pm 4.5$ . Early menopause labeled to 115 (39.9%) and normal labeled to 173 (60.1%) women. Out of total, 83.3% were married, 13.9% were divorced and only 2.8% were single. Out of early menopause group, 17.5% and from normal 15% were diagnosed as a case of osteoporosis. There was significant ( $<0.05$ ) difference in between two groups as regard to forgetfulness, joints pain, pain in body, sleep disorder and wake as tired.

**Conclusion:** There was difference existed in between early and normal menopause women as regard to some symptoms.

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### Factors related to infected episiotomy in post partum normal delivery in Prasart Hospital, Surin, Thailand

A. Pathan<sup>1,2</sup>, R. Buntaungjai<sup>1,2</sup>, P. Punsanthan<sup>1</sup>, P. Rithiwong<sup>1,2</sup>, T. Srichareun<sup>1,2</sup>, S. Kaewpitoon<sup>1,3</sup>, N. Kaewpitoon<sup>4,3</sup>, R. Rujirakul<sup>3</sup>, M. Wiset<sup>5</sup>, J. Deeying<sup>6</sup>

<sup>1</sup> Family medicine and community medicine, Institute of Medicine, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>2</sup> Medical Education Center, Surin Hospital, Surin, Thailand; <sup>3</sup> Parasitic Disease Research Unit, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>4</sup> Pathology, Institute of Medicine, Suranaree University of Technology, Nakhonratchasima, Thailand; <sup>5</sup> Preventive Medicine, Prasart Hospital, Surin, Thailand; <sup>6</sup> Preventive Medicine, Chumpolburi, Surin, Thailand

**Background :** Infected episiotomy has increase rank of the cause of admit to hospital, wasted time to work, expenses, morbidity of the newborn from receive antibiotic than normal newborn who not received. Thus, the study of factors related to infected episiotomy in post partum normal delivery will provide benefit for problem solving.

**Objective:** To study rate and identify risk factor of infected episiotomy

**Setting;** Prasathospital, Prasat District, Surin Province

**Design:** Retrospective cohort study

**Method:** 135 patients who delivered during October 20,2010 to September 20,2012 at Labor Room Prasat hospital were included. 45 patients were the study group (infected episiotomy) and 90 patients were the control group (Normal delivery with no complication). Data collections are made from delivery records and medical records. Data were analyzed by both univariate analysis and multiple logistic regression analysis.

**Result :** Infected episiotomy rate was 2.17%. After Multiple logistic regression analysis was

done, the factors which were statistically significant were Odds ratio 2.93 (95% CI = 1.31-6.51) and episiotomy in intrapartum period Odds ratio 4.96 (95% CI 1.38-17.88)

**Conclusion:** Artificial ruptured of membrane and episiotomy, There should be more concerns for pregnant women with these risk factors and study the causes and prevention of infected episiotomy and their unpleasant outcomes.

**Keywords:** Episiotomy, Infected episiotomy

Disclosure: No conflict of interest declared

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**Profile of termination of pregnancy (TOP) seekers and reasons for this service in Mthatha, Eastern Cape, South Africa**

S.P. Pradhan, G. Wright

*Family Medicine, Walter Sisulu University, Mthatha, South Africa*

**Objective:** To find out the profile of termination of pregnancy seekers and the reasons of this service in Mthatha, Eastern Cape, South Africa.

**Methods:** A consecutive sample of 80 women seeking TOP from 1 June to 17 June 2009 at the Women's Health Clinic of Mthatha General Hospital in Eastern Cape Province was included in this study. A structured questionnaire was used as a data collection tool.

**Outcome measures:** Marital status of women coming for TOP, number of women considering TOP as a family planning method, number of women using different types of family planning methods, number of women coming for TOP for the first time, reasons for TOP.

**Results:** Ninety percent of participants were single. Five percent of participants reported having had at least one TOP previously, while, 92.5% of participants reported that it was their first TOP, 2.5% considered TOP a family planning method, 2.5% were not sure while 95% did not consider TOP as a family planning method. Forty two (52,50%) women came for TOP due to unplanned pregnancy while a considerable number, 29 (36.25%) of participants said they had opted for TOP due to financial problems and could not afford to have and bring up a baby.

**Conclusion:** Our study findings are that unplanned pregnancy and financial problems are the two major reasons of termination of pregnancy in Mthatha, South Africa.

Disclosure: No conflict of interest declared

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**Endometriosis health profile: validation and the use of embryo scoring system as prediction to pregnancy**T. Jamaan<sup>1</sup>, T.A. Pakasi<sup>2</sup>*<sup>1</sup> Bunda Maternity Hospital, Jakarta, Indonesia; <sup>2</sup> Department of Community Medicine, Faculty of Medicine University Indonesia, Jakarta, Indonesia*

**Objective:** Endometriosis is predisposing factor to infertility, but the mechanism is indirect, because actually the quality of embryo is the most important predictor to pregnancy. The study aimed in describing differences between endometriosis and non-endometriosis patients with infertility, and therefore may predict pregnancy for in vitro fertilization (IVF) among Indonesian women.

**Methods:** A cross sectional study was applied among infertility couples. History of endometriosis and infertility were taken, continued for physical examination as well as examining the embryo. Scoring of embryo were taken from number of cells, fragmentation and regularity.

**Results:** One-hundred and fortytwo patients participated in this study, which had 1-3 ova during the ovarium pick up, and were analyzed following history taking and physical examination, total covered 275 embryo. Out of 142 patients, 69% had no endometriosis, but there was no differences were observed for age, length of infertility. Higher body mass index was observed among those who were not endometriosis (mean 24.4Kg/m<sup>2</sup> compared with 21Kg/m<sup>2</sup>). Higher proportion of excellent and good embryo were significantly found among the non-endometriosis patients (73.3%) compared to patients with endometriosis (62.7%); and the proportion of poor embryo were lower in the non-endometriosis group (5.6%) compared with the other one (17.9%), p=0.010. After follow up, 28.8% patients reported to be pregnant. Chance to get pregnant for each category of the embryo were 26.3% (excellent), 35.8% (good), 16% (moderate) and 14.3% (poor). Higher opportunity to pregnancy were among subjects without endometriosis.

**Conclusions:** Endometriosis lowered the chance to pregnancy while careful selection of embryo gave more chance to pregnancy in IVF. However no specific characteristic were found among subjects that higher the chance to be pregnant.

Keywords: endometriosis, quality of embryo, BMI, age, pregnancy

Disclosure: No conflict of interest declared

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**Impact of low-dose combined oral contraceptives on teenage bone**T. Miragaia<sup>1</sup>, V. Amaral<sup>2</sup>, F. Címbron<sup>3</sup><sup>1</sup> *Medicina geral e familiar, Unidade de Saúde da Ilha de São Miguel, Lagoa, Portugal;* <sup>2</sup> *Medicina geral e familiar, Unidade de Saúde da Ilha do Pico, Madalena do Pico, Portugal;* <sup>3</sup> *Medicina geral e familiar, Unidade de Saúde da Ilha do Faial, Horta, Portugal*

Adolescence is a crucial period for the growth and mineralization of bone. Estrogens play a key role in the development of bone; therefore any changes in their circulation levels can have an impact in the peak bone mass.

**Objective:** To assess the impact of low-dose combined oral contraceptives on the bone mineral density of teenagers.

**Methodology:** Bibliographic research carried out in October 2012, on evidence-based medicine websites with the MeSH terms: “oral contraceptive”, “adolescent” and “bone mineral density”. The attribution of levels of evidence has followed the U.S. Preventive Services Task Force scale.

**Results:** From the research resulted 151 articles, 8 matched the inclusion criteria. The studies show a bigger increase of bone mineral density on non-users of oral contraceptives or on those who use doses above 30 µg of *ethinyl estradiol*, comparatively to the low-dose users (level and evidence II-2).

**Discussion:** The evidence suggests that oral contraceptives with low doses of *ethinyl estradiol* (<30 µg) seem to have a negative impact on bone mineral density of teenagers. The evidence is insufficient for the recommendation for or against the use of low-dose contraceptives, because it would require randomized controlled trials, and the existing tests are poor (degree of recommendation I).

There is a clear need for randomized controlled trials to assess the risk of long-term fracture, as a simple measure like increasing the contraceptive dosage in teenagers may possibly avoid it.

Disclosure: No conflict of interest declared

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**Prevalence of chronic diseases among patients applied to breast diseases outpatient clinic**U. Aydogan<sup>1</sup>, Y.C. Doganer<sup>2</sup>, O. Sari<sup>1</sup>, H. Akbulut<sup>3</sup>, Zafer Kilbas<sup>4</sup>, Necibe Usterme<sup>1</sup>, S. Yuksel<sup>1</sup>, M. Balkan<sup>4</sup>, K. Saglam<sup>5</sup>, T. Tufan<sup>4</sup><sup>1</sup> *Department of Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey;*<sup>2</sup> *Department of Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey;* <sup>3</sup> *Department of Family Medicine, 4th Air Force Base, Ankara, Turkey;* <sup>4</sup> *Department of General Surgery, Gulhane Military Medical Faculty, Ankara, Turkey;* <sup>5</sup> *Department of Internal Medicine, Gulhane Military Medical Faculty, Ankara, Turkey*

**Objective:** Incidence of breast diseases have increased due to many reasons. As a reflection of prolongation in human life, incidence of chronic diseases increased. In our study, we evaluated the association of chronic diseases among patients applied to outpatient clinic and diagnosed as a breast cancer.

**Methods:** 376 patients applied to breast diseases outpatient clinic of GMMF were included to study. Patients admitted to our outpatient clinic were evaluated for common chronic diseases. After obtaining informed consent from patients about the study, chronic disease states were discussed one to one.

**Results:** The mean age of patients participated in the study was 46.16±9.93 years. 64.89% (n=244) of the patients had chronic diseases. Assessment of chronic diseases was as follows: 19.9% (n=75) hypertension, 13% (n=49), hypercholesterolemia, 7.7% (n=29), diabetes mellitus (DM), 7.7% (n=29) thyroid disease. Other rare chronic diseases (asthma, FME, RA, osteoporosis, osteoarthritis, depression) excluded from common ones. 7.71% (n=29) of patients admitted to breast diseases outpatient clinic was diagnosed as a breast cancer in detailed evaluation. When patients diagnosed as breast cancer on follow-up period were examined in terms of chronic diseases, prevalence of chronic diseases as follow: hypertension 27.3%(n=9), DM 18.2% (n=6), hypercholesterolemia 18.2% (n=6), thyroid disease 12.1% (n=4).

**Conclusions:** In parallel with the increase in life expectancy, chronic diseases has been increasing in the community. During the evaluation period of female patients admitted to primary care center, examination of breast diseases and their associations in terms of chronic diseases should not be ignored.

Disclosure: No conflict of interest declared

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**Evaluation of family history of patients applied to breast diseases outpatient clinic**

O. Sari<sup>1</sup>, U. Aydoğan<sup>1</sup>, YC. Doğaner<sup>2</sup>, Z. Kilbas<sup>3</sup>, H. Akbulut<sup>4</sup>, N. Usterme<sup>1</sup>, S. Yuksel<sup>1</sup>, M. Balkan<sup>3</sup>, T. Tufan<sup>3</sup>

<sup>1</sup> Family Medicine, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>2</sup> Family Medicine, Turkish Military Academy Primary Care Center, Ankara, Turkey; <sup>3</sup> General Surgery, Gulhane Military Medical Faculty, Ankara, Turkey; <sup>4</sup> Family Medicine, 4th Air Force Base, Ankara, Turkey

**Objective:** It's detected that family history is one of most important risk factor for breast cancer particularly. In our study, the status of familial history in terms of breast diseases have been studied.

**Methods:** 376 patients applied to breast diseases outpatient clinic of GMMF were included to study. After an informed consent of patients, sociodemographic characteristics of patients questioned by delivering questionnaire.

**Results:** Average age of patients participated in study was  $46.16 \pm 9.93$  years (22-75 years). Prevalence of family history in terms of breast cancer as follows: 11.7% (n=44) aunt, 7.4% (n=28) sister, 6.6% (n=25) mother. All patients applied to outpatient clinic were divided 3 groups according to their breast diseases as "not having breast disease", "benign breast disease", "breast cancer". Among patients whom aunts have breast diseases; 23 patients have benign breast disease, 3 patients have breast cancer. Among patients whom mothers have breast diseases; 12 patients have benign breast disease, 4 patients have breast cancer. Among patients whom sisters have breast diseases; 15 patients have benign breast disease, 4 patients have breast cancer. Statistical significance could not be detected between breast diseases of patients and family history of breast diseases ( $p>0.05$ ).

**Conclusions:** Although various etiologic risk factors are responsible, one of the significant risk is family history of breast cancer among 1<sup>st</sup> degree relatives. During the periodic examination of women applied to family medicine center, query of familial breast cancer history should be paid attention.

Disclosure: No conflict of interest declared

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**Antibiotics and the contraceptive Pill. A cross-sectional study about patients' knowledge**

K. Hoffmann, A.K. Leifheit, L. Heschl, D. Stelzer, M. Maier

Department of General Practice, Medical University of Vienna, Vienna, Austria

**Background:** It is discussed that the intake of antibiotics and their side-effect diarrhea can lead to a reduction of the effectiveness of the oral contraceptive Pill (OCP). Within the context of the European APRES project it was the aim of this analysis to assess the knowledge of the Austrian population and possible predictors related to this effect.

**Method:** The cross-sectional study lasted from November 2010 till July 2011 and took place in 20 GP offices all over Austria. Each GP tried to recruit 200 patients to complete the questionnaires including the question with the antibiotics-Pill interaction. Statistical analyses included descriptive statistics as well as statistical tests for subgroup analyses and logistic regression models.

**Results:** Overall, 3,380 questionnaires could be analysed. About the discussed interaction of antibiotics with OCP knew 29.7% (females 37.1% vs. males 19.9%;  $p<0.001$ ). In the group of women <46 years, 52.3% (n=421) marked this answer. In the adjusted regression model, predictors for knowledge were younger age (OR 2.20) and reading the package insert (OR 1.51). An inverse predictor was originating from Turkey (OR 0.55) or South-East Europe (OR 0.39). No associations related to the educational level could be found.

**Conclusion:** Half of the women in the reproductive age in Austria know about possible interactions between antibiotics and OCPs. Although the evidence is not conclusive yet, the interaction is mentioned in all package inserts implicating that physicians should consider mentioning the need for extra precautions with OCP when prescribing antibiotics and vice versa.

Disclosure: No conflict of interest declared

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**International health clinic in a family medicine residency program**

L. Hadley

*Family Medicine, JPS Health Network, Fort Worth, Texas, United States*

**Objective:** Caring for recent immigrants presents challenges for Family Medicine Clinics. We describe our experiences developing an International Health Clinic (IHC) embedded within a residency family medicine clinic in Fort Worth, Texas, USA.

**Methods:** We performed a mixed method study using retrospective clinical visit data and key informant interviews about the process of improving the IHC over the last 5 years. We identified all IHC patient visits for the 12 month period between October 2011 and October 2012 collecting data on demographics, diagnoses, and languages. In addition, we conducted individual interviews with key informants including physicians, clinic managers, nurses, and translators.

**Results:** *Quantitative:* 25,666 total clinic visits occurred in the FMC. 4574 were IHC visits. 352 (7.7%) of the IHC visits were for maternity care. 55 countries were represented. 25 languages were encountered. No-show rates were similar to the rest of the clinic population (30%). IHC specific costs included \$113,148 in contract language services, \$15,886 on language line services and \$60,000 on a clinic coordinator. *Qualitative:* Successes included the coordination of care of refugees using a team-based approach and the clinic presence of translators. Challenges included physician schedules that had to be lengthened to accommodate translation time at both the registration desk and in the exam room. Other challenges included managing cultural expectations and completing tests and referrals away from the Family Health Clinic.

**Conclusions:** Our FMC successfully incorporated an IHC providing comprehensive care for recent immigrants. The greatest challenges occur when arranging care outside the clinic walls.

Disclosure: No conflict of interest declared

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**Effect of vaginal self-sampling on cervical cancer screening rates: A community based study.**A. Pike<sup>1</sup>, P. Duke<sup>1</sup>, M. Godwin<sup>1</sup>, P. Wang<sup>2</sup>, A. Lear<sup>3</sup>, W. Graham<sup>1</sup>, G. Mugford<sup>4</sup>, M. Traverso-Yepez<sup>2</sup>, M. Ravalia<sup>1</sup>, S. Ratnam<sup>5</sup>

<sup>1</sup> Family Medicine, Memorial University of Newfoundland, St. John's, Canada; <sup>2</sup> Community Health and Humanities, Memorial University of Newfoundland, St. John's, Canada; <sup>3</sup> Oncology, Eastern Health, St. John's, Canada; <sup>4</sup> Medicine, Memorial University of Newfoundland, St. John's, Canada; <sup>5</sup> Newfoundland Public Health Laboratory, Government of Newfoundland and Labrador, St. John's, Canada

**Objective:** To determine whether the introduction of a self-collection strategy for HPV screening results in increased primary population cervical cancer screening in a community-based setting.

**Methods:** Cohort study – Cancer screening rates for 3 rural communities in Newfoundland and Labrador, Canada, with similar demographics were compared. Participants included healthy women aged 30-69 years (pregnant women were excluded). Community A received an intensive educational and promotional program concerning the prevalence and preventability of cervical cancer and the availability of a research project to test for HPV through self-collection. Community B received a similar campaign but was focused on the importance of clinician collected Pap smears. Community C received no intervention.

**Results:** Final results are currently be tabulated and will be available at the time of presentation. It is anticipated that the option to self-collect vaginal specimens for HPV based cervical cancer screening will increase the proportion of women who are screened for cervical cancer. **Conclusions:** Cervical cancer is preventable and treatable if detected early. However, despite intense patient education programs encouraging women to attend Pap screening, parts of NL have very low Pap smear screening rates. This project has offered women an opportunity to self-collect for HPV as a screening tool. Further conclusions will be discussed once the final results have been tabulated.

Disclosure: No conflict of interest declared

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**Effective screening of cervical cancer in HIV positive patients in Africa**

E. Reji

*Family medicine, Witswatersrand/Wonca Working womenparty(africa), Gauteng, South Africa*

**Objective:** To implement, an effective screening of cervical cancer, in a HIV positive patient.

**Literature review:** Sixty eight percent of all people living with HIV resided in the Sub-Saharan Africa, a region with only 12% of the global population and where women are more affected.<sup>1</sup>

The epidemic is most severe in the Southern Africa<sup>1</sup>. HIV positive women in this part has a higher prevalence of cervical cancer than HIV positive women in other regions of the world.<sup>2</sup> HPV infection persist longer in HIV positive women and its prevalence happens to be high in Africa<sup>3</sup>. With the increase in access to highly active antiretroviral therapy, these women are living longer in these resource limited countries; hence they are at a higher risk of getting cervical cancer in their lifetime.<sup>4</sup> The age standardized incidence rate (ASIR) of cervical cancer in general in Africa is 42.7/100,000 and in Sub-Saharan Africa 38.2/100,000.

There is a massive reduction in cervical cancer incidence with a proper implementation of screening. It is achieved by targeting the appropriate group and by extending the coverage to 100% of the targeted women<sup>5</sup>. This study says that coverage is more important than frequency of the screening<sup>5</sup>. Hence, all our HIV women must be screened for cervical cancer.

Pap smear and VIA is used in developing countries to detect cancer. One needs to consider its environmental factor to use the various types of tests.

**Conclusion:** A responsible family physician plays a leading role in the screening of cervical cancer.

Disclosure: No conflict of interest declared

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**Gabapentin for the treatment of hot flashes – what's the evidence?**

V. Duarte

*USF AlphaMouro, Centro de Saúde de Rio de Mouro, Lisbon, Portugal*

**Introduction:** Hot flashes are a common problem in Primary Care. Estrogen therapy remains the most studied and effective therapy for vasomotor symptoms. However, the long-term safety of hormone based therapies is controversial. It's very important to seek non-hormonal strategies for the management of these symptoms. In this context, Gabapentin appears to be an option.

**Objective:** To determine the evidence about the effectiveness of Gabapentin in the management of hot flashes.

**Methods:** The literature search was made at June 2012, through National Guidelines Clearinghouse, CMA – Infobase, Cochrane Lybrary, DARE, Bandolier and Pubmed. We searched for Systematic Reviews, Meta-Analysis, Randomized Controlled Trial and Guidelines, published in the last 10 years, in English, French, Spanish and Portuguese. MESH terms: Gabapentin and Hot Flashes. To rate the quality of the studies and strength of recommendation SORT taxonomy was used (American Family Physician).

**Results:** From a total of 37 articles, 7 were selected (5 Systematic Reviews and 2 Meta-Analysis). The studies support the use of Gabapentin in the management of hot flashes in women with natural menopause and with breast cancer (Level 1). The most studied dose is 900mg/day (ranging from 600 to 2400 mg/day). It is safe and effective in short term treatments (<12 weeks). Gabapentin appears to be as effective as estrogen (Level 1).

**Conclusions:** Gabapentin can be seen as an alternative option to manage hot flashes (SORT A). However, data across the studies are heterogeneous regarding the duration, doses and target population. More studies are needed to consolidate the outcomes.

Disclosure: No conflict of interest declared



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**The causes of discontinuation in women with intrauterine device**A.Ö. Kilicaslan<sup>1</sup>, R. Kutlu<sup>1</sup>, S. Civi<sup>1</sup>, C. Dereli<sup>2</sup><sup>1</sup> Department of Family Physician, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey; <sup>2</sup> Department of Family Planning, Faruk Sukan Maternal and Child Hospital, Konya, Turkey

**Objective:** Intrauterine device (IUD) application is a widely used effective, safe and economic method for family planning. In this study, we aimed to assess the causes of discontinuation in women with intrauterine device.

**Methods:** This descriptive study consisted of 190 women aged 20-58 years who applied to a family planning policlinic for taking IUD out of uterus. In a standardized questionnaire, their socio-demographic characteristics, pregnancy histories and experiences and the causes of discontinuation to IUD were asked.

**Results:** The participants had a mean age of 33.52±8.8 years, 2.5±1.1 children, 13.6±8.7 (year) marriage duration. Of the respondents, 5.8% illiterate, 64.7% had primary school education, 22.6% middle/high school education and only 13 (6.8%) had university degree, 96.3% had first marriage, 92.1% were housewives, 93.7% were nonoccupational. Of the participant's husbands, the mean age was 36.8±9.0 years, 56.8% primary school education, 48.4% worker. The most frequently used IUD type was copper-containing intrauterine device (Cu-IUD) (97.9%). The frequently causes of discontinuation were 34.2% desire to have a child, 17.9% intermenstrual spotting or prolonged menstrual bleeding, 14.2% uterine infection, 10.5% spontaneous expulsion, 2.6% IUD plus pregnancy, 7.0% considered it unnecessary, respectively. Whilst the respondents and their husband's education, occupation and economic status did not affect to discontinuation of the intrauterine device ( $p>0.05$ ), prolonged and heavy menstrual bleeding, dysmenorrhea, dyspareunia, purulent vaginal discharge, postcoital bleeding affected ( $p>0.001$ ).

**Conclusion:** Intermenstrual spotting or prolonged menstrual bleeding, uterine infection, spontaneous expulsion and IUD plus pregnancy were seriously complications and threaten the women's life.

Disclosure: No conflict of interest declared

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**Cost analysis of nursing activities in breast cancer surgery patients**

W. Sae Lim, P. Suwanchote, S. Samabop

Female surgical ward 520, Hat Yai Hospital, MOPH, THAILAND, Hat Yai, Thailand

**Objective:** The purpose of this descriptive study is to analyze the cost of nursing activity in breast cancer patients

**Methods:** The populations are 13 nurses and select samples 3 breast cancer patients. Data collect from primary and secondary data, including a number of activities, time spent in the service, the expenses in the accounting system and record keeping during April and May 2012. The tools for collecting data by the form costs record, the observation time spent in the activity form and service records. Content validity by three expertises. Descriptive data analyzed by frequency, percentage, mean, and standard deviation.

**Results:** The result of this study found a mean duration of treatment hospital length of stay (LOS) was 12.67 days. The cost of the nursing activities in breast cancer patients was analyzed from seven domain activities: Admission process, Pre and Post operative care, Drug administration / special procedures, Medical treatment, Discharge process and Management process found a total cost was 6,728.24 baht (labor cost was 1,241.24 baht, material cost was 4736.00 baht, cost allocated was 745.00 baht). The main activities of nursing with the highest cost activities was Drug administration / special procedures 3050.36 baht, followed by Post operative care 518.02 baht and the lowest cost was Medical treatment 31.66 baht. The cost of nursing activities are 1787.03 baht/case.

**Conclusion:** This study demonstrate the benefits of cost analysis activities, could understand the structure of cost and consider reducing the wasteful activities that do not value added.

Disclosure: No conflict of interest declared

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**Cesarean section and curettage; What do Turkish Women do and think?**G. Zeren Ozturk<sup>1</sup>, D. Toprak<sup>2</sup>, M. Hursitoglu<sup>3</sup>, Y. Ipek<sup>3</sup><sup>1</sup> Saban Ozbek Family Health Center, Turkish Ministry of Health, Istanbul, Turkey; <sup>2</sup> Department of Family Medicine, Sisli Etfal Training and Research Hospital, Istanbul, Turkey; <sup>3</sup> Department of Internal Medicine, Bağcılar Training and Research Hospital, Istanbul, Turkey

**Aim:** To evaluate the knowledge, attitudes and behaviors about cesarean section (C&S), and curettage in women and to identify their relationship with sociodemographic features.

**Method:** Women applied to the family health center between 01.08–01.09 2012 for any reason, over 20 years old, with a history of at least once pregnancy and agreed to participate were included in the study. Besides the sociodemographic features, number and type of birth, causes of first C&S, preference of private and government hospital for birth, opinions about curettage law, causes and number of abortion and curettage were asked.

**Results:** A total of 335 women enrolled in the study. The average number of pregnancy was 4 and birth was 3 per woman. There were 176 (33.1%) C&S in total births (n=961). Indications of the first C&S were ordered as baby-related reasons (50;45%); mother related reasons (30;27%); patient's prefer (29,26%) and doctor's request (2,2%). 70 of C&S (63,1%) occurred in the private Hospitals. 67 women (12.2%) were performed curettage at least once and the most common reason was „unwanted pregnancy“ (59.88%). When asked about the curettage, 61 (18.2%) women wanted it to be free; 130 (38,8%) answered as acceptable in the case of necessity; 113 (33.7%) answered as it should be banned.

**Conclusion:** Projects those inform both the health staff and the patients about giving the decision on C&S or normal birth would help to decrease unnecessary interventions. Also to tempt modern contraceptive methods will reduce the number of unwanted pregnancies and related curettages.

Disclosure: No conflict of interest declared

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**Perceived risk of breast cancer among women with increased risk**M. Kartal<sup>1</sup>, N. Ozcakar<sup>1</sup>, S. Hatipoglu<sup>2</sup>, N. Tan<sup>3</sup>, D. Guldal<sup>1</sup><sup>1</sup> Family Medicine, Dokuz Eylul University, Izmir, Turkey; <sup>2</sup> Primary Health Care Center, Ministry of Health, Izmir, Turkey; <sup>3</sup> Primary Health Care Center, Ministry of Health, Igdir, Turkey

**Objective:** The lack of knowledge, misunderstanding and misperception of their risk about cancer can affect screening behaviors of women. The aim of the study was investigation of their breast cancer risk, risk perception, and their screening behavior.

**Methods:** A questionnaire was applied to 632 women over age 45, at Primary Health Care Center to determine their breast cancer risk, risk perception, and attitudes towards screening. Gail risk score for 5-year risk  $\geq 1.67$  is accepted as *high* risk.

**Results:** Mean age was  $56.7 \pm 9.5$  years and 89.2% of them defined their health as moderate-good. Of the women 21.7% were smoking, 37.8 exercising regularly, 28.9% were obese and morbid-obese. Having first degree relatives with cancer and breast cancer were 38.8%, and 6.8% respectively. Women stating “doing self breast examination” were 69.1% and 37.3% of women had no breast ultrasonography and/or mammography within last 5 years. The women defining their risk as numerically  $\geq 1/50$  and verbally high-very high risk were 27.4% and 3.5%, respectively. The women had mean Gail 5-year risk score as  $1.36 \pm 0.53$  (0.50-4.2) while 22.4% had risk  $\geq 1.67$ . Among women with *high* risk 34.3% stated their risk  $\geq 1/50$  and 5.0% as high-very high. There was no significant difference between *high* and average risk groups in terms of “self breast examination” and breast ultrasonography and/or mammography.

**Conclusion:** Although women had *high* risk for breast cancer they had more optimistic perception about their cancer risk. Family physicians must be aware of this misperception that can affect the patients' screening behavior for breast cancer.

Disclosure: No conflict of interest declared

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**Syndromic approach to vulvovaginal candidiasis in primary care**A. Mert<sup>1</sup>, V. Mevsim<sup>2</sup>, E. Yildirim<sup>2</sup>

<sup>1</sup> *Kemalpasa Armutlu 6 Numbered Primary Health Care Center, Ministry of Health, Izmir, Turkey;* <sup>2</sup> *Dokuz Eylul University Faculty of Medicine Department of Family Medicine, Dokuz Eylul University Faculty of Medicine Department of Family Medicine, Izmir, Turkey*

**Objective:** The aim of this study is to form syndromic components in which anamnesis and gynaecological examination findings could be used for diagnosis of vulvovaginal candidiasis in primary care.

**Methods:** The study was completed with 245 female patients with vaginal complaints aged between 15-49. It is a diagnosis test study. Sabouraud Dekstrose Agar culture examination was utilized as a gold standard method in the diagnosis of vulvovaginal candidiasis. SPSS for Windows 16.0, Microsoft Office Excel 2003 programmes are used for statistical analyses. The sensitivity, specificity, positive and negative likelihood ratio (LR) and post test probabilities of the criteria found significant were estimated. These criteria were divided into three groups as weak, medium and strong according to their +LR values. Post test probabilities were calculated by using chain LR method for variables in each group and variables in different groups.

**Results:** In the presence of five criteria out of 12 weak ones, three out of six medium ones and one out of two strong ones, post-test probability value can be obtained which is able to approach to the level of diagnosis (>65%). In the presence of one weak, one medium and one strong criteria having lowest +LR values, diagnosis can be reached with 86,24% accuracy rate by post test probabilities calculated by chain LR method.

**Conclusions:** Physicians working at primary care can diagnose vulvovaginal candidiasis in women presenting with vaginal complaints by using the indexes of the syndromic approach (based on their medical history and results of their gynecological examination)

Disclosure: No conflict of interest declared

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**Women with polycystic ovary syndrome. Do they enjoy their sexuality?**

I. Lillo-García, D. Soler-Ferrería, I. Reina-Nicolás, M.B. Tudela-De-Gea, L. Quiles-Sánchez, J.F. Menárguez-Puche  
*Primary Care Area, C.S. Profesor Jesús Marín, Molina de Segura – Murcia, Spain*

**Objective:** Describe the perceived sexual life of women with polycystic ovary syndrome (PCOS) compared to women without disease.

**Material and methods:**

Design: controlled case series.

Scope: Primary Care Team

Subjects: 81 women aged 15-45 years with PCOS (diagnosis confirmed by Rotterdam criteria) were identified. We compared with 81 controls of similar baseline characteristics (without PCOS, the same age and family physician). We assessed satisfaction with sexual life globally by FSFI test validated in Spain (score range = 2-36), which examines six dimensions: desire, arousal, lubrication, orgasm, satisfaction and pain during intercourse.

Both groups were compared using unpaired Student T. Age with sexuality relationship was evaluated using linear correlation.

**Results:** Although older women experienced less sexual desire, they felt less pain during intercourse and reached orgasm easier ( $p < 0.02$ ). Their experience of sexuality (FSFI) was better than younger women's ( $p < 0.05$ ).

Comparing the sexuality of women with PCOS to the control group, all reviews about sexuality and its dimensions were best scored in women without PCOS, but was only significant for the FSFI (28.6 Vs30, 2,  $p < 0.05$ ) and excitation ( $p < 0.05$ ). Satisfaction ( $5.3 \pm 0.9$  vs  $5.1 \pm 0.7$ ), I ( $4.1 \pm 1$  vs  $3.8 \pm 0.8$ ), lubrication ( $5.3 \pm 0.7$  vs  $5.1 \pm 0.8$ ) and orgasm ( $5.2 \pm 0.9$  vs  $4.4 \pm 1.1$ ) were better among women without PCOS.

**Conclusions:**

-Older women experienced less desire, but their sexual experience was more satisfactory

-Both overall satisfaction with sexuality and its dimensions were worse among women with PCOS.

Disclosure: No conflict of interest declared

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**Vitamin D status and response to treatment of vitamin D in Korean women first diagnosed with osteoporosis**

J.J. Kim, S.S. Kim, J.S. Kim, J.G. Jung, S.J. Yoon, C.G. Kim

Family Medicine, Chungnam National University Hospital, Daejeon, Korea

**Objective:** Currently, 800-1000 IU of vitamin D supplementation is recommended in patients with osteoporosis. However, there is no standard recommended dose according to the vitamin D status. The aim of this study is to evaluate whether the recommended dose is appropriate in vitamin D deficiency patients.

**Methods:** This was a retrospective study. Women (n=30) first diagnosed with osteoporosis were recruited in outpatient clinic. They were recommended to be exposed to sun for more than 30 minutes a day. Subjects were divided into deficiency (less than 20ng/mL), insufficiency (20~30ng/mL) and sufficiency (more than 30ng/mL) group according to serum 25-hydroxyvitamin D3(25OHD) status. Insufficient and sufficient patients received the recommended dose (1000 IU/day) but deficient patients received recommended or double dose (1800 to 2000 IU/day). We compared the difference in serum 25OHD status before and after vitamin D supplementation for 12 months.

**Results:** Mean (SD) serum 25OHD concentration at baseline was 17.60 (8.44) ng/mL and the proportion of deficient, insufficient and sufficient groups were 66.7%(20/30), 20.0% (6/30) and 13.3% (4/30) respectively. All insufficient patients achieved optimal level (more than 30ng/mL) with the recommended dose. However, 63.6% (7/11) of the deficient patient with recommended dose achieved optimal level and 88.9% (8/9) of those with double dose did (P = 0.016).

**Conclusions:** Women first diagnosed with osteoporosis may achieve optimal level with the recommended dose of vitamin D in case of insufficient level of 25OHD. But, they may require double dose in case of deficient level.

Disclosure: No conflict of interest declared

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**A role of general practitioners / Family doctors in the provision of the contraceptive care for the Croatian women**M. Bencic<sup>1</sup>, M. Vrcic Keglevic<sup>2</sup><sup>1</sup> Family Medicine Surgery „Brdovec“, Health Center „Zagreb County“, Zagreb, Croatia;<sup>2</sup> Department of Family Medicine, „A. Stampar“ School of Public Health, Medical School, University of Zagreb, Zagreb, Croatia

**Introduction:** Primary Health Care in Croatia is based on General Practice/Family Medicine, pediatrics and gynecology. The women's health is somehow divided between GPs/FDs. It is a question who is responsible for what? The aim of this report is to present the results of the survey of the women opinions regarding a role of GP/FD in the provision of the contraceptive care.

**Methods:** The survey of the different aspects of contraception was carried on in two small communities, rural and urban, near Zagreb. 5% of the female population from 18 to 45 years was involved as a sample. Validated questionnaire, designed for the study purposes, consist of 35 questions, investigating women's opinion on different aspect of the contraception, including a role of GP/FD.

**Results:** Out of 329 participants, 41% are women from rural and 58% from urban setting. Gynecologists were the persons most frequently consulted while choosing the contraceptive methods (41.3%). A consultation among the partners was at the second place (30.5%). Personal decision was present in 17.8% women. 7.5% women asked friends or consulted a literature. Only two women (0.9%) consult their GPs/FD. 83.2% of the women did not recognize GPs/FDs as the professionals to consult. Lack of knowledge and experience in the field of contraception was the reason for some of them not to consult GPs/FDs. There were no differences regarding the socio-demographic characteristics of the sample.

**Conclusion:** The professional organizations and organizers of health care should take into the consideration the fact that, for Croatian women, the role of GPs/FDs in the field of contraception is not important.

Disclosure: No conflict of interest declared

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**Associations between abdominal adiposity and three-dimensional breast density using digital mammography**

H.J. Seo, Y.B. Cho, J.H. Kang, B.Y. Yu

Family medicine, Konyang university hospital, Daejeon, Korea

**Background:** Breast density and obesity are independent risk factors of breast cancer, but there are few studies about associations of three-dimensional breast density with abdominal adiposity in Korean women. In this study, we studied about relationships between abdominal adiposity and three-dimensional breast density using digital mammography in Korean women.

**Methods:** Cross-sectional study was performed about 64 women who underwent health checkups in a university hospital. A questionnaire was conducted on past history, medication history, social history, menstrual history, fertility, and hormone replacement therapy. We used weight, body mass index, waist circumference, visceral fat area and subcutaneous fat area as indicators of obesity and measured breast density (dense volume, percentage dense volume) using a digital mammography. We examined associations between breast density and obesity.

**Results:** Multiple linear regressions were used to analyze associations between body mass index, waist circumference, visceral fat area, subcutaneous fat area and outcomes: dense volume and percentage dense volume. In postmenopausal women, waist circumference was statistically significantly associated with dense volume ( $\beta = 0.012$ ,  $P < 0.001$ ) and visceral fat area was negatively associated with percentage dense volume ( $\beta = -0.002$ ,  $P < 0.001$ ). In premenopausal women, visceral fat was associated with dense volume ( $\beta = 0.003$ ,  $P = 0.046$ ) but nothing was statistically significantly associated with percentage dense volume.

**Conclusion:** we studied associations between three-dimensional breast density using digital mammography and abdominal adiposity in Korean women. And abdominal adiposity affected breast density in both premenopausal and postmenopausal women.

Disclosure: No conflict of interest declared

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**Can isoflavones reduce fractures risk in postmenopausal women?**

J. Santos, J. Couto

<sup>1</sup> USF Arco do Prado, ACeS PortoVII, Vila Nova de Gaia, Portugal; <sup>2</sup> USF Ribeirão, ACeS Ave III, Famalicão, Portugal

**Objective:** Determine the evidence of isoflavones use in reducing fractures risk in postmenopausal women.

**Methods:** Search of clinical practice guidelines, systematic reviews (SR), meta-analysis, randomized controlled trials (RCT), published between 01/2002 and 10/2012, at Medline and Evidence Based Medicine sources, using the MeSH terms: *isoflavones* and *osteoporosis, postmenopausal*. The *Strength of Recommendation Taxonomy* (SORT) scale of the *American Family Physician* was applied to assess the level of evidence.

**Results:** We found 73 articles, of which two SR were selected for analysis. Studies included in the 2009 SR (5 – vegetable or soy protein ingestion) revealed heterogeneity of results, with no obvious relationship between the incidence of fractures and isoflavone ingestion (evidence level 1). The 2010 SR included three RCT: two (n=124) showed a reduction of vertebral fracture risk and the other (n=292) showed no statistically significant decrease in vertebral osteoporotic fractures risk with isoflavones (isoflavone 600mg/day) therapy (evidence level 2).

**Conclusions:** Despite morbidity associated with osteoporotic fractures in postmenopausal age, the existing evidence does not show a consistent reduction in fracture risk with the use of isoflavones (SOR B). There's a need for more studies about isoflavone supplementation, with larger samples, using as main outcome fractures incidence. Therefore, it's important that Family Physician identifies women at high risk of fractures in order to improve their quality of life.

Disclosure: No conflict of interest declared

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### Urgent assistance by gender violence in the health centre of Vilassar de Mar. Ten years of research.

J. Bernad Suarez<sup>1</sup>, C. Santamaria Colomer<sup>2</sup>, L. Bernad Marin<sup>2</sup>, J. Cortes<sup>1</sup>, J. Pages<sup>1</sup>, R. Mas Fajardo<sup>1</sup>, J. Gerhard, R. Gonzalez<sup>1</sup>, A. Vazquez Duran<sup>1</sup>, C. Sanchez Lopez<sup>1</sup>

<sup>1</sup> CENTRE D'ATENÇIO PRIMARIA, INSTITUT CATALA DE LA SALUT, VILASSAR DE MAR, Spain; <sup>2</sup> UNITAT DOCENT, Universitat autonoma barcelona, Badalona, Spain

**Objectives:** 1. Knowing the risk of an episode of gender violence that requires urgent assistance in basic health area, in patients domiciled Vilassar de Mar and Cabrera. 2. Knowing whether there is an association between the risk and the nationality of the victim.

**Material and methods:** Retrospective Study cohort (Spanish women versus foreign) to the risk of an episode of gender violence (GV). Women aged 15 to 64 years old. Women surveyed / year = 8248 (7753 Spanish, 270 hispanic, 137 Nor African, 70 in Eastern Europe and 18 other countries). Period 01/01/2002 to 31/12/2011. We studied the relative risk (RR) of to suffer an episode of GV globally and by ethnic, confidence interval (CI) and statistical significance of the differences using X<sup>2</sup> in Numbers and Excel programs.

**Results:** 133 women were attended by GV: 89 Spanish, 26 North African, 11 Hispanic and 7 Eastern European.

Relative risk / Spanish population:

Foreign women group, n=44; RR=9,36; IC=6,56-13,32, X<sup>2</sup> =153, p <0,01. Nor African women group, n=26; RR=10,85, IC=6,34-8,58, X<sup>2</sup>=75, p<0,01. Hispanic women group, n=11; RR=9,01; IC=5,76 - 14,09, X<sup>2</sup> =92,82, p<0,01. Eastern European women group, n=7; RR=7,72; IC =5,86 - 20,86, X<sup>2</sup> = 16,26, p <0,01

**Conclusions:** 1. The risk for GV are higher in the cohort of foreign women in the cohort of Spanish women. The risk is very greater in the subgroup of North African women, and then those of South American origin. 2. No differences between cohort groups of foreign women. 3. We must continue to develop and implement strategies for detection, prevention and assistance aimed specifically at these women, taking into account the particularities of each group.

Disclosure: No conflict of interest declared

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### Association of depression, anxiety and sleep disorders with blood androgen levels in polycystic ovary syndrome of primary care setting

G. Yarlioglu<sup>1</sup>, M. Yarlioglu<sup>2</sup>, O. Ozdemir<sup>3</sup>, M. Heybet<sup>1</sup>, I. Cekiç<sup>1</sup>, I. Sencan<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Ozkara<sup>1</sup>

<sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey;

<sup>2</sup> Cardiology, Ankara Training and Research Hospital, Ankara, Turkey; <sup>3</sup> Obstetric and Gynecology, Ankara Numune Training and Research Hospital, Ankara, Turkey

**Objective:** Increased prevalence of psychological morbidities, including anxiety, depression and sleeping disorders, have been reported in women with polycystic ovary syndrome (PCOS) in comparison with normal ovulating, nonhyperandrogenemic women. The aim of this study was to determine the relationship between the degree of anxiety, depression and sleep disorders with blood androgen levels in women with PCOS.

**Method:** The study included two groups, Group A consisted of 30 PCOS patients with increased blood androgen levels and Group B consisted of 24 PCOS patients with normal blood androgen levels. All participants completed standardized questionnaires assessing depression (Beck Depression Inventory, BDI), anxiety (Beck Anxiety Inventory, BAI) and sleep quality (Pittsburgh Sleep Quality Index, PSQI). Hirsutism scores and serum androgen levels were obtained.

**Results:** Group A had a higher prevalence of moderate or severe depressive symptom levels (BDI scores > 16): 81% vs. 37% in Group B, p<0.001; OR 2.9), a higher prevalence of mild or moderate anxiety symptom levels (BAI scores > 7): 37% vs. 23% in Group B, p<0.001; OR 1.7) and a higher prevalence of poor sleep quality (PSQI scores > 5): 41% vs. 13% in Group B, p<0.001; OR 1.7) compared to Group B. The difference between groups for the continuous BDI, BAI and PSQI scores were also statistically significant (p=0.001).

**Conclusion:** In primary care setting women with PCOS and increased blood androgen levels should be screened at regular intervals in order to detect depression, anxiety and sleep disorders and to treat depressive symptomatology.

Disclosure: No conflict of interest declared

1407

**Mother Program Paulistana: perception of quality of care in the region Capao Redondo, municipality of Sao Paulo, Brazil.**

C. Silva, C. Lisboa, P. Branco, E. Hollen, V. Biller, R. Franca, A. Zorzin, R. Santos, H. Oliveira, A.A. Santos  
*Administração PSF UNASP, UNASP, São Paulo, Brazil*

This paper presents the results of a study that relates the perception of improved quality of care pregnant women followed at a Basic Health Unit with the Family Health Strategy with about 76,000 people registered in the municipality of São Paulo, in the district of Redondo Capon. The Mother Program Paulistana, policy for Women's Health, implemented in 2006, aims to assist the mother during the pregnancy cycle, since queries prenatal, childbirth, the postpartum period until the first year of baby's life.

Initially a survey was conducted of data, including statistics available, contained in official documents of the Municipal Health Department, referring to the actions developed in the health of pregnant women over the period.

The coverage and quality of care for pregnant women are high since the year 2005 until 2011. During this analysis, there was a reduction in the incidence of pregnant women below 20 years of age and increased in 98% of pregnant women followed by health teams. The data indicate that there was an increased incidence of pregnant women who underwent prenatal consultations, as well as the incidence of pregnant women attended with 7 queries prenatal recommended. Additionally, after the implantation of the actual outcomes were significantly increased, indicating the positive impact of this program.

Finally, the study is descriptive and quantitative analysis with data collected in this specified period, to ascertain the degree and impacts determined to improve in assisting the Pre - natal.

Disclosure: No conflict of interest declared

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**The level of education, contraception use and unintended pregnancies in a sample of Turkish women**

S. Erdogmus<sup>1</sup>, G. Kulahlı<sup>1</sup>, Z.A. Saglam<sup>1</sup>, D. Toprak<sup>2</sup>  
<sup>1</sup> Family Medicine, Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey; <sup>2</sup> Family Medicine, Sisli Etfal Training and Research Hospital, Istanbul, Turkey

**Aim:**Unintended pregnancy is an important health issue for women.The purpose was to determine the knowledge, rate and choice of contraceptive methods and factors associated with risk of unintended pregnancy in a sample of Turkish women attending gynecology department.

**Materials&Methods:**This cross-sectional questionnaire-based survey was conducted in December 2012 among patients of gynecology department(n=400;mean age:36,38±11,70) of Goztepe Training and Research Hospital.The items covered in the self-administered questionnaire included:socio-demographic characteristics,knowledge and experience on contraceptive methods.Unintended pregnancy was analyzed through the information given and compared with usage of contraceptive methods.Descriptive and analytic tests were used;p<0.05 showed statistical significance.

**Results:**The majority of(51,5%) patients had primary education(high-school:21,3%;university graduate:22,8%;the rest:illiterate).Median numbers of gravida and healthy children were 3 and 2 respectively.The number of curetage was minimum 0 maximum 7(median 0). 38,5% of patients had unintended pregnancies while using contraceptive methods[oral contraceptives(OC):24,2%;coitus interruptus(CI):14,1%;injection:%9,1;condom:15,6%;OC+condom:3%;intrauterine device (IUD): 21,2%;IUD+OC:6,1%;condom+CI:2,0%;calendar method:%2,0;tubal sterilization(TS):3%].The women had information on mostly condoms(94,5%) the least on vasectomy(14,3%) and implants respectively(20,8%).The most widely used technique was CI(37,3%).The frequency of vasectomy was 0%.Implant followed vasectomy by 2,5%.The participants who experienced unintended pregnancy were significantly older than the others(p<0,01).Low-education was associated with increased unintended pregnancies independent of any contraceptive method(p<0,01). OC, CI, calendar method, IUD, implants and injection methods were respectively used by university graduates.CI was frequent among primary and high-school graduates. The illiterate group was ignorant about contraceptive methods, especially calendar method and implants;they respectively used IUD,OC, injection,TS and CI.

**Conclusion.**Health care providers should emphasize on efficient and continuous counselling to raise awareness on effective contraception especially at low educated women.

Disclosure: No conflict of interest declared

1507

**What do women know about family planning?**

Ö. Öztaş, A. Baydar Artantaş, I. Karataş Eray, Y. Üstü, M. Ugurlu  
FAMILY MEDICINE DEPARTMENT, ANKARA ATATURK TRAINING AND  
RESEARCH HOSPITAL, BİLKENT/ANKARA, Turkey

**Aim:** This study, we aimed to analyse the level of knowledge about birth control methods and family planning, socio-demographic characteristics of women. With the results to be obtained from this study, it can be possible to determine the educational needs of the society.

**Material and Method:** In this cross-sectional and descriptive study includes 264 women, aged between 18-49, applied to Atatürk Training and Research Hospital. A questionnaire consisting of thirty-seven questions assessing sociodemographic characteristics and trends in knowledge, attitudes and behavior about birth control methods were applied. SPSS 15.0 program was used to evaluate the data.

**Results:** 264 women aged between 18-49 were interviewed. The most well known birth control methods were; oral contraceptives, intra-uterine devices, condoms and coitus interruptus, respectively. Coitus interruptus was the most well known traditional method. The least known methods were; female condom, vaginal ring, spermicide tablets, respectively. Factors affecting the choice of the methods were; having less side effects (32.9%), being recommended by a doctor (26.5%), reliability and effectivity (25.3%), and being effective for a long time (24.1%).

**Conclusion:** The level of knowledge about family planning and birth control methods are still not at the desired level. In spite of a wide variety of currently available effective and modern methods, traditional methods are still used highly. With the dissemination and ensuring the continuity of family planning education and counseling services, it can be possible to eliminate of the lack of information on this issue and prevent wrong practices.

**Keywords:** Family planning, birth control methods, family practice.

Disclosure: No conflict of interest declared

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**Lifethreatning corneal pregnancy in pregnant women with a history of salpingectomy.**

A. Claudi, C. Steen-Hansen, L. Norgaard  
gynecology/obstetric department, hospital, hillerød, Denmark

A woman with a history of bilateral salpingectomy achieved pregnancy after in vitro fertilization (IVF). At gestational age 6 weeks she experienced fatigue, hematemesis and abdominal pain. She was hospitalized on suspicion of an peptic ulcer. Several physicians rejected the possibility of an ectopic pregnancy due to the history of salpingectomy. The patient had intraabdominal bleeding and went through acute surgery because of a ruptured interstitial pregnancy. The purpose of this case report is to recall the risk of interstitial pregnancy in pregnant women with a history of salpingectomy.

Disclosure: No conflict of interest declared



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**Evaluation of secondary amenorrhea**

A. Maia

USF do Mar, ACES Póvoa de Varzim/Vila do Conde, Póvoa de Varzim, Portugal

**Background:** Secondary amenorrhea is a common reason for consultation in primary care. It is defined as the absence of menstrual period during a time period exceeding 6 months or equal to the total average of three previous cycles.

**Purpose:** Draw up a chart of diagnostic evaluation of secondary amenorrhea for primary care.

**Methodology:** A systematic review was performed by searching in scientific databases: Pubmed, Tripdatabase, UpToDate and other publications. There were searched articles from the last 10 years in English, Portuguese and Spanish languages using the keywords: „secondary amenorrhea“ and „ primary care“ and “ evaluation”.

**Results:** The evaluation of a patient with secondary amenorrhea should include a complete clinical history, physical examination and laboratory evaluation. Clinical history should address personal history, menstrual and obstetric history, current history: intense physical exercise, weight loss, medication use, galactorrhoea, vasomotor symptoms, visual changes, headache. Physical examination of the patient should include: assessment of height and weight, skin examination (presence of signs of hyperandrogenism: hirsutism, acne) and hyperinsulinemia (acanthosis nigricans); breast palpation (galactorrhoea) and pelvic exam. Laboratory evaluation should include determination of serum B-HCG to rule out pregnancy, TSH, prolactin and FSH. In case of suspected hyperandrogenism, must be requested levels of testosterone and DHEAS.

**Discussion:** A structured approach to secondary amenorrhea is important to investigate various causes of amenorrhea: hypothalamic, gonadal, hyperprolactinemia and Polycystic Ovaric Syndrome. Thus, family physician plays a key role on diagnostic evaluation of a women with secondary amenorrhea.

Disclosure: No conflict of interest declared

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**Family doctor referral doesn't imply end of care**M. Padrao Dias<sup>1</sup>, L. Amaral<sup>2</sup>, C. Shinn<sup>2</sup>, M. J. Araujo<sup>3</sup>

<sup>1</sup> USF Dafundo, ACeS Lisboa Ocidental e Oeiras, Oeiras, Portugal; <sup>2</sup> USF S. Juliao, ACeS Lisboa Ocidental e Oeiras, Oeiras, Portugal; <sup>3</sup> USF Conde de Oeiras, ACeS Lisboa Ocidental e Oeiras, Oeiras, Portugal

**Introduction:** General practitioners refer patients to secondary care on a daily basis. On some occasions the health problem persists despite referral, and may require family doctor (FD) re-intervention.

**Case Description:** Female, 49 years old, caucasian, married, extended nuclear family, stage VI of the Duvall family cycle. Active health problems: arterial hypertension and obesity. The FD established a year-long history of menorrhagias and dismenorrhea, even though treated with norethisterone and levonorgestrel. Further investigation revealed adenomyosis and ferropenic anemia due to excessive blood loss. The patient was referred to a gynaecology consult and started oral iron and dihydrogesterone. In June 2011 she was evaluated by the gynaecologist, and scheduled for an ultrasound and second consult 6 months later. No clinical information was returned to her FD. During investigation the patient required eleven primary care consults and 91 days of sick leave. Due to persistence of symptoms the patient and FD decided upon treatment with an intra-uterine medicated device (levonorgestrel), after which the symptoms improved.

**Discussion:** Treatment requires taking into account medication costs, costs of absenteeism, and diminished quality of life. A treatment plan was agreed upon with the patient: request for clinical information from the gynecologist, active health problems monitoring and socioeconomic re-evaluation. Patient referral only results in a partial transfer of responsibility, as the FD maintains an obligation to assist in decision-making, and defend the patient's interests.

Disclosure: No conflict of interest declared

### 3.8. MATERNAL AND CHILD HEALTH

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#### Frequency, severity of depression and its contributing factors among mothers of children with cancer in a teaching hospital at Karachi.

M. Ghufuran

**Introduction:** Diagnosis of cancer in one's child causes not only social but also psychological devastation for the whole family especially mothers. Depressed mothers are less able to help their sick child cope with intensive treatments.

**Objective:** To identify prevalence, levels of depression and contributing factors in mothers of cancer children.

**Study design:** Cross sectional study

**Setting:** Pediatric oncology outpatient clinics and daycare oncology procedures at Aga Khan University Hospital (AKUH)

**Subjects:** All mothers having children with any form of cancer diagnosed by oncologist.

**Methods:** 100 mothers of cancer children enrolled. A pre-coded validated questionnaire regarding mothers and child's demographics, level of social support along with Hamilton-D, a depression screening and severity scale, used. Data analyzed using SPSS (19.0), frequencies, and proportions were reported accordingly. Chi-square test used to identify related factors.

**Results:** 78% mothers found depressed. 69% had mild, 25% moderate, 5% severe and 1% had very severe depression. 61.5% (n=48) mothers with higher education had depression (p=0.041). Mothers having 3 or less children (51.3%; n=40) were found to be more depressed (p=0.030).

Age of children and financial burden as perceived by mothers were also related with depression (p= <0.05). Mothers having husband's help were found to be less depressed (p= 0.023).

**Conclusion:** Majority of mothers were found to be depressed in this study. This known high level of depression in mothers, it is recommended that early non-therapeutic and/or therapeutic interventions should be done to help them cope with their situation.

**Keywords:** Mothers, Cancer Children, Caregiver Depression.

Disclosure: No conflict of interest declared

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#### Military deployment and early childhood development

K. Hoedebecke, D. Nguyen, C. Berry-Caban, J. Ee

Family Medicine Residency Clinic, Womack Army Medical Center, Ft Bragg, North Carolina, United States

**Objective:** Determine the relationship between parental military deployment and developmental delays in children under the age of 5 in military households.

**Methods:** 154 children of military families between the ages of 6-60 months at Fort Bragg, North Carolina, USA participated. Only one pre-school aged child per family was surveyed and that child was picked by a random number generator. A demographic survey, an Ages and Stages Questionnaire (ASQ-3), and an Ages and Stages Social-Emotional Questionnaire (ASQ:SE) were administered to parents of eligible children.

**Results:** 30.6% of children who had a deployed parent failed the ASQ-3 screen while 12.5% of children who did not have a deployed parent failed (P=0.008). On the ASQ-SE screen, 17.3% of children who had a parent deploy failed versus 5.4% of children who did not have a parent deploy (P=0.026). Differences were found between groups for the areas of gross motor skills (P=0.009) and personal-social skills (P=0.045).

**Conclusions:** Parental deployment is related to adverse risk for developmental delays in children in military families. These adverse outcomes possibly could be mitigated by early detection of developmental delay and firm attention to aggressive screening techniques in military communities. Finally, this study contributes to the growing body of evidence of the enormous toll paid by military families. These studies, as a growing whole, might affect military policy change. The lasting effects on family members still remain largely unstudied.

Disclosure: No conflict of interest declared

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**Omega-3 fatty acids: an ally in postpartum depression?**

A. Bettencourt, B. Pimentel

*Unidade de Saúde da Ilha Terceira, Centro de Saúde de Angra do Heroísmo, Angra do Heroísmo, Portugal*

**Objective:** Postpartum depression (PPD) affects 10-15% of new mothers and can have detrimental effects on the cognitive and emotional development of the child, maternal health and parental skills.

However, mothers may be reluctant to antidepressant therapy, due to concerns about safety for the developing fetus, and are usually more receptive to dietary supplementation.

Our aim was to review the scientific evidence regarding the efficacy and safety of omega-3 fatty acids in the prevention and treatment of PPD.

**Methods:** A search for guidelines, systematic reviews, meta-analyses and randomized controlled clinical trials was performed in evidence based medicine websites, using MeSH keywords *Fatty Acids, Omega-3* and *Depression, Postpartum*.

The Strength of Recommendation Taxonomy (SORT) was used to assign levels of evidence and strengths of recommendation.

**Results:** Of the 63 articles retrieved, 19 met the inclusion criteria.

Regarding the prevention of DPP through supplementation with omega-3, the articles had inconsistent results and methodological limitations. While some found benefit, the ones with the best level of evidence indicate that its use cannot be recommended.

Concerning the treatment of PPD, the most robust studies indicate that omega-3 as monotherapy is not effective. Nevertheless, it may be used as an adjunctive therapy in selected cases.

**Conclusion:** There is insufficient evidence to support the efficacy of omega-3 in prevention or monotherapy of PPD (SORT A).

Given its safety and tolerability, it may be used as an adjunctive therapy (SORT B).

Further research studies, of higher quality, are warranted to clarify the validity of its use.

Disclosure: No conflict of interest declared

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**Socio-demographic characteristics of children who undergo tonsillectomy in England**E.Koshy<sup>1</sup>, J. Murray<sup>1</sup>, A. Bottle<sup>2</sup>, M.Sharland<sup>3</sup>, S.Saxena<sup>1</sup><sup>1</sup> *Primary Care and Public Health, Imperial College London, London, United Kingdom;*<sup>2</sup> *Dr Foster Unit, Imperial College London, London, United Kingdom;* <sup>3</sup> *Paediatric Infectious Disease, St George's Hospital, London, United Kingdom*

**Objective:** To examine the socio-demographic characteristics of children who underwent tonsillectomy in 2002/3 and six years later, in 2008/9

**Methods:** We analysed Hospital Episodes Statistics data to calculate annual tonsillectomy rates in children aged <16 years who were admitted to hospital in England in 2002/3 and 2008/9.

**Results:** Overall tonsillectomy rates declined by 9% among children aged <16 years between 2002/3 and 2008/9. However, tonsillectomy rates among children <4 years increased by 35% from 163 (95%CI 158-168) to 220 (95%CI 214-226) per 100,000 children in 2002/3 and 2008/9, respectively. By contrast, among children aged 4-15 years, rates decreased from 386 (95% CI: 382-391) to 337 (95% CI: 333-342) per 100,000 children, respectively. The median age at tonsillectomy decreased from 7 to 6 years. There were twice as many children from the most deprived areas who underwent tonsillectomy compared with the least deprived areas, in both years.

**Conclusions:** The age at which tonsillectomy was performed decreased and the tonsillectomy rates among children aged <4 years increased substantially over the six year period. This may be due to an increase in operations being performed for obstructive sleep apnoea. Tonsillectomy rates decreased among children aged 4-15 years which could be due to the implementation of national guidelines. Finally, further research is needed to investigate the potential deprivation gradient.

Disclosure: No conflict of interest declared

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**The effect of fennel tea in infantile colic: what scientific evidence there is?**N. Monteiro<sup>1</sup>, A. Belo<sup>2</sup><sup>1</sup> ARS Norte, USF Porto Centro, Porto, Portugal; <sup>2</sup> ARS Norte, USF Serpa Pinto, Porto, Portugal

**Introduction:** Infantile colic is a common problem in infants. Despite its benign course, it can lead to unnecessary hospitalizations. Several interventions have been suggested, but most of them have proven to be ineffective. Among the plants used to relieve colic, fennel is the most recommended.

The aim of this work was to review the current available information about fennel seed oil efficacy in the relief of infantile colic.

**Methods:** A bibliographic research was carried out on May 26<sup>th</sup> 2012 using the MeSH terms *infantile colic*, *fennel* and *foeniculum vulgare* in international databases. Data was collected if published since January 2002 in English or Portuguese. To assess the levels of evidence and strength-of-recommendation grade, the Strength of Recommendation Taxonomy by American Family Physician was used.

**Results:** 7 articles were found, but only 1 Systematic Review complied with the established criteria. The SR analyzed 15 studies and 2 considered fennel's effect singly on infantile colic. The first study had as outcome the relief of colic symptoms, which was defined as a decrease of cumulative crying to less than 9 hours per week. It has successfully showed symptoms improvement (Evidence Level 1). The second study assessed the same outcome and showed symptoms improvement in the intervention group (Evidence Level 2).

**Conclusions:** The current evidence refer that fennel seed oil is effective in the relief of infantile colic symptoms (SOR B). However, a standardized fennel preparation is still not available and recommendations should be given carefully. Therefore, the need for more research is pressing.

Disclosure: No conflict of interest declared

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**Effectiveness of an educational group intervention in primary care to maintain exclusive breastfeeding. Cluster randomised clinical trial. PROLACT Study**

R. Mielgo, M.J. Santamaría, I. Coghén

PRIMARY CARE, CS LOS YEBENES, CS LUCERO, CS LOS CÁRMENES, MADRID, Spain

**Objective:** Evaluate the effectiveness of an educational group intervention performed by primary healthcare professionals in increasing the proportion of mother-infant pairs using exclusive breastfeeding at six months compared to routine practice.

**Methods:** cluster randomized trial.

**Setting:** Multicentre. Primary Care Health Centres (PCHC). Comunidad de Madrid.

**Subjects:** mother-infant pairs using exclusive breastfeeding attending any query in the health centre, as long as the infant is not older than four weeks and who consent to participate in the study. N= 432 (216 in each arm). Unit of randomization: primary healthcare centres. Analysis unit: mother-infant pairs, recruitment to consecutive sampling.

**Intervention:** Educational group intervention in the treatment group and the usual intervention in the control group.

**Variables:** Main response variable: mother-infant pairs using EBF at six months. Secondary variables: types of breastfeeding at 6 months, duration of EBF, reasons for abandoning breastfeeding, satisfaction with the intervention (SERVQUAL). Prognostic variables: infant, mother and professional.

**Data Analysis:** Analysis of main effectiveness by intention to treat, comparing the proportion of mother-infant pairs using EBF at six months in both groups. The estimation adjusted using an explanatory logistics regression model. To assess the effect of the educational group intervention on the duration of the various types of breastfeeding, a survival analysis will be used comparing the two groups using the log-rank test. The control of potential confounding variables will be performed by the construction of various Cox regression models.

Disclosure: No conflict of interest declared

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**Evaluation of low back pain in children and adolescents**

J. Marinhas, C. Fernandes, R. Oliveira, A. Yee, A. Ferreira

*Ortopedia, Centro Hospital de Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal*

Low back pain is a frequent complaint in healthy children and adolescents. When children or adolescents seek medical care for back pain should identify causes and guide conveniently. The most common causes of back pain include pain does not specify or muscle contracture, disc herniation, spondylolysis, scoliosis and Scheuermann's kyphosis. Less common causes include tumors, infection or sickle cell crisis.

If there is suspicion of non-specific low back pain, treatment is medical and includes exemption of exercise for a few days, water aerobics, postural correction, physical therapy or prescription anti-inflammatory drugs such as ibuprofen. In these cases, further investigation is required, as well as referencing the specialty of orthopedics.

If the history and physical examination suggest underlying pathology may be necessary to review as supplementary diagnostic radiographs, complete blood count, erythrocyte sedimentation rate and C-reactive protein by the clinical picture, and then consider referral to specialty of orthopedics.

Today it is accepted that the following factors require rapid assessment and referral to Orthopedics: children under 4 years, persistent symptoms, limitations in activities of daily living, systemic symptoms, increased intensity of symptoms, nocturnal pain and neurological signs or symptoms.

Disclosure: No conflict of interest declared

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**Pediatric sleep disorders – management in primary health care**J.A.B.Barros<sup>1</sup>, M.F.M.J.Costa<sup>2</sup>, M.R.R.Galhardo<sup>3</sup>*<sup>1</sup> USF Maresia, ULS Matosinhos, Matosinhos, Portugal; <sup>2</sup> USF Serpa Pinto, ARS Norte, ACeS Porto Ocidental, Porto, Portugal; <sup>3</sup> USF Dunas, ULS Matosinhos, Matosinhos, Portugal*

**Objective:** Sleep disorders are common in childhood and adolescence, affecting nearly one third of all children, and a frequent concern for parents. Such disturbances, often overlooked and underdiagnosed, are associated with physical, cognitive, emotional and social child impairment. The purpose of this review is to enhance the role of the family physician in preventing, diagnosing and treating sleep disorders in pediatric age group.

**Methods:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms sleep disorders AND child AND adolescent AND management, published from January 2001 to December 2012 in English, Spanish and Portuguese.

**Results:** According to the International Classification of Sleep Disorders (ICSD), there are three major groups of disturbances in pediatric age: dyssomnias (principal cause of disturbed night-time sleep and daytime sleepiness), parasomnias (disruption of an existing state of sleep) and disorders associated with mental, neurological diseases. A detailed and accurate sleep history followed by a systematic physical examination is the cornerstone for diagnosis. In certain sleep disorders, some complementary exams are needed and hospital referral is necessary. Treatment involves behavioral interventions, with clinically significant improvements and pharmacological approach, with relative lack of data in terms of safety and efficacy.

**Conclusions:** This review highlights the important role of the family physician in prevention, identification and treatment of common pediatric sleep disorders. It also enhances awareness among professionals involved in pediatric healthcare regarding the existence of sleep disorders in childhood and adolescence.

Disclosure: No conflict of interest declared

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**The enigma of paracetamol and ibuprofen in pediatric asthma: evidence-based review**

R. Botto, A. C. Henriques, A. Henriques Duarte  
*USF Mactamá, Centro de Saúde de Queluz, Lisboa – Massamá, Portugal*

**Objective:** Some theories advise eviction of ibuprofen in children with asthma. However, this isn't consensual and several studies review this subject. It has also been studied the role of paracetamol as a etiology or worsening factor of asthma.

This study intends to clarify the role of these drugs in asthmatic children.

**Methods:** Literature search in Medline, Pubmed and BMJ, using Mesh keywords: „asthma“, „ibuprofen“, „paracetamol“ and „acetaminophen“; limited to articles concerning the pediatric population in English, Spanish and Portuguese (January 2000 to May 2012).

Level of evidence was evaluated using SORT.

**Results:** There were obtained 36 articles, 24 were selected: 7 systematic reviews, 1 clinical trial, 3 prospective studies, 7 retrospective studies, 1 case-control and 5 revisions.

It was found that paracetamol can be a potential cause of asthma in children, and may also promote asthma exacerbations through a mechanism of pulmonary oxidative stress.

Regarding the ibuprofen, most studies indicate that it doesn't seem to be a factor of worsening asthma, and may even be protective through its anti-inflammatory action in the lung.

**Conclusions:** Current evidence seems to demonstrate a possible increased risk of asthma with paracetamol (SORT B).

The use of ibuprofen doesn't seem to increase the risk of asthma (SORT B).

There are, however, several biases in most studies.

This review highlights the potential etiology/exacerbation of asthma with drugs commonly used in childhood. It's important to use them carefully, knowing that none is absolutely contraindicated in asthmatic children (SORT B).

Further research with more consistent methodology is necessary.

Disclosure: No conflict of interest declared

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**Study on infectious episodes among HIV-1 exposed but uninfected children**

B. Correia, I. Cameron, R. Rabelo, I. Gomes, B. Sartori, M. Simoes, R. Barboza, S. Santos, C. Cardoso  
*Pediatric Infectology, Fluminense Federal University, Rio de Janeiro, Brazil*

**Background:** HIV-1 exposed but uninfected children are frequently submitted to a higher risk of infectious diseases. Among the risk factors that contribute to higher morbimortality on these children, are severity of mother illness, little transference of mother antibodies to newborn and substitution of mother milk to artificial formula.

**Objective:** To study the infectious episodes during the first 12 months among HIV-1 exposed but uninfected children.

**Methods:** It is an observational, longitudinal and retrospective study that included clinical observations of HIV-1 exposed but non infected children admitted between January 1995 and June 2010 and followed until complete 12 months. The infectious interurrences during this period have been analyzed from the patients' charts.

**Results:** Of 232 children admitted, 51.7% were male and 186 (80.2%) presented 473 episodes of infectious diseases (2.5 episodes / child). The most common diseases were in upper respiratory tract (36.8%), mucosal and skin (33.8%) and lower respiratory tract (12.5%); 15.5% of mothers had infectious diseases and 12.1% of them were hospitalized due to infectious diseases during the period of the study. The *p value* is 0,064.

**Conclusions:** Although the difference is not statistically significant, there was a trend of association between the presence of infectious episodes in the child and the mother. So, it is recommended that these children are part of integral attention programs to child health and that they can be assured to have access to treatment and proper health care.

Disclosure: No conflict of interest declared

929

**Acute ataxia in childhood. Report of a case.**

S. García-Álvarez, A. Caamaño, P. Rodríguez-Casal, C. Rial  
Primary Care, SERGAS, Pontevedra, Spain

**Description:** A 5-year-old child who comes to the emergency service because of problems with difficulty in walking. Personal history: Pregnancy, childbirth and neonatal period without problems. Birth weight 3.050 grams. He had to be admitted in 2008 for study of possible allergy to cow's milk proteins (unconfirmed). Anamnesis: A five-year-old male patient diagnosed with balanitis eight days ago was treated with amoxicillin-clavulanate. After the last dose of antibiotic, he had macular rash on abdomen which rapidly spread to arms and face, and on three occasions, he had difficulty in walking after rest, with subsequent normal. This morning, difficulty walking and wide-based gait for which he came to the Emergency Department. Physical examination: harsh-sounding and systolic murmur II / VI in EIB. Difficulty in walking, with increased support base. Negative Romberg. Macular rash on abdomen, chest and face, with lesions of 0.5 cm diameter which disappeared under pressure. Investigations: CBC, biochemistry, coagulation, urine, CSF and normal head CT. Serology and negative culture. Differential Diagnosis: intoxication, CNS infection, posterior fossa tumors, basilar migraine, cerebrovascular disease, hereditary diseases, psychogenic reaction and postinfectious cerebellitis. Clinical Trial: Acute postinfectious cerebellitis. Discussion: Acute postinfectious cerebellitis is the most common cause of sudden onset of ataxia. Most cases are an inflammatory post viral disease and ataxia appears within 7-10 days of infection. It can also make its debut after immunization and manifest itself as difficulties with fine motor coordination. No specific treatment is required and, in 90% of cases, recovery is excellent.

Disclosure: No conflict of interest declared

1054

**Edinburgh postpartum depression scale – evidence in clinical practice**

A. Pais-Sousa<sup>1</sup>, C. Duarte<sup>1</sup>, C. Pires<sup>2</sup>, J. Diez-Carvalho<sup>3</sup>  
<sup>1</sup> MGF, USF Viseu Cidade, Viseu, Portugal; <sup>2</sup> MGF, USF Grão Vasco, Viseu, Portugal; <sup>3</sup> MGF, Centro de Saúde de Gouveia, Gouveia, Portugal

**Introdução:** Postpartum Depression (PPD) is a frequent disorder, with an estimated prevalence between 6,5% and 12,9% in the first year postpartum, and with an elevated familiar morbidity. PPD diagnosis, for its subjectivity and complexity, is a challenge for the Family Doctor. Edinburgh Postpartum Depression Scale (EPDS) is a valuable screening tool for PPD, but it's not frequently used in Primary Health Care although there are plenty of prevention windows in this setting.

**Objective:** Analyse available evidence about EPDS.

**Methods:** Bibliographic search in *Pubmed/Medline, UpToDate e Cochrane Library*, using keywords "Edinburgh Postnatal Depression Scale", published until December 2012 in English and Portuguese.

**Resultados:** 14 out of 155 articles found were selected (7 systematic reviews and 7 clinical trials). EPDS diagnosed more women with PPD than routine clinical evaluation (35,4% versus 6,3%). EPDS use in the first days postpartum predicts maternal mood for the next 4 to 8 weeks. A score above 13 in EPDS has a sensitivity of 53% and a specificity of 99% for PPD. EPDS is available and validated for 12 languages and it's a cost-effective screening procedure for Primary Care setting.

**Conclusão:** Evidence suggests that EPDS is the golden tool for PPD screening. The use of EPDS in the postpartum review consult identifies a greater number PPD cases, allowing for early diagnosis and treatment in order to prevent complications and family disfunction.

Disclosure: No conflict of interest declared

1114

**The impact of the family health strategy (PSF) on birth outcomes**M. S. Shinzato<sup>1</sup>, C. Canquerini<sup>1</sup>, M. P. Dias de Campos Carvalho<sup>1</sup>, G. Fink<sup>2</sup>, A. Brentani<sup>1</sup><sup>1</sup> Department of Pediatrics, University of São Paulo School of Medicine, Sao Paulo, Brazil;<sup>2</sup> Department of Global Health and Population, Harvard School of Public Health, Boston, United States

**Objective:** In Sao Paulo, Brazil, a model of Primary care, called Programa Saude da Familia (PSF), was implemented since 2001. The major outcome of interest for this study is evaluating the impact of the PSF on birth outcomes, and therefore analyze whether the PSF is an effective allocation of public resources compared to the traditional health care (THC).

**Methods:** Women who delivered at the University Hospital (HU) in Sao Paulo City from April 2012 to October 2012 answered questions about their socio-economic background and pre-natal care. Patients were classified in two groups: PSF and THC. And later, medical records birth outcomes were related. Data was analyzed with the Stata 12 statistical package.

**Results:** 979 women participated, from 15 to 46 years old, mostly with 8 years of education and maximum family monthly income between 603 or 1.207 USD. In the PSF group there were 377 deliveries with 24 preterm and 18 low weight. In the THC group, there were 602 deliveries with 45 preterm and 38 low weight. There wasn't statistically significant difference ( $p < 0,05$ ) in terms of low Apgar scores, birth height, birth weight and cephalic, thoracic, and abdominal birth perimeter between the two groups.

**Conclusions:** As it wasn't possible to find differences, research on the effectiveness of the PSF model demands further investigation. As a next step, we intend to increase the number of survey's participants and collect more data regarding the quality of pre-natal care as well as child development outcomes, during the following years.

Disclosure: No conflict of interest declared

1227

**Universal screening of thyroid function in pregnant: which evidence?**M.J. Macedo<sup>1</sup>, R. Cunha<sup>2</sup><sup>1</sup> ACES GUIMARÃES VIZELA FAFE REGIAO DE BASTO, USF RONFE, GUIMARÃES, Portugal; <sup>2</sup> ACES BRAGA, USF BRACARA AUGUSTA, BRAGA, Portugal

**Objective:** Thyroid disease is a common disturb during pregnancy. Treatment reduces pregnancy complications, so early diagnosis and treatment are crucial. Due to the consequences of thyroid dysfunction during pregnancy, in this review it's discussed the relevance of universal screening for thyroid dysfunction, according to scientific evidence available.

**Methods:** For the survey, it was used the MeSH terms „pregnancy“ and „thyroid function tests“, and the entry-term „thyroid function“. It included publications from 1985 to May 2012, in English, Portuguese and Spanish.

The research was conducted in the following databases: *National Guideline Clearinghouse Guidelines Finder* of the *National Electronic Library for Health* of British NHS, *Canadian Medical Association Practice Guidelines Infobase*, *Bandolier*, *Primary Care Clinical Practice Guidelines*, *The Cochrane Library*, *DARE MR*, *Pubmed*, *Medline*, and *National Electronic Library for Health*. To assess the validity and recommendation of the articles, scale Strength of Recommendation Taxonomy (SORT) was used.

**Results:** Of the 33 articles found, it was included 15: 10 systematic reviews (SR), 3 Clinical guidelines (CG) and 2 Original Studies (OS).

Of these, only 5 recommended universal screening of thyroid function during pregnancy (4 SR and 1 CG).

**Conclusions:** Despite the frequency and consequences of thyroid disease in pregnancy, the available evidence does not support the universal screening of thyroid function during pregnancy.

However, new studies concerning thyroid function screening during pregnancy are expected, contributing to the optimization of the primary health care provided.

Disclosure: No conflict of interest declared



1259

**Effectiveness of the family health strategy in prenatal care**

C. Canquerini<sup>1</sup>, M. S. Shinzato<sup>1</sup>, M. P. Dias de Campos Carvalho<sup>1</sup>, G. Fink<sup>2</sup>, A. Brentani<sup>1</sup>

<sup>1</sup> Department of Pediatrics, University of São Paulo School of Medicine, Sao Paulo, Brazil;

<sup>2</sup> Department of Global Health and Population, Harvard School of Public Health, Boston, United States

**Objectives:** In order to improve primary health care in Brazil, the Family Health Strategy (PSF) model was gradually implemented in Sao Paulo since 2001. We aimed analyzing the impact of PSF in prenatal care, compared to the current primary care model.

**Methods:** All women who delivered at the University Hospital from April-October, 2012 were invited to an interview comprising questions about their socio-economic background, education and pre-natal care. They were asked about number of prenatal consultations and weight gain during gestation. Patients were then classified in two groups: Women enrolled in the PSF and women attended according to the traditional primary care model (considered as the control group). Data were analyzed with the Stata 12 statistical package.

**Results:** 985 women, from 15 to 46 years old, mostly with 8 years of education and maximum family monthly income between 603 or 1.207 USD were interviewed. In the PSF group there were 377 women, and in the control group, 608. There were no statistically significant differences ( $p > 0,05$ ) in the average of number of prenatal consultations neither in percentage of adequate weight gain during gestation, which was low in both models (23,93% in PSF and 22,76% in traditional model).

**Conclusions:** In our study we couldn't find statistically significant differences in the average number of prenatal consultations or the percentage of adequate weight gain during gestation between the two analyzed primary care models. Therefore, research on the effectiveness of the PSF model demands further investigation.

Disclosure: No conflict of interest declared

1268

**Pediatric chest pain**

A. Nunes Barata

Family Medicine, USF Amora Saudável, Amora, Portugal

**Objective:** Chest pain is a very prevalent complaint in children and adolescents, resulting in many visits to the physician, including ER visits. Chest pain may be acute or chronic, leading to school absences and activity restrictions. It causes high levels of anxiety not just for patients, but also for their families. A correct approach by the Family Doctor leads to an improvement in the quality of life of patients and their families, and also avoids health care services being overused.

**Methods:** A literature review was conducted through the UpToDate and Pubmed databases for the years 2011 and 2012, using the MeSH terms: "chest pain", "children".

**Results:** The underlying cause of chest pain is typically benign in this patient population. Only in 10% of cases does it result from an underlying organic disease. The most common etiology is musculoskeletal. Chronic chest pain is rarely linked to heart disease, and it may recur every two weeks for up to 12 years. A detailed physical examination gives us the answer in the vast majority of cases. Patients with chest pain who have a normal physical examination or findings consistent with a musculoskeletal etiology do not need further investigation.

**Conclusions:** Although alarming at first sight, pediatric chest pain is rarely linked to a cardiac pathology. Primary health care providers' holistic approach to the patient and its environment places them in a privileged position to come to a correct understanding of this symptom, due to its erratic occurrence and variety of accompanying symptoms.

Disclosure: No conflict of interest declared

1269

**Pediatric encopresis: assessment and orientation on primary health cares**

J. Araújo

*USF Terras de Souza, ACES Tâmega II – VSS, Paredes, Portugal*

**Objective:** Establish guidelines adjusted to Primary Health Cares, which may assist Family Physicians on Encopresis prevention, evaluation and guidance.

**Methods:** Bibliographical research of technical guidelines and review articles published in Portuguese, English and Spanish, between 2004 and 2012, using MeSH terms: “encopresis”, “child”.

**Results:** Encopresis is frequently associated with chronic constipation, originated mostly from dietary errors, situational causes and psychological changes. Other causes include organic pathology and medication. The clinical history is usually sufficient to establish the diagnosis and should include a complete anamnesis with personal history, as well as a complete physical examination, including digital rectal examination. Laboratory and radiographic evaluation should be considered if any doubt arises from clinical history or if any symptoms persist despite treatment compliance. Encopresis treatment comprehends a combination of nutritional, behavioral and pharmacological intervention and treating of fecalomas when present. A successful treatment depends on the support that the child receives. The parent's role is essential.

**Conclusions:** Encopresis presents a tremendous affective burden to the child, which may produce significant relational and affective consequences. It is an involuntary act. As such, the children mustn't be punished; otherwise it might generate an increase of anxiety, emotional instability, fear reactivation and socializing problems. Instead, the child needs support, encouragement and positive reinforcement to learn how to control herself and grow in harmony. The Family Physician plays a key role in the evaluation and appropriate guidance, as well as in developing strategies for family intervention aimed at reducing the disease's prevalence.

Disclosure: No conflict of interest declared

1278

**Universal iron supplementation in pregnant women**

H. Lopes, S. Santos, T. Abreu

*Family Medicine, USF Nordeste, Oliveira de Azeméis, Portugal*

Iron supplementation during pregnancy is common in pregnant women with iron deficiency anemia but their use in non anemic pregnant women is still controversial since the prevention of anemia in early pregnancy can prevent low birth weight of the fetus but on the other hand increasing the concentration of hemoglobin, hematocrit and ferritin can lead to restriction of intrauterine growth and gestational diabetes among others.

The aim of this study is to determine whether routine supplementation with iron in women with low risk pregnancies presents benefits for the pregnant woman and/or for the fetus/newborn.

A search of guidelines, metanalysis, systematic reviews and clinical trial was made in Evidence Based Medicine sites and MEDLINE using as MeSH words: Iron and Pregnancy.

To evaluate the quality of the studies and the strength of recommendation, we used the scale of Strength of Recommendation Taxonomy of American Academy Family Physician.

Of the 378 identified articles, only nine fulfilled the totality of criteria: three guidelines, one metanalysis, two systematic reviews and three randomized control trials (RCT).

It was concluded that there is a clear improvement of iron kinetics and of the hematological status, but there is no sufficient evidence to prove clear benefit of universal iron supplementation.

For this, the authors concluded that universally oral supplementation with iron should not be offered in non anemic pregnant women (Strength of recommendation: B).

Disclosure: No conflict of interest declared

**1301****Scarlet fever**

A. Nunes Barata

*Family Medicine, USF Amora Saudável, Amora, Portugal*

**Objective:** Scarlet fever is an acute and epidemic infectious disease caused by group A *Streptococcus*. It has characteristic clinical manifestations and is very prevalent in primary care. It very often does not manifest with all its characteristic symptoms and may therefore be confused with other pathologies, rendering a correct diagnosis more difficult. Early use of antibiotics may also mask the disease.

**Methods:** Literature review through the UpToDate website and databases for the years 2010 and 2012, using the MeSH terms: “scarlet fever diagnosis”, “scarlet fever treatment”, “scarlet fever complications”. An illustration by the author is included to exemplify the pathology.

**Results:** This disease does not always present itself with all its symptoms including one of its most characteristic symptom, a fever. It is very important to pay attention to atypical manifestations of scarlet fever, because they may involve serious complications at a later stage.

**Conclusions:** It is important to not forget about atypical manifestations of common pathologies, as their repercussions may as serious as, or more serious than, the consequences of other, less common, diseases. It is critical to make a detailed and objective physical examination, taking into account all symptoms and signs. Such a detailed and objective examination may render complementary exams unnecessary. A Family Doctor is in a privileged position to detect and provide guidance in typical and atypical cases, by taking the appropriate therapeutic approach and, if necessary, refer the case to secondary medical services.

Disclosure: No conflict of interest declared

**1314****Safe motherhood: a monitoring strategy**

A. Garzón, S. Cantillo, R. Navarrete, P. Beccera, G. Valenzuela

*ESCAN, Grupo SaludCoop, Bogotá, Colombia*

The Colombian health system consists of a contributory and a subsidized scheme; the contributory scheme concerns healthcare services provided through healthcare promoting entities (HPE). here are currently 24 HPE, one of them being the SaludCoop Group (Cafesalud HPE, Cruz Blanca HPE, SaludCoop HPE) which covers almost 8% of Colombia's total population.

**Objective:** Follow the SaludCoop's maternal-prenatal programme from January 2<sup>nd</sup> 2012 to April 30<sup>th</sup> 2012. Methods: 42,535 females were enrolled in SaludCoop's maternal-prenatal programme from January 2<sup>nd</sup> 2012 to April 30<sup>th</sup> 2012, throw maternal-perinatal clinical records.

**Results:** Cundinamarca had the most enrolments (32%) followed by the Costa (11%), Antioquia and Santander regions (8% each);

- 259,449 general medical, nursing and/or obstetrics consultations consultations were held according to maternal-perinatal clinical records;
- 423,797 prescriptions were issued;
- 430,503 orders were issued for laboratory tests;
- 382,736 drugs were prescribed;
- 99,689 applications were made for special evaluations and therapeutic support;
- 73% of the females attending the maternal-prenatal programme were aged 20-34 years old;
- 25% had 3 or more psychosocial risk factors;
- 20% of the pregnant women were single, lived alone or were classified as “other”;
- 99.7% had received some formal education; and
- 66% were in the first three months of pregnancy.

**Conclusions:** Electronic medical records form part of integrated service networks covering primary healthcare to the highest stage of complexity. Electronic medical record-based systems or those supporting continuum of health care benefitting from real-time, online information for clinical and administrative decision-making, results in providing better healthcare service for our users.

Disclosure: No conflict of interest declared

1371

**Pregnancy dermatoses: a clinical case**

J. Almeilda, M.J. Teles

USF Camélias, ACES Grande Porto VII, Vila Nova de Gaia, Portugal

**Background:** Pregnancy Dermatoses are defined as skin diseases that arise only in pregnant or postpartum women. These entities differ somehow in clinical manifestations, but mainly in the clinical course, prognosis and treatment. It is therefore necessary to recognize and diagnose them to give the appropriate approach.

**Objective:** The aim of this study is to report a case of Pruritic urticarial papules and plaques of pregnancy, emphasizing the importance of correct identification and orientation, in order to the mother's and fetus' well-being.

**Description:** Female, 17 years old, Romani ethnicity, single, IG0P and without relevant personal or family history. On July 25, 2011, appealed to the Pediatrics E.R. claiming about generalized erythema and pruritus and a 37 week pregnancy. The pregnancy was uneventful until the 36th week, when it emerged a generalized and very itchy maculopapular rash that had installed gradually. She was admitted in the Department of Obstetrics at July 25, 2011, for fetal monitoring, research and symptomatic treatment. On August 4, 2011, with a 38 week and 3 days pregnancy, she gave birth to a healthy baby. Less than 24 hours of the postpartum, the skin lesions and itching had regressed almost completely.

**Conclusions:** This case study aims to emphasize the importance of the diagnosis and the correct/timely guidance of pregnant/postpartum women with skin manifestations. Despite not being very common pathologies, they arise in healthy women without known risk factors, and the GP may be the first health professional to contact with them

Disclosure: No conflict of interest declared

1382

**Influence of postpartum and humor in breastfeeding**J. Bordalo<sup>1</sup>, J. Antunes<sup>2</sup>, I. Figueiredo<sup>2</sup>, D. Pereira<sup>3</sup><sup>1</sup> USF Flor de Sal, ACES Baixo Vouga, Aveiro, Portugal; <sup>2</sup> UCSP Ílhavo I, ACES Baixo Vouga, Ílhavo, Portugal; <sup>3</sup> UCSP Gaífanha da Nazaré, ACES Baixo Vouga, Ílhavo, Portugal

**Introduction:** The postpartum (PP) often assumes a considerable change in lifestyle, especially to the mother, which can influence the mood and the perspective on breastfeeding. According to the studies the prevalence of depression is variable reaching 29.7% during pregnancy and 23.3% at PP.

**Methods:** Prospective study between April 2010 and September 2011. Convenience sample of pregnant women in primary care. Evaluation performed from the third quarter driven by clinical interview and Postpartum Depression Screening Scale self-administered in two versions for portuguese. Statistics in SPSSv19<sup>®</sup>.

**Results:** Followed 52 pregnant women. 23.1% had a history of depression which 58.3% had the last episode with no less than 5 years. 18 women had criteria for depression during pregnancy, 78.8% of whom hadn't history of depression. In the PP 13 women had criteria for depression which 61.5% had no previous history. The prevalence of depression during pregnancy was 34.6% and PP 25%. 82.7% didn't consider that childbirth changed the breastfeeding expectation. There wasn't statistically significant correlation between the change of expectation and depression during pregnancy or PP. The average age of women who changed their expectations present a statistically significant difference to those that didn't changed.

**Conclusions:** We found a high prevalence of depression in pregnancy and PP. The depressive antecedents didn't correlate with the depression during pregnancy and PP. The childbirth showed no impact on the pregnant woman expectation or depressive symptoms. More extended studies are needed at different levels of health care. This study alerts the family doctor for underdiagnosed situation with high family impact.

Disclosure: No conflict of interest declared

1389

**Family, society and culture – The impact on breastfeeding**J. Bordalo<sup>1</sup>, J. Antunes<sup>2</sup>, I. Figueiredo<sup>2</sup>, D. Pereira<sup>3</sup><sup>1</sup> USF Flor de Sal, ACES Baixo Vouga, Aveiro, Portugal; <sup>2</sup> UCSP Ílhavo I, ACES Baixo Vouga, Ílhavo, Portugal; <sup>3</sup> UCSP Gafanha da Nazaré, ACES Baixo Vouga, Ílhavo, Portugal

**Introduction:** Breastfeeding (BF) brings benefits for the baby, the mother, to family and to society. The World Health Organization, supports that BF should be exclusive to six months. There are countless factors for early weaning: current lifestyle, work activity, myths and family and friends' influences. These factors appear to play greater influence on BF than the benefits and advantages of BF over artificial one.

**Objectives:** Characterize pregnant women, family support, BF expectations and her knowledge.

**Methods:** Prospective study between April 2010 and September 2011. Convenience sample of pregnant women in primary care. Evaluation performed from the third quarter driven by clinical interview, and followed to puerperium. Statistics in SPSSv19®.

**Results:** 52 pregnant women were followed, mean age 30,4 years, most with secondary or higher education, 17,3% unemployed, 53,8% married. 84,6% were breastfed by their mother. The majority refers to have the maximum support of their spouse and mother. All expected to breastfeed and 36,5% had breastfed before. There were myths and doubts concerning BF. 82,7% did not consider that the child birth changed the BF expectation. 36,5% achieved 6 months of exclusive BF. The group who breastfed until 6 months showed a higher incentive by her mother and his spouse than the other group.

**Conclusions:** The low rate of exclusive BF and the existence of myths and doubts should alert health teams including family doctors to be more interventional in health education. Pregnant women showed to have the support of the mother and spouse to breastfeed. The incentive mother and spouse seems to positively influence the exclusive BF until 6 months.

Disclosure: No conflict of interest declared

1394

**Iron deficiency anemia caused by parents behavior**

A. Escada

USF Cruz de Celas, CS Celas, Coimbra, Portugal

**Objectives:** The aim of this work is to show the importance of a food diary in children consultations, as well as the exploration of parents' beliefs in childhood feeding, which can lead to relevant disturbances, namely iron deficiency anemia.

**Methods:** Consultation of written clinical information, interview with the boy and the family, review of clinical papers about iron deficiency anemia in children published in Pubmed since 2010.

**Results:** A 7-year-old boy presents to the Pediatrician with the diagnosis of iron deficiency anemia made by his GP. While making a complete food diary, we found that the boy only ate fast food fish, pasta and a large amount of milk, with no meal schedules or rules. He wouldn't eat at school because parents thought it was violent to oblige "a super intelligent" child to eat vegetables and food he didn't like. The child admitted he bossed the parents. They also refused to give him iron therapy because it was "bad tasty", even when confronted with laboratory findings. So, the pediatricians and social workers carried out to get an hospitalization, in order to give the boy parenteral therapy.

**Conclusions:** The parents' beliefs are crucial in a child's feeding and must be asked, in order to prevent disturbances. The follow up of a child is a responsibility of the GP.

Disclosure: No conflict of interest declared

1463

**Systematic intestinal deworming – an evidence-based review**U. Mesquita<sup>1</sup>, J. Araújo<sup>1</sup>, L. R. Soares<sup>1</sup>, S. T. Braga<sup>1</sup>, J. M. M. Marques<sup>2</sup><sup>1</sup> USF Terras de Souza, ACES Tamega II – VSS, Paredes, Portugal; <sup>2</sup> CS Paços de Ferreira, ACES Tamega III – VSN, Paços de Ferreira, Portugal

**Objective:** Review the evidence-based recommendations regarding the systematic intestinal deworming.

**Methods:** Bibliographical research of review articles, meta-analyzes and technical guidelines published in English, Spanish and Portuguese, between 2000 and 2011, with abstract available, using the MeSH terms „*Intestinal Parasitic Diseases*“, „*Nematomorpha Infections*“, „*Helminthiasis*“, „*Parasites*“ and „*Therapeutics*“ in databases: Medline, sites of Evidence-Based Medicine (National Guideline Clearinghouse, National Library of Guidelines, Canadian Medical Association, Cochrane, DARE, Bandolier), Index of *Revista Médica Portuguesa*. The Strength of Recommendation Taxonomy (SORT) scale of the American Family Physician was used to assess the corresponding quality and strength of recommendations.

**Results:** The search produced a total of 1274 articles, of which 6 met the inclusion criteria. These included three systematic reviews, two randomized clinical trials and one clinical practice guidelines. Children should be included in regular intestinal deworming programs in areas of high prevalence of intestinal parasites. A prevalence of helminthiasis less than 20%, is not recommended for intestinal deworming. Populations with a prevalence than less 20%, but with poverty and lack of health conditions can be justified regular deworming of school's children. Drugs is not recommended in children than less 12 months of age.

**Conclusion:** There is evidence for the benefits of systematic intestinal deworming with anthelmintics in children living in countries with a high prevalence of intestinal parasite infection. In countries with a low prevalence of infection, such as Portugal, individual treatment based on a diagnosis of infection is recommended.

Disclosure: No conflict of interest declared

1612

**Distribution of intestinal parasites prevalence in children according to the distribution of the patients gender and parasite species in Eskisehir Osmangazi University hospital.**

N. Dogan

medical faculty/parasitology department, Eskisehir Osmangazi University, Eskisehir, Turkey

**Objectives:** Intestinal parasite infection is still an important public health problem. In this study, patients (out patients and in-patients) with various gastro intestinal system complaints presenting at pediatric clinics of the Osmangazi University Medical Faculty, from January 2004–December 2012 were investigated retrospectively for intestinal parasites.

**Methods:** Parasitological examinations were done with native-lugol, cellophane-tape methods and trichrome staining in ambiguous cases. Also modified Erlich-Ziehl-Nielsen staining was used to identify *Cryptosporidium spp.*

**Results:** In a total of 16.224 cases examined 2.3% were found infected with at least one or more parasite, without difference between genders (including nonpathogenic protozoa). In our area predominant parasites were *Blastocystis hominis* 23% and *Entamoeba histolytica/dispar* and other group amoebas. The distribution of identified parasites was as follows; *Giardia intestinalis* 7%, and *Cryptosporidium parvum* 4.5%. Since the cellophane type method was only used in a few cases. The ratio of *Enterobius vermicularis* was found to be 2.3% *Taenia saginata* 0.8% and *Strongyloides stercoralis* 0.4%. In comparison to a previous 10 year retrospective study which was performed in our hospital, we detected an important decrease in prevalence of parasites. But the presence of intestinal parasites is still an important problem.

**Conclusion:** This study re-emphasizes the fact that intestinal parasitic infection is still an important public health problem. Interventions including health education on personal hygiene to the student sand to the parents, especially to mothers are required.

Disclosure: No conflict of interest declared

1733

### Modifiable risk factors analysis of Chronic Kidney Disease onset in children served by The Family Health Strategy

J.H. Vieira Pedroso, F. K. Melchior Silva Pinto, S.R Rodrigues Batista, A. Naghettini, E.R. Silva Pereira

Department Medicine Internal, University Federal of Goiás, goiania, Brazil

**Objective:** To evaluate the presence of risk factors for Chronic Kidney Disease in children and adolescents served by the Family Health Center. **Methodology:** A cross-sectional population-based with children and adolescents aged 6-18 years served by the FHC in the Eastern Region of Goiânia. Through the evaluation of primary data (questionnaires with closed questions) and physical and laboratory assessment, we obtained the following data: personal or family history of obesity, diabetes mellitus, hypertension, weight (kg), height (cm), waist circumference (cm), blood pressure (mmHg), laboratory tests (creatinine, microalbuminuria) and determination of creatinine clearance (Schwartz formula).

**Results:** In this sample, 117 children were evaluated, with a mean age of 12.3 years ( $\pm 3.4$  years), 60 (51.8%) were male. One (0.85%) reported personal history of diabetes mellitus, twenty-five (23.3%) had a family history of obesity. The evaluation of BMI according to percentile (>95%) identified ten (8.5%) overweighted and/or obese children, nine (7.7%) had occasional hypertension. It was identified eight kids with microalbuminuria increased (>30 mcg/mg)

**Conclusion:** In this sample, overweight was the most prevalent factor, followed by previous kidney disease. We evidence the importance of recognition of such factors to seek ways to prevent and manage them, as for the case, nutritional education and physical exercise are primordial.

Disclosure: No conflict of interest declared

## 3.9. EYE PROBLEMS

205

### Consultative views ophthalmologists in the work of doctors GP

N. Radosavljevic

Eye Problems, HC Stari Grad, Belgrade, Serbia

The everyday work of doctors and GP includes sp. Pathology of the eye. Chronic diseases, specificity, the possibility of disability require the availability and reliability of ophthalmic diagnostics.

**Aim:** Perceive the need for diagnostic ophthalmic examinations, for staff planning, technical equipment, as well as develop a plan of preventive examinations of patients with hypertension fr.-dm hta.

**Method:** Descriptive analytical study of semi-annual referral of patients on the ophthalmologic examination the period 1.1 -30.6 2012th

**Results:** In this period was carried out 2847 hits, 185 patients were sent to the ophthalmic examination, or 6.5%. Including:  
Inflammatory diseases of the eye 25 or 11.35%

Bleeding suffuzije-5 to 2.7%

Glaucoma 104 to 56.2%

Cataract 15 to 8.1%

3 injuries -1.6%

Disorders (myopia, Presbyopia) 37 to 20.0%

By a large number of patients with DM 255 to 8.9% and HTA 1064 to 37.4% requires preventive checkups.

**Conclusion:** Early detection of glaucoma, cataracts, treatment of eye infections, determination of refractive eye, preventative intraocular pressure in patients with dm and hypertension require greater availability of ophthalmologists.

Key words: eye, consultation, availability

Disclosure: No conflict of interest declared

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**Analysis of the diagnosis and comprehension of therapeutic intervention by mothers of children with low vision**

M.I. Nobre, M. Figueiredo, R. Silva

*Centro de Estudos e Pesquisas em Reabilitação Prof. Dr. Gabriel Porto – Faculdade de Ciências Médicas, UNICAMP, Campinas, Brazil*

**Objective:** Analyze and characterize how mothers of children with low vision understand the diagnosis and the therapeutic intervention required. **Methods:** This study is a qualitative research and was interviewed 11 mothers of children with low vision attended at a specialized public service. For data processing we used the technique of content analysis.

**Results:** Most mothers had no clear understanding about low vision and visual stimulation process. All mothers interpreted the medical diagnosis in according to their own subjectivity and socio-cultural-economic conditions. Those mothers who had negative conceptions about low vision had difficulty in accepting the diagnosis and adherence to visual stimulation. Already, mothers with an adequate understanding of the diagnosis referred provision of guidance by the occupational therapist who performed the process of visual stimulation of the child. These guidelines in addition to helping mothers in a clear understanding of diagnosis and visual stimulation, favored the acceptance process and the creation of consistent expectations with the reality of the child.

**Final Thoughts:** The cultural, economic and emotional aspects influenced the mothers in understanding the diagnosis, acceptance and adherence to visual stimulation. The way in which the diagnosis is transmitted to the families is extremely important and should take into consideration such aspects. The presence of the occupational therapist on staff focused on the reception and orientation of these mothers demonstrated to be essential for understanding the diagnosis and adherence to visual stimulation.

Disclosure: No conflict of interest declared

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**Occupational performance and quality of life: relationships in daily life of people with visual disabilities**

P. Becker, R.C.I. Montilha

*College of medical sciences, Universidade Estadual de Campinas – UNICAMP, Campinas, Brazil*

The purpose of this study was to identify levels of occupational performance and quality of life of individuals with visual disabilities and subsequent analysis of the interrelationship among the indexes found. A descriptive and cross-sectional study was conducted, with a sample group of people with visual disabilities, aged 18 years old and over, from August 2011 to March 2012. For data collection were applied a questionnaire used to obtain identification data and social-demographic profile, the COPM which measures one's self-perception of occupational performance and the SF-36, an instrument that allows verifying the self-perception of quality of life. Group sample was classified under a non-probability sampling (convenience) and comprised 23 individuals, 74.0% with low vision, 52.2% were female and the mean age was 46.7 years. Self-perception of occupational performance by the interviewees was low. The self-perception of *performance* and *emotion aspects* of the participants with low vision were better than those with blindness. The larger the time of visual impairment, the worse the evaluation of the *pain* domain. The *vitality* domain showed a statistically significant relationship with the domains *general health*, *performance* and *satisfaction*, whereas the *mental health* domain was related to *general health*, *pain*, *vitality* and *performance*. The results showed that the better the emotional aspect, the greater the positive influence reflected in physical, functional and social aspects of the participants. Occupational performance and quality of life are conditions that may be employed in a rehabilitation program for people with visual disabilities through an interdisciplinary team.

Disclosure: No conflict of interest declared



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**Managing red eye in primary health care**

M.R.R.Galhardo, J.A.B.Barros, M.F.M.J.Costa

<sup>1</sup> USF Dunas, ULSMatosinhos, Matosinhos, Portugal; <sup>2</sup> USF Maresia, ULSMatosinhos, Matosinhos, Portugal; <sup>3</sup> USF Serpa Pinto, ARS Norte, ACeS Porto Ocidental, Porto, Portugal

**Objective:** Primary care physicians (PCP) are often at the frontline for a myriad of acute care issues including eye disease.

The purpose of this review is to update on the most important diagnostic and therapeutic tools in managing red eye and review some aspects of the eye examination. PCP should be able to confidently care for the red eye patient and identify the need for referral to an ophthalmologist.

**Methods:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms Eye infection AND Eye Disease AND Eye Injuries AND Primary Health Care, published from January 2000 to December 2012 in English, Spanish and Portuguese.

**Results:** A structured process for diagnosis and management of red eye in primary care practice is presented in order to decrease the variability of PCP's approach. Correct diagnosis is based on detailed patient history and identification of typical clinical signs in physical eye examination, which is usually the most important part of the workup. The most common cause of red eye is conjunctivitis. Other common causes include blepharitis, corneal abrasion, foreign body, subconjunctival hemorrhage, keratitis, iritis, glaucoma, chemical burn and scleritis. The underlying cause of red eye determines the appropriate course of treatment.

**Conclusions:** It is of paramount importance for PCP to properly and early identify/treat red eye or refer associated conditions. With this review common causes of red eye, clinical presentations and therapeutic options are summarized.

Disclosure: No conflict of interest declared

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**Optical neuritis**

C. Rial, S. García-Álvarez, A. Caamaño, P. Rodríguez-Casal

Primary Care, SERGAS, Pontevedra, Spain

A 27-years-old female with Personal History of astigmatism and myopia came to the consulting room suffering from decline of visual acuity. She described the symptom as a fluff of wool inside the eye which causes loss of vision, headache, nausea and vomiting since 2 days ago. No diplopia, no ptosis or photopsias.

She has conserved eyes movement, visual acuity in right eye: 0,1; left eye: 0,7, extrinsecal and intrinsecal movements right. Normal intraocular pressure. On right eye, general depression and central affection on visual field. On left eye, scotomas on upper side.

Clinical symptoms compatible with optic neuritis. She is evaluated by Neurology. They complete the study with visual evoked potentials with data suggestive of right optic neuritis and MNR, with obvious abnormality suggesting of demyelinating disease.

Optic neuritis is an inflammatory, demyelinating condition that causes acute, usually monocular, visual loss. It is a highly associated with multiple sclerosis (MS).

The inflammatory demyelination of the optic nerve is the most common pathology for optic neuritis.

Subclinical visual deficits in the contralateral eye can often be elicited by testing in patients with clinically monocular disease.

Other demyelinating episodes separated in "time and space" can affect prognosis and treatment decisions.

In general, optic neuritis is a clinical diagnosis based upon the history and examination findings. Diagnosis testing is directed toward excluding other causes of visual loss in atypical cases and in assessing the risk of subsequent multiple sclerosis.

Disclosure: No conflict of interest declared

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**Mouth and eye dryness after use of sildenafil: A case report.**Y. Sezgin<sup>1</sup>, M. Ali Kiliç<sup>2</sup>, T. Günvar<sup>2</sup>, V. Mevsim<sup>2</sup><sup>1</sup> *Tonya public hospital, the ministry of health, Trabzon, Turkey;* <sup>2</sup> *Family Medicine, Dokuz Eylül University Tıp Faculty, İzmir, Turkey*

**Objective:** the aim of this case report was to draw attention to different etiological factors and treatment of dryness of mouth and eye.

**Case:** The patient was diagnosed with dry mouth and dry eye. Sjögren's syndrome screening was negative. On physical examination the patient's skin was moist, he had red eyes and he was anxious and tired-looking. The patient had received sildenafil 100 mg twice two months and four months ago. The patient's serum vitamin B12 level was 216 pg/ml and folic acid level was 4.2 ng/ml. therefore we prescribed dodeks I.M. and oral folate. Dry mouth improved in the second month of treatment. The patient's dry eye complaint continued. We suggest that Sildenafil and vitamin B12 deficiency may disrupt the neural transmission due to different mechanisms. As a result, sildenafil and vitamin B12 deficiency together may cause dry mouth and dry eye.

As a result, sildenafil and vitamin B12 together may cause dry mouth and dry eye.

Disclosure: No conflict of interest declared

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**Visual impairment and rehabilitation: Application of the international classification of functioning, disability and health**R. de Cassia Ietto Montilha, M. Romano, A. Cristina Matos, M. I.R.S. Nobre  
*Faculty of Medical Sciences, University of Campinas, Campinas – Sao Paulo, Brazil*

**Introduction:** visual impairment is a generic term which includes levels of impairment of visual quality, which generate losses in the individual functionality, affecting their quality of life. In this context, rehabilitation, whose measures are aimed at the re-establishment and maintenance of the functions and structures of the body, performance, participation, elimination of barriers and integration of assistive technologies is introduced. Rehabilitation has the role of being a facilitator of the potentialities, capabilities, minimizing difficulties, offering tools to achieve and maintain as much independence and autonomy. The international classification of Functioning, Disability and Health (ICF) provides useful information to assist in this process.

**Objectives:** this study purports to rank the participants of Visual Rehabilitation Groups of the Rehabilitation Center – University of Campinas – Brazil, according to the ICH and trace the profile of these users.

**Methodology:** the participants should have ICD-10 corresponding to the visually impaired. The data collection was done through occupational therapy evaluation with 13 subjects, raising daily data. After the evaluation, each participant was ranked and their results compared.

**Results:** the average age of 56 years was obtained, the most frequent pathologies were glaucoma, cataracts, Keratoconus and diabetic retinopathy, 92% use optical and non-optical devices in daily life, the greater restrictions and limitations were for learning, mobility, personal care, domestic and social life. The average time in rehabilitation is 8 months.

**Conclusion:** there is a similar profile in all participants, regardless of Pathology, and highlights the importance of Rehabilitation Group as a facilitator in the process of rehabilitation.

Disclosure: No conflict of interest declared

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**Oscillopsia and myokymia in a young adult**

A.C. Coman<sup>1</sup>, M.D. Graure<sup>1</sup>, A. Zapata Perez<sup>2</sup>, J. M. Bueno Ortiz<sup>2</sup>,  
C. Mendoza Garcia<sup>2</sup>, J. Flores Torrecillas<sup>1</sup>, M. J. Alonso Saenz de Miera<sup>2</sup>,  
E. Pagan Dato<sup>1</sup>, J. Flores Torrecillas<sup>1</sup>, F. Guillen Cavas<sup>1</sup>

<sup>1</sup>Cartagena Casco Antiguo Health Center; Servicio Murciano de Salud, Cartagena, Spain; <sup>2</sup>Fuente Alamo Health Center; Servicio Murciano de Salud, Fuente Alamo, Spain

**Objective:** To describe a case of oscillopsia and myokymia of the right superior oblique muscle

**Methods:** Revision of a case of oscillopsia and myokymia using as variables the medical history, symptoms, diagnostic methods, treatment and clinical evolution.

**Results:** A 33-year-old man consults his General Practitioner for presenting in the last 6 weeks bilateral blurry vision and occasional headache. He only has a medical history of myopia corrected with eyeglasses. The physical examination is inconclusive with no neurological signs. He is referred to the optometrist who discovers an increase in myopia. Two weeks later, he consults again for persistency of the symptoms that last between a few minutes to a maximum of two hours. It is observed that while occluding the left eye he perceives with his right eye a vertical movement of the image (oscillopsia). Apparently he presents up to twenty episodes a day of oscillopsia that sometimes are followed by headache. He is admitted to the Neurology Unit where a blood test, chest X-ray and CT scan are performed, all being inconclusive. The MRI shows a 6.8X0.3 mm microcavernoma in the left inferior temporal gyrus. A carbamazepine treatment is initiated as myokymia of the oblique superior muscle is suspected, with complete remission of the symptoms.

**Conclusions:** Superior oblique myokymia is an involuntary, spontaneous, monocular movement disorder that involves rapid torsional contractions of the superior oblique muscle, perceived as oscillopsia. It is caused by stress, anxiety, excessive caffeine or alcohol intake. Diagnosis is made by eliminating other disorders or diseases.

Disclosure: No conflict of interest declared

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**Age-related macular degeneration: diagnosis in primary care.**

M.Y. Valpuesta

Atención Primaria., Centro de Salud Medina de Rioseco, Valladolid, Spain

**Introduction:** Age-related macular degeneration is the main cause of legal blindness and visual disability in the developed countries. This illness has a prevalence in around thirty-three per cent in old people over sixty-five.

**Objectives:** To achieve an early diagnosis of age-related macular degeneration. To determine the prevalence of age-related macular degeneration in people over fifty years old. To avoid unnecessary derivations to the ophthalmologist.

**Method:** The tool used to study the ocular fundus is a retinal camera recently acquired to be used in the health centre. The population subject to study are people over fifty years old in a rural district health placed fifty kilometres away from the city. The health professionals receive a course, taught by an ophthalmologist, to learn the use of the equipment and the images interpretation. The patients have an appointment in the health centre, where the professionals fill out a medical file with their personal information, background, risk factors and symptoms. After, the professionals do the retinography. Finally, they study the images and send the pathological images to the ophthalmologist in order to study, treat and follow those patients.

**Results and conclusions:** will be showed at the moment of the congress.

Disclosure: No conflict of interest declared

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**Ophthalmology in primary care: a study of general practitioners' knowledge and perceived confidence**

C. Gibson

*General Practice, HSE DML GP Training Scheme, Dublin, Ireland*

**Objectives:** The aim of the study was to assess general practitioner's knowledge and perceived level of confidence in their provision of primary care ophthalmology in Ireland.

**Methods:** A purpose designed questionnaire was sent to 125 randomly selected GPs throughout Ireland. The questionnaire included information on demographics, availability of ophthalmic equipment, perceived confidence with clinical skills and a MCQ on primary eye care.

**Results:** 50 (40%) GPs replied to the questionnaire. Knowledge of ophthalmology was rated positively by 38% of GPs and only 30% of respondents rated their undergraduate ophthalmology training as adequate. Respondents who positively rated their ophthalmology knowledge scored higher in the MCQ than those who negatively rated it (mean quiz score 5.05 vs. 3.96,  $P < 0.05$ ).

When rating confidence levels in clinical skills, most felt at least moderately confident testing visual fields, visual acuity and everting the eyelid. However, most did not feel confident distinguishing an abnormal optic disc (60%) or monitoring patients for diabetic retinopathy (20%).

Most had access to ophthalmoscopes (94%) and 66% of respondents felt confident using it. Of those who had a Snellen chart (96%) there were 16% who lacked confidence in its use and only 62% reported that it was set up correctly. Of the seven multiple choice questions asked 75% correctly answered four or more questions.

**Conclusion:** It appears that most GPs view their ophthalmology knowledge and training as less than adequate. This is reflected in poor self reported knowledge and lack of confidence in clinical skills. This study highlights an important unmet learning need in primary care ophthalmology.

Disclosure: No conflict of interest declared

1480

**Use of retinography to assess diabetic retinopathy at primary care level**JC. Cánive-Gómez<sup>1</sup>, D. Antón Sanmartín<sup>2</sup>, L. López-González<sup>1</sup>, AA. Regueiro Martínez<sup>1</sup>, SM. Gomara-Villabona<sup>1</sup>, VM. Lois-López<sup>1</sup>, MA. Herrero-Delicado<sup>3</sup>, P. Regueiro-Chaves<sup>4</sup>, S. Pérez-Cachafeiro<sup>5,6</sup>

<sup>1</sup> Vilanova de Arousa Primary Health Care Centre, Xerencia Integrada Pontevedra-Salnés, Vilanova de Arousa, Spain; <sup>2</sup> Monteporreiro-Pontevedra Primary Health Care Centre, Xerencia Integrada Pontevedra-Salnés, Pontevedra, Spain; <sup>3</sup> Ophthalmology Service, Salnés County Hospital, Xerencia Integrada Pontevedra-Salnés, Vilagarcía de Arousa, Spain; <sup>4</sup> Faculty of Medicine, University of Szeged, Szeged, Hungary; <sup>5</sup> Cambados Primary Health Care Centre, Xerencia Integrada Pontevedra-Salnés, Cambados, Spain; <sup>6</sup> Research Unit, Fundación IDI CHOP, Pontevedra, Spain

**Objective:** To estimate the prevalence of Diabetic Retinopathy (DR) and to assess the efficacy of retinography at Primary Care level in our context (Vilanova de Arousa Health Center; Pontevedra, Galicia. Spain).

**Methods:** Transversal study. We included diabetic patients in a two-stage DR diagnostic programme: firstly they were evaluated by a GP specially trained on retinography, looking for DR (if poor image quality, retinography was repeated after mydriasis with tropicamide); and secondly, all of them were referred to the Ophthalmologist without information of the previous examination. Descriptive analyses are shown. Kappa index was used to assess the concordance among GP and Ophthalmologist. Univariate associations with DR diagnosis were also estimated.

**Results:** 145 out of 158 estimated sample accepted to participate (92%). 74 were women (51%) and mean age was 68 years (SD 11). 99 had associated HTA diagnosis (68%). 90 were obese (62%) and 9 had morbid obesity (6%). Mean HbA1c was 7.0 (range 5.3-14.3), and 90 presented microalbuminuria (62%).

The GP identified 20 patients with DR (14%), obtaining a total concordance ( $\kappa=1$ ) with the Ophthalmologist. Factors associated with DR diagnosis were: presence of microalbuminuria (OR 2.8,  $p=0.0721$ ), metaglinide use (OR 3.7,  $p=0.0411$ ), insulin need (OR 5.6,  $p=0.0003$ ) and use of mydriatic during the GP examination (OR 4.9,  $p=0.0011$ ).

**Conclusions:** DR prevalence found was similar to that reported in previous studies. Observed concordance between GP and Ophthalmologist was total. Therefore, the test could be implemented at Primary Care level in Galicia decreasing the overall cost of DR diagnosis.

Disclosure: No conflict of interest declared

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**Eye pain in primary care**

T. Lepenos, M. Liarou, A. Champla, C. Tamvakos, A. Papavasileiou, A. Papastergiou, C. Vallilas, D. Moriki, D. Zavos, A. Makrogianni

HEALTH CENTER OF AMFIKLEIA-LAMIA HOSPITAL, ESY-NATIONAL HEALTH SYSTEM OF GREECE, AMFIKLEIA, Greece

Eye pain may be described as sharp, aching, or throbbing and should be distinguished from superficial irritation or a foreign body sensation. In some disorders, pain is worsened by bright light. Eye pain may be caused by a serious disorder and requires prompt evaluation.

**Aim:** To determine the most common causes of eye pain in primary care.

**Design and method:** The participants in this study included 123 patients aged 35-75 years who were suffering from swelling, redness, and pain, were admitted in health center of Amfikleia. Eye examination involves a formal measure of visual acuity and requires a penlight, fluorescein stain and tonometer. Pupillary size and reactivity to light are assessed. If a corneal abrasion is found the eye is examined for foreign bodies. Ocular pressure is measured using tonometry.

**Results:** 123 adults, were included in the study. 50% (61 patients) who admitted to our health center suffered from infectious conjunctivitis 30% (37 patients) with allergic conjunctivitis 18% (22 patients) have got foreign body and 2% (3 patients) crisis of ocular hypertension.

**Conclusion:** Most cases are caused by conjunctivitis. Patients with purulent discharge or a mild severity of eye pain may have a small benefit from antibiotics. Most GPs still prescribe topical antibiotics for most cases of infectious conjunctivitis, a condition where only half of the cases are likely to be due to a bacterial infection. For allergic conjunctivitis, treatment includes allergy eyedrops and artificial tears. Eye pain with or without redness, may represent a diagnostic challenge to family doctors.

Disclosure: No conflict of interest declared

### 3.10. INFECTIOUS DISEASES

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**Nitrofurantoin & fosfomycin sensitivity of outpatient uropathogens in a university hospital of thailand**

T. Sangsuwan, S. Jamulitrat, M. Phengmak

**Background:** The common uropathogens that cause urinary tract infections (UTIs) in Songklanagarind Hospital have become clinical problems because of limited therapeutic options. The roles of fosfomycin and nitrofurantoin have recently been widely discussed for use in UTIs.

**Objective:** To document susceptibility of fosfomycin and nitrofurantoin of uropathogens isolated at the outpatient and emergency departments of Songklanagarind Hospital.

**Methods:** From October 2011 to May 2012 bacteria were isolated from urine specimens of outpatients with pyuria and evaluated for susceptibility to nitrofurantoin and fosfomycin by disc diffusion technique. Medical records of the patients were reviewed for uropathogens and other antimicrobial susceptibilities. The UTIs were classified into complicated and uncomplicated. The factors associated with fosfomycin and nitrofurantoin susceptibilities were also studied.

**Results:** The study included 324 patients with positive urine cultures. The complicated UTIs and uncomplicated UTIs accounted for 62.8% and 27.2%. The most common causative uropathogen was *Escherichia coli* (71.9%). The second most common microorganism was *Klebsiella pneumoniae* (16.7%). The susceptibility to fosfomycin of *E. coli*, *K. pneumoniae*, and pathogens overall were 98.7%, 91.3% and 97.2%, respectively. The susceptibilities of these pathogens to nitrofurantoin were 91.0%, 24.1% and 74.1% respectively.

**Conclusion:** The uropathogens in Songklanagarind Hospital have a higher susceptibility to fosfomycin compared to nitrofurantoin.

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**High body temperature of hospital inpatients with diarrhea predicts not only *Clostridium difficile* infection but also its severity**

K. Yamamoto, H. Murakami, H. Nakaguchi, M. Kume, N. Inada, F. Umeoka, S. Okita, H. Miyaoka, T. Okada

*Internal Medicine, Saiseikai Matsuyama Hospital, Matsuyama, Japan*

**Objective:** The aim was to assess risk factors for *Clostridium difficile* infection (CDI) and predict disease severity in our population.

**Methods:** Data were collected from the medical charts retrospectively (observational study) : Japanese inpatients with suspected CDI between 1 September 2010 and 29 February 2012. Firstly, we grouped these patients into two groups: *C. difficile* toxins (toxinA/B) positive and negative. Multivariate analyses were performed to assess possible risk factors including age, sex, serum albumin level (ALB), Performance Status (PS), body temperature (BT) >100 degrees Fahrenheit, and hemodialysis. Furthermore, we divided toxin positive group into two groups according to severity based on the statement Society for Healthcare Epidemiology of America published in 2010: one group including severe or complicated (elevated WBC, renal failure, hypotension, toxic megacolon), the other mild or moderate. Multivariate analyses were performed to assess factors which would predict CDI severity.

**Results:** We analyzed 157 patients (70 males and 87 females, mean age 76.9). Of 157 patients, 151 patients (96.2%) had diarrhea. 31 patients (19.7%) were CDI; 7 patients were severe. With multivariate analysis, we extracted 3 risk factors: BT (Odds Ratio: 4.08, 95% CI: 1.40-12.0), PS (OR: 2.83, 95% CI: 1.37-5.83), age (OR: 1.04, 95% CI: 1.01-1.12). To assess predictors of severity, with multivariate analysis, we extracted one factor: BT (OR: 53.6, 95% CI: 1.10-2602).

**Conclusions:** High BT, advanced PS and age are risk factors for CDI; BT predicts disease activity. This study is meaningful because clinicians can obtain these values easily, promptly, and for free.

Disclosure: No conflict of interest declared

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**An outbreak of trichinosis among Thai agricultural workers in Israel**E. Alkalay<sup>1,2</sup><sup>1</sup> family medicine, Sackler Faculty of Medicine, Tel Aviv, Tel Aviv, Israel; <sup>2</sup> herut clinic, sherutey briut clalit, herut, Israel

I want to present an outbreak of trichinosis among Thai agricultural foreign workers in an Israeli village.

The sick workers presented to our rural clinic on different days with different symptoms, and it took some days before the village doctor realized there might be a common disease process to all the workers.

The diagnosis was hard to make because of 3 reasons:

- 1.The family physician (myself) and the patients didn't have any common language for exchange of information.
- 2.Patients came on different days and each of them had a different set of presenting complaints.
- 3.Trichinosis is uncommon in Israeli citizens, because they eat meat under veterinary supervision. That's why an Israeli family physician wouldn't consider Trichinosis in the differential diagnosis of the usual patient. The Thai workers may hunt animals and eat them raw without veterinary supervision, and these different habits make them vulnerable to Trichinosis.

The story will be presented as it evolved in our clinic day after day until the diagnosis was made and treatment began, and I will present the theoretical basis of the disease with a short history of the way it was first discovered.

Disclosure: No conflict of interest declared

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**Urinary tract infections and antibiotic resistance in childhood**D. Keles<sup>1</sup>, F.G. Cihan<sup>1</sup>, R. Kutlu<sup>2</sup>, S. Civi<sup>2</sup>, D. Odabas<sup>3</sup><sup>1</sup> Family Medicine, MoH Konya Education and Research Hospital, Konya, Turkey; <sup>2</sup> Family Medicine, Necmettin Erbakan University Meram Medical Faculty, Konya, Turkey; <sup>3</sup> Pediatrics, MoH Konya Education and Research Hospital, Konya, Turkey

**Objective:** UTI are common in childhood. It is important for primary care physicians to appropriately diagnose and treat UTI in children. The aim of this study was to evaluate the value of diagnostic tests and antibiotic resistance for urinary tract infections (UTI) in children living in Middle Anatolian region of Turkey.

**Methods:** This retrospective, descriptive research was performed on 154 children aged between 0-16, who were treated for UTI in Department of Pediatrics at Konya Training and Research Hospital through 2011.

**Results:** Of 154 children, 79.1% were female and 20.9% were male. In 95 patients (61.7%) positive urine culture was determined. Urine culture was highly positive if the urinary leucocyte esterase and nitrite tests were positive. The most common infective agents were E.coli (89.4%), Klebsiella pneumoniae (4.0%), Proteus mirabilis (4.6%) and the other agents (2.6%). E.coli was sensitive to ampicillin, cefuroxime, ciprofloxacin, carbapenems, nitrofurantoin and norfloxacin. Proteus mirabilis was most sensitive to amoxicillin-clavulanate, ampicillin, cefazolin, cefepime, cefuroxime, ceftriaxone, cefuroxime, ciprofloxacin, carbapenems, norfloxacin and piperacillin-tazobactam. E.coli was highly resistant to ampicillin, amoxicillin-clavulanate, ceftriaxone, cefuroxime and trimethoprim-sulfamethoxazole and Klebsiella pneumoniae was highly resistant to ampicillin, amoxicillin-clavulanate, ceftriaxone, cefuroxime and trimethoprim-sulfamethoxazole.

**Conclusions:** If the agent is unknown, urine culture cannot be performed and urinary leucocyte esterase and nitrite tests are positive; it can be concluded that trimethoprim-sulfamethoxazole, ampicillin, amoxicillin-clavulanate, ceftriaxone and cefuroxime should not be first step therapy because of high resistance. For empiric therapy amikacin, cefuroxime, carbapenems for parenteral therapy and nitrofurantoin for oral therapy should be preferred.

Disclosure: No conflict of interest declared

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**The added diagnostic value of five c-reactive protein tests performed with point-of-care test devices to detect pneumonia in primary care: a nested case-control study.**M.C.Minnaard<sup>1</sup>, A.C. van de Pol<sup>1</sup>, J.A.H. de Groot<sup>1</sup>, N.J.de Wit<sup>1</sup>, R.M.Hopstaken<sup>2</sup>, S.van Delft<sup>2</sup>, P.Little<sup>3</sup>, C.C.Butler<sup>4</sup>, B.D.L.Broekhuizen<sup>1</sup>, T.J.M. Verheij<sup>1</sup><sup>1</sup> Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, Netherlands; <sup>2</sup> Salto, Diagnostic Center for Primary Care, Utrecht, Netherlands; <sup>3</sup> Primary Care Medical Group, University of Southampton Medical School, Southampton, United Kingdom; <sup>4</sup> Department of Primary Care and Public Health, Cardiff University, Cardiff, United Kingdom

**Objective:** Performance of 5 different point-of-care (POC) tests for C-reactive protein (CRP) in a laboratory setting varies compared to the laboratory reference standard. The present study aims to determine whether these differences alter accuracy and added diagnostic value for pneumonia in adults presenting with lower respiratory tract infection (LRTI) in primary care.

**Methods:** Outpatients over 18 years of age presenting with community acquired LRTI were included in the European GRACE study ([www.grace-lrti.org](http://www.grace-lrti.org)). History taking, physical examination, chest radiography and measurement of CRP using five different POC tests and a laboratory analyser was performed. We calculated single test accuracy values of the five different CRP POC tests and compared accuracy with the conventional (reference) test at thresholds of 20 and 100 milligram/litre. Furthermore, added values of the 5 different CRP POC tests to symptoms and signs were calculated.

**Results:** Sensitivity, specificity, positive predictive value, negative predictive value and univariate odds ratios (ORs) showed similar results for all 5 CRP POC tests and the reference laboratory test. The area under the receiver operating characteristic curves of the different CRP POC tests and the reference laboratory test were all comparable and higher than the clinical model without CRP.

**Conclusions:** All 5 different CRP POC tests and the laboratory reference test have similar accuracy to detect pneumonia both if studied as single test and as additional test to symptoms and signs.

Disclosure: No conflict of interest declared

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**Trichinellosis-difficulties in reaching the diagnosis from the general practitioner's point of view; case report**

J. Mitrovic

General Practice, Primary Health Care Centre „Dr Simo Milosevic“, Belgrade, Serbia

**Introduction.** Trichinellosis is world wide spread zoonosis caused by parasites of Trichinella genus. It's a typical zoonosis and one gets infected by eating a meat of a sick animal. Trichinellosis is the most important zoonosis in Serbia, with the incidence of 1.15 to 7.7 per 100.000. Since the clinical presentation of trichinellosis can vary the role of the general practitioner is crucial in prompt and correct diagnostics.

**Case report** This case report is about obese thirty-two year old man suffering from conjunctivitis, high fever (38.5°C) and muscle weakness. Physical examination showed bilateral conjunctivitis, sore throat and muscle weakness. Since he was already not moving as much due to obesity, muscle pain was ignored and he was sent to ophthalmologist where he was treated under the diagnosis of viral conjunctivitis. Since the condition was deteriorating he was given wide spectrum antibiotics (cefixim). Laboratory revealed ESR 52mm/h, normal CBC, AST 176 IU/L, ALT 74 IU/L, LDH 816 IU/L, CK 1120 IU/L. 5 days later his mother started complaining of muscle pain, when it was revealed that they ate some uncontrolled meat. He was diagnosed with trichinellosis and received treatment.

**Conclusion** General Practitioners should always think about trichinellosis when encounter patients with high fever, conjunctivitis, rash, gastrointestinal problems, muscle pain and weakness, since the disease presents with various clinical symptoms and signs. Reaching the diagnosis timely with adequate treatment decreases incidence of complications and shortens duration of hospitalization. Normal leukocyte count can also be seen, which makes diagnosing of trichinellosis even more difficult.

Disclosure: No conflict of interest declared

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**Communicable diseases (sexually transmitted diseases)**

R. Njeri Mbugua

Centre for Microbiology Research, Kenyatta National Hospital and Kenya Medical Research Institute, NAIROBI, Kenya

**Objectives:** Sexually transmitted diseases (STD) are defined as a group of communicable diseases which are transmitted predominantly by sexual contact.

**Methods:** The number of agents known to be sexually transmitted include 20 pathogens. These, (Chlamydia trachomatis, herpes simplex virus, human papilloma virus, hepatitis B virus, human immunodeficiency virus) tend to replace the classical „venereal diseases“ both in importance and frequency as they are often more difficult to detect, treat, and control.

**Results:** STDs are a major public health problem in most African countries on account of their frequency, their associated morbidity /mortality, their impact on maternal / infant health, economic costs in terms of health expenditure and lost productivity, because of their social consequences. Recent epidemiological studies using sophisticated diagnostic technologies greatly extend our knowledge on the true spectrum of complications and sequelae associated with these infections.

**Nongonococcal urethritis – caused to 40% by Chlamydia trachomatis** – and gonococcal infections are together the most frequent STDs. The increasing importance of chlamydial infections, in contrast to a gradual decrease of gonococcal infections, is related to the fact that these infections frequently cause a symptomatic/mild disease and do not motivate patients to seek medical care, resulting to extended period of infectivity and high risk of developing complications.

**Conclusions: Maternal infections with STD may not only have adverse effects on pregnancy** outcome but may cause serious morbidity and mortality in the newborn ( congenital syphilis, ophthalmia neonatorum, herpes simplex virus infection of the neonate, chlamydial pneumonia, congenital HIV infection).

Disclosure: No conflict of interest declared



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**Existence of HIV in the global arena**

R. Njeri Mbugua

**Objectives:** AIDS is an example „par excellence“ of a sexually transmitted disease of public health importance requiring extensive clinical services and posing enormous financial and social problems for the individual and the society at large.

**Methods:** AIDS and the other viral STD have greatly increased the interest in primary prevention strategies such as health education and behavioral modification, for the control of sexually transmitted diseases.

**Results:** Awareness is increasing that sexually transmitted diseases (STD) are very common in most of the developing world, particularly in Africa. Evidence for this awareness can be found in the rapidly rising number of publications on STD in scientific journals, and in the many reports on these diseases in the lay press of many countries.

**Conclusions:** Two major new developments in the STD field have led to this changed attitude to the STD problem. The first development was the advent and the spread of penicillinase-producing *N. gonorrhoeae* (PPNG) which added a new dimension to gonorrhoea treatment. The cheap and widely available penicillin had to be replaced by more expensive antibiotics and this has not been implemented in many areas resulting in increases gonorrhoea morbidity. The second was the appearance of the acquired immunodeficiency syndrome (AIDS), which in a large part of the developing world is mainly a sexually transmitted disease, and now poses the most difficult challenge of all.

Disclosure: No conflict of interest declared

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**Boutonneuse fever: the importance of the clinical findings**M. D. Graure<sup>1</sup>, A. C. Coman<sup>1</sup>, F. J. Vera Mendez<sup>2</sup>, S. Martin Soto<sup>1</sup>, F. Guillen Cavas<sup>1</sup>, P. Gea Fernandez<sup>1</sup>, A. Canovas Ingles<sup>1</sup>, J. Flores Torrecillas<sup>1</sup>, T. Kostyrya<sup>1</sup>, G. M. Peralta Diaz<sup>1</sup><sup>1</sup> *Cartagena Casco Antiguo Health Center, Servicio Murciano de Salud, Cartagena, Spain;*<sup>2</sup> *Infectious Diseases Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain*

**Objective:** To describe a case of Boutonneuse fever diagnosed only by clinical features.

**Methods:** Revision of a case of Boutonneuse fever using as main variables the symptoms, tests results, diagnosis, complications, treatment and evolution of the disease.

**Results:** A 44-year-old man consults for a three days history of abdominal pain, vomiting, high fever, arthromyalgias, generalized papular exanthema with palmoplantar involvement, three pruritic lesions with necrotic center on the right leg, bilateral submandibular and inguinal lymphadenopathies and oral mucositis. The blood test shows a C-reactive protein of 15 mg/dl, leukocytosis, while the abdominal X-ray, ultrasound, urine and blood cultures are normal. The serology shows positive IgM for *Mycoplasma pneumoniae* and *Borrelia burgdorferi*, the rest being negative, including the IgG and IgM for *Rickettsia conorii*. Suspecting a Boutonneuse fever, treatment with ceftriaxone and doxycycline is started, but the patient starts with enanthema, oral ulcers, candidiasis and arthritis of the carpal bones. The new chest X-ray confirms an acute interstitial pneumonitis and an intravenous treatment with azithromycin is started, with resolution of the lesions in two weeks. The new serology shows no seroconversion from IgM to IgG thus, the positive results were considered as false positive with final clinical diagnosis of Boutonneuse fever.

**Conclusions:** High fever, headache, a necrotic crust (tache noire), papular generalised and palmoplantar exanthema, arthromyalgias, hepatosplenomegaly are the main symptoms of Boutonneuse fever. The clinical diagnosis is the most important and immediate treatment with doxycycline should be started to avoid major complications.

Disclosure: No conflict of interest declared

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**Correlation of germs with other causative factors in diabetic foot ulcers**

C. Verras<sup>1</sup>, G. Chrysos<sup>2</sup>, E. Fousteris<sup>3</sup>, K. Papadopoulou<sup>3</sup>, I. Gkaitartzakis<sup>1</sup>, P. Panousoglou<sup>1</sup>, F. Lola<sup>1</sup>, R. Paparigopoulos<sup>1</sup>, A. Kamaratos<sup>3</sup>, A. Melidonis<sup>3</sup>

<sup>1</sup> Department of General Practitioner, Tzaneio, Piraeus, Greece; <sup>2</sup> Outpatient Clinic of Infectious Diseases, Tzaneio, Piraeus, Greece; <sup>3</sup> Department of Internal Medicine – Diabetes Center, Tzaneio, Piraeus, Greece

**Objective:** Diabetic foot infection where associated with ulcers, cause significant morbidity and they have high cost treatment. The search for the most common pathogens found in ulcers and possible correlation with various complications of diabetes mellitus or factors regarding glycemic control.

**Methods:** We studied 55 patients with diabetic foot ulcers, with a mean age 66.1 years. In all received medical history, 2 crops of material from the area of the ulcer, glycosylated hemoglobin (HbA1c) was measured, the presence of albuminuria, and evaluated peripheral neuropathy and angiopathy.

**Results:** The 74 strains of bacteria were grown in order of frequency:

Coagulase negative staphylococci: 18 (24,32%), Staphylococcus aureus 11 (14,86%) (MRSA 3), Escherichia coli 10 (13,51%), Pseudomonas aeruginosa 7 (9,45%), Proteus mirabilis 6 (8,10%), Enterococcus faecalis 5 (6,75%), Stenotrophomonas maltophilia 3 (4,05%), Citrobacter spp. 3 (4,05%), Enterobacter cloacae 3 (4,05%), Klebsiella oxytoca 2 (2,70%), Serratia spp. 2 (2,70%), Acinetobacter spp. 2 (2,70%), Bacteroides spp. 2 (2,70%), Flaribacterium 1 (1,35%), Streptococcus agalactiae 1 (1,35%). All patients with MRSA had HbA1c > 9,1, peripheral neuropathy and albuminuria.

**Conclusions:** The most frequently isolated bacteria were gram-positive cocci, and in many developed and gram-negative bacteria, in particular for making foregoing antibiotics. Except MRSA no significant correlation of microbes or their resistance to antibiotics with other agents.

Disclosure: No conflict of interest declared

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**Unique case of osteomyelitis of the hand caused by Mycobacterium abscessus**

C. G. Zambrano Clavier<sup>1</sup>, F. J. Vera Méndez<sup>2</sup>, M. D. Graure<sup>3</sup>, A. C. Coman<sup>3</sup>, M. Hernández Roca<sup>4</sup>, M. Ortiz<sup>5</sup>, M. J. del Amor<sup>5</sup>, E. E. Soriano Navarro<sup>6</sup>, J. Álvarez González<sup>5</sup>, F. Vera Repullo<sup>5</sup>

<sup>1</sup> Los Dolores Health Center, Servicio Murciano de Salud, Cartagena, Spain; <sup>2</sup> Infectious Diseases Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain; <sup>3</sup> Cartagena Casco Antiguo Health Center, Servicio Murciano de Salud, Cartagena, Spain; <sup>4</sup> Pneumology Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain; <sup>5</sup> Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain; <sup>6</sup> Rheumatology, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain

**Objective:** Describe a unique case of osteomyelitis of the carpal bones caused by Mycobacterium abscessus.

**Methods:** Description of the case, using as main variables: current pathology, therapy with immunosuppressants and immunomodulators, symptoms, diagnostic methods, surgical treatment, elective antibiotic treatment and evolution.

**Results:** A 72 year-old male patient with rheumatoid arthritis treated with prednisone and leflunomide for 11 years, consults for pain and inflammation of the wrist. An arthritis outbreak is suspected thus the prednisone treatment was increased with no response. A synovectomy was performed with good radiological results and negative cultures. Three months later the patient consults for erythematous swelling of the base of the first finger of the right hand with local fistulization. The new culture is positive for Mycobacterium abscessus and treatment with clarithromycin is started. The x-ray of the hand depicts destruction of the carpal bones, the base of the first metacarpal, diffuse alteration of the others metacarpals. Total carpectomy is performed with implantation of a gentamicina-coated prosthesis. Intravenous treatment with amikacin, cefoxitin and clarithromycin was maintained for 8 weeks with resolution of the acute infection. Oral treatment with amikacin and clarithromycin should be maintained for one year to prevent relapse.

**Conclusions:** Osteomyelitis caused by Mycobacterium abscessus presented an aggressive course with complete destruction of the carpal bones. The carpectomy and prolonged antibiotic treatment with at least 2 active first line drugs was necessary for the resolution of the infection. The surgical treatment proves to be an essential adjuvant in the treatment of this type of osteomyelitis.

Disclosure: No conflict of interest declared

1413

**A simple mononucleosis or more?**

M. D. Graure<sup>1</sup>, A. C. Coman<sup>1</sup>, S. Herrera Adan<sup>2</sup>, J. Flores Torrecillas<sup>1</sup>, F. Guillen Cavas<sup>1</sup>, E. Esteban Redondo<sup>3</sup>, E. Esparza Perez<sup>1</sup>, P. Gea Fernandez<sup>1</sup>, A. Canovas Ingles<sup>1</sup>, R. M. Requena Ferrer<sup>1</sup>

<sup>1</sup>Cartagena Casco Antiguo Health Center; Servicio Murciano de Salud, Cartagena, Spain;

<sup>2</sup>Internal Medicine Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain; <sup>3</sup>Occupational Medicine, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain

**Objective:** To describe a case of cholestatic hepatitis induced by Epstein-Barr virus.

**Methods:** We describe an unusual case of acute cholestatic hepatitis in a young woman with mononucleosis using as main variables: symptoms, laboratory findings, imaging methods, treatment and evolution.

**Results:** A 31-year-old woman consults her General Practitioner for a two month history of epigastric pain, headache, nausea and postprandial fullness which responds to treatment with omeprazole and spasmolytics. In the last two weeks the patient presents anorexia, pyrosis, diarrhea, fever, painful retroauricular and cervical lymphadenopathies, jaundice with pruritus, dark urine and pale stools. She is admitted to the Internal Medicine Department where the physical examination shows a normal pharynx and pain in the right hypochondrium. The blood analysis is suggestive of mononucleosis, with total bilirubin of 6.5 mg/dl (conjugated 5.3 mg/dl), elevated transaminases, a  $\beta$ 2-microglobulin of 4.7 and positive Paul-Bunnell test. The autoimmunity tests and chest X-ray are normal. The abdominal ultrasound shows multiple cholelithiasis. As a lymphoproliferative disorder is suspected a CT-scan is performed which is normal. The gastroscopy is normal and a colangio-MRI confirms the cholelithiasis without coledocolithiasis. The serology is positive for Epstein-Barr but also for Cytomegalovirus. Analgesics are administered with good response. She is discharged with the diagnosis of acute cholestatic hepatitis due to mononucleosis infection and cholelithiasis.

**Conclusions:** Rarely the EBV infection can cause cholestatic jaundice suggesting anatomic biliary tract obstruction. It should be considered in the differential diagnosis of patients with liver abnormalities, increased levels of transaminases or a transitory cholestatic pattern.

Disclosure: No conflict of interest declared

1462

**Tuberculous lymphadenitis – a timeless medical case**

P. Teixeira, C. Sousa, E. Alves

USF Renascer, ACeS Gondomar, Gondomar, Portugal

**Introduction:** Peripheral lymphadenopathy is a very common sign in Primary Care (PC). In the particular case of isolated cervical lymphadenopathy, its presence raises multiple etiological hypotheses, which bring sometimes the concern of being in the presence of a “serious disease”. The following case reports the approach used in the evaluation of isolated cervical lymphadenopathy in the context of PC. It also provides a systematic review of the main aspects to pay attention.

**Case report:** 29 years old male without any relevant fact in past medical history neither family medical history. He has consultation with his family doctor (FD), referring a painful tumescent neck mass, in posterior cervical triangle on the left side, since 2 weeks ago. Ultrasonography reveals a conglomerate of hypoechoic nodular images with cystic aspect, possibly correlated with lymphadenopathy, in spite of being impossible to exclude lymphoma. This way, the patient is referred to perform a fine-needle aspiration biopsy (FNAB), which presents result compatible with granulomatous and suppurative lymphadenitis. Although the search for acid-alcohol resistant bacilli is negative, it is not possible to exclude tuberculous lymphadenitis. Consequently, he is oriented to local Pneumology Diagnostic Centre.

**Discussion:** This case confirms that lymphadenopathy becomes, frequently, a clinical challenge, when after anamnesis and physical exam is not found an obvious etiology. Then, FD faces a dilemma: to keep patient under clinical surveillance or to make referral to secondary health care. Therefore, attention is required to some epidemic and clinical aspects, mainly to alarm signs of malignity or “serious disease”.

Disclosure: No conflict of interest declared

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**The prevalence of intestinal amoebiasis in elementary school children in Eskisehir and surrounding area.**

N. Dogan, N.U. Kocman

*parasitology, osmangazi university, Turkey/Eskisehir, Turkey*

**Objectives:** Amebiasis, is a common parasitic infection in all over the world, which is caused by *Entamoeba histolytica*. In developing countries it is still an important public health problem, and the differential diagnosis of infected persons should be done as soon as possible. In our study was determining the prevalence of intestinal amoebiasis in elementary school children.

**Methods:** We collected 977 stool samples in 5-14 age group children. All stool samples were examined macroscopic and wet mount microscopic examination and culture for *Entamoeba histolytica* cyst or trophozoites. We were performed additional tests (ELISA and PCR methods) on samples with diarrheal and suspected microscopy.

**Results:** We worked 977 fecal samples, by the method of direct microscopic examination of *E. histolytica / dispar* prevalence of 83 (23.6%), and 45 of them (12.8%) of them with trichrome stain, 32 (9.1%) of them with the culture method, 13 (3.7%) were determined by ELISA, 4 (1.1%) were molecular method and found to be positive. by molecular method 7 (2.0%) fecal sample is found to be positive of *E. histolytica*, of which 4 (1.1%) of them with direct microscopy, 2 (0.6%) of them with trichrome stain, 2 (0.6%) of them with the culture method, and 1 (0.3%) were found to be positive by ELISA. In only one sample is positive with all diagnostic methods which were we used.

**Conclusions:** Various prevalence rates of *E. histolytica* infection had been published by different researchers. The rates vary for the different locations, states, and the types of patients surveyed and the source of the survey materials. Improved sanitation, personal hygiene and deliberate policy by government for rural community health concern will indeed prevent fecal contamination of food and water.

Disclosure: No conflict of interest declared

1722

**Stool cultures in urban health center: descriptive analysis**

J.P. García Paine, J. Paz Galiana, L.A. Calleja Cartón, T. González-Granda García, J.M. Santa Cruz Talledo, B. Palop Borrás

**Objective:** Knowing the most common organisms isolated in stool cultures that are requested from a health center in the period of one year.

**Material and methods**

*Design:* Descriptive longitudinal

*Field of study:* Urban Health Centre with two rural clinics.

*Selection Criteria:* Stool cultures requested in 2011.

*Subjects:* stools cultures (n = 10) requested by the health center in 2011 (N = 458).

*Measurements:* Age, number of seeds, or microorganism growth in each planting, type of microorganism isolated.

**Results:** 458 stool cultures were requested in 2011, with only 2.2% (10) positive. The average age in the positive stool cultures was 49.3 years (6-101). Three positive results were obtained between 0-20 years of age, none between 21-40 years, 2 between 41-60, 4 between 61-80 years and 1 in over 80 years. Revealed no contaminated culture and polymicrobial flora was all normal. The 10 isolates were performed in the first planting. We detected three different types of microorganisms, Salmonella species in 80% of the isolates (n = 8) and Campylobacter Species and Aeromonas hydrophila in a 10% each (n = 1). There were no associations of microorganisms.

**Conclusion:** Salmonella species is the most frequently isolated microorganism in the stool. Knowing the map bacteriological culture tests can help decision making empirically.

Disclosure: No conflict of interest declared

### 3.11. VACCINATION

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#### Pandemic flu A(H1N1) immunization in 2009 – view from a distance

S. Visnjevac, S. Kosanovic, D. Visnjevac  
*General practic, Primary Health Centar Indjija, Indjija, Serbia*

**Introduction:** Immunization is the primary strategy for prevention and control of seasonal and pandemic influenza.

**Objective:** To determine: the structure of vaccinated persons and possible adverse events. Is there a difference in the average number of office visits selected doctor, people who are vaccinated achieved within one year after vaccination and the number of visits a year before the vaccine, and whether differences in the average number of office visits that were vaccinated people made one year after vaccination, and average number of visits made by persons who are not vaccinated, and health are the same or similar age and sex structure

**Methods:** Statistical analysis used the SPSS 16.0 program for Windows.

**Results:** Of 129 respondents who received the vaccine, 51.9% were male. Within 42 days after the adverse events are not registered. Each person within one year before the vaccine achieved an average of 8.74 visits selected doctor, and within one year after vaccination, 8.55. It was found that there was no statistically significant difference in the average number of visits to selected physicians. The control group consisted of 129 persons who did not receive a vaccine against pandemic flu. Again, it was determined that there is no statistically significant difference in the average number of visits to selected physicians

**Conclusion:** The largest number of vaccinated persons older than 65 years. Not registered serious adverse events. Our research we didn't found a statistically significant difference in the average number of visits selected doctor.

**Key words:** immunization, influenza, adverse events, office visits

Disclosure: No conflict of interest declared

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#### Immunization schedules: differences across the globe

A. Bettencourt, B. Pimentel

*Unidade de Saúde da Ilha Terceira, Centro de Saúde de Angra do Heroísmo, Angra do Heroísmo, Portugal*

**Objectives:** Prevention of disease is essential for both patient health and control of medical costs. The national vaccine immunization schedules, directed mainly at children, is one of the most successful examples of effective preventive care, reducing complications and mortality related to a number of infectious diseases.

These programs are updated regularly, according to the availability of new vaccines and local epidemiology.

The aim of this review was to compare and identify differences between the immunization schedules of selected countries, representing all the continents.

**Methods:** Classical review based on textbooks, articles, and guidelines published in scientific databases, in English and Portuguese, using the MeSH term *Immunization schedules*.

The countries selected, by convenience sampling, were: Angola, Australia, Brazil, India, Japan, Mexico, Portugal and United States of America (USA).

The websites of the national health departments of each country were also searched.

**Results:** All countries studied include in their routine immunization schedule the following vaccines: Diphtheria, Tetanus, Pertussis, Poliomyelitis and Measles. *Haemophilus influenzae* type b and Hepatitis B vaccines are absent from the Japanese program and Rubella from the Angolan schedule. Also not included in both of these countries is the Mumps vaccine. Australia and the USA do not contemplate the BCG vaccine. Other vaccines are administered only in some countries, such as Japanese Encephalitis in Japan and Yellow Fever in Angola and Brazil.

**Conclusions:** Although some vaccines are accepted as essential in all the countries studied, others are integrated depending on the local epidemiology, economy and accessibility of the health care system.

Disclosure: No conflict of interest declared

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**Influenza-vaccine-preventable diseases**

M. Dobrovic Milosevic, M. Toskovic, E. Kreckovic, L. Zogovic Vukovic, J. Papic Radunovic  
*General Practice, Health Centre Podgorica, Podgorica, Montenegro*

**Introduction:** Influenza is an infective disease. Today, we have a safe and efficient vaccine against the flu which is recommended every year to persons from the groups with the increased risk.

**Material and method:** By using the information system, we have monitored the vaccination against the flu in the five year period (2007 – 2012) in our health institution.

**Results:**

In 2007, 5,63% from the total number of patients was vaccinated, and from that number 85,03% are > 65 years and 14,97% patients were persons from the risk groups <65 years.

In 2008, 5,67% from the total number of patients was vaccinated, and from that number 80,83% are > 65 years and 19,17% < 65 years.

In 2009, 7,54% from the total number of patients was vaccinated, and from that number 68,41% are > 65 years and 31,59% < 65 years.

In 2010, 4,80% from the total number of patients was vaccinated, and from that number 72,95% > 65 years and 27,05% < 65 years.

In 2011, 4,58% from the total number of patients was vaccinated, and from that number 69,96% > 65 years and 30,04% < 65 years.

In 2012, 4,24% from the total number of patients was vaccinated, and from that number 72,80% > 65 years and 27,20% < 65 years.

**Conclusion:** The percentage of vaccinated persons is relatively low. The increase of the number of vaccinated persons in the group of persons with chronically characterized diseases < 65 years. Unjustifiably low percentage of vaccination of health workers.

Disclosure: No conflict of interest declared

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**Flu vaccination and General Practitioners: a preliminary descriptive study**

MJ. Purriños Hermida<sup>1,2</sup>, S. Perez Cachafeiro<sup>3,4,2</sup>, A. Sanmarful Schwarz<sup>5,2</sup>,  
 J. Miguel Carrera<sup>6,2</sup>, MI. Regal Faraldo<sup>7,2</sup>, AMA. Curieses de los Arcos<sup>8,2</sup>

<sup>1</sup> S.X. de Información sobre Saúde e Epidemioloxía, Dirección Xeral de Innovación e Xestión da Saúde Pública, Santiago de Compostela, Spain; <sup>2</sup> Infectious Diseases Group, Galician Society of Family Doctors (AGAMFeC), A Coruña, Spain; <sup>3</sup> Cambados Health Center, Xerencia Integrada Pontevedra-Salnés, Cambados, Spain; <sup>4</sup> Research Unit, Fundación IDI CHOP, Pontevedra, Spain; <sup>5</sup> Chapelá Health Center, Xerencia Atención Primaria Vigo, Redondela, Spain; <sup>6</sup> Foz Health Center, Xerencia Atención Primaria de Lugo, Foz, Spain; <sup>7</sup> U. Saude Laboral – Xeral, C.H.U. de Vigo, Vigo, Spain; <sup>8</sup> A Ponte Health Center, Xerencia Atención Primaria Ourense, Ourense, Spain

**Objective:** In October 2012, the Spanish Medicines Agency (AEMPS) immobilized a number of vaccines due to safety concerns. Our study aims to describe the knowledge and attitudes of General Practitioners (GPs) associated to the Galician Society of Family Doctors (AGAMFeC) regarding flu vaccination after this alert.

**Methods:** We conducted a pilot survey (sample=30) during a regional conference of AGAMFeC. A systematic review of the literature was performed in order to select questions used in previous influenza studies. Questions regarding the recent AEMPS alert were added. Crombach alpha was used to assess correlation among answers.

**Results:** Response rate was 93%: 23 women (82%); median age, 43 years; 63% worked at urban areas. Answers to questions related to the protection of the vaccine were highly correlated ( $\alpha \geq 0.93$ ), no other correlations were found.

Whilst Flu vaccine efficacy was accepted by 71% of our GPs, only 32% did receive flu shot in 2011, and 21% were vaccinated in 2012. 37% showed concern about adverse events, and 31% believed that the vaccination itself may transmit influenza. 52% considered that non-injected vaccines would reach higher coverage rates. 82% did not follow any Evidence-Based source of knowledge on this topic.

AEMPS alert did not modify attitudes of GPs about flu vaccination in 92% of respondents, although 73% of them pointed that information was scarce and inadequate.

**Conclusions:** Given that AEMPS alert did not adequately reach GPs, it could not influence their vaccine-related behavior. Lack of Evidence-Based approach among our professionals on this issue is worrying.

Disclosure: No conflict of interest declared

1185

**Practical experience with Flu vaccination in general practice**

J. Vojtíšková, K. Zoufalá, N. Král

*Lékařská ordinace Vyšehrad s.r.o., Lékařská ordinace Vyšehrad s.r.o., Prague, Czech Republic*

**Introduction:** Due to unsatisfactory data in flu vaccination in the Czech Republic, we decided to prepare internal survey and analyse data in our GP office. The aim was to determine whether we meet the criteria of national vaccination programme in the group of our registered patients, especially in the group up to 65 years old, which is high-risk group and vaccination is covered by public insurance.

**Methods:** We prepared retrospective analysis of data from the year 2002 to 2011. Data were evaluated from our medical database. The average number of registered patients in our GP office is between 1827 to 2453 patients in years 2002-2011.

**Results:** Number of vaccinated patients in age over 65 years shows an increasing trend from 63 patients in the year 2002 to 227 patients in the year 2011. We registered 447 patients in the age over 65 years, 227 (50.78%) of them were vaccinated against flu. Women are vaccinated three times more than men. The number of our patients which fell in flu ranged between 8-38 patients per year. We registered only one patient with flu, who was vaccinated. Number of vaccinated patients under 65 years is about 10%, despite the annual increase in the years 2002-2011.

**Conclusion:** Our data are still not satisfactory, but the trend of vaccination is strongly increasing. There isn't unity among doctors and many of them don't recommend vaccination. Our data suggest importance of systematic work with the patient, explanation of benefits, which are not only health but also economic.

Disclosure: No conflict of interest declared

1298

**Increasing vaccination rates in primary care – to do or not to do? Retrospective multicenter analysis of over 100.000 vaccinated subjects.**

R. Madar

*Vaccination Centers, Avenier, Brno, Czech Republic*

**Objective:** Primary care physicians (PCP) are key elements of the preventive medicine. One of the main tasks is to protect susceptible non-immune patients by means of active immunization. This is very crucial in decreasing morbidity and mortality of the most vulnerable individuals. This role of PCP is absolutely irreplaceable by specialists, its underestimation therefore leads to risky exposure of the most vulnerable groups to preventable diseases. Vaccinology is one of the most progressing parts of medicine and it is sometimes difficult for PCP to follow all up-dates and changes in this area. That makes them feel uncertain about who to vaccinate safely without worry or hesitation.

**Methods:** The authors present retrospective multicenter analysis of more than 100,000 patients with various allergies and chronic conditions based on electronic data of 22 Czech vaccination centres.

**Results and discussion:** Patients suffering from chronic illnesses, most common allergies and immunodeficiencies can be safely vaccinated with inactivated/killed vaccines with only very few exceptions. Co-application of two vaccines during one PCP visit can be used in relevant cases. Contraindications of vaccination are very rare and should be always weighted against the potential risk of exposure and consequences of a real illness.

**Conclusion:** Increasing vaccination rates – especially in susceptible adults – has a great potential to protect the quality and prolong the quantity of life. It would also have significant money saving effect. Increasing vaccination rates in vulnerable groups of patients should therefore be one of the main tasks of every PCP.

Disclosure: No conflict of interest declared

1327

**Vaccination coverage rate of pneumococcal vaccine: the reality of 4 family health units.**E. Alves<sup>1</sup>, C. Salgueiro<sup>2</sup>, J. Couto<sup>3</sup>, R. Correia<sup>4</sup><sup>1</sup> ACES Alto Ave, USF de Ronfe, Guimarães, Portugal; <sup>2</sup> ACES Ave III Famalicão, USF São Miguel o Anjo, Famalicão, Portugal; <sup>3</sup> ACES Ave III Famalicão, USF Ribeirão, Famalicão, Portugal; <sup>4</sup> ACES Terras de Basto, USF Novo Cuidar, Fafe, Portugal**Introduction:** The diseases caused by *Streptococcus pneumoniae* represent a public health problem. The pneumococcal disease is most frequently non-invasive, but invasive form is also possible, especially in children under two years old.

Since 2001, pneumococcal vaccine (VP) is used in Portugal, for with that age, however not included on the national vaccination program (NVP).

There are few researches in this area in Portugal, so this paper aims to determine the evolution of the coverage rate of VP in low risk children between 2001 and 2011 and know the reality of the four family health units where the authors work.

**Methodology:** Observational descriptive study and time series. We used censuses cohort of a population of low risk children born between 1/11/2000 and 30/06/2011.**Results:** The evolution of the coverage rate of VP between 2001 and 2011 was different in the four family health units studied. Only one had a clearly decrease in the coverage rate in the last 4 years. There was another unit with a little decrease in the last year, but in this unit the rate was always floating through the years. The other two units had no decrease on the coverage rate.**Discussion:** Face to the results, we decided to lengthen the period of observation, because the worst period of economic crises is still happening in Portugal. We expecte the decrease coverage rate of VP in the four units. If that occur, we emphasize the importance of this vaccine and its inclusion in NVP.

Disclosure: No conflict of interest declared

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**Acceptance of mothers who had 0-3 months babies about strategy of cocooning**S. Ayoç<sup>1</sup>, D. Ayhan<sup>1</sup>, E. Katii<sup>1</sup>, D. Caliskan Ozcelik<sup>1</sup>, R. Kahveci<sup>1</sup>, U. Beyazova<sup>2</sup>, A. Ozkara<sup>3</sup><sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Pediatrics, Gazi University Medical Faculty, Ankara, Turkey; <sup>3</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey**Objective:** We aimed to confirm acceptability of adult type reduced pertussis vaccine (Tdap) to postpartum women by surveying.**Methods:** The study included 0-3 months babies' mothers who admitted to Pediatrics Department of Gazi University Medical Faculty. A questionnaire was prepared for mothers to obtain their knowledge and thoughts about vaccine.**Results:** We have some preliminary results with 147 patients (final results will be presented at the conference). 59 (40,1%) mothers were positive about being vaccinated. It is found that education level did not affect views of mothers about vaccine (p=0.221). The mostly selected reasons of 88 mothers who were not positive about vaccination are reported as;

\* were not informed enough about vaccination (52.3%)

\* because of economical problems (21.5%)

\* do not believe usefulness of vaccine (21.5%)

**Discussion:** Because of infants are immunocompromised and at especially high risk for pertussis, „Cocooning Strategy“ has been developed in recent years. This strategy bases on vaccination of mothers, the other members of family with one dose of Tdap vaccine, to form a cocoon around infants. But around the world, adult acceptance of vaccination is low. For this reason, before recommending vaccination in Turkey, it is necessary to learn factors that would affect women's decisions. The preventive health services are carried out by primary care physicians in Turkey, so the most important role of us is to raise awareness about immunization of patients and to encourage them to vaccinate.

Disclosure: No conflict of interest declared



1582

**Immunization status among the elderly**

M. Akman, M. Sarisoy, A. Uzuner, S. Cifcili

*family medicine, marmara universty, school of medicine, istanbul, Turkey*

**Objectives:** Influenza (yearly), Pneumococcus (once every five year) and Tetanus (once every ten year) are recommended vaccination for the people above 65 years. The aim of this study is to investigate vaccination status and knowledge level of vaccination among the elderly.

**Methods:** A questionnaire (21 questions) was prepared by the study team and applied to elderly patients attending outpatient clinics of two hospitals (one on European, the other on the Asian side) of Istanbul. In total 325 elderly people gave consent to participate. Likert scale of 10 points was used to determine self rated knowledge level of each vaccine.

**Results:** The percentage of male participants was 47.1% (154). The percentage of participants having Influenza vaccination regularly was 28% (92 person). The same percentage for Pneumococcus vaccine 3.1%(10 person) and for tetanus vaccine 11.6 (38 person). According to self-rated 10 point likert scale 42.9% of the participants were rated their level of knowledge for influenza vaccine as 1 and 4% rated as 10. Among the participants 65% rated their knowledge for pnuemoccoal and tetanus vaccine as 1.

**Conclusion:** Vaccination status and the knowledge level for vaccination were very low among the participants. Relatively influenza vaccine is known better and applied more.

Disclosure: No conflict of interest declared

**3.12. ALERGOLOGY AND IMUNOLOGY**

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**New approach to treat allergic rhinitis with vitamin E, cod liver oil and vitamin C with use nasal steroidal spray**G. Singh Dhanawat<sup>1,2</sup>*<sup>1</sup> Office of Bank's Medical Officer (Head State Medical Officer), National Bank for Agriculture And Rural Development (NABARD), Bhopal, India; <sup>2</sup> Emergency Medicine, Peoples Medical College, Bhopal, India*

In general practice many of the patients come with a problem of allergic rhinitis and having history of taking medicines like levocetirizine or cetirizine with or without use nasal steroidal spray but the problem persists since several years with little or no improvements. As per my clinical practice I used some new approach with the conventional prescriptions, Supplementing with vitamin E may help relieve some of the symptoms associated with seasonal allergic rhinitis. Allergic rhinitis is an inflammatory condition of the nose, throat, sinuses, and eyes. People with allergic rhinitis may have eye and nose itchiness, nasal stuffiness, episodes of sneezing, and a runny nose. Vitamin E is a powerful antioxidant, can calm portions of the immune system that are involved in allergic reactions. Cod Liver oil is high in Vitamins A & D which are natural anti-inflammatory to reduce inflammation of the mucus membranes. Vitamin C reduces inflammation and allergic responses. So based on these facts use of combination of drugs containing Vitamin D, Cod liver oil and Vitamin B Complex with Monteleukast Sodium & levocetirizine and nasal spray containing Fluticasone Propionate IP with Azelastine Hydrochloride. This therapy gives around >80% relief in symptoms and the frequency of attack significantly reduced. Out of 53 patients 16 have complete relief in three month of therapy than they are switched to multivitamin and multi mineral combinations. Final Conclusion is that in the treatment of allergic rhinitis the role of Vitamins (specially E, C) and Cod liver oil is very significant.

Disclosure: No conflict of interest declared

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**PFAPA syndrome – periodic fever of uncertain cause**

N. André

USF Escariz, USF Escariz, Arouca, Portugal

**Objective:** Do a classic review of articles on the diagnosis, treatment and prognosis of this disease.

**Methods:** A classic review. Were searched the keywords “PFAPA Syndrome” in site Medline/Pubmed, published between January 2001 and December 2011.

**Results:** PFAPA syndrome is a benign clinical entity of unknown etiology, important to take account in the differential diagnosis of a clinical condition characterized by recurrent episodes of fever, aphthous stomatitis, pharyngitis and cervical adenitis, at intervals of 28days. It is most prevalent in children under 5 years of age. Between periods of crisis, the child grows and develops in a perfectly normal.

This syndrome is not hereditary, no predilection for gender or race. The clinic is of sudden onset. These features can help distinguish it from other diseases that are associated with periodic fever. The diagnosis of this disease is exclusionary and its prognosis is very good.

**Conclusion:** The correct diagnosis of this syndrome and its differential diagnosis with other more serious diseases, such as Behçet’s disease, immunodeficiencies, Family Mediterranean Fever, are of utmost importance. It is very important to make the diagnosis of this syndrome, in order to reassure the child and their family, informing them of the benign course of the clinical situation and prognosis. It is important to note that the use of steroids in the acute phase, though not universally accepted therapy, is instituted.

Disclosure: No conflict of interest declared

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**Hypoallergenic dog breeds in allergic patients**T. Magalhães<sup>1</sup>, G. Ferreira<sup>2</sup>, J. Ferreira<sup>3</sup><sup>1</sup> Famile Medicine, UCSP Oliveira do Douro, Porto, Portugal; <sup>2</sup> Famile Medicine, USF BrásOleiro, Porto, Portugal; <sup>3</sup> Famile Medicine, USF Novo Sentido, Porto, Portugal

**Objective:** Evaluate the available evidence for the utilization of so-called “hypoallergenic” breeds of dogs in allergic patients.

**Methods:** Literature review, using Mesh keywords “dogs”, “hypersensitivity”, “allergy”, in Pubmed, Cochrane Library, TRIP database, DARE, Bandolier and references of selected articles, in English, Spanish and Portuguese languages, without temporal restrictions. Evaluation of evidence levels and strength of recommendations was performed using SORT (Strength of Recommendation Taxonomy).

**Results:** One study assessed the levels of the major dog allergen *Canis familiaris* 1, collected in dust samples from 190 families. No statistically significant difference in allergen levels between dog breeds reported as hypoallergenic and non-hypoallergenic was found. A second study that collected hair, dust and airborne samples, found that allergen levels were actually higher in hypoallergenic breeds. A third study evaluated the dog allergen content via prepared extracts. There was high variability, related more to individual dogs than to specific breeds or gender. The fourth study, that evaluated allergen content in a sample of shaved hairs, found similar results, with only Labradors having statistically significant reduced allergen content compared to other breeds. Sex and seborrhea also seemed to influence allergen content.

**Conclusions:** There is no firm scientific evidence that specific breeds of dogs are hypoallergenic (SOR C). Data is sparse, and higher quality studies are lacking. Additionally, certain dog allergens are not produced in dog dander. Until robust, larger studies exist, these highly marketed and expensive breeds should not be recommended to patients allergic to dogs.

Disclosure: No conflict of interest declared

1450

**Food additives in allergic and asthmatic reactions: what can be done?**A. Santos<sup>1</sup>, M. Santos<sup>2</sup><sup>1</sup> Family and General Medicine, USF S. João do Porto, Oporto, Portugal; <sup>2</sup> Pharmaceutical Sciences, Faculdade de Farmácia da Universidade de Coimbra, Coimbra, Portugal

**Objective:** Evaluate: the role of food additives in allergic and asthmatic reactions, the clues that the patient may be reacting to a food additive and its management by family physician.

**Methods:** Research of clinical practice guidelines, reviews, meta-analysis and original studies at sites of evidence-based medicine, using the MeSH terms “Food Additives” and “Hypersensitivity”

**Results:** There were obtained 182 articles and ten were selected. Food additives reactions include anaphylaxis, isolated asthmatic reactions in people with asthma, urticaria and angioedema. The family physician should suspect of food additives reactions when: patient have allergic or asthmatic reactions that occur in association with meals or other ingestions; history of symptoms associated with several apparently unrelated foods and reaction to foods when are commercially prepared but not when prepared at home.

In patients with a suggestive history of reaction to a suspected additive, a trial of avoidance would be reasonable. If no further reaction occurs, no additional tests are needed. If a suspect additive cannot be identified, it should not be advised the avoidance of all additives. Patients who had anaphylaxis, who have recurrent idiopathic urticaria/angioedema (with refractory/severe symptoms or glucocorticoids dependence) and with chronic persistent asthma or life-threatening asthmatic exacerbations should be referred to an allergy expert

**Conclusions:** With the increasing urbanization, faster pace of life and an active role of marketing there is a greater consumption of foods with additives. The family physician should be alert to potential allergic or asthmatic reactions caused by these products.

Disclosure: No conflict of interest declared

**3.13. TRAVEL AND TROPICAL MEDICINE**

190

**Travel-related dengue virus infection**

N. Marques, E. Rabadao, J. Saraiva da Cunha

*Infectious Diseases, University Hospitals of Coimbra, Coimbra, Portugal*

**Objective:** To report a case review of travel-related dengue diagnosed at an Infectious Diseases Ward in the center of Portugal during the last 4 years (2009-2012).

**Methods:** Retrospective analysis of clinical records.

**Results:** Six cases were identified (3 male, 3 female; mean age 38.8 years, range 24-60). Five patients were inhabitants of Western Europe, 3 of them had previously traveled once or several times to tropical areas and none reported a previous episode of dengue. The infections were acquired in the following regions: Southeast Asia (n=3), Central and South America (n=2) and Madeira Island (n=1). They presented 6 days (median; range: 3-10) after the onset of symptoms. The most common symptoms were: generalized muscle pain (n=6), fever (n=5), malaise (n=4), arthralgia (n=4), diarrhea (n=3), retro-orbital pain (n=2) and nausea/vomiting (n=2). There were no cases of rash. Signs of bleeding were seen in two patients (petechiae, epistaxis and menorrhagia). One patient had hepatomegaly. Leucocyte counts < 2.0 G/L were seen in two and thrombocyte counts < 50 G/L in three patients. Elevated serum aminotransferases were present in 4 patients, 3 of them had levels higher than 3.5x the upper limit of normal. All cases were laboratory-confirmed by serology (indirect immunofluorescence). According to the WHO, 2009 dengue classification, one patient had dengue with warning signs and there were no cases of shock.

**Conclusions:** As globalization, climate change and increased global travel networks may lead to further spread of Dengue, clinicians should be aware of its manifestations.

Disclosure: No conflict of interest declared

**1015****Fever in travellers returning from tropical countries**

D. Stoszek

*General Practitioner Office, Stoszek – PL, s.r.o., Horice, Czech Republic*

With increasing number of travellers, general practitioners are faced to fever patients who recently have returned from exotic countries. Fever patient do not necessarily have a tropical disease, but potentially fatal infection like malaria has to be rule out immediately. Note, that no antimalarial prophylaxis is 100% protective!

The most common tropical infections are malaria, Dengue fever, hepatitis and enteric infections. Rarely african schistosomiasis, leptospirosis, Chikungunya infection and other can occur. Working diagnosis has to be made from complete history, vaccination history, examination (with particular note of jaundice, hemorrhage, skin rashes, insect bites or localizing signs of infection), knowledge of most common tropical diseases and their incubation period.

If any tropical disease is suspected, GP has to consider which disease is treatable in GP ambulance, which is potentially lethal, the risk of transmittion and therefore public health risk.

Initial laboratory investigations include thick and thin blood films for malaria, blood count, liver function tests, urine analysis, blood, urine and stool cultivation and arbovirus serology.

Case History: Male, 27 years old, 5<sup>th</sup> day of holiday on south Thailand islands (no antimalarial prophylaxis recommended) he developed fever up to 39°C, headache, fatigue. Another day the fever went away, severe arthralgia and myalgia stayed. Patient did not look for doctor, because he had no travel insurance (!). Second day after arrival home he developed high fever again and visited me. He was immediately referred to the hospital to rule out malaria, finally blood tests showed Dengue fever infection.

Disclosure: No conflict of interest declared

**3.14. MENTAL HEALTH****47****Prevalence of postpartum depression and associated risk factors in Dammam, Saudi Arabia**

M. Koura, L. Alasoom

*Family and Community Medicine Department, Dammam University, Dammam, Saudi Arabia*

Postpartum depression (PPD) is defined as a major depressive episode that occurs four weeks after delivery. Its risk increases during the 1<sup>st</sup> 90 days after delivery and continues for almost 2 years. It is a significant health concern affecting mothers, their infants and families. The aim of present study was to assess the prevalence of PPD and associated risk factors among women living in Dammam, Saudi Arabia.

A cross-sectional study was conducted in five Primary Healthcare centers in Dammam. 450 mothers visiting the health centers for immunizing their children at age 2-6 months were screened for PPD. The sample was proportionally allocated to the population served by each health center. Mothers were assessed using Edinburgh Postnatal depression scale. A score of 10-12 was considered mild depression and a score of 13 or higher moderate to severe depression. In addition, an interview questionnaire was developed covering socio-demographic information and risk factors for PPD e.g. obstetric history, personal and family history of depression, stressful life events and social support. All data were entered to SPSS program for statistical analysis.

It was found that 9.8% of the women had mild PPD and 8% had moderate to severe depression. Stepwise logistic regression analysis revealed that the strongest predictors of PPD were family history of depression, followed by non-supporting husband, lifetime history of depression, unwanted pregnancy and stressful life events. It was recommended to screen all high risk mothers for PPD, while visiting the Primary Care well baby clinics.

Disclosure: No conflict of interest declared

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**Adherence to the treatment in the bipolar disorder: expression of resistance or omnipotence?**H. Fernandes<sup>1</sup>, A. Souza<sup>2</sup>, C. Bersi<sup>1</sup>, R. Rios<sup>1</sup>, T. Silva<sup>1</sup><sup>1</sup> Nursing, Centro Universitário Italo-Brasileiro, São Paulo, Brazil; <sup>2</sup> Nursing, UniItalo, São Paulo, Brazil

This study is an integrative review of the literature completing the data MEDLINE, SCIELO and LILACS and then the use of four descriptors to search published materials between 2002 and 2012. Were selected 21 articles organized into two analytical categories. As results, was evidenced that if the patient didn't adhere to the treatment with bipolar disorder is a consequence of his omnipotence, given the lack of knowledge of the pathology and the available treatments. There are necessities of psychological approaches associated to the nursing job to awareness the patient and his pathology, increasing his medication adherence, with an intension to decrease the relapses, the suffering and the attempts of suicide. Face to this, it shows the necessity of new researches of the theme with levels of higher evidences.

Disclosure: No conflict of interest declared

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**Incidence of burnout syndrome in assessment medicine doctors in the Czech Republic**L. Čeledová<sup>1</sup>, R. Čevela<sup>1</sup>, R. Ptáček<sup>2</sup>, H. Kuželová<sup>2</sup><sup>1</sup> Assessment Service, Ministry of labour and Social Affairs, Prague, Czech Republic; <sup>2</sup> Clinic of Psychiatry, 1st Medical Faculty of Charles University, Prague, Czech Republic

**Objective:** Survey of the incidence of Burnout Syndrome in Assessment Medicine Doctors in the Czech Republic

**Methods:** We have conducted an extensive research to determine the level of stress load and occurrence of possible signs of depression and other reactive mental illnesses among Czech assessment doctors. The research group consisted of randomly selected assessment doctors in the Czech Republic (n=250) and a control group consisting of other medical and non medical professions (n=100). The groups were compared on the basis of questionnaires evaluating levels of burnout syndrome, stress, depression and occurrence of other possible mental illnesses.

**Results:** Assessment medicine doctors show higher incidence of burnout syndrome and stress related phenomenon as depression comparing to other medical and non-medical professions (p<0.01). This may be connected to specificity of the profession bringing specific stress load.

**Conclusion:** Assessment medicine represents an individual area of expertise that requires special skills and knowledge and it also put specific stress load on the assessment doctors. Different responsibility and the style of work, including special kind of contact with clients make this profession to different from other fields of clinical medicine. The specific work load may bring different stressors and cause specific mental load.

Disclosure: No conflict of interest declared

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### Efficacy of nalmefene as-needed in alcohol dependent patients with high drinking risk level: subgroup analysis of two randomised controlled studies

A. Gual<sup>1</sup>, H.-J. Aubin<sup>2</sup>, A. Bladström<sup>3</sup>, L. Torup<sup>4</sup>, W. van den Brink<sup>5</sup>, K. Mann<sup>6</sup>

<sup>1</sup> Department of Psychiatry, Alcohol Unit, Institute of Neurosciences, Hospital Clinic, Barcelona, Spain; <sup>2</sup> Addiction Treatment Center, Hôpital Paul Brousse, INSERM 669, Université Paris-Sud, Villejuif, France; <sup>3</sup> Biostatistics, H. Lundbeck A/S, Valby, Denmark; <sup>4</sup> ICR Psychosis & Addiction Disorders, H. Lundbeck A/S, Valby, Denmark; <sup>5</sup> Department of Psychiatry, Amsterdam Institute for Addiction Research, University of Amsterdam, Amsterdam, Netherlands; <sup>6</sup> Department of Addictive Behaviour and Addiction Medicine, Central Institute of Mental Health, University of Heidelberg, Mannheim, Germany

**Objective:** Efficacy and safety of as-needed nalmefene 18mg *versus* placebo in reducing alcohol consumption was evaluated in the pooled subgroup of patients from the 6-month studies ESENSE1 (NCT00811720) and ESENSE2 (NCT00812461) with high drinking risk level (men:>60 g/day;women:>40 g/day).

**Methods:** All patients received a motivational and adherence-enhancing intervention (BRENDA). Co-primary outcomes heavy drinking days (HDDs) and total alcohol consumption (TAC;g/day) at month 6 were measured using the Timeline Follow-back. Additionally, data on clinical improvement, liver function and safety were collected.

**Results:** The study population comprised 667 patients: placebo N=332; nalmefene N=335 (mean age 48±11 years; 66% men; mean HDDs:23±5.9/month; mean TAC:106±45g/day). Treatment groups did not differ in demographic, clinical or drinking characteristics. For patients providing efficacy data at month 6, mean number of HDDs decreased to 10days/month and mean TAC decreased to 42g/day in the nalmefene group. There was a superior effect of nalmefene compared to placebo in reducing HDDs (-3.2days [95% CI:-4.8;-1.6];p<0.0001) and TAC (-14.3g/day [-20.8;-7.8];p<0.0001) at month 6. The proportion of responders (patients shifting to low drinking risk level [men: 40g/day and below; women: 20g/day and below]), was 32% for placebo and 43% for nalmefene, corresponding to an odds ratio of 1.79 [1.27;2.53];p<0.001 and a number-needed-to-treat of 9. Improvements in clinical status and liver parameters were greater in the nalmefene group compared to the placebo group (p<0.05). Adverse events and adverse events leading to dropout were more common with nalmefene than placebo.

**Conclusions:** As-needed nalmefene was efficacious in reducing alcohol consumption in patients with high drinking risk level.

Disclosure: Anna Bladström and Lars Torup are employees of H. Lundbeck A/S

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### The network of mental health care in primary care.

R. Pegorari, E. Yu Me Yut Gemignani, I. Tiburcio Faria  
Medicine, UNICID Universidade Cidade de São Paulo, São Paulo, Brazil

**Introduction:** The mental health care network should be formed by different modes of care for mental health interventions in primary care – Psychosocial Care Centers – CAPS, Outpatient Mental Health, Therapeutic Residential Services, emergency psychiatric bed and / or Mental Health Unit at Hospital General or reference, among others. So the matricial support is a new way to produce health in which two or more teams in a process of shared construction, create a proposal of pedagogical-therapeutic intervention in Primary Care.

**Objective:** Providing the rear of specialized assistance, as well as a technical and pedagogical support, a bond interpersonal and institutional support in the process of collective construction of singular therapeutic projects with the families.

**Methods:** Primary Care, especially the Family Health Strategy, plays an important role in the restructuring and reorganization of health services in the cities, because according to the Ministry of Health psychiatric complaints are the second leading cause for seeking treatment in primary care by population.

**Results:** This mental health treatment is dealt with on a day-to-day life of the subject, within the family and within the territory, guaranteeing the right of these citizens, not in a logical asylum, but with reference to permanent specialized services such as CAPS – Psychosocial Care Centers characterized by Local Health Units / regionalized service offering intermediate care between the outpatient and inpatient hospital.

**Conclusion:** The most important goal is a reintroducing the patient in society.

Disclosure: No conflict of interest declared

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**Treatment of post-stroke depression**

N. André

*USF Escariz, USF Escariz, Arouca, Portugal*

**Objective:** To review the evidence of the treatments (pharmacological and non-pharmacological) of depression in the patient who had a stroke.

**Methods:** Research in Bandolier, Cochrane, TrypDatabase, DARE, National Guideline Clearinghouse, Guidelines Finder, Canadian Medical Association, the keywords „post-stroke“ and „depression“ of articles published between January 2000 and March 2012.

**Results:** Pharmacological treatment should be initiated in patients diagnosed with depressive disorder (DSM-IV), if there are no contraindications. No recommendations for a class of anti-depressants, although it is known that selective inhibitors of serotonin reuptake (SSRI's) are the first line of treatment (SORT A), by having fewer side effects. The pharmacological treatment should be continued and monitored for at least six months if it is effective. The cognitive-behavioral rehabilitation is effective in treating post-stroke depression (PSD) (SORT B). Acupuncture is effective in treating PSD (SORT B). The high intensity light therapy combined with citalopram shows good results in the treatment of PSD (SORT B). The electroconvulsivoterapia can be used in the treatment of PSD, although no efficacy in the acute phase (SORT B).

**Conclusions:** There is still little evidence in this area. The family doctor should be able to sensitize patients and caregivers to the possibility of PSD at all stages after stroke. In the first approach of the post-stroke patient's, the clinician should determine if there is a previous history of depression or risk factors for the disease. In drug treatment, there is insufficient evidence regarding the best dose to be used, treatment time, and techniques of attempted withdrawal.

Disclosure: No conflict of interest declared

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**Care for older people with mental disorders: the role of primary care**

C.A. de Mendonça Lima

*Department of Psychiatry and Mental Health, Centro Hospitalar do Alto Ave, Guimarães, Portugal*

Across the world, the family remains the cornerstone of care for older people who have mental disorders. But in high-income countries (HIC) the vital caring role of families is often overlooked while in low- and middle income countries (LMIC) the family care system is often overestimated. Older people with mental disorders in these countries typically live with extended families. But these are widely perceived as under threat from the social and economic changes that accompany economic development and globalization.

PC professionals are in a unique position to change this situation by improving the detection and management of mental disorders in old age. In HIC, the evidence suggests that PC doctors and nurses can make a mental disorder diagnosis with reasonable accuracy during a typical consultation. These findings cannot be generalized to LMIC. There is an urgent need to develop specific policies and programmes aimed at training PC professionals in the formal diagnosis and management of mental disorders in old age.

PC health care providers should seek to identify possible cases of mental disorders after appropriate training and awareness raising. For a formal mental disorder diagnosis, a more detailed history, medical review and mental state examination should be carried out to exclude other common causes of mental impairment and decline.

PC professionals can also have a major role in the physical assessment and prescription of psychotropic medicines and other medication. Finally, they can support families and other informal carers to cope with psychological stress, using counselling and psycho-educational interventions.

Disclosure: No conflict of interest declared

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**Burn out in primary care.**

J. Martínez Lozano<sup>1,2</sup>, P. Martínez Andrés<sup>3</sup>, J. Martínez Andrés<sup>4</sup>,  
M. C. Martínez Lozano<sup>5</sup>, N. Martínez Lozano<sup>6</sup>, M. D. Martínez Lozano<sup>7</sup>,  
M. A. Martínez Lozano<sup>8</sup>, J. V. Ramírez Villaescusa<sup>9</sup>

<sup>1</sup> Health Center of Banyeres de Mariola, Agència Valenciana de Salut, Banyeres de Mariola (Alicante), Spain; <sup>2</sup> Medical Director, Clínicas Martínez Lozano, Spain, Spain; <sup>3</sup> Plastic Surgery, General Hospital University, Albacete, Spain; <sup>4</sup> Medical School, Catholic University „San Vicente Mártir“, Valencia, Spain; <sup>5</sup> Medical Director, I. N. S. S., Albacete, Spain; <sup>6</sup> Rehabilitation, General Hospital University, Albacete, Spain; <sup>7</sup> Neurology. Dementia's Unit. Medical Director, General University Hospital, Castellón, Spain; <sup>8</sup> Dentistry, University „Cardenal Herrera“ C. E. U. Master Medical Director, Valencia, Spain; <sup>9</sup> Traumatology, General Hospital University, Albacete, Spain

**Purpose:** The burn out syndrome is defined as a chronic job stress response composed in negative attitudes and feelings towards people who they work with and to the same professional and being emotionally exhausted. It occurs most often in health workers. It was described in 1974 by Freudenberg. It is also called „Disease of Thomas“, explained in the book „The unbearable lightness of human beings“, by Milan Kundera. It is a process hardly evaluated in medical research and it is often going unnoticed. We try to find out the incidence of this phenomenon among General Practitioners in our environment.

**Material & Methods:** We recruited a total of 47 GP`s of which 18 refused to participate. We used the Maslach Burn out Inventory (MBI), assessing emotional exhaustion, depersonalization and reduced personal accomplishments.

**Results:** The average age of respondents was 39.7 years old, 52% are women and 48% men. We obtain an average score of 23 points from which we conclude that the burn out is in between. It is most striking in women until the age of 40. Surprisingly, it is much lower in GP`s who working the private sector.

**Conclusions:** The degree of burn out that we detect is not high. We are struck by the way in which some of the respondents endure it better: 1) Two of them say with physical exercise. 2) Another says using substances (alcohol and psycho drugs). 3) One of the women says that buying in a compulsive way.

Disclosure: No conflict of interest declared

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**„Meditation and wellness: Six steps to a healthy path“**

F. García

Family Medicine Service, Italian Hospital of B.A, CABA, Argentina

**Objective:**

- consider the Subjective well as a therapeutic target.
- develop a method to improve the well being using meditation

**Method:**

The mind has a tremendous capacity to produce disease but has not yet come to understand their power as a therapeutic tool.  
six steps to walk using meditation as a tool.

**-1° step „Conscience“**

Meditation helps to expand our consciousness. Meditation connects us to our innermost being.

**- 2° step „Energy“**

Life is a manifestation of energy in matter, the body having a continuous flow of energy. When these energies become unbalanced, illness arises

**- 3° step „Balance“**

We explain the balance from the beginning of yin and yang

Sick because we can not or do not know or do not want to maintain the balance of Yin and Yang

**- 4° „Unity“**

Disease is polarity and healing is overcoming polarity. It is important to recognize that the world is not polar but the knowledge that our mind gives him.

**- 5° step „Encounter“**

Our search should be directed to answer questions about the meaning and purpose of our lives.

**- 6° step „Happiness“**

„The purpose of life is the expansion of happiness and the process that takes place is the evolution“

We consider happiness as a therapeutic target, as important as the level of blood pressure or blood sugar value.

**Conclusions:**

Meditation is an invaluable tool value in the path to wellness and health fullest.

Disclosure: No conflict of interest declared



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**The prevalence of anxiety and depression symptoms among cancer patients**S. Kreitmayer Pestic<sup>1</sup>, M. Mujcinagic Vrabac<sup>1</sup>, O. Batic Mujanovic<sup>2</sup>, E. Alibašić<sup>1</sup><sup>1</sup> General/Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina; <sup>2</sup> Educational Center and Teaching Center of Family Medicine, Health Center Tuzla, Tuzla, Bosnia-Herzegovina

**Introduction:** The diagnose and treatment of cancer patients is a stressor condition for family doctors. Some mental disorders, especially anxiety disorder and depression, are very common among cancer patients. Process of adaptation to the oncologic treatment and increase in duration of hospital stay can result with significant life quality disturbance if symptoms of accompanying mental disorders remain untreated.

**Objective:** The severity level of anxiety and depression symptoms among cancer patients were investigated.

**Methods:** This prospective study was conducted among patients with two different cancer types. 48 patients were included in the study. Patients were evaluated according to Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI).

**Results:** 23 female and 25 male patients were included in the study. Average age was 51.27. Average duration after diagnose was 23.5 months. 5 patients had minimal anxiety, 9 had mild anxiety, 6 had moderate anxiety and 7 had severe anxiety. 3 had minimal depression, 7 had mild depression, 3 had minimal depression, 6 had moderate depression and 5 had severe depression.

**Conclusion:** Depending on numerous of variables (nutritional habits, environmental conditions, family support, cancer types etc.) patients indicate rapidly rising rates. Despite the incredible improvement in treatment, mental ruin is inevitable. This study indicates that there is comorbidity of anxiety disorder and depression with the cancer and that in some cases both disorders are present in the same time and how severe it can be.

Disclosure: No conflict of interest declared

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**Are well treated mental health disorders in primary care?**

L.A. Calleja Cartón, J. Paz Galiana, J.P. García Paine

Palo Health Care, Malaga Sanitary District, Málaga, Spain

**Objective:** Assess whether patients referred to mental health consultation in primary care is done if they are treated with the proper dosage and for the appropriate time.

**Material and methods:**

**Design:** Descriptive longitudinal

**Field of study:** three urban health centers.

**Selection Criteria:** Patients referred for mental health consultation carried out in health centers

**Subjects:** Patients referred for mental health consultation (N = 474)

**Measurements:** if you use mental health derived from primary care treatment prescribed, if the dose is right and if the treatment time is right.

**Results:** They include 474 patients of which 63.1% goes to primary care consultation prescribed treatment. Of those who come with 51.4% prescribed treatment have prescribed the appropriate dose and 50% receiving treatment for the appropriate time.

**Conclusion:** We must improve the management of mental health disorders in both scheduled dose as the time the patient must remain treated before referral to mental health consultation.

Disclosure: No conflict of interest declared

1047

**Psychic morbidity – mortality in elderly living in the community**

M. Labarta, S. Benabarre, J. Olivera, O. French, J. Rodriguez, T. Lorente, M. Sanz, I. Galindo, J.I. Bernues, P. Poveda  
*Pirineos Health Centre, Family and Community Medicine Teaching Unit of Huesca, Huesca, Spain*

**Objective:** To estimate the possible association between psychological symptoms and certain factors (physical, psychological, social, functional) and mortality in a sample of people over 65 years living in the community.

**Methods:** 324 people were selected from 19 health centers in Huesca (Spain), over 65 years, of both sexes, stratified random sampling by HealthCenters and age. Test were performed to assess cognitive status, functional psychopathology and the degree of physical impairment.

Bivariate and multivariate prevalence analysis was performed to analyze the relationship with the variables studied and followed for five years in order to study the relationship of those with mortality.

**Results:** Almost half of the elderly present psychiatric symptomatology, (more common in women). 50% of them were undiagnosed. Mortality by 5 years was 21.8%. No statistically significant relationship between the gender variable and increased mortality ( $p = 0.727$ ). Older patients have 8.5 times higher risk of death, CI 95% (1.8-39.25). Physical involvement is related in all grades with mortality so that in very severe the risk of death is 53.71 times higher, CI 95% (16.54 – 174.43). The psychic symptoms shows no statistically significant relationship with mortality when performed multivariate adjustment ( $p = 0.77$ ).

**Conclusions:**

- There is significant under-diagnosis of mental symptoms in the elderly.
- Sex is not associated with increased mortality in our sample.
- The factors associated with mortality are the physical affectation and age.
- Mortality was not directly related to psychiatric disorders when controlling possible confounding variables.

Disclosure: No conflict of interest declared

1076

**Do UK military helicopter aircrew exhibit resilience factors that protect against the development of operational stress?**

R. Withnall, D. Graham, N. T Fear, Mrs Lisa Hull, M. Jones, S. Wessely  
*King's Centre for Military Health Research, King's College London, London, United Kingdom*

**Objectives:** All military conflicts since the Boer War have led to complex post-combat medical symptoms. Contemporary manifestations of military operational stress include non-specific physical symptoms, PTSD, depression and alcohol misuse. Operational stress challenges military General Practitioners by causing significant morbidity and reducing individuals' military effectiveness. UK military helicopter aircrew (UK MHA) may be at increased risk of operational stress as they are amongst the UK's most frequently deployed military personnel. This study provides the first quantitative analysis of UK MHA operational stress by testing a null hypothesis, then proposes and qualitatively tests the UK's first military resilience theory.

**Methods:** All 1143 UK MHA were invited to complete an anonymised questionnaire including pre-validated measurable markers for operational stress (Multiple Physical Symptoms checklist; General Health Questionnaire; PTSD and AUDIT checklists). The 70% response rate exceeded that of most military studies. Levels of UK MHA operational stress were statistically compared with a matched control group of UK military non-helicopter personnel. UK MHA pilots' and non-pilots' operational stress levels were also compared. The 'LOAD versus CLEAR' resilience theory was proposed, and tested within 60 semi-structured interviews with UK MHA conducted in Afghanistan.

**Results:** Although the UK MHA had deployed to conflict zones more often and for longer than the controls, no statistical difference was measured in operational stress between the UK MHA and controls, or between pilots and non-pilots.

**Conclusions:** This study proposes the UK's first military resilience theory to explain the lack of association between conflict exposure and the development of operational stress.

Disclosure: No conflict of interest declared

1081

**Is it just caregiver burnout?**T. Magalhães<sup>1</sup>, G. Ferreira<sup>2</sup>, J. Ferreira<sup>3</sup><sup>1</sup> Family Medicine, UCSP Oliveira do Douro, Porto, Portugal; <sup>2</sup> Family Medicine, USF BrásOleiro, Porto, Portugal; <sup>3</sup> Family Medicine, USF Novo Sentido, Porto, Portugal

**Background:** Glioblastoma is a malignant neoplasm of the central nervous system. It can manifest as headache, muscle weakness, seizures, decreased libido, depression and memory, personality and vision disturbances. The caregiver experiences the same stress as all the other family members, and is subjected to physical and mental stress resulting from daily life and the difficulties of taking care of frail family members.

**Case description:** 43 year old woman, Caucasian, married, in a highly dysfunctional family. She has been the caretaker of her mother for several years. Presents with complaints of depressive symptoms and decreased libido, apparently due to caregiver burnout. Physical examination was normal. She was prescribed an antidepressant. After 3 months, she had complaints of marked anxiety, irritability and headaches; the medication was adjusted. Two months later, she has a convulsive episode. Cerebral imaging showed an infiltrative lesion in the cortico-subcortical plan, left fronto-temporal area. Surgery confirmed a glioblastoma.

**Conclusions:** The glioblastoma was located in the left fronto-temporal lobe. Injuries in this area may manifest as complaints of memory disturbance and decreased libido, and frontal lobe lesions may present with depression. The Family Physician must be the pillar of the family and be attentive to their needs: this case requires us not only to reflect on the caregivers as elements that are especially vulnerable to psychological and/or organic pathology, but also to always remember this particular dichotomy in the differential diagnosis of apparently psychological complaints.

Disclosure: No conflict of interest declared

1085

**Pregabalin for treatment of generalized anxiety disorder in adults**

A. Neto

USF Forte, USF Forte, Forte da Casa, Portugal

**Introduction:** Generalized anxiety disorder is a problem common in our daily activity. As a General Practitioner (GP), we are often responsible for the initial detection of this disease and its treatment.

**Objective:** To determine the evidence of the use of pregabalin in the treatment of generalized anxiety disorder in adults.

**Methods:** It was performed a survey of clinical guidelines, systematic reviews, meta-analysis and randomized clinical trials in the databases Medline, BMJ-clinical evidence, Cochrane library, Finder guidelines published over the past 10 years, in English and Portuguese, using the Mesh terms: pregabalin AND generalized anxiety in adults. Articles were selected according to the interest for the proposed target. To evaluate the results, the taxonomy SORT (Strength of Recommendation Taxonomy) of American Family Physician was used.

**Results:** Forty two articles were found, from which nine studies were selected: 1 guideline, 1 systemic review, 6 randomized clinical trials and 1 meta-analysis. From their analysis, we conclude that pregabalin is effective in treating of generalized anxiety disorder. The optimal dose ranges go from 200 to 450mg per day. It is well tolerated in a short term period treatment.

Pregabalin at a dose of 300mg/day appears equivalent to venlafaxine and alprazolam.

**Conclusions:** Pregabalin is an alternative to the treatment of generalized anxiety disorder (SORT A) in adults and may be used by the GP. It is effective in a short term period treatment. However, more research is needed, in order to evaluate this drug in the long term and determine the most appropriate dose.

Disclosure: No conflict of interest declared

1116

### The stress of traditional biggest holidays among Korean married women and men: Comparison the stress score between men and women using the Korean Social Readjustment Scale

S.J. Cho, J.S. Kim, S.S. Kim, J.G. Jung, S.J. Yoon, K.P. Kim  
Family Medicine, Chungnam National University Hospital, Daejeon, Korea

**Objective:** This study was performed to rate and compare the degree of the stress from the married women and men during the Korean traditional biggest holiday using Korean version of Social Readjustment Rating Scale (SRRS).

**Methods:** The subjects were 308 married men and 254 married women who had visited the Health Promotion center in Daejeon. Subjects were allowed to write in subjective stress scores based on SRRS. Also, factors associated with stress, sociologic and demographic features, characteristics related to Korean traditional holidays were evaluated in consideration with the family APGAR score. Stepwise multiple regression analysis was performed to evaluate the relation between researched variables and stress score.

**Results:** The mean ( $\pm$ SD) stress score on Korea's biggest holiday was 25.85 ( $\pm$ 15.46) in men and 32.41 ( $\pm$ 17.78) in women. The stress score in men were significantly lower than women ( $P=0.000$ ). Using the stepwise multiple regression analysis, 2 variables (Family APGAR score and allowance for parents in holidays) were related with the men's stress score (overall  $r^2=0.234$ ) and 3 variables (Family APGAR score, education and Hobby to cope with stress) in women (overall  $r^2=0.382$ ).

**Conclusions:** The mean stress score of men were lower than that of women. Although the magnitude of stress differs in both men and women, there is no doubt in that a holiday brings stress for both. Also, the family APGAR score seemed to contribute in showing the greatest explanation for stress in both men and women. In conclusion, a normal functioning family enormously affects one's mental health.

Disclosure: No conflict of interest declared

1229

### Acute alcohol intoxication

A. Guerra<sup>1</sup>, A. Cevallos<sup>2</sup>, P.Caballero<sup>3</sup>, F. Buenestado<sup>2</sup>, R.López<sup>2</sup>, A. Ortiz<sup>2</sup>, M.Dorado<sup>3</sup>

<sup>1</sup> Numancia Health Center, SER MAS, Madrid, Spain; <sup>2</sup> Angela Uriarte Health Center and Doce de Octubre Hospital, SER MAS, MADRID, Spain; <sup>3</sup> Medicina Interna, Doce de Octubre Hospital, SER MAS, Madrid, Spain

**Objective:** study alcohol intoxication.

**Methods:** It is a retrospective study of 703 patients with the diagnosis of acute intoxication, in the emergency department of our reference Hospital. We went through the patients attended during 2009 of intoxication (alcohol, pharmaceutical, illegal drugs, caustic substances or detergents).

**Results:** Alcohol intoxication represents a 30% of all of them. About sex, 67% of all were in men and 33% were in women.

About age, 68% of the patients were between 18 -30 years old, mainly young people.

At the emergency department arrived three different group of patients:

One group of adolescents related with "botellon" binge drinking, we mean young people that use to drink on the street of urban areas on weekend night, they buy alcohol and other beverages to drink together as a group. Another group are elderly men and some women, mainly alcoholics, some of them beggars that are sent to the Hospital by Community Service over and over again. The last group are middle aged men and women, alcohol intoxicated that suffer anxiety, depression or social maladjusted. Very often immigrants.

**Conclusion:** We can say that alcohol is in 58% the main toxic, and in 42% goes accompanied with other drugs ( benzodiazepine, cannabis, cocaine) Of all the patients that were admitted to hospital with acute intoxication: 44% suffered from alcoholism, 6% depression, 2% suicide attempt, 5% other psychiatric diseases and 8% drug addiction.. Our extrahospitalary medical assistance attends a lot of acute intoxications, only 42% goes to the hospital. Very few need admission.

Disclosure: No conflict of interest declared

1343

**Psychosocial interventions for common mental disorders in primary health care**A. Lopes do Amaral Menezes<sup>1</sup>, S. Fortes<sup>1</sup>, B.C. Bezerra Junior<sup>2</sup><sup>1</sup> Rio de Janeiro State University, Laboratório Interdisciplinar de Pesquisa em Atenção Primária à Saúde, Rio de Janeiro, Brazil; <sup>2</sup> Rio de Janeiro State University, Institute of Social Medicine (Public Health), Rio de Janeiro, Brazil

**Background:** Common mental disorders (CMD), especially anxiety and depression, are highly prevalent. In Primary Health Care (PHC), represented in Brazil by Family Health Strategy, these conditions are poorly detected or treated. This results in burden for patients, families and communities, as well as social and economic losses. Integrating mental health care into primary care can diminish this situation.

**Objective:** Identify and analyze psychosocial interventions currently adopted in Brazilian and international PHC in order to provide care for mental suffering and CMD.

**Method:** Brazilian and international literature review through LILACS and MEDLINE bibliographic databases.

**Results:** Interventions were gathered as follows: first group) traditional arrangements where a qualified professional performs the treatment face-to-face; second) different arrangements where contact with the professional is reduced and his role is more of a facilitator than that of a leader (example: interventions conducted by lay people, self-help, electronic platforms offering treatment packages via internet). In international PHC, interventions were brief and very structured. Theoretically, Interpersonal Therapy, Cognitive-behavioral Therapy and Problem Solving Therapy anchored most interventions. In Brazil group interventions and Community Therapy stood out.

**Conclusions:** CMD gain more visibility as PHC gains more ground and establishes itself closer to the population. In foreign countries, the integration of mental healthcare in PHC is in consolidation and there is an increase in psychosocial interventions, while in Brazil, since integration is a recent process, there isn't a standard in place. The prevalence of CMD and the potential for care in PHC demand that the research continues.

Disclosure: No conflict of interest declared

1347

**Assessment of anxiety, depression and quality of life in diabetic patients and its relation to duration of disease, treatment and changes in treatment**B. Sonmez<sup>1</sup>, A. Ozkara<sup>2</sup><sup>1</sup> Department of Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey; <sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Background:** The prevalence of diabetes is increasing rapidly throughout the world. The anxiety and depression, accompanying diabetes, may adversely affect the patient's harmony, quality of life, response to treatment, prognosis, course of diabetes, morbidity and mortality.

The aim of this study is to demonstrate the anxiety and depression conditions of Type 2 DM patients, and the relationship of their quality of life levels with the duration of their disease, the type of treatment applied and change of treatment

**Methods:** 400 Type 2 DM patients. A general survey has been applied on all patients in order to determine their socio-demographic characteristics and the general state in relation to their disease, while the Hospital Anxiety and Depression Scale (HAD), the EQ5D scale and The diabetes-specific quality of life scale (DQOL) has been applied on patients. The data analyzed by SPSS 15.0.

**Results:** In our research, it has been determined that age, gender, HT, the disease duration, type, change and duration of treatment, BMI and the diabetic complications influenced their anxiety and depression states and their quality of life.

**Conclusion:** The family practitioner, posing as an opinion leader in his/her region, is the most significant healthcare personnel who can stand by his/her patients in dealing with all these difficulties. Since the family practitioners can manage treatment of the diabetes patients among the population registered to them regularly and in an integrated manner with the hospitals, the rate of observing adverse influences on the patients' quality of life, anxiety and depression will be reduced.

Disclosure: No conflict of interest declared

1353

**Comparative study of the family representation of young patients with asthma and panic**

M. Kékes Szabó

*Institute of Psychology, University of Szeged, Szeged, Hungary*

**Objective:**The family constitutes a psychological unit in which the individual's development is subject to the interactions of the family members present in the system (Székely, 2008).

**Methods:** In my research I was looking for possible connections between asthma and panic disorder, by comparing the family representation of 12 asthmatic patients (19.5-28 years, M: 21.625 SD: 2.2475), 12 panic patients – with asthmatic history (19.5-26 years, M: 21.917 SD: 1.9521) and 57 healthy subjects (17.5-29 years, M: 21.474 SD: 1.6351) with the use of Gehring's (2010) Family System Test (FAST).

**Results:** During the quantitative analysis of the data, I did not find a significant difference in the strength of cohesion on the level of the family and its subsystems, but the strength of hierarchy – on family level, in an ideal situation – showed significant differences between the groups ( $\chi^2 = 12.678$ ,  $df = 6$ ,  $p = 0.048$ ). Panic patients displayed a stronger hierarchy in their representations. The flexibility of sibling cohesion also revealed a significant difference ( $F(2) = 3.482$ ,  $3.523$ ,  $p = 0.037$ ). Asthmatic patients "idealized" a closer relationship with their siblings than healthy or panic patients.

The qualitative analysis revealed a larger difference in the previous and current family structure for panic patients. "Triangulation" occurred more frequently in the patients groups.

**Conclusions:** Thus the family background and its perception are in connection with the occurrence of psychosomatic symptoms. However, further investigation is necessary in order to interpret the results in a broader context.

Disclosure: No conflict of interest declared

1370

**"Reduction of damage to the health of crack users by providing them with monitoring by a family health strategy team"**

R. Arantes Villela, M. Braga

*Secretaria Municipal de Saúde, Unidade de Saúde da Família – Gustavo Capanema, Rio de Janeiro, Brazil*

**Objective:** "Reduction of damage to the health of crack users by providing them with monitoring by a Family Health Strategy team"

**Method:** We, members from the Family Health Strategy team, for the purpose of assisting crack users and introducing them to our therapeutic groups, have decided to make regular visits to the environment used by crack users for consumption of the drug and offer our services to them. Our strategy was to approach the user during their day-to-day activities, in periodical, random visits during the morning period, so as to convey concepts on health, healthy food, oral hygiene, trying not to make criticism regarding the use of crack, but instead find out something that could explain such collective deviation of conduct. While offering assistance, we are attracting those individuals to a new type of approach, treating the user as a person with health problems, and offering alternatives to rescue their citizenship and, as a result, the cure to the addiction.

**Result:** After 5 visits within a period of 12 months by a Family Health Team composed by 1 Physician, 1 Nurse, 1 Nursing Assistant and 3 Health Community Agents, we were able to rescue from a universe of 42 crack users a patient who is managing to stay away from crack for 8 months.

**Conclusion:** Periodical monitoring by a Family Health Team of a crack user community may be beneficial in the sense to reduce damage to the health of crack users.

Disclosure: No conflict of interest declared

1377

**FOCO. Psychosocial intervention in family practice**

M. Mutchinick, P. Carrete, J. Estremero, A. Goldman Lifschitz, E. Rubinstein  
*Servicio de Medicina Familiar y Comunitaria, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina*

**Objective:** To introduce a tool called FOCO (English: focus, spanish acronym for Family, Orientation and Context) created at the Family and communitarian medicine practice at Hospital Italiano de Buenos Aires, to approach patients' context in the doctor's office

**Description:** FOCO is a tool that the Doctors at the Family and communitarian medicine practice at Hospital Italiano de Buenos Aires use with our patients, aimed to provide assistance, emotional support, orientation and eventually treatment for psychosocial problems that came up in the daily practice. The FOCO tool consist in a series of programmed interviews (generally no more than six) lasting 40 minutes each, with a patient, couple, or some or all of the members of a family, where general or specific aspects of this problems are treated.

Using this tool, all doctors complete a form that was designed by the practice, gathering information related to the problem that provide easy access to all important information and helps to keep it organized to help future supervision or investigation studies, and remains in the patients' medical record

**Conclusions:** We think that psychosocial aspects, whether contextual or family related are central topics in the daily practice for general practitioners. FOCO tool help us approach this topics and made easier for us to deal with them

Disclosure: No conflict of interest declared

1384

**Role of cognitive leisure activities in preventing dementia in the elderly**

R. Gonçalves<sup>1</sup>, A. R. Maltez<sup>2</sup>, M. J. Sá<sup>3</sup>  
<sup>1</sup> Family Medicine, Family Health Unit „Viver Mais“, Maia, Portugal; <sup>2</sup> Family Medicine, Family Health Unit „Pedras Rubras“, Maia, Portugal; <sup>3</sup> Family Medicine, Family Health Unit „Lidador“, Maia, Portugal

**Background:** Along with global aging, the incidence of age related diseases such as cognitive impairment and dementia is increasing. Dementia inflicts a tremendous burden of care on family and healthcare system. As limited effective treatment for dementia is currently available, identifying protective factors or effective prevention strategies may lead to considerable benefits. Among the proposed protective factors, cognitive leisure activities (e.g. reading, solving crosswords puzzles, playing cards, playing music) are one of the most studied.

**Objective:** Evaluate the effectiveness of cognitive leisure activities in preventing dementia development in older adults.

**Methods:** Studies were identified by searching PubMed using terms “dementia” and “cognitive leisure activities”. Only papers published in English, Portuguese or Spanish from 2002 to December 2012 and human related were included.

**Results:** We identified for inclusion two systematic reviews and four prospective studies. Most papers are based on observational studies and consistently indicated a protective effect of mental activity on cognitive function and prevention of dementia.

**Conclusions:** The evidence to date indicates that cognitive leisure activities participation may act as a protective factor against dementia development. However, higher-quality clinical trials such as well-designed randomized controlled trials are required to show a causal relationship between cognitive leisure activities and the risk of dementia.

Promoting the importance of cognitive challenges during leisure time might be a successful prevention strategy which can be carried out relatively easily on an individual level.

Disclosure: No conflict of interest declared

1416

**Progressive supranuclear paralysis: the other side of dementia. a case report**

M.F.M.J. Costa, A.S.N.P.S. Silva, S.M.R. Carvalho

USF Serpa Pinto, ARS Norte, ACeS Porto Ocidental, Porto, Portugal

**Objective:** Progressive Supranuclear Paralysis (PSP) is a rare neurodegenerative disease. As in Alzheimer disease, there is a cognitive dysfunction but there are several clues that should alert the physician for this diagnosis.

The aim of this report is to alert family physicians to the importance of a careful clinical history that is cornerstone to the correct diagnosis of demential syndromes.

**Methods:** We describe the case of EMVCF, male, 84 years old, caucasian. The first signs of disease appeared at the age of 73 with mild cognitive impairment (difficulty in word finding, trouble in remembering events), impairment in spatial abilities (small traffic accidents) and two inexplicable falls without any injury. On physical examination there weren't any extrapyramidal signs and postural stability was preserved. Analytical study was unchanged and computerized tomography revealed global cortico-subcortical atrophy. EMVCF was diagnosed with Alzheimer's disease and treated with donepezil.

**Results:** Over the years, there was a progressive decline in daily activities: greater imbalance in gait, frequent falls, gradual dystonic posture and limitation in inferior vertical movements of the eyes. In 2010 he was diagnosed with PSP. Instead of the therapy (cabidope-levodope, amantadine), the progressive functional decline persisted. Nowadays, EMVCF has reduced mobility and is dependent for all daily activities. His last fall was in August 2012 from which resulted a rib fracture with pneumothorax.

**Conclusion:** This case highlights the importance of clinical history in the evaluation of patients with cognitive impairment and the importance of considering several differential diagnosis of dementia.

Disclosure: No conflict of interest declared

1505

**Attention to street people in the central region of the city of Sao Paulo: possible challenge?**

M.I. Campos, M. Cavalcanti, O. Reis

ATENÇÃO BÁSICA, PREFEITURA MUNICIPAL DE SÃO PAULO, SÃO PAULO, Brazil

The presentation of this article came from the experience developed by the Legal Center Project to provide care to people living on the streets in the city of São Paulo, chemical dependent or not, as well as offering treatment.

**Objective:** to describe the process of project implementation Legal Center as public policy, in particular as health policy for the street population in the central and southern region of the city of São Paulo, Brazil.

**Method:** descriptive Research carried out in the year 2012.

**Results:** the project design is based on performance in the territory in the host search approach, identification, humanization, identification of all these people, and routing the network of health and social services of the municipality with specific instruments and registration. The problems encountered were numerous, from information obtained from the teams of street approach, implemented since July 2009.

Approaching the management to street people and or raising awareness among professionals is not the easiest task. Much still has to be done is to strengthen the actions in the territory and its articulation with the health care networks. It is important to think about strategies, with assistance focused on service models of the population, in a new logic of attention, that should be guided by Decree No. 7053 of 23/12/09 establishing the National Policy to the street Population and its Intersectoral Committee for monitoring the prospect of involvement.

Disclosure: No conflict of interest declared



1523

**Tiaprider use on alcohol dependence – What's the evidence?**M.T. Silva<sup>1</sup>, J. Gabriel<sup>1</sup>, R. Pedro<sup>2</sup><sup>1</sup> USF Mactamã, ACES X – Cacém / Queluz, Lisbon, Portugal; <sup>2</sup> USF Alfamouro, ACES XIX – Algueirão / Rio de Mouro, Lisbon, Portugal

**Introduction:** Family doctors should intervene in every case of alcohol consumption. Tiaprider can be used in treatment of Alcohol Withdrawal Syndrome (AWS), controlling tremor and agitation.

This work aims to review the evidence of Tiaprider as treatment in alcohol dependence.

**Methods:** Clinical guidelines, systematic reviews, meta-analysis and randomized controlled trials (RCT), published between October 2002 and October 2012 were collected from Medline, evidence based medicine websites and *Portuguese Indexed Medical Reviews*, using the MeSH terms: *tiapamil hydrochloride AND alcoholism/therapy*.

The Strength Of Recommendation Taxonomy (SORT) scale from the American Family Physician Association was used for assigning levels of evidence (LE) and strength of recommendation.

**Results:** Five articles were found and two RCT were selected.

The aim of the first RCT was to compare lorazepam with pregabalin or tiaprider in treatment of AWS having concluded all swotted medication showed evidence of safeness and effectiveness of the treatment (LE 2).

The second RCT procured to evaluate efficacy of tiaprider in maintaining abstinence from alcohol after detoxification on addicted people and established no superior efficiency compared to placebo (LE 2).

**Discussion:** Tiaprider displayed evidence of being safe and efficient in treating AWS (SORT B), but no superior effect was shown upon comparison to placebo on maintenance of abstinence (SORT B). Simultaneous psychosocial treatment was proved to influence the results.

Further studies are deemed required, which may provide paramount support to the current findings.

Disclosure: No conflict of interest declared

1607

**Factors associated with school refusal and outcome in Sri Lankan children**K.C. Jeewanara<sup>1</sup>, H. Perera<sup>2</sup><sup>1</sup> Department of Family Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka; <sup>2</sup> Department of Psychological Medicine, University of Colombo, Colombo, Sri Lanka

**Background:** School refusal occurs in 1–5% of all school children and has major social, emotional and educational implications for the child. It can cause serious disruption of the child's wellbeing and associated with significant short- and long-term sequelae. Children with school refusal may suffer from significant emotional distress, especially anxiety and depression.

**Objectives:** To study the clinical features, social, familial, and environmental and temperamental factors associated with children presenting with school refusal and the outcome of school refusal

**Method:** All children between 5 to 12 years of age, seen at child mental health clinic during January 2009 to July 2010 were included in the study. An interviewer administered semi-structured questionnaire used for collection of bio-data and features associated with school refusal.

**Results:** 71 children aged 5 to 12 years (mean age 9.08 years) participated in the study. 59.2%(42) were male. Commonest associated features were Somatic complaints 98.6%(70), fearfulness 46.5%(33), anxiety 29.6%(21), difficulty in separation 28.2%(20). Commonest precipitants were difficulty with peers 25.4%(18), difficulty with teacher 18.3%(13), change of school 14.1%(10). 50.7%(36) had an "easily upset" temperament. 32.4%(23) of these children were temperamentally timid. Majority of the children 45.1%(32) did not carry a specific diagnosis while others had phobic anxiety disorder 16.9%(12), asperger syndrome 14.1%(10) and depression 11.3%(8). Learning disability was represented only in 1.4%(1). 84.5%(60) children were managed as out patients. 36.6%(26) required medication. 57.7%(41) returned to school consistently and 22.5%(16) returned to school inconsistently.

**Conclusions:** Children with school refusal may suffer from significant emotional distress, especially anxiety and depression.

Disclosure: No conflict of interest declared

1700

### Evaluation of the severity of Alzheimer's disease in dementia patients attending the outpatient clinic for memory impairment by a „checklist for activities of daily living“

A. Yoshiiwa, K. Yamamoto, S. Ohno, S. Shiota, A. Kuroda, K. Abe, K. Murakami, T. Fujioka

Department of General Medicine, Oita University, Faculty of Medicine, Yufu-shi, Oita, Japan

**Objectives:** We conducted a questionnaire survey of the caregivers of patients with Alzheimer's disease (AD) to assess the relationship between the duration and severity of this disease, as well as the level of awareness of the disturbance of activities of daily living (ADL) among family members, using the „Checklist for Activities of Daily Living“, which was devised for rapid evaluation of the severity of AD based on the Functional Assessment Staging (FAST) scale.

**Methods:** The „Checklist for Activities of Daily Living“ was completed by the main caregivers of 317 patients who had been diagnosed as having AD at the „Outpatient Clinic for Memory Impairment“ (Department of General Medicine, Oita University Hospital) and were being treated on an outpatient basis.

**Results:** According to the FAST scale, AD was classified as severe in approximately 30% of the patients. Changes to activities in the toilet and bathroom often led the caregivers to first notice AD. When the relationship between the duration and severity of AD was assessed, AD was found to become severe at 3 years after it was detected by the family.

**Conclusion:** Because caregivers can easily confirm the severity of AD by focusing their attention on the patient's ADL in the toilet and bathroom, the „Checklist for Activities of Daily Living“ could be a useful tool for collecting information about dementia patients and be helpful for determining the treatment plan, including the timing for increasing the dosage of anti-dementia drugs such as donepezil.

Disclosure: No conflict of interest declared

## 3.15. MUSCULOSCELETAL PROBLEMS

101

### Effectiveness and satisfaction by the infiltrations performed in primary care

V. Lopez Marina, D. Rodriguez Vargas, D. Allepuz Perez, M.A. Alborch Orts  
Primary Care Center of Piera, Catalan Health Institute, Piera (Barcelona), Spain

**Objectives:** To assess the effectiveness and the satisfaction grade of the infiltrated patients in primary care.

**Methods: Methodology:** prospective intervention study in which 75 patients >14 years old were infiltrated with Triamcinolone Acetonide and Bupivacaine 2% by two family physicians of a semiurban primary care center during 2009. **Measurements:** socio-demographic factors (sex, age, marital status, education, employment status and rank); locations infiltrated; effectiveness in reducing local pain on a numerical scale (initial measurement, at 2 weeks, 3 months and year); satisfaction survey. **Statistics:** proportions, mean (X), standard deviation (SD), CI [95%], T-Student.

**Results: Socio-demographic factors:** 69.3% women, age (X+/-SD) 48.5+/-10.2 years old, 77.2% married, 41.3% completed primary school, 48% in active and 82.6% handworkers.

**Infiltrated locations:** 48% shoulder tendinitis, 26.6% carpal tunnel syndrome, 16.1% epicondylitis, 9.3% others. **Effectiveness (X, CI [95%]): Pain:** Initial 8.41, 7.6-9.1; 2 weeks 2.4, 1.8-3.1; 3 months 2.2, 1.5-2.8; year 2.5, 1.9-3.3 (p<0.05). **Functional impotence:** Initial 8.9, 8.3-9.6; 2 weeks 2.8, 2.2-3.5; 3 months 2.5, 1.7-3.2; year 2.1, 1.6-2.8 (p<0.05). **Adverse effects:** 1 mild ecchymosis in 1 epicondylitis. **Satisfaction survey (N = 50):** 90% great satisfaction, emphasizing comfort (64%) and high efficiency (54%). 90% would want their family physician applies the technique.

**Conclusions:** Were infiltrated more women, middle-aged and active as handworkers. Shoulder tendinitis and carpal tunnel syndrome are more infiltrated locations, being a very effective and safe procedure. Patients expressed great satisfaction after infiltration and want its generalization in primary care.

Disclosure: No conflict of interest declared

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**Study of trigger points in shoulder pain**

S. Perez Palomares<sup>1,2</sup>, B. Oliván-Blázquez<sup>3,2</sup>, E. López-Lapeña<sup>1,2</sup>, E. Gaspar-Calvo<sup>1,2</sup>, M<sup>a</sup>L. De-la-Torre-Belderrain<sup>1,2</sup>, M. Pérez-Benito<sup>1,2</sup>, V. Ara-Loriente<sup>1,2</sup>, R. Magallon Botaya<sup>1</sup>

<sup>1</sup> Primary Care, Aragon Health Services, Zaragoza, Spain; <sup>2</sup> Primary Care Research, Aragon Health Science Institute, Zaragoza, Spain; <sup>3</sup> Psychology Department, University of Zaragoza, Zaragoza, Spain

Shoulder pain is an important cause of morbidity and has high prevalence. It is the third most common musculoskeletal problem seen in primary care consultations.

The biomechanical situation in movement of the scapula is relevant in its aetiology, as is an underlying muscular cause that may be responsible for this absence of normal movement. This muscular cause is referred to as myofascial trigger points (MTrPs), which are located in the soft tissues, mainly in the muscle bellies.

**Aims:** To identify the existence of MTrPs in the context of subacromial impingement, which leads to pathologies affecting the tendons of the rotator cuff.

**Methodology:** Transversal descriptive study into the correlation between the existence of MTrPs in the periarticular muscles and their influence on perceived pain (measured with VAS), limitation of joint mobility (measured with goniometry) and shoulder function (evaluated with the Constant score).

**Sample size:** 121 subjects. Statistical analysis of correlation was performed using Spearman's rho correlation coefficient.

**Results:** The mean number of MTrPs per patient was 5.5 ( $\pm 2.3$ ) and 47.1% of patients had more than 5 MTrPs. The more MTrPs patients had, the more pain they suffered, in addition to having less mobility in flexion and abduction, and lower shoulder function for carrying out the activities of daily life. The most influential MTrPs were those located in the supraspinatus, teres minor and deltoid muscles.

**Conclusions:** These findings are significant in that they allow treatment for this condition to be adjusted with such effective techniques as dry needling of MTrPs.

Disclosure: No conflict of interest declared

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**More than a fall...**

A. Bettencourt<sup>1</sup>, B. Pimentel<sup>1</sup>, C. Rego<sup>1</sup>, D. Rocha<sup>2</sup>

<sup>1</sup> Unidade de Saúde da Ilha Terceira, Centro de Saúde de Angra do Heroísmo, Angra do Heroísmo, Portugal; <sup>2</sup> Unidade de Saúde da Ilha Terceira, Centro de Saúde da Praia da Vitória, Praia da Vitória, Portugal

**Context:** The aneurysmal bone cyst (ABC) is a benign osteolytic bone neoplasm. Despite its good prognosis it has a locally aggressive behavior, and may present with pain, mass, limping gait or pathologic fracture. Its treatment involves excision, curettage and bone grafting. Given the possibility of recurrence, medical follow-up and periodic radiological monitoring is needed.

**Case Description:** Male, 5 years old, without relevant personal or family history, inserted into a nuclear family in stage III of the Duvall family life cycle.

He presented to the urgent care service (UCS) complaining of pain and limping gait, after lower limb trauma. In the absence of other findings, he was treated symptomatically. Eight days later, due to the persistence of the complaints, he returned to the UCS. The X-ray performed showed a well-defined lytic lesion in the femoral shaft, without fracture. He was referred to the pediatric emergency room and admitted to the hospital. The CT-scan showed a lytic expansive image in the right femur diaphysis, suggestive of an ABC.

He underwent tumor excision, graft and internal fixation.

Currently asymptomatic, he is followed routinely in orthopedics, pediatrics and family medicine consultations.

**Discussion:** The limping gait is a very common childhood complaint. While most cases are caused by benign self-limiting situations, life- or limb-threatening conditions must be diagnosed promptly.

The etiology can frequently be determined through medical history and physical examination, although radiographic studies are often necessary.

In this context, the family doctor plays a key role in the initial assessment, diagnosis and early referral.

Disclosure: No conflict of interest declared

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**Rare diseases, a challenge in primary care**

E. Andres, J.A. Ibañez

Family Medicine, C.S. Utebo, Zaragoza, Spain

**Objective:** Rare diseases, a challenge in Primary Care**Method:** Medical record review of the patient**Results:** Women, 40 years, comes because of pain, fatigue and marked weakness in the shoulder and pelvic girdle since 2 years. She has been seen in gastroenterology and internal medicine services. Relevant medical history of autoimmune hepatitis, primary biliary cirrhosis and hypertriglyceridemia.

Under treatment with ursodeoxycholic acid and fibrates. Blood tests revealed high levels of CPK (2217 U/L), LDH (606 U/L), ALT (150 U/L) and AST (108 U/L). ESR 41mm/h, ANAs +, antimitochondrial antibodies +1/160, EMG: low amplitude and short duration.

In primary care we consider the differential diagnosis between:

- **Systemic lupus erythematosus (SLE):** Our patient only has ANAs+. She doesn't fit the rest of diagnostic criteria.
  - **Drug-induced myopathies:** <1% incidence. We remove fibrates treatment without clinical improvement.
  - **Dermatomyositis:** She hasn't Skin findings (gottron lesions, scaly erythematous eruptions or red patches overlying the knuckles, elbows, and knees).
  - **Polymyositis:** Diagnosis is fourfold, including elevation of creatine kinase, history and physical examination, EMG alteration, and a positive muscle biopsy.
- Our suspected diagnosis was "**Probable Polymyositis**" (Clinical characteristics, EMG results compatible with polymyositis and high levels of muscle enzymes), so we decided to start with an initial high dose prednisone (1 mg/kg) which improved symptoms and CPK values. Later, the biopsy confirmed the diagnosis.

**Conclusion:** from primary care we may treat and manage the patients with polymyositis, up his visit by hospital specialist doctors, which will improve the symptoms and quality of life of patients.

Disclosure: No conflict of interest declared

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**Piriformis syndrome; A case with nondiscogenic sciatalgia**A. Parlak<sup>1</sup>, A. Aytekin<sup>2</sup>, S. Develi<sup>3</sup>, S. Ekinci<sup>4</sup>, E.T. Budak<sup>5</sup><sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Ortopedia, Agri Military Hospital, Agri, Turkey; <sup>5</sup> Anesthesia, Agri Military Hospital, Agri, Turkey

41 years old male patient admitted to our outpatient clinic with ongoing pain for 6 months in the waist and right hip. Patient had no history of trauma or coercion and sitting for a long time such as bus ride, long-distance walking, climbing stairs was bringing out his pain on the right hip and thigh which was not showing continuity. In physical examination Schober test evaluated as negative and straight leg raising test positive at 45 degrees, FABER test as. There was tenderness in deep palpation on the right gluteal region. No pathological finding revealed at lumbosacral AP/L X-ray. In MRI of lumbar spine and sacroiliac joints, diffuse annular bulging at L4-5 mainly at the right side detected but no root and spinal nerve compression determined. Sacroiliac joints found to be normal in MRI of the sacroiliac joints. But according to left piriform muscle of patient, on the right side asymmetric increase in size and no abnormal signal changes of piriform muscle and sciatic nerve detected. There were no neurological deficits. Electrophysiological studies were normal. Sonographic examination of the vascular structures in the lower extremities revealed no pathological findings. Sitting with hot packs, hip abduction strengthening exercises and stretching exercises of piriformis suggested due to diagnosis of piriformis syndrome. Piriformis syndrome as a nondiscogenic reason besides lumbar discopathy should be kept in mind as a rare situation in daily practice, in differential diagnosis of patients presenting with low back and hip pain.

Disclosure: No conflict of interest declared

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**Three cases of tethered cord syndrome in adults depending on neural fibrolipoma**A. Parlak<sup>1</sup>, A. Aytekin<sup>2</sup>, S. Develi<sup>3</sup>, U. Aydogan<sup>4</sup><sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey <sup>4</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey

Three patients admitted to our clinic with back pain and leg pain increasing with activity. There was no history of trauma and operation, complaint of pain has showed a slight increase in the last two years.

Our first case was a 25 years old female patient and was complaining of pain in low back, right thigh and leg. In her physical examination; straight leg raise test (SLRT) was positive, there was a loss of motor function in right foot flexion movements and hypoesthesia at L5-S1 dermatome zones.

Other two patients were female, 33 and 24 years old, complaining of low back and left leg pain. SLRT was positive in both cases, in second case there was hypoesthesia at the left L4-5 dermatome zones. No motor deficits found.

No urinary and fecal incontinence, lower extremity orthopedic problems and significant muscle atrophy was detected in these three cases.

In lumbar MRI examination, increase in lumbar lordosis and lipoma at internal filum terminale was observed in all three cases. In these cases, conus medullaris was in the normal position, no significant thickening of internal filum terminale and disc pathology detected.

In three cases with internal filum terminale lipoma (fibrolipoma), herniated disc pathology considered first due to sciatica like symptoms but radiologically no disc hernia detected. Tethered cord syndrome is diagnosed with slight motor and sensory loss, pain complaints, increased lumbar lordosis, and fibrolipoma detected at internal filum terminale.

Disclosure: No conflict of interest declared

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**A case of adult Chiari Malformation**A. Aytekin<sup>1</sup>, A. Parlak<sup>2</sup>, S. Develi<sup>3</sup>, S. Ekinci<sup>4</sup><sup>1</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey; <sup>4</sup> Ortopedia, Agri Military Hospital, Agri, Turkey

33 years old female patient suffering from headache, loss of balance, paresthesia in both upper extremities, occasional syncopal attacks admitted to hospital. According to patient's medical history, current complaints have improved slowly in the last 10 years but it was noticed that patient has been complaining from syncope and involuntary downward eye movements since childhood. In physical examination, romberg sign was positive, loss of sensation in both upper extremities, pathological findings of cerebeller system such as unable to walk in a straight line and difficulty with rapid alternating movements found. Kerning and Brudzinski was suspected positive and Babinski evaluated +1. In examination of eyes it was observed that sometimes patient have difficulty in looking upwards. No pathology was found in patient's routine and *complete blood count*.

In patient's brain magnetic resonance imaging, cerebellar tonsils found to be protruded caudally through the foramen magnum, signs of brain stem compression, widespread dilatation in central canal (hydromyelia), bifid spinous processes of C6 and C7, enlarged structure of spinal canal (dural ectasia) observed. According to physical examination and brain MRI findings patient diagnosed to be Chiari Malformation Type I. Patient referred to neurosurgeon for further evaluation and treatment.

Disclosure: No conflict of interest declared

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**Osteoporotic Fractures and Obesity**I. Sierra-Martínez<sup>1</sup>, L. Sierra-Martínez<sup>2</sup>, R. Martínez-Fuerte<sup>3</sup><sup>1</sup> Traumatology Department, Hospital of Medina del Campo (Valladolid), Medina del Campo, Spain; <sup>2</sup> Gamazo Health Center, Valladolid Este Primary Assistance Gerency, Valladolid, Spain;<sup>3</sup> Pilarica Health Center, Valladolid Este Primary Assistance Gerency, Valladolid, Spain

**Aims:** Using records from the Medical Record Informatics (MRI) to determine the prevalence of osteoporotic fractures in patients with obesity to promote the Preventive Services Primary Health Care (PC) and the Specialist Orthopaedic Surgery and Traumatology (OST).

**Method:** Most osteoporotic fractures (OF) occur in the elderly, consuming significant resources, health, social and economic in the process of diagnosis and treatment. The authors conducted a descriptive cross-sectional study of patients diagnosed with Osteoporosis (OP) and Obesity and its complications OF, registered in MRI.

From the list of 16,294 patients with MRI, 1484 have been diagnosed with obesity, 753 of Osteoporosis (OP), we studied the OP-prevalence and the OF-prevalence. We analyzed the causes of OF. Data are collected on an Excel spreadsheet and analyzed using SPSS 9.0 for Windows.

**Results:**

-Patients with a diagnosis of obesity: 9.1% of patients-MRI.

-Patients-OP: 20% of the population > 50 years of age.

-753 patients-OP: 687 women, 66 men. Ratio woman-OP/men-OP: 10/1.

-687 women with diagnosis of OP: OF-Prevalence = 31,99%. 1. OF-hip: 5,09%. 2. OF-spine: 6,6%. 3. FO-twang-foot: 3,8%. 4. FO-humerus: 5,8%. 5. FO-wrist: 10,7%.

-66 men with diagnosis of OP: OF-Prevalence = 16,7%. 1. FO-hip: 3%. 2. FO-spine: 6,2%. 3. FO-twang-foot: 4,5%. 4. FO-humerus: 1,5%. 5. FO wrist: 1,5%.

-Falls at home was the cause in 82% of cases. For defects of vision, collision with obstacles and falls from ladders.

**Conclusions:** 9.1% of patients are obese. 20% of the population over 50 years of our health center, has recorded in his MRI the clinical process OP, with Ratio woman-OP/men-OP: 10/1

and FO-Prevalence woman/men: 2/1, which justifying the implementation of a Health Improvement Plan, including Education Program for Health aimed at groups and the development of Preventive Services PC and OST.

Disclosure: No conflict of interest declared

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**Nemaline myopathy. A child case report.**M.A. Caballero<sup>1</sup>, I. Gil<sup>2</sup>, P. Chinarro<sup>1</sup>, G. Prats<sup>3</sup><sup>1</sup> Pediatra, Centro de Salud Miraflores de los Angeles, Málaga, Spain; <sup>2</sup> Pediatra, Centro de Salud Alhaurín de la Torre, Málaga, Spain; <sup>3</sup> Médico de Familia, Centro de Salud Miraflores de los Angeles, Málaga, Spain

Nemaline Myopathy (NM) is a rare congenital neuromuscular disease characterized by muscle weakness, low proximal muscle tone, ligamentous laxity, areflexia and skeletal deformities. NM shows four different clinical and genetic types according to the age of beginning of symptoms and the type of inheritance.

**Case report:** A 7-years-old child who is monitoring in Pediatric Neurology Department because of motor delay and hypotonia from birth.

31w premature. He presented global hypotonia and needed nasal oxygen because of wet lung. Cranial ultrasound normal.

He started walking at 22 months and language was delayed.

He has recently worsened with frequent falls and difficulty standing.

**Exploration and complementary exams:**

Facial dysmorphism with prognathism and ogival palate.

Neuromuscular signs: generalized muscle hypotrophy, winged scapula, generalized hypotonia, miotatic hyporeflexia, decrease of strength in the extremities.

Pupillary and tendon reflexes are normal, and coordination too.

Karyotype 46XY, fragile-X study negative.

Elevated muscle enzymes

Electroneurogram and electromyogram: myopathic involvement.

Muscle biopsy: congenital nemaline myopathy.

**Evolution:** Nowadays he's attending school but needing physiotherapy and motoric and verbal. Pulmonary function is normal, presents only occasional episodic asthma.

**Conclusions:** Nemaline myopathy is a rare form of congenital myopathy, which can occur at any age. We must suspect it in any child, especially premature babies, with persistent hypotonia.

Muscle biopsy gives the definitive diagnosis.

There is no specific treatment for this disease and only the participation of a multidisciplinary team can help improve their quality of life. Respiratory complications and scoliosis will determine the prognosis.

keyword: nemaline myopathy, muscle biopsy

Disclosure: No conflict of interest declared

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**Arthrosis – types, importance, frequency and prevention in primary health service**

S. Bošnjak Stojiljković

GP Sremska Kamenica, Health Centre – Novi Sad, General Practice Sector, Novi Sad, Serbia

*Arthrosis* is a disease of the musculoskeletal system, caused by degenerative changes of the cartilage which leads to subchondral sclerosis of a bone and hypertrophic changes on the rim of a bone – *osteophytes*.

**Methods:** We used patients' medical case histories, clinical examinations, laboratory, X-ray diagnosis and survey, as well as consultations with physiatrists and orthopaedists.

**Results:** *The aim of the paper* is to examine types of arthrosis, their importance and frequency in regard to sex and age parameters, and therapeutic and preventative measures. 70 patients were included, 40 women and 30 men, life ages 40 to 60, and the study lasted five months. All 70 patients had some kind of the arthrosis. The most common types were gonarthrosis and coxarthrosis: 15 of 30 men had coxarthrosis, 5 in combination with gonarthrosis, the other 15 had only gonarthrosis, 15 of 40 women had coxarthrosis, 5 in combination with gonarthrosis, the other 25 had only gonarthrosis. Thus, 40 patients (life ages 40 to 50) were diagnosed with gonarthrosis, 30 with coxarthrosis out of which 10 (life ages 50 to 60) had gonarthrosis in combination. The cause is unknown, the most frequent potential factors are: congenital hip subluxation (5 patients), obesity (20), trauma (20), genetic factors (10), hard, physical work (10) and metabolic or endocrine disorders (menopause, diabetes mellitus, Hashimoto's thyroiditis, 5 patients). 28 of 70 patients had clinical symptoms (pain, crepitations, muscle atrophy, limited movability), 16 with gonarthrosis and 12 with coxarthrosis. *Therapeutic approach* comprised of physical therapy (hydrotherapy, kinesitherapy and electrotherapy) with 28 patients. Surgery intervention (arthroplasty) was applied at 3 patients with gonarthrosis and 10 patients with coxarthrosis. All 70 patients had preventative measures: weight reduction, balanced diet, physical activity adapted to the health condition, usage of chondroprotectors for muscle strengthening, cartilage regeneration and joint relieving.

**Conclusion:** Arthrosis frequency is rather high and is increasing constantly. Women (life ages 45 to 55, working population) are most commonly affected. The most frequent types are coxarthrosis and gonarthrosis, equally present with both sexes. Arthrosis anticipations are good, without effect on the overall health condition and life expectancy, with 90% favourable predictions in arthroplasty. *Age limit is shifted to younger population; arthrosis prevalence is increasing which stands as great health and social problem, imposing the need for better methods of treatment and prevention.*

Disclosure: No conflict of interest declared

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**Tropical or degenerative myelopathy?**

N. Monteiro, E. Alves, M. C. Gonçalves

ARS Norte, USF Porto Centro, Porto, Portugal

**Introduction:** Spondylotic cervical myelopathy is the most common spinal cord dysfunction after 55y. Despite degenerative changes being its main etiologic factor, occupational trauma and genetic factors are also relevant. It makes differential diagnosis with tropical spastic paraparesis, which has one of the highest prevalence rates in Brazil.

**Case report:** Male, 35y, single, born in Brazil, resident in Portugal since 2007, former marijuana user, history of sexual risk behavior 10y ago, cervical and lumbar pain since 2010 with normal imaging study dating from 2011. In 26<sup>th</sup> March 2012 presents to health care services with walking difficulty, paraesthesiae and decreased muscle strength at lower limbs. At neurological examination had enlarged deep tendon reflexes and unstable walking, with no further changes. A hospital appointment was asked by his Family Doctor. In 19<sup>th</sup> April 2012, he presents again at his Family Doctor's office with increased walking difficulty. The patient has been advised to attend the emergency department of local hospital. He has been admitted to the Neurology Service where a MRI has been done. It showed a voluminous disc herniation at C4-C5 with signs of spinal cord compression. A surgical intervention was performed in 5<sup>th</sup> May 2012. The patient is currently recovering.

**Conclusion:** This case shows the General Practitioner's important role in the fully integration of clinical history and physical examination. On the other hand, it demonstrates the need for the Family Doctors to become acquainted with diagnosis rare in their home countries, but common in the main countries of immigration.

Disclosure: No conflict of interest declared

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**A rare cause of headache in adults: Atretic parietal cephalocele**A. Aytekin<sup>1</sup>, A. Parlak<sup>2</sup>, S. Develi<sup>3</sup><sup>1</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Anatomy, Gulhane School of Medicine, Ankara, Turkey

39 years old female patient admitted to our clinic with the complaint of headache. Patient had a complaint of headache which existing for ten years and its severity was increased in time. Pain was at the back of the head and was in moderate severeness. Patient was investigated previously in terms of hypertension and migraine because of headache, but the mentioned diseases were not detected. Patient was prescribed analgesic therapy and used treatment for a short time. However, over time, patient have left the treatment. Despite continuing complaint of headache, patient did not admitted to hospital. Recently, due to the severity of her complaint patient admitted to our outpatient clinic. On physical examination the patient's arterial blood pressure noticed to be 110/70 mmHg, fever 36.5° and heart rate 76 beats/min. Neurological examination was normal. Examination of the head and neck revealed a mass of about 1x2 cm in diameter on parietal bones, around lambda, examination of other organs was normal. Fundus examination revealed no pathological. Complete blood count, routine biochemical tests, vitamin B12, folate, ferritin, thyroid hormone levels were within normal limits. Patient had a brain Magnetic Resonance Imaging (MRI) scan. In MRI, interparietal bone defect and soft tissue mass noticed at anterior of lambdoid suture. In intracranial evaluation, absence of sinus rectus and instead, presence of persistant primitive vertical falcine sinus observed. The patient was diagnosed as Atretic parietal cephalocele (APC) according to these findings. APC is a rarely seen and secret form of congenital herniation which involves meninges and glial cells of central nervous system.

Disclosure: No conflict of interest declared

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**Medial tibial stress syndrome**S. Develi<sup>1</sup>, A. Aytekin<sup>2</sup>, A. Parlak<sup>3</sup>, S. Ekinci<sup>4</sup><sup>1</sup> Anatomy, Gulhane School of Medicine, Agri, Turkey; <sup>2</sup> Radiology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>4</sup> Ortopedia, Agri Military Hospital, Agri, Turkey

20 years old male patient was admitted to our outpatient clinic with pain in both legs. The patient had complained of pain, which was lasting for few weeks, in distal 2/3 and anteromedial parts of both legs. While pain was significant at the initial phase of exercise, it was ongoing with decrease. In physical examination mild pes planus noticed but over pronation didn't observed. Body mass index was 25,60 kg/m<sup>2</sup>. No obvious edema, swelling or hematoma of both lower extremities were detected. The X-ray radiographs revealed no pathological findings. Magnetic Resonance Imaging (MRI) was planned for the patient. In MRI, bilateral increased signal changes observed in fat-suppressed T2-weighted sequences, at the distal 2/3 and posterolateral of Tibia, which was evaluated in favor of periostitis. At the same time there was slight edema in the bone marrow. No significant stress fracture was found. Patient was diagnosed as medial tibial stress syndrome due to current imaging findings and clinical features and initially resting prescribed. Cold pack massage suggested for pain and inflammation. Additionally ibuprofen is given for antiinflammatory treatment. Footbed was given to patient and recalled for controll 1 month later. In control examination, significant improvement in complaints noticed, stretching and strengthening exercises for the leg muscles planned. Medial tibial stress syndrome has a spectrum ranging from asymptomatic osteopeni to stress fracture. Especially improper exercise programs, inadequate pre-exercise preparation, improper working environment and female gender are risk factors for this syndrome. Also pes planus, over pronation and pes cavus are predisposing clinical situations.

Disclosure: No conflict of interest declared



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**Assessment of disease activity in rheumatoid arthritis**M. Racic<sup>1</sup>, Lj. Kozomara<sup>2</sup>, S. Kravic<sup>3</sup>, S.Kusmuk<sup>1</sup><sup>1</sup> Family Medicine Department, University of East Sarajevo, Sarajevo, Bosnia-Herzegovina;<sup>2</sup> Family Medicine, Health Centre, Banja Luka, Bosnia-Herzegovina; <sup>3</sup> Family Medicine, Health Centre, Gacko, Bosnia-Herzegovina

**Objective:** The aim of this study is to investigate which rheumatoid arthritis disease activity measures are being collected in BiH rheumatology practice.

**Methods:** Ten family medicine practitioners from eastern parts of Bosnia and Herzegovina participated in this observational study between October and November 2012. The patient population reviewed represented a cross-sectional cohort of patients with rheumatoid arthritis who visited different rheumatology practices for consultation as of 1 October 2011. Each practitioner recruited their patients with rheumatoid arthritis into the study by retrospectively reviewing their medical records. The following disease activity measures were reviewed from each patient's last consultation: the doctor and the patient global assessment of disease activity, patient's perception of pain, tender joints count, swollen joints count, laboratory analysis of acute phase reactants (ESR and CRP), patient's assessment of physical function and radiographic analysis.

**Results:** Ninety-six patients participated in this study. The disease activity measures that were collected most often were ESR (92,3%), CRP (86.9%) and radiographic imaging of affected joints (68%). Swollen joints count and tender joints count were infrequently collected (19%). Patient's perception of pain, physical function assessment and the global assessments of disease activity were not collected in any single patient.

**Conclusion:** This review showed that rheumatoid arthritis disease activity measures have not been adequately collected in BiH rheumatology clinical practice. An accurate and validated composited assessment of the disease activity is necessary to effectively treat rheumatoid arthritis patients. Their use might need further recommendations and appropriate education before they become embedded in routine clinical practice.

Disclosure: No conflict of interest declared

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**Psychoeducational group in fibromyalgia: results of FIQ pre and post intervention**M.A. Sieira Ribot, L. Troyano Moreno, K. Torres Reyes, P. Vera Garcia, I. Hernández Maldonado, P. Franco Comet  
ABS Can Gibert del Pla, ICS, Girona, Spain**Objectives:**

1. Rate psychoeducational Fibromyalgia intervention through satisfaction survey and Fibromyalgia Impact Questionnaire (FIQ).
2. Analyze changes in patients with pre-post intervention FIQ by items.

**Material and method:**

Sample: 16 patients from urban health center.

Intervention: Psychoeducational Group (6 sessions-1/week)

Materials: Satisfaction survey validated and FIQ.

Method: Analysis satisfaction survey and pre-post intervention FIQ total and by item.

Statistical test: Correlation of Fisher and t-Student

**Results:**

Satisfaction survey (all results in %):

Contents: Good: 12.5-Very good: 87.5

Professionals: Very good: 100

Timetable: Very bad: 6.3-Regular: 6.3-Good: 18.8-Very good: 68.8

Location: Very bad: 6.3-Good: 6.3-Very good: 87.5

Improved quality of life: Good: 12.5-Very good: 87.5

Global: Very good 100

Correlation FIQ pre-post intervention:

Physical impairment: 0.760 ( $p < 0.05$ )

Feel good: -0.053 ( $p > 0.05$ )

Work missed: 0.247 ( $p > 0.05$ )

Do work: 0.617 ( $p < 0.05$ )

Pain: 0.593 ( $p < 0.05$ )

Fatigue: 0.398 ( $p > 0.05$ )

Rested: 0.334 ( $p > 0.05$ )

Stiffness: 0.634 ( $p < 0.05$ )

Anxiety: 0.337 ( $p > 0.05$ )

Depression: 0.676 ( $p < 0.05$ )

Total: 0.537 ( $p < 0.05$ )

Student t-FIQ pre-post intervention:

Physical impairment: -0.412 ( $p > 0.05$ )

Feel good: 1.240 ( $p > 0.05$ )

Work missed: 1.706 ( $p > 0.05$ )

Do work: 2.112 ( $p > 0.05$ )

Pain: 0.779 ( $p > 0.05$ )

Fatigue: 1.965 ( $p > 0.05$ )

Rested: 0.577 ( $p > 0.05$ )

Stiffness: 0.000 ( $p > 0.05$ )

Anxiety: 0.839 ( $p > 0.05$ )  
Depression: 2345 ( $p < 0.05$ )  
Total: 1,202 ( $p > 0.05$ )

**Conclusions:** Although intervention is assessed as very good by all patients, the improvement in the FIQ is only modest and not significant. It seems to be especially effective in reducing depression, although there are significant correlation in items physical impairment, do work, pain and stiffness. But it is important to keep in mind that many factors can influence the sections studied and the FIQ questionnaire refers to the last week. However, considering the obtained results, we will continue sessions for improving the patients quality of life.

Disclosure: No conflict of interest declared

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### Chronic shoulder pain: Evaluation and diagnosis

J. Marinhas, C. Fernandes, A. Yee, R. Oliveira

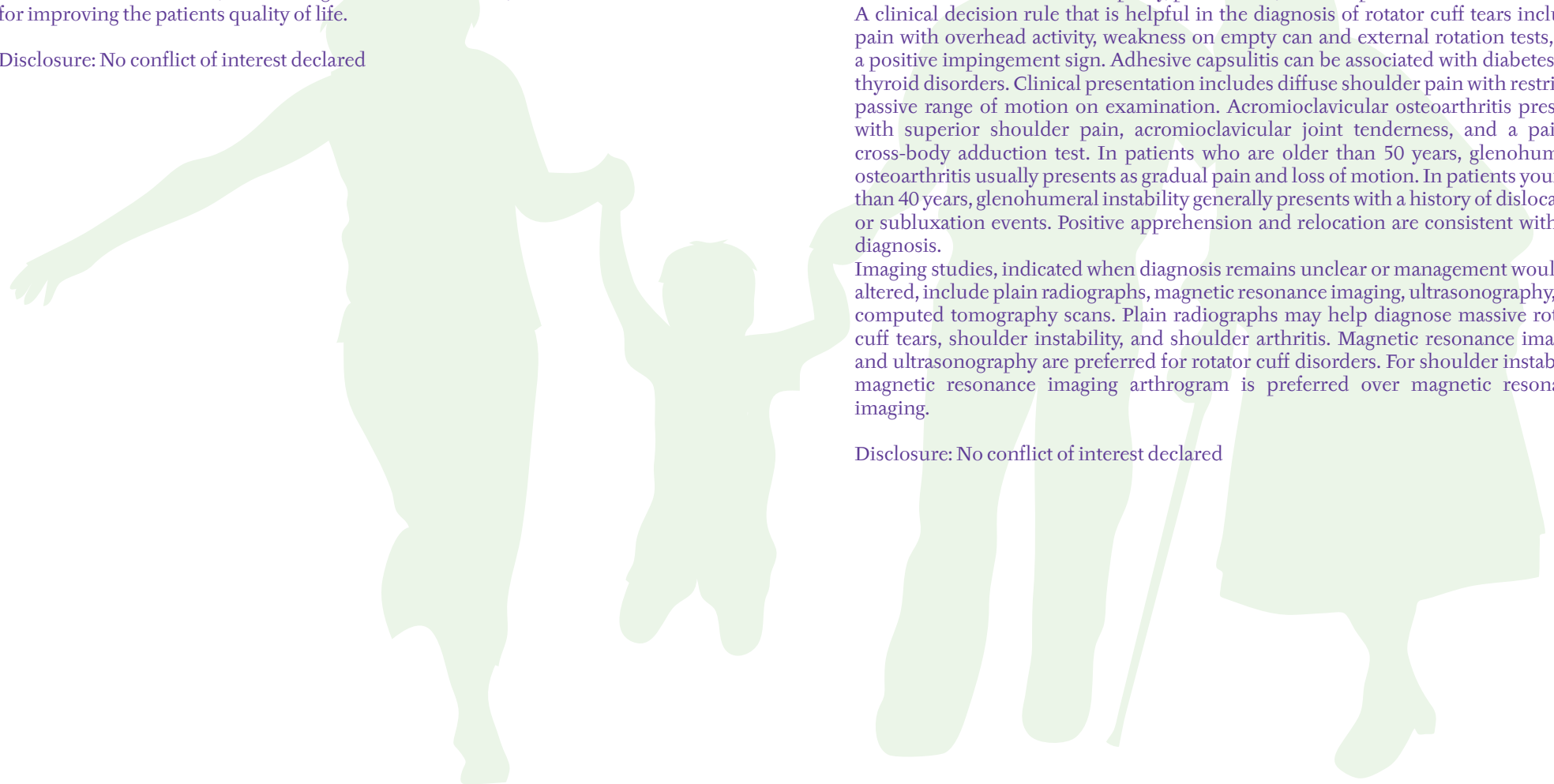
*Ortopedia, Centro Hospitalar Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal*

Shoulder pain is defined as chronic when it has been present for longer than six months. Common conditions that can result in chronic shoulder pain include rotator cuff disorders, adhesive capsulitis, shoulder instability, and shoulder arthritis. Rotator cuff disorders include tendinopathy, partial tears, and complete tears.

A clinical decision rule that is helpful in the diagnosis of rotator cuff tears includes pain with overhead activity, weakness on empty can and external rotation tests, and a positive impingement sign. Adhesive capsulitis can be associated with diabetes and thyroid disorders. Clinical presentation includes diffuse shoulder pain with restricted passive range of motion on examination. Acromioclavicular osteoarthritis presents with superior shoulder pain, acromioclavicular joint tenderness, and a painful cross-body adduction test. In patients who are older than 50 years, glenohumeral osteoarthritis usually presents as gradual pain and loss of motion. In patients younger than 40 years, glenohumeral instability generally presents with a history of dislocation or subluxation events. Positive apprehension and relocation are consistent with the diagnosis.

Imaging studies, indicated when diagnosis remains unclear or management would be altered, include plain radiographs, magnetic resonance imaging, ultrasonography, and computed tomography scans. Plain radiographs may help diagnose massive rotator cuff tears, shoulder instability, and shoulder arthritis. Magnetic resonance imaging and ultrasonography are preferred for rotator cuff disorders. For shoulder instability, magnetic resonance imaging arthrogram is preferred over magnetic resonance imaging.

Disclosure: No conflict of interest declared



754

**Osteoporosis in men**

J. Marinhos, F. Santos, R. Oliveira, C. Fernandes

*Ortopedia, Centro Hospitalar Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal*

Osteoporosis is a significant threat to aging bone in men. Thirty percent of hip fractures occur in men; during initial hospitalization and the first year after fracture, the mortality rate is twice that of women.

Nevertheless, osteoporosis in men is grossly underdiagnosed and undertreated. The most frequent factors associated with osteoporosis in men are age >75 years, low baseline body mass index (<24 kg/m<sup>2</sup>), weight loss >5% over 4 years, current smoking, and physical inactivity. Osteoporosis in men is either secondary to a primary disease or is idiopathic. It exhibits a bimodal age distribution, with peaks at age 50 years (secondary disease) and at age 70 years (idiopathic).

Prevention and early detection currently are the best forms of management. Alone or in combination, calcium, vitamin D, bisphosphonates, and human parathyroid hormone are

all effective management options. In the acute setting of fragility fracture, the orthopaedic surgeon is key in identifying patients at risk because the surgeon provides primary care and may initiate prophylactic measures to prevent future fractures.

Disclosure: No conflict of interest declared

811

**Osteonecrosis of the hip, a case report**

M. Sant'Ana, H. Sottomayor, I. Alvim

*USF Espaço Saúde, ACeS Porto Ocidental, Porto, Portugal*

**Objective:** Non-traumatic osteonecrosis of the hip mostly affects adults between the third and sixth decades of life, being bilateral in 50% of cases. The process leads to severe destruction of the femoral head with degeneration of the joint, causing high morbidity. We describe a case of non-traumatic osteonecrosis of the hip in an adult woman.

**Case Report:** Female, 39 year old, without relevant background or traumatic history, goes to the Emergency Department (ER) in October 2011 for strong pain in the groin and right hip, lasting for two weeks. The pain radiated to the groin, woke up the patient at night and caused large incapacity. Infectious cause was excluded and she was discharged with anti-inflammatory drugs.

Patient got worse and returned to the ER a week later. Computerized Tomography (CT) showed no changes and the patient was oriented to orthopedic appointment.

In December 2011, she performed a magnetic resonance imaging (MRI) which showed extensive osteonecrosis of the femoral heads, more prevalent on the right.

In January 2012 she had surgery for right total hip prosthesis placement. After surgery the pain spread to the left hip, despite walking with crutches.

Currently, she maintains surveillance in orthopedics and is being evaluated for left total hip prosthesis placement.

**Conclusions:** Non-traumatic osteonecrosis of the hip has multiple etiologies. The history and physical examination are essential for the diagnosis, since the radiological study (Radiography and CT) can only show changes in very late stages of the disease. MRI is the exam of choice.

Disclosure: No conflict of interest declared

867

**Diacerin in the relief of pain caused by osteoarthritis**R. Campos<sup>1</sup>, A.L. Soares<sup>1</sup>, T. Magalhães<sup>2</sup><sup>1</sup> USF Nova Via, ACES Grande Porto VIII Espinho/Gaia, Vila Nova de Gaia, Portugal; <sup>2</sup> UCSP Oliveira do Douro, ACES Grande Porto VII Gaia, Vila Nova de Gaia, Portugal

**Objective:** Review evidence regarding diacerin's benefit in the relief of pain caused by knee/hip osteoarthritis.

**Methods:** Survey of clinical practice guidelines, systematic reviews, meta-analysis and randomized controlled clinical trials published in Cochrane Library, Pubmed, National Guideline Clearinghouse, DARE, TRIP, Bandolier, Portuguese medical magazines index, using the MeSH keywords: diacerin, osteoarthritis. Inclusion criteria: treatment with diacerin in the relief of pain in patients with hip/knee osteoarthritis. Assessment of levels of evidence and strength of recommendation was established using American Family Physician's Strength of Recommendation Taxonomy (SORT).

**Results:** Of the 18 studies found, 4 were compliant with the inclusion criteria: a randomized double-blind trial and 3 meta-analysis. All studies showed a greater efficacy in pain reduction with diacereína when compared with placebo, two of which showed an efficacy similar to non-steroidal anti-inflammatory drugs. Diacerin had a greater number of side effects than placebo, most of which gastrointestinal: colics, dyspepsia and a diminished consistency of feces.

**Conclusion:** Evidence shows that diacerin is effective in the symptomatic relief of pain in osteoarthritis (SOR A), with the advantage that it can be used in elderly patients with multiple cardiac, renal and gastrointestinal comorbidities that often contraindicate the usage of non-steroidal anti-inflammatory drugs or other pharmacological classes. Studies with a greater sample size and longer follow-up period are needed to determine its long term effect.

Disclosure: No conflict of interest declared

963

**Steinert dystrophy...an atypical description**M. Jordão Abreu<sup>1</sup>, P. Fonte<sup>1,2</sup><sup>1</sup> Ponte Family Health Unit, Ponte Family Health Unit, Guimarães, Portugal; <sup>2</sup> Department of Community Health, School of Health Sciences, University of Minho, Braga, Portugal

**Objective:** Steinert's disease, a genetic disorder, is the most common form of muscle disease. Although its most pronounced characteristic are skeletal and smooth muscle dysfunction (weakness, stiffness and pain), these patients can also present vision impairment, cardiovascular and respiratory disturbances, among others. The diagnosis is clinical, being supported by DNA analysis and electromyography. Treatment is symptomatic. Life expectancy varies greatly among individuals. The authors aimed to alert to the possibility of this type of dystonia manifest itself firstly by less characteristic symptoms.

**Methods:** A clinical interview was conducted. We also consulted patient's clinical record and performed a literature review.

**Results:** VMMA, male, 63 years old, former smoker, with history of Chronic Obstructive Lung Disease, Sleep Apnea, left heart failure, sensorineural hearing loss and cataracts. In June 2012, the patient underwent a pharmacologic stress echocardiography, which was interrupted earlier due to not sustained multiple polymorphic ventricular tachycardias. This man was admitted to Cardiology service and, during this hospitalization, there were diagnosed dysarthrophonia, dysphagia, alopecia, bilateral ptosis, facial hipomimia, tetraparesis, global areflexia and cognitive complaints. Electromyography revealed a myotonic dystrophy, although genetic study being inconclusive for this same diagnosis.

**Conclusions:** This case illustrates the need for medical specialties to act together in order to evaluate the patient as a whole, since some diseases occur in a less common way. The family physician can play a key role serving as a link between the different medical specialties, as well as being alert to unspecific signs of the disease.

Disclosure: No conflict of interest declared

1027

**Glucosamine / chondroitin combination in symptomatic relief of osteoarthritis**A. Nogueira<sup>1</sup>, A. Moreira<sup>2</sup>, N. Monteiro<sup>3</sup><sup>1</sup> USF S. Félix Marinha, ARS Norte, Vila Nova de Gaia, Portugal; <sup>2</sup> UCSP Oliveira do Douro, ARS Norte, Vila Nova de Gaia, Portugal; <sup>3</sup> USF Porto Centro, ARS Norte, Porto, Portugal

**Objective:** The aim of this work was to review the current available information about the effectiveness of oral glucosamine/chondroitin combination, versus placebo, in the symptomatic relief of patients with knee osteoarthritis (OA)

**Methods:** A bibliographic research was carried out on February of 2012 using the MeSH terms *Knee Osteoarthritis*, *Glucosamine* and *Chondroitin* in several databases: *National Guidelines Clearinghouse*, *Guidelines Finder*, *CMA-InfoBase*, *Cochrane Library*, *Clinical Evidence*, *DARE*, *Bandolier*, *PubMed* e *Index de Revistas Médicas Portuguesas*. Data was collected if published since February 2002 in English or Portuguese. To assess the levels of evidence and strength-of-recommendation grade, the Strength of Recommendation Taxonomy (SORT) by American Family Physician was used.

**Results:** We found 212 articles, but only 1 Systematic Review (SR) and 1 randomized controlled clinical trial (RCT) comply with the established criteria. The SR studied does not recommend the use of the glucosamine / chondroitin combination in the treatment of OA of the knee with Evidence Level 1. The included RCT showed no statistically significant differences in relieving pain or improving function and mobility of the knee joint, of this therapy when compared with placebo (EL 1).

**Conclusion:** Being glucosamine and chondroitin natural substances that are seen as stimulators of synthesis of proteoglycans in articular cartilage, which would, theoretically, remodel the joint, the current evidence refers that oral glucosamine / chondroitin association is not recommended in symptomatic relief of knee osteoarthritis (SORT A).

Disclosure: No conflict of interest declared

1061

**Is it always the most prominent spinous process this of the seventh cervical vertebra? Radiographical study of the cervico-thoracic spinal junction in a Greek population sample.**G. Tsilimidos<sup>1</sup>, C. Verras<sup>1</sup>, K. Botsios<sup>1</sup>, M. Chatzisaroglou<sup>1</sup>, T. Charikopoulos<sup>2</sup>, D. Matsaidonis<sup>2</sup>, T. Grivas<sup>3</sup><sup>1</sup> Department of General Medicine, Tzaneio, Piraeus, Greece; <sup>2</sup> Radiology Department, Tzaneio, Piraeus, Greece; <sup>3</sup> Department of Trauma and Orthopaedics, Tzaneio, Piraeus, Greece

**Objective:** The spinous processes of the seventh cervical vertebra (C7) is indicated as the most prominent and therefore as a guide point for the recognition of others. The question is if it is always the C7 spinous process protruding or there is a deviation from this morphology. The purpose of this study is to answer the above question.

**Methods:** 195 were included in our study – 93 men (47.7%) with a mean age of 42.14 years and 102 women (52.3%) with a mean age of 49.43. The length was that of the middle point of the spinous process's origin from the vertebral lamina up to the middle of its tip. The comparisons of continuous variables were done by the t-test, SPSS 20.0 package.

**Results:** In males, C7 spinous process is longer in 72.90% and this of T1 in 27,1% (p <0,001), while, in females in 42.7% and in 57,3% (p <0,001) respectively. Thus there is statistically significant difference of C7 –T1 spinous process morphology. In males the average length of C7 spinous process was 44,11 mm (range 23,70 mm to 61,90 mm) and in females 37,82 mm (range 26,10 mm to 54, 20mm). In males the T1 spinous process length was measured 47,93 mm (range 24,20 mm to 58,70 mm) and in females 40,44 mm (ranging 24,40 mm to 53,10 mm).

**Conclusion:** Based on these results the necessity of finding the correct palpable guide-point on the surface of the torso (spinous processes of C7 or T1) is confirmed.

Disclosure: No conflict of interest declared

1090

**Obesity and OA in hip and knee: an epidemiological study in the general population with five years follow-up**Ž. Banjanin<sup>1</sup>, J. Bojanić<sup>2</sup>, G. Stefanovski<sup>3</sup>, Z. Dardić<sup>4</sup><sup>1</sup> Center for basic rehabilitation, Health center „Dr M. Stojanović“, Laktaši, Bosnia-Herzegovina;<sup>2</sup> Epidemiology, Institute of Public Health, Banja Luka, Bosnia-Herzegovina; <sup>3</sup> Physical therapy, Institute for rehabilitation “Dr M. Zotovic”, Banja Luka, Bosnia-Herzegovina; <sup>4</sup> General practice, Health center „Dr M. Stojanović“, Laktaši, Bosnia-Herzegovina

**Background:** Obesity is one of the most important risk factors for osteoarthritis in knee. However, notwithstanding numerous studies on this topic, the link between obesity and OA in hip is still not clear enough.

**Objectives:** To investigate the association between obesity and age and degenerative joint disease of hip and knee within adult population of the municipality of Laktaši.

**Methods:** The study included a retrospective analysis of a total of 865 patients aged between 19 and 91, who were treated for osteoarthritis in hip and/or knee from 01.01.2005 – 15.09.2010. OA was diagnosed based on clinical symptoms, physical examination and X-rays (78% of patients).

**Results:** Out of 865 participants, 295 (34.1%) had hip OA, among them 199 were women (67.5%) and 96 were men (32.5%). 570 patients (65.9%) were diagnosed with knee OA, among them 376 were women (66.0%) and 194 were men (34.0%).

317 patients (36.6%) had BMI above 30, among them 95 (30.0%) with hip OA (68.4% women and 31.6% men), while 222 (70.0%) had knee OA (72.1% women and 27.9% men). There was a considerable statistical significance ( $p < 0.01$ ) of the association between BMI and knee OA, whilst there was no statistically significant ( $p > 0.05$ ) link between BMI and hip OA.

**Conclusion:** A High BMI was significantly associated with knee OA, but not with hip OA

Disclosure: No conflict of interest declared

1200

**Musculoskeletal complaints may be initial symptoms of childhood malignancies**

M. Gökçe, B. Yalçın

Department of Pediatric Oncology, Hacettepe University Faculty of Medicine, ANKARA, Turkey

**Objective:** Children with malignancies may present with musculoskeletal complaints initially and these may cause misdiagnosis mostly as rheumatological disorders. Musculoskeletal symptoms may sometimes mask underlying malignancy and these direct physicians to wrong diagnoses and inappropriate management. Childhood malignancies like neuroblastoma, acute myeloid/lymphoid leukemias, Ewing sarcoma, Hodgkin's lymphoma are examples.

**Method:** Here, we present an adolescent patient from our hospital with such a history.

**Case report and results:** A 15-year-old boy presented to a local hospital with the complaints of heel pain, swelling and movement limitations of the left big toe. Swelling and pain of both thumbs, and left hip pain followed. Initially, infections had been considered but laboratory results were negative. A sacroiliac MRI was obtained to evaluate left hip pain and limping which displayed a 5-6 cm solid mass inferolateral to the left kidney which was interpreted to represent a malignant tumor. Histopathological examination of a tru-cut biopsy revealed 'undifferentiated Ewing sarcoma'. The patient's condition was interpreted as paraneoplastic syndrome with sacroileitis and synovitis in the left hip joint. After the first cycle of systemic intensive chemotherapy, joint complaints and pain disappeared.

**Conclusions:** Musculoskeletal symptoms like diffuse bone pain, arthritis, arthralgia and myalgia may mask underlying malignancy in children. Sometimes, these patients are referred to different specialists and significant delay for correct diagnoses and treatment may result. When family physicians evaluate children with persistent musculoskeletal symptoms, they should be aware of the possibility of underlying malignancies and increase awareness about childhood malignancies which might initially present with musculoskeletal symptoms.

Disclosure: No conflict of interest declared

1277

**Piriformis syndrome: case report**

A.C. Coman<sup>1</sup>, M.D. Graure<sup>1</sup>, E. E. Soriano Navarro<sup>2</sup>, J. Moreno Morales<sup>2</sup>, F. J. Rodriguez Martinez<sup>2</sup>, V. Cogolludo Campillo<sup>2</sup>, J. Gimenez Sanchez<sup>2</sup>, E. Pagan Dato<sup>1</sup>, J. Flores Torrecillas<sup>1</sup>, P. Gea Fernandez<sup>1</sup>

<sup>1</sup> Cartagena Casco Antiguo Health Center; Servicio Murciano de Salud, Cartagena, Spain;

<sup>2</sup> Rheumatology Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain

**Objective:** To describe a case of piriformis syndrome.

**Methods:** We describe a case of piriformis syndrome using the clinical examination and medical imaging as main variables.

**Results:** A 40-year-old woman with no medical history refers pain in the left renal fossa and dysuria for the last 2 days, with no fever. The general practitioner starts treatment with antibiotics and analgesics due to the analysis which shows a mild urinary infection. No improvement is seen so she is admitted to the hospital for persistent left renal colic. Abdominal ultrasonography is normal. MRI reveals a degenerative disc disorder of L3-L4. She is discharged with analgesia and rehabilitation exercises. Months after, she consults for invalidating left lumbar sciatica, being admitted to the Rheumatology service. She presents positive Lasegue on the left side, burning sensation and intense pain in the left gluteal region with movement of the thigh. Electromyography is normal. A piriformis syndrome is suspected thus a corticosteroids and botulinum toxin infiltration is realized with improvement of the symptoms. A new MRI informs of left sciatic neuritis and thinning of the piriformis muscle (advanced stage of the piriformis syndrome). The new electromyography informs of moderate-severe left L5 and mild left L4 chronic radiculopathy. Decompressive surgery is performed with good results.

**Conclusion:** The piriformis syndrome is a rare neuromuscular disorder due to the compression of the sciatic nerve by the piriformis muscle. It is difficult to differentiate it from a common lumbalgy and that is why more advanced techniques should be used.

Disclosure: No conflict of interest declared

1282

**A case report of post partum osteoporosis**

A.C. Coman<sup>1</sup>, M.D. Graure<sup>1</sup>, L.D. Pereira Ferreyra<sup>2</sup>, V. Cogolludo Campillo<sup>3</sup>, E.E. Soriano Navarro<sup>3</sup>, J. Moreno Morales<sup>3</sup>, E. Pagan Dato<sup>1</sup>, F. Guillen Cavas<sup>1</sup>, S. Martin Soto<sup>1</sup>, E. Esparza Perez<sup>1</sup>

<sup>1</sup> Cartagena Casco Antiguo Health Center; Servicio Murciano de Salud, Cartagena, Spain;

<sup>2</sup> Cartagena Este Health Center; Servicio Murciano de Salud, Cartagena, Spain; <sup>3</sup> Rheumatology Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain

**Objective:** To describe a case of pregnancy-associated osteoporosis in a young woman

**Methods:** We used as main variables the symptoms, diagnostic methods, treatment and evolution

**Results:** A 30-year-old woman, who gave birth to her first son two weeks ago, attends her general practitioner for important dorsolumbar pain without sciatica. No previous traumatism. A treatment with analgesia is initiated. After a few days the patient goes to the Emergency service for invalidating pain and is admitted to the Rheumatology Department. Physical exploration reveals important pain in the dorsal and lumbar region with severe apophyseal joint pain at the D11, D12, L1 to L5. The MRI informs of compression fractures of D11, L1, L2 and L4. Bone gammagraphy: areas of increased uptake in various vertebrae: D7, D8, D11, D12 and L1-L5 suggestive of vertebral crushing due to osteoporosis. Thorax and abdomen CT scan: bilateral axillary adhenopathy and a minimum bilateral pleural effusion. Bone densitometry after 3-4 weeks of hospitalization: T-score -1.98 in spine and -1.22 in hip. While hospitalized the patient is treated with analgesics, calcium, vitamin D and zoledronate. She is discharged with ibandronate once a month and a dorsolumbar orthosis. Two years later the new densitometry shows a T-score of -0.7 in spine and -0.4 in hip. She gives birth to her second child without any complications and maintaining good T-scores.

**Conclusions:** The recent pregnancy and breastfeeding processes where associated with the osteoporotic fractures. Intensive treatment with bisphosphonates can normalize the T-score and prevent new complications.

Disclosure: No conflict of interest declared

1296

**More than a simple back pain**

M.D. Graure<sup>1</sup>, A.C. Coman<sup>1</sup>, G.M. Peralta Diaz<sup>1</sup>, A. Zapata Perez<sup>2</sup>, E. Pagan Dato<sup>1</sup>, J. Flores Torrecillas<sup>1</sup>, F. Guillen Cavas<sup>1</sup>, S. Martin Soto<sup>1</sup>, E. Esparza Perez<sup>1</sup>, R.M. Requena Ferrer<sup>1</sup>

<sup>1</sup> Cartagena Casco Antiguo Health Center; Servicio Murciano de Salud, Cartagena, Spain; <sup>2</sup> Fuente Alamo Health Center; Servicio Murciano de Salud, Fuente Alamo, Spain

**Objective:** To describe a case of sacroiliitis and colitis.

**Methods:** We describe a case of sacroiliitis and colitis in a young woman using as main variables the symptoms, physical examination, medical imaging, diagnosis and treatment.

**Results:** A 27-year-old woman consults her general practitioner for lumbar pain. Clinical examination reveals pain in the paravertebral lumbar region, no sciatica. An analgesic treatment is initiated. After one week she decides to go to the Emergency room for lumbar, hip and abdominal pain along with diarrhea and rectorragy. The clinical examination only shows pain in the gluteal region with the movement of the right hip, an external hemorrhoid and anal fissure. Blood analysis shows a mild anemia and urinary infection. She is admitted to the Internal Medicine Department with a diagnosis of sacroiliitis and urinary infection. Serologic tests are negative. Analysis shows high levels of CRP (*C-reactive protein*) and ESR (erythrocyte sedimentation rate) and iron deficiency anemia. The MRI informs of bilateral sacroiliitis and inflammatory changes in the right lower abdomen. Abdominal ultrasound refers of images compatible with colitis. The study is completed with gastroscopy which turned out normal. Colonoscopy with biopsy where realized to differentiate between ulcerative colitis and infectious colitis.

She receives a treatment with antibiotics and mesalazine with good results. She is remitted to the Gastroenterology service for study of the colitis.

**Conclusions:** Not all back pain is a simple lumbalgy that is why a thorough medical interview and clinical examination is needed.

Disclosure: No conflict of interest declared

1358

**Topical non-steroidal anti-inflammatory drugs in the treatment of pain from knee osteoarthritis**

M. Moreira<sup>1</sup>, M. Afonso<sup>2</sup>, P. Araújo<sup>3</sup>

<sup>1</sup> USF das Ondas, ACES Grande Porto IV – Póvoa de Varzim/Vila do Conde, Porto, Portugal;

<sup>2</sup> USF Corino de Andrade, ACES Grande Porto IV – Póvoa de Varzim/Vila do Conde, Porto, Portugal;

<sup>3</sup> USF Navegantes, ACES Grande Porto IV – Póvoa de Varzim/Vila do Conde, Porto, Portugal

Knee osteoarthritis (OA) is highly prevalent and pain is its most predominant symptom, responsible for considerable morbidity and a common Primary Care consultation motive. Non-steroidal anti-inflammatory drugs (NSAIDs) are among the options recommended for analgesia, although risk of serious adverse effects is present. Topical NSAIDs may be an alternative, once proven its efficacy and fewer such effects.

**Objective:** To review the available evidence on the efficacy of topical NSAIDs in the treatment of pain from knee OA.

**Methods:** Databases (*National Guideline Clearinghouse, TRIP, The Cochrane library, DARE, Bandolier, Medline* and other specific sites) were searched for guidelines and publications, dated from January 2002 to December 2012, in Portuguese, English or Spanish, using the Mesh terms („Administration, Topical“ OR „Administration, Cutaneous“) AND „Anti-Inflammatory Agents, Non-Steroidal“ AND „Osteoarthritis“. To evaluate the level of evidence and strength of recommendation, *Strength of Recommendation Taxonomy (SORT)* of the American Academy of Family Physicians was used.

**Results:** The initial search retrieved 97 articles of which 84 were excluded for failing our criteria. Four guidelines, three metaanalyses and three systematic reviews were considered. All the publications are unanimous as to the effectiveness of topical NSAIDs in knee OA analgesia, differing mainly in their statement of efficacy with long term use. However, most recent higher quality studies with longer follow-up time prove sustained analgesia for at least 12 weeks.

**Conclusions:** Topical NSAIDs are effective in the management of pain in knee OA (Strength of Recommendation A).

Disclosure: No conflict of interest declared



1405

**Primary care patients affected by a painful shoulder**P. Márquez<sup>1</sup>, J. Segura<sup>2</sup>, D. Rodríguez<sup>2</sup><sup>1</sup> Rehabilitation Medicine Department, National Health Service, Las Palmas, Gran Canaria, Spain; <sup>2</sup> Primary Care Centre Canalejas, National Health Service, Las Palmas, Gran Canaria, Spain

**Introduction / Objective:** Shoulder pain is the third most common cause of musculoskeletal consultation in primary care. The shoulder is one of the most used joints and any pain or disability in it, affects a person's ability to carry out daily activities.

The aim of our study is to determine in a period of time from 1<sup>st</sup> October 2011 and 30<sup>th</sup> September 2012 in a Primary Care Centre of the Island of Gran Canaria; the number of adults consulting for painful shoulder (non traumatic, non related to malignant diseases or inflammatory diseases), its distribution and the management of them.

**Methods:** An observational, descriptive and retrospective study was designed. The data was collected from the electronic clinical registries in the Primary Care Centre Canalejas, Gran Canaria.

**Results:** 902 cases, 333 (36.91%) men and 569 (63.08%) women, with an average age of 58 (95% CI). The most common diagnosis was codified as unspecified shoulder pain 91.02% followed by rotator cuff tendinitis 5.54%. All cases were first managed by the GP and 32.4% were referred to specialists.

**Conclusions:** The importance in primary care due to its prevalence, of a good physical examination, diagnosis and treatment of the principal shoulder pathology ( frozen shoulder, rotator cuff disorder, glenohumeral joint arthritis and instability ), to avoid chronicity and complications.

Management should be multidisciplinary, including analgesics, relative rest and access to rehabilitation programs.

Disclosure: No conflict of interest declared

1456

**Magnesium for the treatment of cramps: what is the evidence?**

A. Santos, I. Pires

Family and General Medicine, USF S. João do Porto, Oporto, Portugal

**Objective:** Cramps are painful involuntary muscle contractions, of a muscle or muscle group. When is not identified a cause are called idiopathic and arise mostly in legs and feet, especially at night. Represent a common complaint in primary care, affecting patient's quality of life. Magnesium is often prescribed to treat it. The aim of this review is to evaluate the efficacy of magnesium in the treatment of idiopathic muscle cramps in nonpregnant adults.

**Methods:** We conducted a survey of clinical practice guidelines (CPG), systematic reviews, meta-analyses and original studies at sites of evidence-based medicine, using the MeSH terms „Muscle Cramp“ and „Magnesium“.

**Results:** We found 40 articles, of which 4 were selected: 1 CPG and 3 randomized controlled trials (RCT). Two of the RCT administered the magnesium orally: one concluded that magnesium was not effective in the treatment of cramps the other showed a trend to fewer cramps in the group treated with magnesium, however, with no statistical significance. The third RCT administered it intravenously, concluding that it did not reduce the frequency of cramps. The CPG state that magnesium is probably not effective.

**Conclusions:** 3 of the evaluated articles concluded that magnesium was not effective. Although one of the RCT has shown a tendency of magnesium to reduce the cramps, this correlation was not statistically significant, and that study showed a high withdrawal rate. Thus, the best evidence points to a lack of efficacy of treatment with magnesium in idiopathic cramps, however are needed higher quality studies.

Disclosure: No conflict of interest declared

1553

**Osteoporosis therapeutics – What to do after 5 years of treatment with bisphosphonates**

A. Silva, D. Tomás

*Centro de saúde de Oeiras, ACES de Oeiras, Lisboa, Portugal*

Osteoporosis is a major public health issue due to fracture risk and health costs. Bisphosphonates are first-line therapeutics in osteoporosis due to its effects on vertebral and non-vertebral fracture risk reduction. Although bisphosphonates are one of most prescribed medicines in clinical practice, it's not know to the date the optimal duration of the treatment and how the follow-up should be.

**Objective:** Determine the evidence related to the osteoporosis therapeutics after 5 years of treatment with bisphosphonates.

**Methods:** We research the principal databases using the *MeSH* terms “Osteoporosis”, “Therapeutics” and “Bisphosphonates”, and evaluated the evidence using the Strength of Recommendation Taxonomy (SORT).

**Results:** We selected 6 guidelines and one randomized clinical trial. Three guidelines mentioned that optimal duration of treatment with bisphosphonates is unknown and one mentioned that should be long without referring the duration (level of evidence 3). The possibility of stopping the treatment after 5 years in mild osteoporosis is referred in one guideline (level of evidence 2). If there's a high fracture risk, 2 guidelines consider continuing the treatment (level of evidence 2). It's also recommended to monitor bone mineral density (BMD) during the “drug holiday”, resuming therapeutics if the BMD drops, the turn-over markers rises or fracture occurs (level of evidence 3).

**Conclusions:** In mild Osteoporosis, it might be considered a drug holiday after 4 to 5 years of treatment (SORT B). Individuals with high fracture risk should continue treatment for ten years (SORT B). Nevertheless, more research is needed to define the optimal duration of treatment.

Disclosure: No conflict of interest declared

1608

**Diagnosis of rheumatoid arthritis in bangladeshi population**

Z. Rahman

*general medicine, bangladesh college of general practitioners, dhaka, Bangladesh*

**Objectives:** This study was conduced to assess the utility of anti-Cyclic Citrullinated Peptide (Anti-CCP) antibodies in the diagnosis of early RA(disease duration less than 2 yrs.) and sero-negative RA in our population and ultimately see the prognosis after treatment.

The study was conducted inBSMMU and BCGP and my own chamber (BDRI), Bangladesh from July 2005-June 2011.

**Materials and methods:** Serum Anti-CCP antibodies and RF were evaluated in 80 RA patients diagnosed by ACR criteria, 40 non RA disease control and 40 healthy control. Anti-CCP antibodies and RF were detected by second generation anti-CCP-2 enzyme linked immunosorbent assay

**Results:** Anti-CCP antibodies were detected in 58 out of 80(72.5%) cases in early rheumatoid arthritis and in disease control group in 2 out of 40 (5%) and none out of 40 healthy control. Conversely RF was detected 43 out of 80 (54%) in early RA, and 10 of 40 (25%) disease control and 2 of 40 (5%) healthy control. In case of sero-negative RA cases, 17 (22%) were positive. The sensitivity and specificity of Anti-CCP in early RA was 72.5% and 97.5% respectively. The sensitivity and specificity of RF in early RA was 53.75% and 85% respectively. Decrease ACCP titre after giving treatment significantly. ACCP test also done after 2 years and five years DMARD treatment of Rheumatoid arthritis patents.

**Conclusion:** Detection of anti-CCP antibody were found to be more sensitive and highly specific for the diagnosis of early rheumatoid arthritis. After giving treatment ACCP titre decrease markedly along with improvement of symptoms of patient.

Disclosure: No conflict of interest declared

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**Effect of the physical activity on normal bone and on the osteoporosis prevention and treatment**

J. Marinhas, C. Fernandes, A. Yee, R. Oliveira, A. Ferreira

*Ortopedia, Centro Hospitalar Vila Nova de Gaia/Espinhos, Vila Nova de Gaia, Portugal*

Osteoporosis has been increasingly diagnosed in women and men worldwide. Although the sexual steroids are important in the genesis of human osteoporosis, it is believed that the lack of physical activity constitutes an important risk factor. Physical activity acts on the bone by direct effect via mechanical force, or indirect effect through hormonal factors. However, the mechanism through which physical activity improves the bone mass is not completely known. Sports practice has been increasingly recommended for prevention and even treatment of osteoporosis based on the results that have demonstrated the beneficial effects of physical activity on the bone tissue. The goal of this review is to describe the effects of physical activity in the normal bone tissue and on the osteoporosis prevention and treatment.

Disclosure: No conflict of interest declared

**3.16. EMERGENCIES AND TRAUMA**

37

**An audit of the application of Ottawa knee rules at a large UK teaching hospital**

J. Hussain, C. Sherry

*Emergency Department, University Hospital Coventry and Warwick, Coventry, United Kingdom*

**Background:** A negative result on an Ottawa knee rule test accurately excludes knee fractures after knee injury

Sensitivity = 98.5% (95% CI: 93, 100)

Specificity = 49% (95% CI: 43, 51)

(Bachmann L M et al. 2004)

Those who do not meet the criteria are unlikely to have a knee injury that requires irradiation (0.37% probability of fracture with negative Ottawa result).

**Objectives:** Exploring the usage of Ottawa knee rules for the assessment of all adult patients presenting with a history of knee trauma at a large teaching hospital.

**Methods:** The notes of all attendees to the Emergency Department with traumatic knee pain between 1/9/2011 – 31/10/2011 were reviewed. Children under 16 were excluded.

Notes were checked for documentation of each rule as well as reasons for deviation from them. Documentation of reasons for deviation was also checked.

**Results:** 76 patients met the criteria for an x-ray according to the Ottawa rules and of these 53 patients had an x-ray (70%) meaning 30% of patients requiring an x-ray did not have one. 38% had an x-ray despite failing to meet the rules. A further 31% of these patients had no reason documented.

**Conclusions:** Currently Ottawa knee rules are not adhered to routinely when requesting x-rays for knee injury patients. Documentation is poor (including negative results). The implications of this include; cost (wasted resources), radiation exposure, wasted time, medico-legal ramifications of missed fractures and providing gold standard care.

Disclosure: No conflict of interest declared

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**Comparison of pre-operative bilirubin level in simple appendicitis and perforated appendicitis**

M. Vaziri, Z. Tamannaie

*Minimally invasive surgery research centre. Tehran university of medical sciences*

**Background:** Delay in diagnosis and treatment of perforated appendicitis may cause life-threatening complications. The aim of this study was to determine and compare pre-operative total and direct bilirubin levels in cases of simple and perforated acute appendicitis in order to improve the clinical decision making.

**Methods:** This prospective observational study included eighty patients who underwent open appendectomy, during a one-year period from March 2010 to March 2011 in the surgical department of Hazrat Rasool Hospital, an academic teaching hospital in Tehran- Iran. Pre-operative total and direct levels of bilirubin were compared in two groups of histologically proved appendicitis (simple and perforated), each including 40 patients.

**Results:** Mean pre-operative total and direct levels of bilirubin were significantly higher in 24 men and 12 women with perforated appendicitis as compared to 21 men and 19 women with simple appendicitis.

**Conclusion:** Assessment of preoperative total bilirubin is useful for the differential diagnosis of perforated versus acute simple appendicitis and total bilirubin should be used as an independent parameter in the early diagnosis of appendix perforation

Disclosure: No conflict of interest declared

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**Locked-in syndrome in 23-years male with headache at ER**

A. Serrat-Rostoll, I. San Roman-Sirvent, M.F. Ramirez-Espinosa

*Medicina Familiar, Hospital San Juan, ALICANTE, Spain***Clinical case report**

24 year old male patient who visits the ER complaining of one week of oppressive occipital headache which then became generalized. Also referred dizziness along with vertigo, muscular weakness and decreased right visual field vision. The patient also complains of residual sensation of numbness over right hemithorax, abdomen, foot, triceps area, ulnar forearm area, 4th and 5th fingers. A Brain CT was requested and the patient was admitted to the neurology service. Brain CT was suggestive of multiple cerebral ischemic changes over vertebrobasilar area and the patient was discharged home on clopidogrel 75 mg daily after 17 days of admission. One day after the discharge, the patient developed dysarthria and was admitted to the ICU with the diagnosis of acute thrombosis of basilar and posterior cerebral arteries, posterior infarcts over cerebellum and pons.

Physical exam was pertinent for numbness over right hemithorax, abdomen, foot, triceps area, ulnar forearm area, 4th and 5th fingers. There were no other pertinent findings on physical exam.

Brain CT (upon admission) : multiple hypodense areas over supratentorial and infratentorial area ( left cerebellum )

The clinical picture related is consistent with locked-in syndrome with tetraparesis and spontaneous eye opening secondary to basilar artery and posterior cerebral thrombosis with ischemia over pons and cerebellum

Differential diagnoses include embolic phenomena, vasculitis and infectious etiology. Primary angiitis of the CNS is a vasculitis that affect brain arteries, characterized by negative serum markers; brain biopsy is needed in order to establish the diagnosis.

Disclosure: No conflict of interest declared

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**Fracture-Associated Trauma in patients over 65 years of age**I.Sierra-Martínez<sup>1</sup>, L. Sierra-Martínez<sup>2</sup>, R. Martínez-Fuerte<sup>3</sup><sup>1</sup> Traumatology Department, Hospital of Medina del Campo (Valladolid), Medina del Campo, Spain; <sup>2</sup> Gamazo Health Center, Valladolid Este Primary Assistance Gerency, Valladolid, Spain;<sup>3</sup> Pilarica Health Center, Valladolid Este Primary Assistance Gerency, Valladolid, Spain

**Objective:** Using records from the Medical Record Information (MRI) to determine the prevalence of Fracture-Associated Trauma (F-T) in older people to promote preventive activities from the Primary Care (PC) clinic and Specialist Orthopaedic Surgery and Traumatology (OST).

**Method:** Fractures are the most common complication after trauma among people over 65 years of age, consuming significant resources, health, social and economic developments in the process of diagnosis and treatment. The authors conducted descriptive cross-sectional study of patients with a diagnosis of F-T in people over 65 of age with registration in the medical record Pilarica Health Center (Valladolid).

List of patients MRI > 65 years of age, 3615 (1562 men, 2058 women). Data are collected on an Excel spreadsheet and analyzed using SPSS 9.0 for Windows.

**Results:**

We studied 228 cases of Fracture-Associated Trauma. (217 women, 11 men). (95% women)

Hip-fracture: 36 cases F-T (34 women, 2 men)

Spine-fracture: 49 cases F-T (45 women, 4 men).

Ankle/foot-fracture: 29 cases F-T (26 women, 3 men).

Humerus-fracture: 40 cases F-T (39 women, 1 man).

Wrist-fracture: 74 cases F-T (73 women, 1 man).

83% of cases F-T the cause was falls.

65%: 81-85 years of age.

**Conclusions:** There is greater prevalence of fracture-Associated Trauma in women than men (95%), the most frequent fracture of wrist (32%), falls being the most frequent (83%). The age group with the highest fracture can find between 81 and 85 years (65%). From these results provides clinical Improvement Plan that includes the implementation of a program of health education to groups in our Health Center and preventive multidisciplinary activities from the PC and Specialist OST.

Disclosure: No conflict of interest declared

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**Chew your food well you could have a schatzky ring**

C. Baena, H. Perez, V. Meca, R. Figueroa

Family Medicine, Hospital Virgen del Castillo, Yecla, Spain

**Case presentation:** A 71 year old female patient arrives to the emergency department referring vomiting of chewed food and insisted that this only happened after eating, she denied feeling nausea, diarrhea, abdominal pain, or sialorrhea. Her physical exam was normal. First a PA chest X – Ray was taken fig 1: where you can observe the third-mid portion of the trachea shifted to the right and by the arrows various radiolucent well delimited areas that give the sense of following a path. The lateral X – Ray, fig 2 shows by the arrow a radiopaque retro cardiac area.

With the suspicion of an esophageal obstruction a fluoroscopy was done fig 3 showing a dilated esophagus and an obstruction in its distal segment. If this image were to be seen by someone who did not know the patient's case would say that cancer must be considered as a differential. The endoscopy found a piece of sausage to be obstructing the distal esophagus when stopped by a Schatzki Ring.

**Discussion:** Schatzki rings are a common cause of progressive dysphagia and acute bolus impaction in children and young adults, but they have been very little documented in older persons. This is also commonly considered as an isolated entity, when other accompanying pathologies cannot be forgotten like gastroesophageal reflux disease and esophagitis.

Disclosure: No conflict of interest declared

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**A strange form of discomfort – a clinical case.**

P.L. Alves, L. Alves

*St. Andrews Family Healthcare Unit, Northern Region Health Administration, Canidelo – Vila Nova de Gaia, Portugal*

**Introduction:** In primary healthcare, it is often difficult to find an organic or definable cause in patients presenting non-specific complaints. In certain population groups, such as menopausal women with a depressive humour background, this task is even more difficult.

**Case description:** A 54 year-old woman, working as a maid, with medical history of depressive disorder medicated with paroxetine 20 mg/day, presented complaints of an ascending pain in the left foot's lateral border with few days of evolution in late August 2012. She was prescribed analgesic medication and rest and an ankle x-ray was requested. A week later, she returned to the practice and presented fatigue, irritability, tremor, a feeling of uneasiness. She also referred gait alterations and imbalance. In the neurologic examination, while eliciting the deep tendon reflexes, namely the patellar reflex a near syncope reaction occurred along with inexhaustible clonus revealing clearly pathologic reflexes. The patient was immediately referred to the Emergency Department with a suspicion of an acute spinal cord injury. The diagnosis was soon after confirmed as Cervical Spondylotic Myelopathy, and the patient underwent discectomy surgery seven days later.

**Discussion:** Cervical Spondylotic Myelopathy occurs in about 5-10% of people who have underlying cervical spondylosis, almost always with a progressive onset of complaints. A cervical spondylotic myelopathy with an acute onset is a rare neurological emergency requiring immediate referral, with the risk of definitive neurological deficits installation. A complete neurological examination is mandatory in patients presenting with suspicious complaints potentially related to nervous system dysfunction.

Disclosure: No conflict of interest declared

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**Primary care protocol in the treatment of burns.**P. Martínez Andrés<sup>1</sup>, J. Martínez Andrés<sup>2</sup>, J. Martínez Lozano<sup>3,4</sup>, M. C. Martínez Lozano<sup>5</sup>, N. Martínez Lozano<sup>6</sup>, M. D. Martínez Lozano<sup>7</sup>, M. A. Martínez Lozano<sup>8</sup>, J. V. Ramírez Villaescusa<sup>9</sup>

<sup>1</sup> Plastic Surgery, General Hospital University, Albacete, Spain; <sup>2</sup> Medical School, Catholic University „San Vicente Ferrer“, Valencia, Spain; <sup>3</sup> Health Center of Banyeres de Mariola, Agència Valenciana de Salut, Banyeres de Mariola (Alicante), Spain; <sup>4</sup> Medical Director, Clínicas Martínez Lozano, Spain, Spain; <sup>5</sup> Medical Director, I. N. S. S., Albacete, Spain; <sup>6</sup> Rehabilitation, General Hospital University, Albacete, Spain; <sup>7</sup> Neurology. Dementia's Unit. Medical Director, General Hospital University, Castellón, Spain; <sup>8</sup> Dentistry. Master Medical Director, University „Cardenal Herrera“ C. E. U., Valencia, Spain; <sup>9</sup> Traumatology, General Hospital University, Albacete, Spain

**Purpose:** Develop and agree a care protocol, for Primary Care, to try that the evolution, the treatment time until the final healing, the days of dissability, health costs and complications are minimized. We are interested that our treated burns patient arrive on the best condition to Burn Units and Plastic Surgery Services.

**Materials and methods:** We reviewed the protocols and reviews a published in PubMed in the last 10 years, adapting to our needs care.

**Results:** We developed an action protocol of burns in Primary Care very well accepted, simple and useful. We emphasize the following points: 1) Evaluation and classification of burns. 2) Local care, cleaning, antibiotic and tetanus vaccination coverage and the right choice of dressings. 3) Referral criteria to specialized units.

**Conclusions:** Burns use to affect skin but when the burned skin exceed 10-15% out of the total it may produce severe complications. About 80% of the studied patients in Primary Care are sent to (Burns Units) and are wrongly diagnosed.

So, it's necessary to apply scientific criteria in the right way in order to avoid unsuited treatment in emergency and the derivation of the patient to an inadequated level so in that way the patient can get a good administration of human and material resources. The result is a very good attention of burneds patients in the primary care and the Burned Units.

Disclosure: No conflict of interest declared

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**Cost analysis for nursing care activities at the pediatric intensive care unit of Hat Yai Hospital**

S. Sae-ong, S. Wutthiwitchanon

*Pediatric Intensive Care Unit, MOPH, THAILAND, Hat Yai, Thailand*

**Objective:** To investigate the costs of nursing care activities using the concept of costing system for direct and indirect nursing care activities.

**Method:** The population of the study was 10 patients receiving services in the Pediatric Intensive Care Unit of Hat Yai Hospital, and 20 nursing personnel who actually worked in the unit during 1 May to 30 June 2012. There were two sets of instruments: Set 1 was a dictionary of nursing care activities in the Pediatric Intensive Care Unit of Hat Yai Hospital, and Set 2 was a record form of cost analysis for nursing care activities. The data were analyzed using percentage and mean.

**Results:** The results of the study revealed that the average cost of the nursing care activities was 636,920.93 Baht broken down into 300,885.90 Baht for labor costs, 248,287.23 Baht for material costs, and 878,747.80 Baht for driving costs. The proportion of the costs from highest to lowest was labor costs: material costs: driving costs or in percentages of 47.24: 38.98:13.18, respectively. The total time spent in doing all the nursing care activities was 105,698.35 minutes or in the proportion from the highest to lowest time spent in doing activities was: continuing nursing care activities: management activities: recording nursing activities and making reports: initial admission activities: discharge activities or in percentages of 80.99: 10.81: 6.55: 0.95: 0.71, respectively.

**Conclusion:** Improving manpower management can help reduce the budget so that it is suitable for direct and indirect nursing care activities.

Disclosure: No conflict of interest declared

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**Activity-based costing for burn patients in Hatyai Hospital**

M. Nudtarom, T. Sidpun, Y. Saekog

*Burn Patient Unit Hatyai Hospital, MOPH, THAILAND, Hat Yai, Thailand*

**Objectives:** The purpose of this study was to analyze the costs of nursing activities for burn patients during admission to discharge according to significant caring process of total burn care using activity-based costing system analysis.

**Method:** The activities to be analysed consisted of 4 major activities, including admission process, continuing care process, discharge process and quality improvement divided into 18 sub-activities. The samples were 15 nursing personnel working in Burn Center of Hatyai Hospital. Data were collected during May 1, 2012 to July 31, 2012. Research instruments composed of 10 nursing activity record forms. All instruments were tested for content validity and reliability.

**Results:** The major results of this study were as follows: Mean costs of all nursing activities in burn care during admission discharge was 66,782.28 Baht. Mean costs of nursing activities in burn care on admission process was 1,706.36 Baht, on continuing care process was 59,165.45 Baht., on discharge activities process was 900.85 Baht, on quality improvement activities was 5,009.62 Baht. The highest cost of wound care for infected was 41,565.03 Baht. The lowest cost was In – hospital treatment/ day was 152 Baht.

**Conclusion:** A technology system should be used in the nursing work to reduce the costs and the time spent in doing administrative activities, recording nursing care which are indirect nursing activities that can result in more time available for nurses to perform more activities for initial admission and discharge activities which are direct activities.

Disclosure: No conflict of interest declared

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**The role of the second-line hospital on serious natural disaster -through our experience-**

Y. Nakamura, K. Shiina, T. Sujiura, T. Yoshida

*Department of General Internal Medicine, Iwate Prefectural Senmaya Hospital, Ichinoseki, Iwate, Japan*

**Objective:** Iwate Prefectural Senmaya Hospital (Senmaya Hospital) adjoins the coastal area in Iwate and Miyagi Prefecture, that is seriously damaged by Tsunami. We worked as the second-line hospital then. We perform this study to verify the role of the second-line hospital of tsumami disaster, for taking better steps to deal with the future disasters.

**Methods:** The data was obtained from patient record of Senmaya Hospital and assessed.

**Results:** Overall 273 patients, (143 tsunami refugees, 130 residents of surrounded area) admitted to Senmaya Hospital within 1 month after the disaster. Among tsunami refugees, 60% were from Iwate Prefecture and 40% from Miyagi Prefecture, next to Iwate. Ninety-five percent of refugees were transferred by ambulances, and 79% were from damaged medical facilities. The highest number of admission was found on the day of the tsunami. Once the number of inpatients dropped on 16<sup>th</sup>, the next day of the restoration of electricity, but increased again. The average inpatient per month were 1.0-1.8 fold (average 1.3) compared with the previous year (before tsunami). The highest number of the inpatients was found in February (the coldest month) 2012. The cause of death was not different between annual 2010 and 2011.

**Conclusions:** The second-line hospital should receive many patients immediately after the disaster and continuously accept the excess of the inpatients for a long time. The constitution of the patients is not different from the patients before the disaster. The second-line hospital should store additional space, equipments and goods for patients from disaster sites.

Disclosure: No conflict of interest declared

962

**Highly concentrated benzalkonium chloride solution (10%) ingestion**

H. Kulbay

*FAMILY MEDICINE, Umraniye Number 4 Family Medicine Clinic, ISTANBUL, Turkey*

Benzalkonium chloride aqueous solution is a mixture of alkylbenzyltrimethylammonium chlorides which is a cationic quaternary ammonium surface-acting agent. It is used for antiseptics of skin and mucous membranes, for disinfection of medical utensils and other environmental surfaces, for disinfection and storage of ampuls, thermometers, metal instruments and catheters.

A twenty eight year old female clinic staff in a family medicine clinic ingested a half glass (125 milliliter) of highly concentrated (10%) benzalkonium chloride solution accidentally and the solution had not been further diluted. The patient applied to the Emergency Department 2 hours after the ingestion. Signs of toxicity were nausea, vomiting, restlessness, apprehension, dysphagia and dyspnea. Laryngoscopic exam revealed hyperemia in the oropharynx; rubor and minimal edema in the larynx. Emergency endoscopy revealed multiple superficial (Grade I) lesions on the esophagus, cardia and antrum secondary to the Benzalkonium chloride solution. Endoscopic evaluation of pyloric part and duodenum was abandoned due to patient intolerance.

Benzalkonium chloride solutions of 10% or more are toxic to humans, causing skin and mucosa irritation, chemical burns and death if taken orally. Treatment of various concentrations of benzalkonium chloride solutions exposure depends on patient's medical condition, local irritation and severity of lesions and complications in the gastrointestinal tract. An emergency endoscopy (within the first 12 to 24 hours) is needed to evaluate the location and severity of injury in the gastrointestinal tract. The spectrum of treatment varies from supportive treatment to surgery.

Disclosure: No conflict of interest declared



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**Gastroenteritis acute thrombosis as a manifestation of massive thrombosis in inferior vena cava, iliac, mesenteric and portal veins**J. Paz Galiana<sup>1</sup>, JP García Paine<sup>1</sup>, M. Aguilar Casas<sup>2</sup><sup>1</sup> Palo Health Care, Malaga Sanitary District, Málaga, Spain; <sup>2</sup> Emergency service, Carlos Haya Hospital, Málaga, Spain**Personal Background:** Male, 69 years with hypertension and chronic obstructive pulmonary disease (COPD) treatment.**Present Illness:** Attended the emergency hospital by diarrhea, vomiting and fever for 4 days have ceased but fever continues with cough, sore throat, and overall malaise. Physical examination: overall malaise, dryness of mucous. Very hyperemic pharynx without exudates. Painful in abdomen with signs of peritoneal irritation. Exploration cardiopulmonary and neurological were normal.**Complementary Tests: Blood test:** *Leukocytosis with left shift. Creatinine 5.98* **Abdominal CAT:** massive thrombosis of the inferior vena cava, iliac, mesenteric and partial portal veins. Interstitial pattern in both lungs.**Evolution:** After completion of abdominal CAT, the patient begins to have a tendency to hypotension, requiring antibiotics, intensive fluid therapy and dopamine infusion. Given the poor response we begin norepinephrine infusion but continues in anuria. Given the state of shock, airway is isolated. Gasometry shows severe metabolic acidosis. Despite fluid and vasoactive amines, evolves with refractory shock and multiorgan failure until death.**Conclusion:** Sometimes serious and rare diseases present with very frequent clinical pathology (acute gastroenteritis, in our case) but the patient's condition and additional tests are essential for an accurate diagnosis.

Disclosure: No conflict of interest declared

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**Pernicious vomiting as presenting a withdrawal syndrome to morphine.**J. Paz Galiana<sup>1</sup>, JP García Paine<sup>1</sup>, M. Aguilar Casas<sup>2</sup>, LA Calleja Cartón<sup>1</sup>, MS Rojas Guzmán<sup>2</sup>, T Gonzalez-Granda García<sup>3</sup><sup>1</sup> Palo Health care, Malaga Sanitary District, Málaga, Spain; <sup>2</sup> Emergency service, Carlos Haya Hospital, Málaga, Spain; <sup>3</sup> Clinical Analysis, Carlos Haya Hospital, Malaga, Spain**Personal antecedents:** Female, 43, allergic to metoclopramide. Hypertension, herniated disc. Surgery for cholecystectomy, cesarean and left knee meniscectomy. Home treatment: Captopril, Tramadol, Morphine, Paracetamol, Lyrica, Zolpidem.**Actual disease:** Turn after various consultations in health center for nausea and vomiting unrealized despite treatment with ondansetron, refers not fever, no diarrheal stools, abdominal pain located in the epigastrium. Refers to the last one week has stopped taking morphine surgery disc herniation.**Physical examination:** Conscious, oriented. Cardiopulmonary auscultation: regular rhythm without murmur. Good ventilation in both lungs. Abdomen: soft and palpable, nontender in epigastrius no signs of peritoneal irritation.**Investigations: Blood Test:** all values within normal ranges.**Evolution:** Seeing the patient despite treatment with ondansetron no improvement, beginning treatment with morphine and within hours the patient significantly improves the picture is not showing new episodes of vomiting.**Conclusion:** The cause of the vomiting does not always have an origin in the digestive system and therefore not transferred with antiemetic, so it is important to know the medical history to determine the cause of the symptoms for which the patient consultation.

Disclosure: No conflict of interest declared

993

**Proximal diaphyseal femoral fracture because of chronic use of bisphosphonates: report of a case**

L.A. Calleja Cartón<sup>1</sup>, J. Paz Galiana<sup>1</sup>, J.P. García Paine<sup>1</sup>, V. Parent Mathias<sup>2</sup>, J.M. Santa Cruz Talledo<sup>1</sup>, I. Pérez Enriquez<sup>1</sup>

<sup>1</sup> El Palo Health Center, Malaga Sanitary District, Málaga, Spain; <sup>2</sup> Emergency Department, Carlos Haya Hospital, Málaga, Spain

**Personal background and present illness:** We present the case of a woman of 77 years who initiated treatment with Alendronate seven years ago for osteoporosis. The patient initially presented a pain clinic from the proximal right thigh, presenting incomplete fracture in radiography. A month later present a proximal diaphyseal pathological fracture. In the treatment of osteoporotic disease, bisphosphonates are currently the first choice treatment, because of its efficacy antifracture effect in all types of osteoporosis. In recent years there have appeared a number of secondary effects that have sparked debate about the appropriateness of maintaining continued treatment with these drugs chronically. One of these complications is called „atypical fractures“ because of its location and radiologic appearance that appears in patients chronically treated with bisphosphonates, because of the prolonged inhibition of bone remodeling. These fractures that share a number of common clinical features do not present the characteristics of classical osteoporotic fragility fractures.

**Conclusion:** The MAP should thoroughly investigate the cause of nonspecific thigh pain in patients who have been treated for longer periods with Bisphosphonates and know the different radiological patterns that appears with these complications. The presence of these previal problems conducting a review of imaging techniques of both femurs looking for fractures.

**Keywords:** bisphosphonates, alendronate, femoral shaft fractures, atypical fractures.

Disclosure: No conflict of interest declared

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**Urgent Care: the Generalist leading the way**

A. Razzak, J.K. Grewal

URGENT CARE, CARE UK, LONDON, United Kingdom

Primary Care in England is undergoing its greatest change since the birth of the National Health Service. We are seeing GPs take the lead with their new commissioning roles. The modern Generalist is taking on a diverse range of roles, seeing the emergence of a new sub-specialty within primary care – Urgent Care.

There are many advantages to having a highly skilled Generalist assessing and treating patients in the urgent care setting. For this poster I propose an interview with Dr Ali Razzak who is the GP Clinical Lead for one of the busiest urgent care centres in North West London. We will cover how using a GP led urgent care model in close conjunction with existing hospital specialties and the emerging Clinical Commissioning Groups is making more effective use of our national healthcare resources

Disclosure: No conflict of interest declared

1058

**Gerstmann's Syndrome**

I. Rodríguez, V.M. García, J.C. López, M. Casanova

*Emergency Department, Hospitales de Madrid, Torreloñones, Spain*

**Introduction:** Neurological disorders are a common presenting complaint in primary care and A&E department. It is also cause of great anxiety for the patient and their families. Although sometimes the initial symptoms are acute, sometimes they have been preceded by previous similar episodes. It is very important to make a thorough medical interview and investigations in this pathology.

**Case description:** A 63-year-old patient consults because of disorientation, poor language, graphesthesia and ideomotor apraxia. The symptoms appearance was acute and had last for more than 12 hours. The patient had a medical history hypertension, hypercholesterolemia, Diabetes Mellitus type 2, breast cancer operated 17 years ago without evidence of recurrence since. Base treatment: Telmisartan 40mg, fenofibrate 145, acid acetyl salicylic, metformin 850, glimepiride 4mg, atorvastatin 40mg, omeprazole 600 and omeprazole.

Although the physical examination, blood test and CT scan did not disclose important findings, the patient was admitted to the hospital. Further investigations lead to find several lacunar infarcts in the left middle cerebral artery territory, one of them in evolution.

**Discussion:** This case illustrates the importance of continuing the diagnosis even after the symptoms had been controlled and to fulfil etiologic diagnosis. Primary care is very important part of the system as it is not possible neither good to have every patient admitted into a hospital for long periods, and frequently that is what it takes.

Disclosure: No conflict of interest declared

1163

**Why our patients come to the emergency room late at night?**D. Nuñez Castillo<sup>1</sup>, J.P. García Paine<sup>2</sup>, J. Paz Galiana<sup>2</sup>, J. Palacios Castillo<sup>1</sup>, P. Valverde Vallejo<sup>1</sup>, R. Rodríguez Barrios<sup>1</sup>, R. Bordallo Aragón<sup>1</sup>, J.I. Valero Roldán<sup>1</sup>, L.A. Calleja Cartón<sup>2</sup>, I. Villar Mena<sup>1</sup><sup>1</sup> *Emergency service, Carlos Haya Hospital. Pav C, Málaga, Spain;* <sup>2</sup> *El Palo Health Center, Málaga Sanitary District, Málaga, Spain*

**Objective:** Knowing the most common reasons for consultation of patients presenting early morning (from 00:00 in 06:00 hours) to a hospital emergency room.

**Material and methods:**

*Design:* descriptive transversal

*Area of study:* Hospital Emergency Service. Tertiary Hospital.

**Selection Criteria:** It is a sample of 1 in 7 days from January 2012 in November 2012.

**Subjects:** Patients who visit the emergency room between 00:00 hours and 06:00 hours. A sample of 578 patients.

**Measurements:** Age, sex, time band that goes (between 0-3 hours or between 3:01 to 6:00 pm, reason for consultation)

**Results:** We analyzed a total of 578 patients. The mean age was 40.48 years (6-94 years). The most common age of attendance is between 30-50 years. 56.4% were male. They come more often in the early hours (00:00-03:00) being 69.7% (403 patients), and of these 45.9% (185 patients) came in the first hour (between 00:00 -01:00). There is a progressive decline in attendance as the hours go by. We identified 71 different query reasons, the most common the most common are trauma by 10.4% followed anxiety with 6.4%, eye problems 6% and toothache 5.7%. Headache represents 3.5% of the reasons for attendance. Traffic accidents and psychiatric evaluations are 2.5% each. Poisoning substances are 3.2% and chest pain only 1%.

**Conclusion:** Patients come to the emergency room unless the later is done. The main reason for consultation in general is pain with 36.7% of the assistance. Injuries have a high incidence in the emergency room at dawn.

Disclosure: No conflict of interest declared

1173

**Syncope as a manifestation of viral encephalitis**

J.P. García Paine<sup>1</sup>, J.Paz Galiana<sup>1</sup>, M. Aguilar Casas<sup>2</sup>, M.S. Rojas Guzmán<sup>3</sup>, T. González-Granda García<sup>4</sup>, L.A. Calleja Cartón<sup>1</sup>

<sup>1</sup> El Palo Health Center, Málaga Sanitary District, Málaga, Spain; <sup>2</sup> Emergency Service, Carlos Haya Hospital. Pav C, Málaga, Spain; <sup>3</sup> Emergency Nurse, Carlos Haya Hospital. Pav C, Málaga, Spain; <sup>4</sup> Clinical Analysis, Carlos Haya Hospital, Málaga, Spain

**Personal Background:** Male, 45 years with psychotic disorder treated for mental health unit.

**Present Illness:** While eating at Chinese restaurant, patient presents sudden syncope Glasgow 8-9 improving with flumazenil. Taken to a hospital emergency suspected of acute drug intoxication. On arrival to the emergency department Glasgow decreases to 3 not responding to Naloxone or Anexate, proceeding to intubation which requires removal of about 3 inches in the right upper lobe atelectasis.

**Complementary Tests:** **TAC skull:** no significant findings. **Blood Tests:** unchanged. **Urinalysis:** positive benzodiazepines.

**Evolution:** Starts flumazenil infusion and patient awakens so intubation is removed, responding to simple commands but with somnolence. Maintains good saturations.

**Lumbar puncture** is performed with bland result. In 48 hours continues with sleep tendencies but easily waking up. **EEG** is requested compatible with diffuse encephalopathy with focal harmful-irritative left temporal compatible with encephalitis. Patient is moved to the internal medicine service admission with antibiotics (acyclovir)

**Conclusion:** Encephalitis is common causes of decreased consciousness, requiring diagnosis by lumbar puncture. The observation of the patient is essential for the final diagnosis of the episode.

Disclosure: No conflict of interest declared

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**Decreased level of consciousness as a manifestation of acute diverticulitis complicated by pneumoperitoneum**

J. Palacios Castillo<sup>1</sup>, P. Valverde Vallejo<sup>1</sup>, JP. García Paine<sup>2</sup>, J. Paz Galiana<sup>2</sup>, L.A. Calleja Cartón<sup>2</sup>, T. Quesada Fernández<sup>3</sup>, T. González-Granda García<sup>4</sup>

<sup>1</sup> Emergency Service, Carlos Haya Hospital. Pav C, Málaga, Spain; <sup>2</sup> El Palo Health Center, Málaga Sanitary District, Málaga, Spain; <sup>3</sup> Victoria Health Center, Málaga Sanitary District, Málaga, Spain; <sup>4</sup> Clinical Analysis, Carlos Haya Hospital, Málaga, Spain

**Personal Background:** Female, 76 years with high-grade glioma in tracking palliative care unit.

**Present Illness:** go to hospital emergency, brought by relatives, for choking episode with fluid intake, decreased level of consciousness and self-limited fever in the last 48 hours.

**Physical examination:** Auscultation bibasilar pulmonary crackles. Abdomen with umbilical hernia is not reducible. Murphy and negative Blumberg. No peritoneal irritation. DRE normal.

**Investigations: Blood Tests:** leukocytosis with a left shift. PCR 380 **Urinalysis** Nitrite +. leukocytes +

**Evolution:** antibiotic therapy is initiated. Given the persistence of pain is requested **abdominal ultrasound** was normal. Presents tendency to hypotension and fever peak so before the **CT** requested clinical abdomen: multiple diverticula in the sigmoid colon in relation to acute diverticulitis with pneumoperitoneum bubbles. The patient was admitted to the general surgery floor with intravenous antibiotic therapy, died at 3 days after admission.

**Conclusion:** There are diseases that may coincide in time, such as urinary tract infection and diverticulitis, both responsible for decreased level of consciousness. Highlight the mismatch in the complementary tests of abdominal ultrasound and CT. Physical examination is one of the most important tools available to us, and this is coupled with periodic reassessment of patients, fundamental to guide the diagnosis.

Disclosure: No conflict of interest declared

1322

**Contact urgency of frequent attenders in primary care out-of-hours services**K. Hek, M. Zwaanswijk, R.A. Verheij  
Primary Care, NIVEL, Utrecht, Netherlands

**Objective:** Frequent attenders (FAs) of primary care out-of-hours services account for approximately one-fifth of all out-of-hour consultations. It is sometimes suggested that FAs excessively use services for health problems that do not require immediate help. To test this hypothesis, we compared contact urgency between FAs and non-frequent attenders (NFAs) and explored whether urgency of FA contacts varied between out-of-hours services.

**Methods:** Data (including patient age, gender, and contact urgency labels) were extracted from electronic medical records kept by 9 out-of-hours services (36 locations) in the Netherlands, servicing a population of 4 million inhabitants, 650,000 of whom contacted the out-of-hours service at least once in 2011. Patients with >2 consultations were regarded as FAs.

**Results:** Preliminary analyses showed that 9.7% of patients were FAs (range for the 9 services: 7.9-11.4%). They accounted for 28% of the contacts (23.3-31.8%). The frequency of highly urgent contacts for FAs (11.1%) was higher than for NFAs (8.3%). Eighteen percent of the FAs only had non-urgent contacts for their health problems (5.3-45.6%). The group of FAs who had only non-urgent contacts was younger and comprised more females than FAs who had also urgent contacts.

**Conclusions:** Although FAs had a higher frequency of highly urgent contacts than NFAs, a significant portion of FAs repeatedly consulted out-of-hours services for health problems that did not require immediate help. Numbers varied greatly between services. Reasons for this variation (e.g. collaboration with hospital emergency departments) will be explored and discussed.

Disclosure: No conflict of interest declared

1639

**Stroke in a young patient with no risk factors**J. Valero Roldán<sup>1</sup>, I. López Leiva<sup>1</sup>, J. Paz Galiana<sup>2</sup><sup>1</sup> Emergency service, Carlos Haya Hospital, Málaga, Spain; <sup>2</sup> Palo Health Care, Málaga Sanitary District, Málaga, Spain

A 29- year old patient with no relevant medical history, occasional cannabis smoker and working at a cleaning company with a night time shift, sent to emergency after being attended at home because stonic-clonic seizure, apparently after toxic consumption. Once the crisis is over, he is conscious, oriented, with amnesia for the episode, defensive attitude abd and lack of collaboration. The patient refers overwork and poor night's sleep the days leading up the crisis, with excessive sleepiness the day before the same.

Being into emergency he suffers a new tonic-clonic seizure, treated with Diazepam and he has a postcritical state with psychomotor agitation.

**Physical examination:** Hemodynamic stability. Psychomotor agitation. Medium mydriatic normoreactiva pupils. Exploration by devices without alterations. Neurological Examination trending to drowsiness, disoriented to time and space but oriented to people. Right homonymous hemianopsia. Horizontal nystagmus exhausted. The rest is regular.

**Complementary Tests:** Blood Count: Leukocytes 16310 (85.7%Neutrophils), blood counting, blood clotting tests blood gas and blood biochemical without alterations. Ethanol 1.0 mg/dl.

Toxics analysis negative

X- Ray thorax, ECG and Doppler Ecography normally.

Cranial TAC: Hypodense area in the lower area on the left temporal lobe of triangular shape, which affects grey and white matter, following middle left cerebral artery territory, probably due to ischaemic pathology evolving. Hypodense point – sized image in the right basal ganglias (lenticular center) in relation to lacunar infarctions

**Evolution:** Neurology Dept orders admission and carries out a detailed study and analysis (lipid profile, protein measurement, autoimmunity, serology) CT-angiography which exclude neoplastic wounds.

Disclosure: No conflict of interest declared

1640

**Small cell carcinoma (oat cell carcinoma) and paraneoplastic syndrome**J. Paz Galiana<sup>1</sup>, I López Leiva<sup>2</sup>, JI Valero Roldán<sup>2</sup><sup>1</sup> Palo Health Care, Malaga Sanitary District, Málaga, Spain; <sup>2</sup> Emergency service, Carlos Haya Hospital, Málaga, Spain

**Reason for medical consultation:** Male of 57 years treated in medical consultation HealthCenter by asthenia and hyporexia for several weeks with lost 7 kg of weight in two months, left rib pain, nausea and vomiting. After analytical, metabolic alkalosis and hyperglycemia of 380 mg/dl were detected. Radiology: left perihilar mass was observed. The patient is derived to hospital emergency for evaluation.

**Personal history:** No known drug allergy, medical history or usual treatment. Ex-smoker for 8 years ago (60 packs/year).

**Physical examination:** Poorly overall condition, mucosal dehydration. Head, neck, cardiac auscultation, abdomen, neurological examination and extremities without disorders. Respiratory auscultation with expiratory wheezing and mild hypophonesis in left lung field.

**Tests in Emergencies:** Analytical: Platelets: 135000; Leukocytes: 12200 (neutrophils: 78.9%; Gluc: 379; K: 2.8, PCR: 56.6; pH: 7.53; pCO<sub>2</sub>: 54.2; HCO<sub>3</sub>: 45.1; Rest hemogram, coagulation and blood biochemistry unaltered.

Radiograph: left pleural effusion with parahilar mass without mediastinal displacing. Urinalysis, ECG, abdominal radiograph and head CT unaltered.

**Evolution:** The patient was admitted to Emergency Observation with left pleural effusion, left perihilar mass, hyperglycemia, hypokalemia and metabolic alkalosis suspicious of paraneoplastic syndrome associated. Treatment administered: Insulin, potassium supplement, diuretics, oxygen and steroids.

During his admission, the patient showed altered behaviour and refused the treatment. After psychiatric evaluation, it is recommended treatment for altered behaviour without previous precedents, neurological disease or evidence of toxic.

The patient was hospitalized in Internal Medicine floor after stabilization and confirmed the diagnosis after tests.

**Final diagnosis:** Small cells lung carcinoma and associated paraneoplastic syndrome

Disclosure: No conflict of interest declared

1641

**Young person in viral meningoencephalitis requiring mechanical ventilation**J. Valero Roldán<sup>1</sup>, D Núñez Castillo<sup>1</sup>, J. Paz Galiana<sup>2</sup>, I. López Leiva<sup>1</sup><sup>1</sup> Emergency service, Carlos Haya Hospital, Málaga, Spain; <sup>2</sup> Palo Health Care, Malaga Sanitary District, Málaga, Spain

Patient without drug allergies or past medical history, attended the previous day in the hospital by malaise, not feeling dysthermia thermometer, chills and dizziness. There were no alterations in analytic except Leukocytes: 23340 (N: 88.9%). Plain thoracic radiography and physical examination unaltered. May be discharged.

After 24 hours at home has tonic-clonic partial seizure right arm and deviation of the oral commissure and gaze upward and subsequently generalized knowledge lost in the presence of medical personnel Ambulance that moved to hospital.

**Exploration:** Pauses of apnea and scale Glasgow 3/15, so we proceed to Intubation and mechanical ventilation. Treatment began with Ac. Valproic, ceftriaxone and vancomycin.

Computed Tomography is performed without alterations of skull. In analytic Leuc: 23,680 (N: 82.9%), Cr 1.4, severe acidosis respiratory (pH: 7.06, pCO<sub>2</sub>: 105; HCO<sub>3</sub>: 28.9); Radiology single thoracic showed a complete atelectasis of the left lung.

**Evolution:** The patient was admitted to the Intensive Care Unit (ICU) with respiratory isolation of suspected bacterial meningitis, lumbar puncture is performed, the cerebrospinal fluid was analyzed as multiple virus serology in cerebrospinal fluid, enterovirus PCR,...

Electroencephalogram is made compatible with diffuse encephalopathy nonspecific etiology with focal type PLEDs (periodic lateralized epileptiform discharges) that could be related to focal alterations harmful (necrotizing viral encephalitis, herpes, focal vascular disorders, stroke,...)

Cerebrospinal Fluid biochemistry was consistent with viral meningitis

After elderly patient could be extubated without neurological sequelae and after hemodynamic stability and absence of symptoms after 3 days in ICU may be discharged to the patient's home.

**Diagnosis:** viral meningoencephalitis

Disclosure: No conflict of interest declared

1642

**Cardiomyopathy for stress caused by intravenous administration of adrenaline**D Núñez Castillo<sup>1</sup>, J Valero Roldán<sup>1</sup>, J Paz Galiana<sup>2</sup>, I López Leiva<sup>1</sup><sup>1</sup> Emergency service, Carlos Haya Hospital, Málaga, Spain; <sup>2</sup> Palo Health Care, Malaga Sanitary District, Málaga, Spain

Patient of 85 years with no known drug allergies, with prostate cancer with bone metastases and arterial hypertension treated with multiple drugs for pain, enalapril / Hydrochlorothiazide and acetilsalicylic acid.

This patient is brought by ambulance anaphylactic reaction probably related to drugs ruled the same day in "pain unit" with increased for 4 hours evolution of tongue.

Admitted to Observation Area absence of clinical improvement after administration of methylprednisolone, Dexchlorpheniramine Intramuscular and subcutaneous adrenaline.

**Exploration:** Regular general, hydrated, jaundiced tint and eupneic. No rash. constants normal, lingual protrusion caused edema

Cardiac auscultation with systolic murmur I / IV

Head and neck, respiratory auscultation, chest, abdomen and neurological unaltered

Complete blood tests with negative cardiac markers.

**Evolution:** In the observation area is administered adrenalin intravenously and the patient has severe malaise and rising objective in electrocardiogram bigeminy progressing at intermittent intervals of ventricular tachycardia and evidence subsequently complete atrioventricular block transient and subsequent restoration to sinus rhythm spontaneously without medication after a few minutes.

After discussing the case with Cardiology, informs us of the existence of stress cardiomyopathy reported following intravenous administration of adrenaline

Following strong performance of the night, with disappearance of angioedema and without presenting more symptomology associated or electrocardiographic changes, the patient is discharged by us with recommendations.

**Final diagnosis:** Cardiomyopathy for stress caused by intravenous administration of adrenaline

Disclosure: No conflict of interest declared

**3.17. SKIN AND SOFT TISSUE PROBLEMS**

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**A rare case: localized ichthyosis developed after thoracotomy**A. Parlak<sup>1</sup>, N. Parlak<sup>2</sup>, O. Sari<sup>3</sup><sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Dermatology, Ankara University Medical Faculty, İbni Sina Hospital, Ankara, Turkey; <sup>3</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey

Ichthyosis is a skin disease characterized with skin drying and squamosis, it can be congenital or acquired. Here, a patient developed localized ichthyosis adjacent to incision scar after thoracotomy presented.

Computed chest tomography of 19-year-old male patient taken for suffering from cough and sputum since childhood. Lung lobectomy performed by left thoracotomy due to bronchiectatic changes at the lower lobe of left lung revealed in computed chest tomography. Cytopathological examination findings were reported as consistent with bronchiectasis. In patient's medical history there was no additional history of diseases except vitiligo. In one-year period patient admitted to our outpatient clinic with complaints of unilateral dry skin and the formation of brown squama around the thoracotomy incision scar. In physical examination of the patient dry brown squamas observed on the beginning of thoracotomy incision scar which is at the left anterior of chest, under the breast, on the end of the thoracotomy incision scar which is at the posterior of the chest and around the drain scar which is at the left side of waist. Bilateral depigmented macules were noticed on the flexor side of wrists, around ankles and on the anterior surface of knees. As a postoperative complication after sympathectomy developed during thoracotomy and lobectomy, hipohydrosis may cause skin dryness and therefore acquired ichthyosis. Although there is no evidence of hipohydrosis, in our case we suggest that partial denervation of sympathetic nerves could have been caused localized acquired ichthyosis by causing subclinical hipohydrosis

Disclosure: No conflict of interest declared

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**A case of Melkersson Rosenthal Syndrome: Isolated eyelid edema**A. Parlak<sup>1</sup>, M. Cayirli<sup>2</sup>, U. Aydoian<sup>3</sup><sup>1</sup> Family Medicine, Agri Military Hospital, Agri, Turkey; <sup>2</sup> Dermatology, Agri Military Hospital, Agri, Turkey; <sup>3</sup> Family Medicine, Gulhane School of Medicine, Ankara, Turkey

Melkersson Rosenthal syndrome is a granulomatous disease characterized by triad of recurrent peripheral facial palsy, orofacial edema and fissured tongue. However in early stages of the disease, granulomamay not seen histopathologically, this condition does not prevent the diagnosis of the disease. Melkersson Rosenthal syndrome is often refractory to treatment. Classic triad is rare and usually monosymptomatic or oligosymptomatic involvement seen. Here, a case of 41 years old female patient which complaining from painless, nonpruritic swelling of right upper and lower eyelids for 2 years is presented. Thyroid function tests, immunological tests and orbital magnetic resonance imaging of the patient were normal. There was no evidence suggesting the presence of lymphedema in bilateral cranial lymphoscintigraphy. Histopathological examination of the skin biopsy taken from the right upper eyelid revealed edema and nonspecific inflammation. Doxycycline and dapsone treatments were intrusive, but patients has benefited partially from systemic steroid treatment. Here, a case with Melkersson Rosenthal Syndrome which diagnosed clinically due to the isolated right eyelid edema, is presented because of its rarity. As a result, in patients with isolated eyelid edema, monosymptomatic Melkersson Rosenthal syndrome should be kept in mind.

Disclosure: No conflict of interest declared

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**Clinical-dermatoscopic screening of pigmented skin lesions in general practice, awareness of patient self-examination and primary outcomes**N.P. Placentino, F. Canistro, C. Schiavone, G.B. D' Errico, R. Grisorio, L. Iannantuoni  
Family Medicine, Training Course in Family Medicine, Foggia, Italy

Melanoma is a malignant tumour that begins in melanocytes, with an incidence growing all over the world. Melanoma is a tumour with fatal prognosis in advanced stages and early diagnosis is the main therapeutic weapon. The study involved the distribution of information material in the setting of general practice aimed to raise awareness of the population in order to assess which means of communication would be more effective to establish the usefulness of the involvement of general practitioners in the screening campaign.

92 patients were recruited, all with suspicious skin lesions, submitted by their doctor at the first level of objective physical examination aimed to identify skin changes according to ABCDE rule. Then a dermatologist, using the dermatoscope, visited patients at risk and he sent to surgery cases that needed a histological definition.

The posters proved to be the most valid mean of information.

We obtained extremely positive results for the impact that the campaign of health education has had on the general population and the ability of general practitioners to select the pigmented lesions than sent to the dermatologist.

Improvement of knowledge of clinical-morphological appearance of melanoma and integration between general practitioner and specialised structures are confirmed as optimal substrate for diagnostic and therapeutic path based on the criteria of evidence and efficiency as proof of the validity of the involvement of general practitioners in the campaign for screening and prevention.

Disclosure: No conflict of interest declared



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**A rare adverse effect of montelukast treatment: ecchymosis**

Ö. Türedi, C. Aypak, N. Solmaz, H. Yikilkan, S. Görpelioglu  
*Family Medicine, Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey*

**Objective:** Montelukast is a leukotriene receptor antagonist that has been found to be effective both in the treatment of allergic rhinitis and asthma. The dermal side-effects of montelukast have rarely been reported.

**Methods:** Here we present a 31-year-old woman with complaint of ecchymosis affecting the lower extremities after initiation of treatment with montelukast (10mg once daily) for her chronic asthmatic bronchitis. She had a 2-year history of asthma treated with inhalant budesonid. She had not consumed other new drugs, over-the-counter medications, or herbal products, and had not modified her dietary habits.

**Results:** Clinical examination of systems was normal except for painless multiple petechial lesions on the lower extremities. Laboratory results (complete blood cell count, erythrocyte sedimentation rate, serum iron, and routine biochemical parameters, and urine and parasitological stool examinations), all of which were normal. Autoantibody screening yielded negative results for rheumatoid factors, antinuclear antibodies, cryoglobulin and perinuclear antineutrophil cytoplasmic antibodies (p-ANCA). The skin biopsy of the lesions revealed no specific pathology. The dermal lesions resolved within ten days after the suspension of montelukast. When she resumed montelukast; after 2 days, she developed lower extremity bruising again. We attributed the adverse reaction to montelukast because of the temporal relationship between use of montelukast and bruising, the positive rechallenge and the absence of other identified causative factors.

**Conclusions:** Physicians should be aware of potential adverse reactions of montelukast because of increasing use of it in bronchial asthma and allergic rhinitis.

Disclosure: No conflict of interest declared

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**The role of Power and Triplex Doppler ultrasound, in detection, assessment and monitoring peripheral and deep adenopathy to the child.**

M.S. Iacob  
*Pediatrics and Family Medicine, ADVITAM MEDICIS MEDICAL CENTER, TIMISOARA, Romania*

Most lymph nodes are not palpable in newborns and infants. In children, normal nodal elements cannot be identified by ultrasound. Adenopathy is produced either by proliferation of existing lymphoid elements, or by infiltration with malignant cells and phagocyte cells, or storage of various metabolites.

We formed two distinct groups of study, with children aged between 0-18 years, with various benign and malignant pathologies. The first group comprises of 260 patients who were found clinically superficial lymph nodes of various diseases, and the second group studied a total of 240 patients with deep adenopathy detected medical imaging. Generalized adenopathy occurs in systemic diseases or other malignancies and accompanying with pathological changes in other organs.

As a result of ultrasound examination of adenopathy, we have established a series of ultrasound criteria underlying an ultrasound score indicative for malignancy. Triplex Doppler ultrasound provides us with data on: location, number, size, structure, local invasion, vascularity of lymph nodes, that have a high sensitivity and specificity in the differential diagnosis of inflammatory or malignant adenopathy. Ratio of long and short axis of lymph nodes are a major criterion. Power Doppler ultrasound allowed the establishment of three main types of vascularity node type I and II associated with acute or chronic inflammatory lymph nodes and type III with multiple peripheral vascular pole, occurring in malignant adenopathy  $p < 0.01$ .

In conclusion any persistent adenopathy more than four weeks, asymptomatic, with imaging criteria for malignancy, requires lymph node biopsy and pathological examination, and these remain the main methods to assess the child adenopathy.

Disclosure: No conflict of interest declared

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**Eruptive xanthomas – regarding to a clinical case**D. Freitas<sup>1</sup>, J. Santos<sup>1</sup>, V. Carneiro<sup>2</sup>, P.Santos<sup>3</sup>

<sup>1</sup> *Unidade de Saúde de Capelas, Unidade de saúde de Ilha de Sao Miguel – Unidade de Capelas, Ponta Delgada, Portugal;* <sup>2</sup> *Serviço de Anatomia Patológica, Hospital do Divino Espírito Santo, Ponta Delgada, Portugal;* <sup>3</sup> *Serviço de Dermatologia, Hospital do Divino Espírito Santo, Ponta Delgada, Portugal*

**Introduction:** Cutaneous xanthomas result from intracellular and dermal deposition of lipids. The lesions appear with different anatomical locations and morphologies, which may indicate the type of underlying pathology. The eruptive xanthomas manifest as erythematous, or yellow, millimetric papules and usually are located on the extensor surfaces of the extremities, buttocks and hands. Arise frequently in primary or secondary hypertriglyceridemia associating with elevated triglycerides.

**Case report:** It is reported the case of a male patient, 55 years old, with a history of hypercholesterolemia, smoking and ethyl habits, and a recent history of acute pancreatitis, evaluated at Dermatology Appointment for monomorphic, bilateral and roughly symmetrical dermatosis, consisting of yellowish papules, about 3-5mm in diameter, located on the extensor surfaces of the arms and legs, thighs and buttocks, with 10 days of evolution. The clinical diagnosis of eruptive xanthomas was confirmed histopathologically. The evaluation of patient showed severe hypertriglyceridemia (> 5000) and diabetes mellitus.

**Conclusion:** Xanthomas can translate systemic diseases, in particular, hypertriglyceridemia, diabetes or hypothyroidism. The recognition of eruptive xanthomas and investigation of underlying conditions, allow a correct diagnosis and timely treatment. In this case the diagnosis and treatment of severe hypertriglyceridemia has allowed avoiding potentially serious complications such as acute pancreatitis and coronary artery disease. The diagnosis of diabetes mellitus also permitted to treat the disease and prevent its complications.

Disclosure: No conflict of interest declared

1057

**Norwegian Scabies – different and confusing**J. Diez-Carvalho<sup>1</sup>, A. Pais-Sousa<sup>2</sup>, C. Duarte<sup>2</sup>, C. Pires<sup>3</sup>

<sup>1</sup> *MGE, Centro de Saúde de Gouveia, Gouveia, Portugal;* <sup>2</sup> *MGE, USF Viseu Cidade, Viseu, Portugal;* <sup>3</sup> *MGE, USF Grão Vasco, Viseu, Portugal*

**Introduction:** Norwegian Scabies is the most contagious and aggressive type of Human Scabies, featuring only mild pruritus and widespread crusted lesions where vast numbers of mites are found. It's more frequent in immunosuppressed and undernourished people and can be a source of epidemics of ordinary scabies.

**Description:** 58 year old woman, rural worker, part of a nuclear family, in the VII stage of Duvall Cycle, low social class, with a background of Diabetes Mellitus, Chronic Obstructive Pulmonary Disease and Obstructive Sleep Apnea. Relevant chronic medication is Budenoside.

The patient complained about a scaly and erythematous plaque in the left infraglauteal cleft and mild itching evolving for 4 months. During the physical exam it was also found erythematous and scaly papules scattered on the trunk and limbs.

After a first diagnosis of Psoriasis and therapeutic failure with betametasone and salicylic acid, she's referred to a Dermatology Consult at the local Hospital where the bigger lesion is biopsed and the patient is empirically medicated with benzyl benzoate suspecting Norwegian Scabies. A month passed, the biopsy reveals Scabies and the treatment is changed to sulfur ointment due to poor improvement. It should be noted that the husband had typical Scabies lesions evolving for 1 month.

**Discussion:** Clinical presentation of typical scabies is straightforward, but Norwegian Scabies can be a challenge for the family practitioner. Since it's a rare condition and can be confused with Psoriasis, the highlighting of this entity as differential diagnosis is important to avoid unnecessary referrals to secondary health care.

Disclosure: No conflict of interest declared

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**Treatment of scabies in children.**

A. Neto

USF Forte, USF Forte, Forte da Casa, Portugal

**Introduction:** Scabies is a common parasitic infestation in the pediatric population and the diagnosis is clinical. An outbreak of scabies depends on the strict implementation of infection control measures and proper treatment.

**Objective:** Review the evidence on the topical and oral treatment of scabies in children.

**Methods:** Researches were performed on databases Guideline finder, BMJ-clinical evidence, Cochrane library, Medline, published in the last 10 years, in English and Portuguese, using the Mesh terms "scabies treatment" and "children". To evaluate the results, the taxonomy SORT was used.

**Results:** From the research resulted 46 articles, from which 10 were selected: 3 guidelines, 1 original research study, 5 systemic reviews and 1 meta-analysis. From their analysis the topical permethrin 5% was the most effective with fewer side effects. The efficiency of crotamiton 10% is questionable. Lindane 1% has similar efficacy than permethrin 5%, but has high toxicity level. The topical benzyl benzoate 10-25% is recommended as the first line in some countries. There weren't found any randomized clinical trials on the efficacy of malathion 0.5%. The sulfur 2-10% proved to be safer and effective. Ivermectin is the only oral drug, but was less effective than topical permethrin.

**Conclusion:** Evidence was good in order to support the efficacy of permethrin 5% and sulfur 2-10% in the treatment of scabies in children (SORT A). Followed by crotamiton 10%, lindane 1%, benzyl benzoate 10-25% and ivermectin (SORT B). More research is needed on the effectiveness of malathion (SORT C). However, more studies are needed in order to compare the various drugs.

Disclosure: No conflict of interest declared

1281

**Burn treatment in primary care: evaluation of medical, economical and social aspects**F. Özarslan<sup>1</sup>, Ç. Yastı<sup>1</sup>, İ. Kasım<sup>1</sup>, İ. Şencan<sup>1</sup>, E.M. Koç<sup>1</sup>, R. Kahveci<sup>1</sup>, A. Özkara<sup>2</sup><sup>1</sup> Family Medicine, Ankara Numune Training and Research Hospital, Ankara, Turkey;<sup>2</sup> Department of Family Medicine, Hitit University Çorum, Faculty of Medicine, Çorum, Turkey

**Objectives:** A large quantity of burn patients fit for outpatient management. They usually skip the PC and directly admit to hospitals. We aimed with this study to reveal the current situation at the management of burn patients, and to check the availability of management at primary care facilities.

**Methods:** The burn patients admitted to ambulatory care in a training and research hospital between July 1 and August 31 2012 were planned to be included in the study. 119 of the total 153 admissions were treated as outpatient while the rest was hospitalized. The outpatients' management was closely observed and treatment costs were also noted. Twenty-one patients' primary care physicians were selected via random sampling besides twenty-one control group physicians and a questionnaire was applied to all physicians regarding their level of knowledge on management.

**Results:** At the study group, the mean age was 28,98±18,08 years. Total number of dressing changes applied was 501. Of the patients, 70.6% had at least one accompany. While hospital treatment cost was about 20 € (42.9 TL) for each visit when calculated on unit cost per dressing, it is approximately 5 € (11.9 TL) when dressing is made at the primary care setting.

**Conclusion:** Most of the burn injuries can be managed at primary care settings. While it increases the work load of family physicians, the patients and companions economical, psychological and social extra-loads will diminish. However, man power waste will be decreased at the secondary or tertiary settings, and also unit cost per dressing and overall treatment cost will decrease.

Disclosure: No conflict of interest declared

1321

**Acyclovir as treatment for Pityriasis Rosea – what scientific evidence there is?**S. Calejo Rios<sup>1</sup>, N. Monteiro<sup>2</sup>, A. Catarina Candeias<sup>3</sup><sup>1</sup> MGE, USF Sem Fronteiras, S.Paio de Oleiros, Portugal; <sup>2</sup> MGE, USF Porto Centro, Porto, Portugal; <sup>3</sup> MGE, USF Sudoeste, Arrifana, Portugal

**Introduction:** Pityriasis Rosea is a common, acute exanthem and self-limiting skin disorder. Despite its benign course, it can be presented to General Practitioners with anxiety concerning the disease, variable pruritus and cosmetic disfigurement. Recently, the role of two herpes viruses was advocated as being the etiology of Pityriasis Rosea. Thus recent studies are focused on using antiviral agents in this disorder, mainly acyclovir.

The aim of this work was to review the current available information about acyclovir efficacy in the improvement of Pityriasis Rosea's symptoms.

**Methods:** A bibliographic research was carried out on December 15<sup>th</sup> of 2012 using the MeSH terms *Pityriasis Rosea* and *Acyclovir* in several databases. Data was collected if published since January 2002, in English or Portuguese. To assess the levels of evidence and strength-of-recommendation grade, the Strength of Recommendation Taxonomy by American Family Physician was used.

**Results:** The number of articles found was 15, but only four Randomized Controlled Trials comply with the established criteria. These studies have compared oral acyclovir with no treatment, placebo or oral erythromycin. In all four studies oral acyclovir has proven to be more effective in reducing the severity and duration of Pityriasis Rosea (Evidence Level 2).

**Discussion:** The current evidence states that acyclovir is effective in decreasing the Pityriasis Rosea's symptoms (SOR B). However, these four studies have several limitations, like the small sample size and being neither randomized nor double blind. Therefore the need for more scientific evidence is necessary.

Disclosure: No conflict of interest declared

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**„Pseudoathletic“ appearance**J. Moreira<sup>1</sup>, G. Pereira<sup>2</sup><sup>1</sup> SNS – ACES Ave, UCSP Vale de São Cosme, Famalicão, Portugal; <sup>2</sup> SNS – ACES Entre Douro e Vouga I, USF Sem Fronteiras, Santa Maria da Feira, Portugal

**Introduction:** Multiple Symmetric Lipomatosis (MSL) is a rare disease characterized by the growth of non-encapsulated and painless lipomas, preferably located in the neck, scapular region, the proximal part of the upper and limbs, excluding the face and distal part of the limbs. Predominates in males, between 30 and 60 years. Its pathogenesis is still unknown and may be associated with neuropathy, hyperuricemia, liver disease and malignant tumors of the airways and digestive tract.

**Case description:** A male patient, 47 years old, caucasian, uses the query to renew chronic medication (statin and uricosuric) and analytical study routine. Physical examination shows a multiple bilateral swellings in the proximal region of the upper and lower limbs. Analytically presents hyperuricemia, hypertriglyceridemia, hypercholesterolemia (at the expense of HDL-c), macrocytosis and changes in hepatic tests. TC revealed the presence of non-encapsulated homogeneous masses of adipose tissue in the proximal region of the limbs.

**Conclusion:** The growth of lipomatous masses can cause dyspnea, dysphagia, superior vena cava syndrome, depending on the location of the deposits. The diet has no effect on the growth of lipomas and alcohol withdrawal is, so far, the non-surgical therapeutic measure which has been proven most effective. The surgical treatment either by lipectomy or by liposuction are the only ones so far proved effective. Despite its generally benign course, there may be a substantially high mortality in individuals with MSL, so it is relevant to monitor these patients.

**Keywords:** Symmetric Multiple lipomatosis, hyperuricemia, hypertriglyceridemia, hypercholesterolemia.

Disclosure: No conflict of interest declared

1383

**A different kind of urticaria**

S. Calejo Ros, G. Gomes Pereira, M. Redondo  
MGF, USF Sem Fronteiras, S.Paio de Oleiros, Portugal

**Introduction:** Urticaria is a common clinical manifestation causing an inflammatory response. However, the etiology of chronic urticaria (CU) is, in most cases, unknown. CU occurs about two times more often in women than in men, suggesting that hormonal differences may play a role in this phenomenon.

**Case description:** female, 29y, went Emergency Department, by the appearance of urticarial lesions, itchy, trunk, abdomen and limbs, having been treated with cetirizine for a period of 20 days. After stopping therapy, the patient went to her family doctor (FD), the reappearance of new lesions urticarial, pruritic, in the region of the waist line, and limbs. She was treated with cetirizine 10mg in the morning and hydroxyzine 25mg at night. By persistent lesions, and no apparent improvement was prescribed lepicortinolo 20mg twice daily for 4 days and then one time per day, hydroxyzine overnight and two tablets of Cetirizine 10mg in the morning and one at night, and was sent to allergology, where was treated with cetirizine and hydroxyzine morning to night in crises. It was also changed the oral contraceptive of levonorgestrel+ethilenoestradyol for ethilenoestradyol+drosiprenone, presented some improvement since May 2012

**Conclusion:** Oral contraceptives are recognized as one of the etiologic factors responsible for the emergence of chronic urticaria. In this case, the form of presentation and therapeutic resistance, led to a more detailed study of the etiology of this disease. It is for the FD suspicion, identification and treatment of these cases and the proposed alternative methods contraceptives.

Disclosure: No conflict of interest declared

1645

**„Case report: doctor, I feel this tightness in my throat.“**

T. Magalhães<sup>1</sup>, G. Ferreira<sup>2</sup>, J. Ferreira<sup>3</sup>

<sup>1</sup> Family Medicine, UCSP – Oliveira do Douro, Vila Nova de Gaia, Portugal; <sup>2</sup> Family Medicine, USF BrásOleiro, Porto, Portugal; <sup>3</sup> Family Medicine, USF Novo Sentido, Porto, Portugal

**Objectives:** We aim to describe a case of mediastinal goiter; most are extensions of cervical goiters. Patients are generally female, over age 60, and only rarely have symptoms.

**Methods:** History, physical, chart and literature review.

**Results:** 77 year-old Caucasian male. Complaints of anterior cervical tightness, dysphagia for solids and cough, for 3 months. Inspection and palpation revealed an enlarged thyroid. Thyroid ultrasound revealed a solid hypoechoic nodule with 10.5x13 mm in the middle third of the right lobe and another nodule in the left lobe with similar characteristics, likely colloid. The chest x-ray suggested enlargement of the superior mediastinum; the lateral view showed a fusiform image separated from the anterior wall of the upper third of the lung field suggesting substernal goiter. Thoracic CT confirmed the diagnosis. A surgical referral was made.

**Discussion:** Esophageal dysphagia to solids may be associated with regurgitation, aspiration or odynophagia. Causes can include lower esophageal ring, peptic strictures, carcinoma, diffuse esophageal spasm, scleroderma, achalasia and substernal goiter, among others. Substernal goiter is associated with a low rate of malignancy. The initial signs and symptoms may include dyspnea/progressive dysphagia, superior vena cava compression syndrome, mediastinal mass on radiography, tracheal compression and hyper/ hypothyroidism. Faced with compression of adjacent structures, surgical treatment is indicated. Given their frequency, and sometimes insidious onset and nonspecific symptoms, the GP needs to maintain a high index of suspicion when dealing with complaints of cervical discomfort associated with esophageal or respiratory symptoms.

Disclosure: No conflict of interest declared

1688

**Tattoos and cancer – what is the evidence?**T. Magalhães<sup>1</sup>, G. Ferreira<sup>2</sup>, J. Ferreira<sup>3</sup><sup>1</sup> Family Medicine, UCSP Oliveira do Douro, Vila Nova de Gaia, Portugal; <sup>2</sup> Family Medicine, USF BrasOleiro, Porto, Portugal; <sup>3</sup> Family Medicine, USF Novo Sentido, Porto, Portugal

**Objective:** Evaluate the effect of permanent tattooing on the subsequent risk of skin cancer.

**Methods:** Literature review, using Mesh keywords “tattooing” and “neoplasms”, in Pubmed, Cochrane Library, TRIP database, DARE, Bandolier and references of selected articles, in English, Spanish and Portuguese, without temporal restrictions. Evaluation of evidence levels and strength of recommendations was performed using SORT (Strength of Recommendation Taxonomy).

**Results:** The carcinogenic effect of tattoos is unclear. The best available evidence was found in a 2012 extensive review of the literature, between 1938 and 2011; overall, only 50 cases of skin cancer arising from tattoos were reported; an earlier 2007 review found 12 cases of cancer. These reported cases included melanoma, basal-cell carcinoma, squamous-cell carcinoma, keratoacanthoma and pseudoepitheliomatous hyperplasia. This very small number of tumors arising in tattoos suggests a coincidental, and not causal, association.

**Conclusions:** Available evidence does not support a causal link between tattoos and skin cancer (SOR B). However, several components of tattoo ink are considered human carcinogenic, ink composition is not thoroughly regulated and there are several other additional risk factors for skin cancer that have not been extensively controlled for when assessing the possibility of tattoo associated cancer; as such, more, higher quality studies, should be performed. The fact that tattoos also complicate the clinical evaluation of underlying skin changes and lead to reactive alterations in the pattern of preexisting lesions, thus hindering subsequent management, should also be emphasized.

Disclosure: No conflict of interest declared

1779

**Erythema ab igne: a case report**

M.S. Bakola, K. Mavridou, C. Stergiopoulou

Department of Skin and Venereal Diseases, General Hospital of Ioannina „G.Hatzikosta“, Ioannina, Greece

**Objectives:** Erythema ab igne (EAI) is characterized as localized areas of reticulated erythema and hyperpigmentation due to chronic and repeated exposures to heat, at a lower level than that which causes a thermal burn. It is associated with hypothyroidism and with possible development of skin cancers on the hyperpigmented areas.

**Methods:** A 76 year old man presented to our department, with a two month history of asymptomatic, blackish discoloration on the right side of his back and buttock, that appeared after repeated and prolonged exposure to heat (fireplace). Medical history revealed that the patient was taking medication for chronic obstructive pulmonary disease and hypothyroidism.

**Results:** The diagnosis was based on physical examination and history taking. Since there were no accompanying symptoms (itching and burning) the therapy was prophylactic, ie to avoid exposure to external factor which caused the EAI.

**Conclusions:** EAI, is a relatively common skin condition. It is usually found on the anterior shins of people who sit too closely to fires or wood-burning stoves. The differential diagnosis is made with livedo reticularis. The presence of ulceration or the appearance of nodules on the hyperpigmented areas after repeated exposure to heat, should make the general practitioner to suspect the transformation of EAI to squamous cell carcinoma and Merkel cell carcinoma, and refer the patient to a dermatologist. It is important to emphasize the association of EAI with hypothyroidism as in our case.

Disclosure: No conflict of interest declared

### 3.18. OCCUPATIONAL HEALTH

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#### Assessment of invalidity on the principles of ICF

R. Čevela, L. Čeledová

Assessment Service, Ministry of Labour and Social Affairs, Prague, Czech Republic

**Objective:** The operative events for determining invalidity have changed in the Czech Republic since January 2010.

**Method:** The conclusions of the project of the Ministry of Labour entitled “Consideration of the progress in medical science in respect of the functional evaluation of state of health and capacity for work in terms of the International Classification of Diseases and with a view to the International Classification of Functioning”, undertaken by the Czech Medical Society of J.E. Purkyně, provide medical background materials to evaluate the effects of disability on the capacity for work and invalidity.

**Results:** The solution reflects the principles of the International Classification of Functioning, Disability and Health. Also included, as an integral part, was the evaluation of the impact of the long-term poor state of health on the decrease in the capacity for work and on the ability to use the attained education, experience and knowledge, the ability to continue the previous professional or trade activity, or on the capability of vocational retraining, in the events falling within ‘standard assessment’ as well as in the situations when the effect of the long-term poor state of health is much greater or, by contrast, absolutely insignificant.

**Conclusion:** The new invalidity assessment method, pursuant to the cited Decree, makes it possible to consider the useful profile of the functional capabilities of an individual, his or her disability, and to specifically make up for the decreased capacity for work of that individual while evaluating the extent of the decrease in the capacity for work.

Disclosure: No conflict of interest declared

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#### Metallothionein 1A polymorphisms may be associated with uric acid excretion in chronic lead-exposed workers

C.-C. Yang<sup>1</sup>, H.-I. Chen<sup>2</sup>, Y.-W. Chiu<sup>1</sup>, C.-H. Tsai<sup>3</sup>, H.-Y. Chuang<sup>4,2</sup>

<sup>1</sup> Department of Family Medicine, Kaohsiung Medical University Hospital, Kaohsiung City, Taiwan; <sup>2</sup> Department of Public Health, College of Health Sciences, Kaohsiung Medical University, Kaohsiung City, Taiwan; <sup>3</sup> NGO Research Center, School of Public Policy and Management, Tsinghua University, Beijing, China; <sup>4</sup> Department of Community Medicine, Kaohsiung Medical University Hospital, Kaohsiung City, Taiwan

**Objective:** Lead is a renal toxin, and susceptibility to lead varies between individuals. Metallothionein (MT) is known for its metal scavenging role. The aim of the study was to evaluate the association among blood lead levels and renal biomarkers in chronic occupational lead-exposed workers and to survey whether the association is influenced by MT1A gene polymorphisms.

**Methods:** In this cross-sectional study, 412 lead-exposed workers participated. Their annual health examination data and renal function markers were collected after the IRB approved the study and consent letters were obtained. From the blood samples, DNA was extracted and used for real-time PCR typing of 2 MT1A SNPs: rs11640851 and rs8052394 on exons 2 and 3. Descriptive analysis, one-way ANOVA, and multiple linear regressions were performed.

**Results:** There was a significant inverted relationship of creatinine-adjusted urine uric acid concentrations and the time-weighted index of cumulative blood lead levels (TWICL) that may be significantly influenced by the AC genotypes of rs11640851 in exon 2 and rs8052394 in exon 3. After controlling for potential confounding factors, the creatinine-adjusted urine N-acetyl-beta-D-glucosaminidase (NAG) concentrations were shown to be influenced by the GG genotype of rs8052394 in exon 3, and were weakly increased with time-weighted index of cumulative blood lead levels (TWICL).

**Conclusions:** The variations of MT1A SNPs may influence urine uric acid (UA) and NAG excretion in chronic lead-exposed workers, and urine creatinine-adjusted urine UA as a biomarker of lead toxicity should be considered.

Disclosure: No conflict of interest declared

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**Evaluation of health promoting projects at workplace in Taiwan**C-T. Huang<sup>1</sup>, Y.-T. Chang<sup>2</sup>, K.-Y. Chao<sup>3</sup>, H.-Yi. Chuang<sup>1,2</sup>

<sup>1</sup> Department of Family Medicine, Kaohsiung Medical University Hospital, and School of Medicine, Kaohsiung Medical University, Kaohsiung City, Taiwan; <sup>2</sup> Department of Public Health, College of Health Sciences, Kaohsiung Medical University, Kaohsiung City, Taiwan; <sup>3</sup> Bureau of Health Promotion, Department of Health, Taipei City, Taiwan

**Objective:** Occupational health promotion at workplace is important to prevent work-related diseases, improve workers health and reduce accident. Hence, the aim of this study was to evaluate health promoting projects for workers, which were supported by Bureau of Health Promotion, Department of Health, Taiwan.

**Methods:** The participant group consisted of 838 companies which enrolled in the occupational health promoting projects which were supported by Bureau of Health Promotion, Taiwan Department of Health, from 2003 to 2007. The non-participant group, including 1000 companies, was randomly selected from the registered company list of Ministry of Economic Affairs, Taiwan.

**Results:** We have received 447 (53.3%) questionnaires from the participant group and 97 (9.7%) questionnaires from the non-participant group. According to our study, the participant group was more effective in using the external and medical resources, as well as more frequently follow-up of annual health examination than the non-participant group did. Then, the participant group has remarkably improved in avoiding second-hand smoke, reducing the tobacco smell in whole companies, and more employees smoking quit comparing with the non-participant group.

**Conclusions:** By means of interfering consulting of health promotion, we expected remarkable progress in improving the workers' health status. The benefit to enterprises and workers from the support of the Taiwan Bureau of Health Promotion was significant.

Disclosure: No conflict of interest declared

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**Clinical investigation of elevated serum alanine aminotransferase levels among the elderly agricultural and fishing population in Taiwan**T.H. Tung<sup>1</sup>, Y.F. Chen<sup>2</sup>, Y.C. Hu<sup>3</sup>, H.C. Shen<sup>4</sup>

<sup>1</sup> Department of Medical Research and Education, Cheng-Hsin General Hospital, Taipei, Taiwan; <sup>2</sup> Institute of Health and Welfare Policy, National Yang-Ming University, Taipei, Taiwan; <sup>3</sup> College of Nursing, Taipei Medical University, Taipei, Taiwan; <sup>4</sup> Department of General Surgery, New Taipei City Hospital, Taipei, Taiwan

**Objective.** To discuss any gender-related differences in prevalence of and condition-associated factors related to an elevated serum alanine aminotransferase (ALT) level amongst the elderly agricultural and fishing population in Taiwan

**Methods.** The study participant was conducted with a total of 6,542 (2,553 males and 3,989 females) healthy adults voluntarily admitted to a teaching hospital for a physical check-up in 2010 in Taipei, Taiwan. Fasting blood samples were drawn via venipuncture and interviewed with a structured questionnaire from study participants by clinical nurses.

**Results.** The overall prevalence of an elevated serum ALT level for this study population was found to be 18.2%, the prevalence revealing a statistically significant decrease with increasing participants' age ( $p < 0.001$ ). Males exhibited a significant higher prevalence of elevated serum ALT level than did females (19.7% vs. 15.9%,  $p < 0.001$ ). Using multiple logistic regression model, in addition to male gender, a younger age, presence of obesity, type 2 diabetes, hypertension, and hyperuricemia were the significant factors associated with an elevated serum ALT level for both in males and in females. Gender-related differences as regards associated risk factors were also revealed. For males, hypercholesterolemia (OR=1.82, 95%CI: 1.19-2.80), hypertriglyceridemia (OR=1.22, 95%CI: 1.01-1.48), and low HDL (OR=1.21, 95%CI: 1.01-1.46) were significantly related to an elevated serum ALT level but this was not so for females.

**Conclusions.** Several gender-related differences were indicated pertaining to the prevalence of and relationship between hypercholesterolemia, hypertriglyceridemia, and low HDL and elevated serum ALT level among elderly specific occupational population in this study.

Disclosure: No conflict of interest declared



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**Relationship between occupational stress and gastric disease in male workers**

T. Gong Yoon, H. Seob Lihm, S. Ra Jeong

*Family medicine, Kosin University Gospel Hospital, Busan city, Korea*

**Background:** Health of workers is threatened due to various events and occupational stress. This study was conducted to investigate the relationship between occupational stress and gastric disease in male workers.

**Methods:** The occupational stress were measured among a total 498 workers of a shipbuilding firm who visited hospital for health examination using the KOSS-SF, and relationship between sociodemographic factors, health-related behaviors, occupational stress and gastric disease, and the distribution of occupational stress by the sociodemographic factors in gastric disease group was examined.

**Results:** There were no significant association between gastric disease and occupational stress score and the seven sub-factors of it. The analysis showed that the risk of being included gastric disease was significantly higher in the Q1 group in which the stress caused by the discomfort in occupational climate among seven sub-factors was lowest than that in the Q4 group (OR: 2.819, 95% CI: 1.151~6.908). The analysis only on the gastric disease group showed that stress score of labors were higher in the four sub-factors than that of office workers ( $P < 0.05$ ). The analysis on the educational background showed that the scores of the three sub-factors were lower in the under high school group ( $P < 0.01$ ).

**Conclusion:** This study suggested it is needed to improve the culture of Korean collectivism in workplace and to manage the occupational stress in the low-educated and labors. It is recommended for the future studies to confirm the causal relationship between occupational stress and gastric disease by large scale studies using a KOSS reflecting out workplace culture appropriately.

Disclosure: No conflict of interest declared

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**Occupational overuse syndrome**L. Mahelova<sup>1</sup>, S. Moricova<sup>2</sup>, K. Dostalova<sup>2</sup>, I. Batora<sup>1</sup>, L. Kukuckova<sup>3</sup>*<sup>1</sup> Department of Occupational Medicine and Toxicology, Derer 's Hospital, University Hospital, Bratislava, Slovakia; <sup>2</sup> Faculty of Public Health, Slovak Medical University, Bratislava, Slovakia;**<sup>3</sup> Department of long term ill, Derer 's Hospital, University Hospital, Slovak Society of General Practice, Bratislava, Slovakia*

Since 1997 in the Slovak Republic the largest part of occupational diseases (over 30%) has represented the disease of occupational overuse syndrome (OOS). OOS belongs to the top of occupational diseases in most countries of the European Union as well. In 2011 in the Slovak Republic 162 OOS (i.e. 43,4%) of the total 373 occupational diseases cases were reported.

The occupational overuse syndrome is affecting the structure of limbs – bones, joints, tendons, nerves. It is caused by different work activities without the necessary time to recover. The most common OOS include carpal tunnel syndrome, impingement syndrome, ulnar or radial epicondylitis.

General practitioners (GPs) are often part of the occupational health service and so primarily responsible for the quality of the initial, preventive and final medical examinations.

When OOS is suspected GPs should send a patient to a orthopedic respectively neurological examination or direct him to the occupational health clinic or department of occupational medicine where differential diagnosis should be carried out.

The role of GP is to pay attention to patient's difficulties with musculoskeletal system from the labor history point of view and thus increase the detection of patients with OOS, improve the prognosis and prevent progression of the disease what may lay out a patient from work and life.

It is reported that almost 2/3 of workers in the world work in conditions that are below the minimum safety standards. The cooperation of occupational physicians and GPs seems to be inevitable for prevention and early detection of OOS.

Disclosure: No conflict of interest declared

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**The functional food usage and relation with fatigue for male workers**

S. Ra Jeong, J. Sun Choi, T. Gong Yoon, J. Jung Lee

*family medicine, Kosin University Gospel Hospital, Busan city, Korea*

**Background :** Fatigue is a common problem in male workers because they have role in home and responsibility in work place. The functional food usage is an increasingly popular choice for fatigue recovery but previous research is not enough. Therefore, the aims of this study were to investigate the functional food usage and relation with fatigue for male workers.

**Methods :** The subjects were male workers seen for health check up at a university hospital in Busan from May to July 2009. They completed a questionnaire dealing with social factor, occupational factor, life style, functional food usage and disease. The subjects were divided into groups in order of fatigue severity(fatigue and non-fatigue group).

**Results :** Among 770 subjects, 267(34.7%) took functional food in their daily diet. Most of them used functional food to recover fatigue or supplement nutrition by wife or acquaintance recommendation. They were found significantly different from age, occupation satisfaction, alcohol drinking, insomnia between the fatigue and non-fatigue group. The prevalence of fatigue was 37.8%. The functional food usage had a relation with increasing fatigue severity scale( $P<0.001$ ).

**Conclusion :** Fatigue is common problem in male workers. The functional food usage is relation with fatigue severity.

Disclosure: No conflict of interest declared

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**Entrepreneurship: citizenship that comes from trash**

A. Modesto de Sousa, D. Ramos Henrique, O. Araújo Gomes, G. Júnior, J. P. Marques, H. Gomes, M. Costa, K. Fernandes, K. Garcia

*Public Health, University of Brasilia, Brasilia, Brazil*

**Introduction:** In public health there is a need to bring the light of academic research worker of the trash and leaving your desktop element health / environment / work, basing on the concept of health as something that transcends the broad mere biological aspect and correlating practices and work of scavengers with social determinants.

**Rationale:** The shares were scored and planned from the knowledge of the reality of the cooperative of waste pickers and their workers. This is an action research, where there is the implement of actions that meet the demands expressed by the class in question, and which also sets up empowerment: the workers become not only a participant in receptor action, but also protagonists. Objective: To promote actions to promote health among the scavengers of garbage cooperative Cataguá, located in P. South Ceilândia, DF, Brazil.

**Methods:** The sample consisted of 40 (forty) cooperative and data collection was obtained through interactive conversations wheels, where the workers related their difficulties and possible solutions for them. Data analysis was performed by the students participating in the study and subsequently by members.

**Conclusion:** These findings emphasize the awareness of scavengers on the importance of a healthy work environment. They demonstrated also be aware of the social importance of their services.

Disclosure: No conflict of interest declared

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**Work stress and related risk factors among high tech male workers in southern Taiwan**C.-Y. Huang<sup>1,2</sup>, C.-Y. Lin<sup>1,2</sup><sup>1</sup> Family Medicine, Chi-Mei Medical Center, Tainan, Taiwan; <sup>2</sup> Tainan Science Park Clinic, Chi-Mei Medical Center, Tainan, Taiwan

**Objective:** Work stress, which might lead to the accumulation of stress and lead to various physical and mental illnesses, has become an important issue among workers in the high-tech industry. There is gender difference between work stress and shift work. Therefore, we conducted a study to evaluate the associations between work stress and shift work among high tech male workers.

**Materials and Methods:** We recruited workers working in a scientific park in southern Taiwan from January 1 to December 31, 2011. Information on demographic characteristics was collected through a self-administrated questionnaire. Participants also completed a job content questionnaire and reported habits of smoking and drinking.

**Results:** There were 1193 male workers participated in this study. We observed positive associations between work stress and marriage status, shift work, seniority, burnout for personal reasons, work-related burnout, over-commitment, and client-related burnout (all with  $p < 0.05$ ). After adjusting for other factors, we found higher seniority [6-10 years (adjusted odds ratio [AOR] = 1.61, 95% confidence interval [CI]: 1.04-2.50); >10 years (AOR = 1.74, 95% CI: 1.12-2.68)], day work (AOR = 1.40, 95% CI: 1.01-1.93), and burnout for personal reasons (AOR = 2.09, 95% CI: 1.19-1.93), were independent risk factors of work stress.

**Conclusion:** Among the high tech male workers, work stress is associated with day work, higher seniority and burnout for personal reasons. Therefore, intervention strategies for work stress should take into consideration these factors.

**Key words:** shift work, work stress, burnout and seniority.

Disclosure: No conflict of interest declared

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**The effectiveness of aerobic exercise intervention on physiological parameters and quality of life**C.-Y. Huang<sup>1,2</sup>, C.-Y. Lin<sup>1,2</sup><sup>1</sup> Tainan Science Park Clinic, Chi-Mei Medical Center, Tainan, Taiwan; <sup>2</sup> Family Medicine, Chi-Mei Medical Center, Tainan, Taiwan

**Objective:** The workload, independent ability, environmental adaptation, work competitive increase pressure in workplace. "Karoshi" (death from overwork) may lead to sudden death. Therefore, it is very important to have healthy body and cultivate good lifestyle in the workplace for health promotion. This study aimed to investigate the effects of aerobic exercise on related physical parameters and quality of life among employees in the high-tech industries in southern Taiwan.

**Methods:** A total of 75 employees were recruited in this study. They were randomly assigned to either experimental group (n=37) or control group (n=38). The aerobic exercise was used as intervention program in this study. Participants in the experimental group received 12 sessions (30 minutes /a session/ per week) of aerobic exercise. Participants in the control group received no intervention. The research instruments included physiological status, blood biochemical, fitness cases indices, quality of life, working pressure and job satisfaction.

**Results:** The experimental groups' body weight, BMI, waist, and cholesterol, triglycerides, high-density lipoprotein, low-density lipoprotein were significantly decreased than control group by pair t-test ( $p < 0.05$ ). Fitness comprised muscle endurance, flexibility, cardio- respiratory endurance were significantly different ( $p < 0.05$ ). Quality of life, job control, interpersonal relationship in the workplace and job satisfaction showed significantly increased in the experimental group ( $p < 0.05$ ) compared with the control group.

**Conclusion:** This study suggests that aerobic exercise has effects to the weight loss, relaxation, promotion of the negative impacts of work stress; thus, enhance the physical health, job satisfaction and quality of life.

Disclosure: No conflict of interest declared

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**10.000 km of Mobile Primary Care for workers**

E. Lopez, M.F. Blanco

*Clinica Belgrano Family Medicine Department, Belgrano 964 Medicina Laboral S.A., Quilmes, Argentina*

Since Alma Ata we know the definition of Primary health care. We also know that "It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work." But what we have done in all these 30 years to take Primary Care as close as possible to where people work?

In order to developed a model of delivering Primary Care Services that were available right at every location where people live and work we start thinking in taking Primary Care and Occupational Medicine as close as possible to every enterprise.

Out of an old Motorhome we create a Mobile Clinic which has been specially designed to accommodate two consulting room, an x-ray room, a nurse station and a silent room for audiology tests. This way we could see patients by parking our Mobile Clinic right at the door of the enterprise. We also have the possibility of moving between different locations every day. Thus overcoming a great barrier we were facing when managers deny workers the possibility to leave to have periodical examinations and medical controls during working hours.

Our team was composed by two nurses, an X-Ray technician, a Family Doctor, an Occupational Health specialist, an audiology specialist and a bus driver.

Overall we are able to reach many small towns and villages with lack of medical services and we share in this paper the experiences of this incredible journey.

Disclosure: No conflict of interest declared

**3.19. ONCOLOGY AND PALLIATIVE CARE**

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**General practitioners' experiences with patients who hasten death by voluntary refusal of food and fluid**E.E. Bolt<sup>1</sup>, A. van der Heide<sup>2</sup>, B.D. Onwuteaka-Philipsen<sup>1</sup>*<sup>1</sup> Department of Public and Occupational Health and EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, Netherlands; <sup>2</sup> Department of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, Netherlands*

**Objective:** In the Netherlands, 0.4% of deaths follow upon voluntary refusal of food and fluid (VRFF). Half of general practitioners (GPs) consider VRFF as a possible alternative to euthanasia in some cases. According to Dutch professional standards, a competent patient who decides to deliberately hasten death by VRFF should receive supportive care by their physician. However, little is known about this practice.

Our aim is to describe how often Dutch GPs are confronted with VRFF, to describe motives and characteristics of people who hasten death by VRFF and the role GPs play in care for these people.

**Methods:** Survey of a random national sample of 1100 GPs (response 72%). Of these, 500 received questions about the last patient in their care who hastened death by VRFF (response 65%).

**Results:** Of GPs 45% ever cared for a patient who chose for VRFF. Most patients were 80 years or older, suffered from physical illnesses and were dependent on others for everyday care. Reasons for VRFF were related both to physical suffering and existential suffering. Patients had previously requested for euthanasia in 17% of cases. GPs were informed in advance in 49% of cases, 69% was involved in the preparation or in care during VRFF. In most cases, GPs stated that it went according to the patient's wish, although some described burdensome symptoms.

**Conclusions:** It is not unlikely for GPs to be confronted with patients who choose to hasten death by VRFF, in which case GPs can play a role in supportive care.

Disclosure: No conflict of interest declared

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### The narrative as a means of therapeutic alliance between the general practitioner and the cancer patient in palliative treatment

G.B. D' Errico, D. Mescia, R. Grisorio, L. Iannantuoni  
Family Medicine, Training Course in Family Medicine, Foggia, Italy

The narrative in the palliative treatment responds to the desire of men to give meaning to their lives, the patient may wish to discuss about death to relieve his fears and 'put things in order'.

For an operator of end of life decode the story of a patient allows to acquire an insight to its values, to the way in which he faces his own condition and to come to taking decisions on what he expects and what he is prepared to tolerate about treatments.

#### Objectives

- improve clinical practice and the relationship with patient;
- improve the quality of path toward death;
- introduction of a means to identify the individual needs of the patient at the end of life.

#### Phases of the project

##### Phase one

- conception of the search path;
- realization of the interview;
- selection of patients to be interviewed.

##### Phase two

Implementation of semi-structured interviews to the selected patients.

##### Phase three

- transcription of recording interviews;
- analysis and interpretation of narrative materials transcribed;
- definitions of the most important dimensions of meaning for an integrated assessment of quality of cancer care pathways made and their continuous improvement.

##### Phase four

Final evaluation of the data obtained.

#### Conclusions

The analysis of life stories allow to access to personal worlds, to the prospects and projects at the end of life of patients, providing a better understanding and suggesting 'food for thought' to improve care.

Disclosure: No conflict of interest declared

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### Bone metastasis in hepatocellular carcinoma

A. Zacharof

1st Department of Internal Medicine, Hellenic Red Cross Hospital, Athens, Greece

Bone is an uncommon site of metastasis in patients with hepatocellular carcinoma (HCC), and often overlooked. We report two cases that had isolated bone metastasis.

1) A 65-year-old female presented with symptoms of pain abdomen. The evaluation showed multiple hypoechoic lesions in the liver. The histology was suggestive of HCC. She was HBV positive and HCV negative. X-ray chest revealed lytic lesions in the ribs and in the clavicles. A Tc<sup>99m</sup>-labeled bone scan showed metastasis in the humerus, right femur, and left tibia. Because of the advanced (stage IV) disease and the inoperability of the primary lesion, because of involvement of the inferior vena cava and the presence of multiple lesions involving both lobes, the patient was treated with combination chemotherapy. After six courses, the primary lesion regressed by 90% and the bone lesions showed decreased activity on Tc<sup>99m</sup> scan (indicating healing). She remained asymptomatic for the next 15 months. Later, she had seizures and was diagnosed as having brain metastasis. She died of progressive disease.

2) A 54-year-old male presented with pain abdomen, progressively deepening jaundice, anorexia, and a weight loss of 15 kg over the last 5 months. He had liver cirrhosis due to HBV. Histology of the liver mass was suggestive of HCC. CT scan of the abdomen showed multiple hypodense lesions involving both lobes of the liver and lytic lesions in the lumbar as well as lower thoracic vertebra. A Tc<sup>99m</sup>-labeled bone scan showed that the patient had metastasis (increased uptake of the isotope) in the right iliac bone, and T<sub>10</sub>-L<sub>2</sub> vertebrae. Only symptomatic care offered. He died of progressive disease the following month.

Our cases reinforces the view that HCC should be considered in the differential diagnoses in patients presenting with bone metastasis.

Disclosure: No conflict of interest declared

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**The story of the disease in the therapeutic process of cancer patients: an experience of narrative medicine**

G.B. D' Errico, R. Rignanese, R. Grisorio, L. Iannantuoni

*Family Medicine, Training Course in General Medical Practice, Foggia, Italy*

Progressively it has been witnessed the development of increasingly sophisticated diagnostic technologies that have subtracted time listening to the patient. The narrative medicine is born with the purpose of investigating the experiences of illness lived by patients, to describe the difficulties, the needs expressed and unexpressed to the communication of the diagnosis and the patient-physician relationship.

**Objectives:** By collecting, listening to the stories and 'illness stories' of patients, we can identify the most important values, the common and recurring elements to understand the meaning of the experience: illness.

**Materials and Methods:** In the study performed on a sample of 12 cancer patients enrolled using inclusion criteria (recent diagnosis and/or treated patients) exclusion criteria (cured patients, patients in follow-up, hospitalized or in disease progression) was adopted a qualitative strategy which the main tool of definition of the existence of the patients involved is semi-structured interview.

**Results:** The analysis of the stories found common aspects about the issues of the research:

- The communication of the diagnosis is a crucial and dramatic event that changes the quality of life of the patient and must be gradually with empathy, involvement, support, serendipity and reassurance.

-from the relationship with their physician, patients expect a dual response: scientific to the health problem, listening and understanding of the fears and feelings.

**Conclusions:** The study shows that doctors must recover time spent understanding the patient in order to build together 'a good rapport of disease' by taking care of the patient in every manner possible.

Disclosure: No conflict of interest declared

556

**A survey of physicians' knowledge, attitudes and perceptions on hospice care in a tertiary private hospital setting in the Philippines**

M.E. Ramones Sianghio, K. Estepa Garcia, A. Ang

*Department of Family and Community Medicine, Manila Doctors Hospital, Manila, Philippines*

**Objective:** Hospice care is relatively underutilized in the Philippines, possibly due to inadequate education and training. We assessed the knowledge, attitudes and perceptions of benefits and barriers to hospice care in a tertiary private hospital setting.

**Methods:** A cross-sectional study was conducted between October and November 2012. Two hundred twenty eight physicians from Manila Doctors Hospital (MDH) were asked to answer a 39-item questionnaire developed by Ogle et al which consisted of four sections: demographic/practice variables, attitudes towards hospice, knowledge about hospice policies and services, and perceptions regarding benefits and barriers to hospice referral.

**Results:** One hundred physicians (44%) aged 31 to over 60 years responded to the questionnaire. Their ages ranged from 31 to over 60 years, and nearly half had been in practice for more than 20 years. One third of the respondents were internists and one fifth were surgeons. About half had not discussed hospice with patients or family members in the past three months. Physicians demonstrated generally positive attitudes toward hospice and felt comfortable facilitating hospice referrals. The mean number of correct answers in the knowledge section was 5.3 out of 8 items, though about one fifth of the respondents were unsure of the correct answer for half of the items. Respondents perceived many benefits but also identified strong barriers to early hospice referrals, including inadequate physicians' knowledge and patient and family unreadiness.

**Conclusion:** Physicians in MDH appear to have adequate knowledge about, positive attitudes toward, and strong perceptions of benefits and barriers to hospice care.

Disclosure: No conflict of interest declared

609

**Retroperitoneal sarcoma clinical case**

L. González, M.J. Cortés, G. Lovatón, L. Pérez, E. Gregorutti, M. Vinyes  
CAP Est, Consorci Sanitari de Terrassa, Terrassa, Spain

**Clinical case:** A 51 year old male patient with no drug allergies, medical history of hypercholesterolemia, vasectomized at age 40, is admitted by the emergency room for mechanical right lumbar pain not irradiated. Systematic urine test performed is negative and was initially oriented as mechanical lumbago.

Reconsultes 2 weeks later by dysuria and hematuria autolimited 24 hours later. Physical examination shows tender mass palpable in the hypogastrium.

Imaging tests were performed. Abdominal ultrasound describes enlarged prostate and a partially calcified yuxtavesical mass. Abdominal CT: retroperitoneal mass with suspected liposarcoma. CT chest: small millimetric nodules in both hemothorax, suggestive of lung metastasis.

Needle biopsy by FNA reports sarcomas.

The tumor was surgically removed; final anatomopathology describes dedifferentiated retroperitoneal liposarcoma of 32 centimeters, with rhabdomyolysis and leiomyosarcoma component.

**Conclusions:** Sarcomas represent 1% of diagnosed malignant tumors de novo between 40 and 60 years old. Liposarcomas represent 15% of all sarcomas; a third of them can be located in the retroperitoneum.

Symptoms are often nonspecific and insidious. Usually depends on the affected organ. The possibility of malignancy and metastasis is provided by histological types, various types can coexist in the same tumor. Four histological types have been described: well differentiated, myxoid, pleomorphic and dedifferentiated. The most aggressive is the dedifferentiated, usually located at retroperitoneum and metastasizes to lungs.

Treatment depends on the location and histological type. The total tumor resection is the first line of treatment, chemotherapy can be used as second-line or adjunctive surgical treatment.

MeSH Terms: dedifferentiated, liposarcoma, neoplasms

Disclosure: No conflict of interest declared

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**Changes in the quality of life in cancer patients after high-dose vitamin C intravenously treatment.**

H. Seob Lihm, T. Gong Yoon, S. Ra Jeong, J. Jung Lee  
Family medicine, Kosin University Gospel Hospital, Busan city, Korea

**Background:** This study was performed to investigate the effect of high dose vitamin C on cancer patients' quality of life.

**Methods:** The study included 19 cancer patients who agree to be given an intravenous administration of high dose vitamin C from June 17, 2010 to August 6, 2010. They were given an intravenous administration of 30g vitamin C six times with 2 day interval for 2 weeks, and then we compared questionnaire(EORTC QLQ-C15 PAL) before and after administration of vitamin C to assess whether the quality of life is improved.

**Results:** After administration of vitamin C for 2 weeks, in the global health status, the score is improved significantly from 42.1 to 64.0( $p=0.007$ ). In functional scale, physical function score is improved from 75.4 to 83.6( $p=0.03$ ) and emotional function score is improved from 68.4 to 86.0( $p=0.04$ ) after administration of vitamin C. In symptom scale, the patients reported significantly lower scores for fatigue, nausea/vomiting, pain, and appetite loss after administration of vitamin C. The other symptom scores such as dyspnea, insomnia, constipation is lower after administration of vitamin C, but that is not significantly changed.

**Conclusion:** This study suggested that high dose vitamin C through intravenous administration may improve quality of life on cancer patients. A randomized control study is required in a large number of subjects who are cancer patients.

Disclosure: No conflict of interest declared

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**Epistaxis as the initial symptom of advanced gastric cancer [case report]**

S. Matsumura, T. Okada

*Family Medicine, Kameda Family Clinic Tateyama, Tateyama, Chiba, Japan*

Weight loss and abdominal pain are the most common symptoms as the initial presentation of gastric cancer. We experienced epistaxis as the initial symptom of gastric cancer.

An 83 year-old man came to ER, because of continuous epistaxis and feeling of chest tightness. Bleeding was controlled easily with routine procedure, but his hemoglobin decreased 11.5g/dl to 9.4g/dl next day. Then black stool appeared. The subsequent upper endoscopy revealed an advanced gastric cancer.

Although the cases of gastric cancer discovered by hematemesis has been reported, it is rare for patients to report epistaxis as the initial symptom of advanced gastric cancer. By sharing the case with audience in conjunction with literature review, we are hoping to discuss and exchange insights about this case for better care in the future.

Disclosure: No conflict of interest declared

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**Late diagnosis of cancer: role of the family doctor**

R. Botto

*USF Mactamã, Centro de Saúde de Queluz, Lisboa – Massamá, Portugal*

**Introduction:** According to WONCA, one of the characteristics of Family Medicine is to be the point of first medical contact within the healthcare system, dealing with many undifferentiated signs. This case illustrates the performance of the General Practitioner (GP) with a patient who presents himself with nonspecific symptoms.

**Case Study:** Male, 75 years old, married, retired. Personal history of asthma, with very few contacts with his GP.

He went to an urgent consultation with his GP complaining of intense low back pain radiating to the lower limbs, accompanied by anorexia with a month of evolution. He presented Lasègue sign positive bilaterally and limitation of trunks's flexion. Analgesia was prescribed and it was requested some diagnostic exams.

He returned three weeks later, with the same symptoms. The most relevant exams' results were: total PSA > 1.000 ng/mL and bone scintigraphy with multiple metastatic hyperfixation. It was diagnosed metastatic prostate cancer.

The patient made a femoral fracture and surgery wasn't indicated. He became bedridden, under palliative care, and eventually died. Liaison with secondary care was ineffective and all decisions had to be made by the GP, without support from other specialties.

**Conclusions:** The GP should recognize red flags that motivate diagnostic investigation adequate to proper diagnosis. It's also fundamental to develop a plan for the patient and family in diseases with poor prognosis, such as this one.

This case alerts to the importance of correct cooperation between different levels of healthcare, wich didn't happened, making the treatment of this patient more difficult.

Disclosure: No conflict of interest declared



911

**End-of-life patients – critical reflection on clinical practice**

S. Leal

*USF Dafundo, ACES Oeiras, Lisboa, Portugal*

**Introduction:** Advances in medicine, along with increase in life expectancy, have contributed to proliferation of chronic diseases, whose symptoms require proper control.

After a short training in palliative care, I proceeded to a critical analysis on symptoms control of three end-of-life patients.

**Cases description:**

Case 1: Female, 78 years, dependent. In context of dehydration, it was proposed going to emergency department (ED) for intravenous correction of dehydration, which she refused. However, the next morning she went to ED, where they performed intravenous hydration. In this case, use of subcutaneous administration would allow hydration at home and obviate the need to go to ED.

Case 2: Female, 96 years, dependent. For food refusal and prostration, several attempts of nasogastric intubation were made, but without success. We encouraged to insist on oral feeding and she died some days later. In this case, food refusal and prostration occurred in context of agonal phase, so nasogastric intubation was contraindicated and we should have done subcutaneous hydration.

Case 3: Female, 84 years, dependent. She developed prostration, dyspnoea and sense of suffering. On suspicion of acute pulmonary edema, she was referenced to ED, where she died one hour later. In this case, use of opioids could control dyspnoea and sense of suffering, preventing death in hospital.

**Conclusion:** A correct approach of end-of-life patients allows better control of symptoms and a more dignified death. Continuing training and critical reflection allow a constant updating of knowledge and a better delivery of health care.

Disclosure: No conflict of interest declared

1003

**Male breast cancer – a reality in men!**

A. Alves, A. Ramôa, H. Leal

*Family Medicine, USF Espaço Saúde, Porto, Portugal*

Male breast cancer (MBC) is a rare pathology. In Portugal, 1% of breast cancers (BC) are in men, however, it's incidence has been increasing. The median age of onset is 65 to 67 and generally presents as a firm, painless subareolar mass. The differential diagnosis includes gynecomastia, breast abscess and metastases. Approximately 15-20% of men with MBC have family history, where BRCA 1 and 2 account for 80%. Other risk factors include obesity, prior chest wall irradiation, gynecomastia, history of testicular or liver pathology and Klinefelter's syndrome.

The authors describe a clinical case of a man, age 87, that asked for a consultation because of a painful mass in the right breast with weeks of evolution. This patient was diagnosed with bladder cancer 40 years ago with relapse in 2005 and submitted to several TUR and mitomycin. He also made an excision of an Keratoacanthoma in 2009 and is a smoker. He presented a retroareolar, firm, painful mass with 5 mm on the right breast. The ultrasound revealed a hypoechoic solid mass with 7.8x7.6 mm and regular contours. He was submitted to a right mastectomy and the histology revealed an invasive ductal carcinoma (pT1 N0 M0) positive for hormone receptors over 90% of cells. He began hormone therapy with Tamoxifen and maintained surveillance.

The importance of this case is to remember that BC is not a pathology exclusive of women and that BRCA mutation testing is recommended in men who develop breast cancer as well as his family.

Disclosure: No conflict of interest declared

1145

**Modifiable factors associated with caregiver burden among family caregivers of terminally ill Korean cancer patients**

S.J. Yoon, J.S. Kim, S.S. Kim, J.G. Jung

*Family Medicine, Chungnam National University Hospital, Daejeon, Korea*

**Objective:** Quality of life of both patients and their families is an important component of palliative care. Higher caregiver burden is associated with poor quality of life among family caregivers. However, in Korea, very few studies have examined factors associated with caregiver burden. The present study investigated factors associated with caregiver burden among family caregivers of terminally ill Korean cancer patients, particularly modifiable factors for associated with caregiver burden.

**Methods:** A cross-sectional study using self-administered questionnaires was performed. The subjects included 64 family caregivers of terminally ill cancer patients who were admitted to the hospice-palliative care unit in Chungnam National University Hospital, South Korea. Family caregivers filled out self-administered questionnaires on the day the patients were admitted to the aforementioned hospice-palliative care unit.

**Results:** Disrupted schedules were the most distressing burden for family caregivers, based on the scores of the 4 subscales of the Caregiver Reaction Assessment scale assessing negative dimensions of caregiving. Long time spent providing care per day, fewer weekly visits from other family members, poor family functioning, and low self-esteem were found as modifiable factors associated with caregiver burden. Low monthly income and being the spouse as the family caregiver were non-modifiable factors.

**Conclusions:** The present study has practical significance in that it identifies modifiable factors that can be used to devise intervention strategies. Developing and applying such intervention strategies for alleviating the factors associated with high caregiver burden could be important for improving the quality of life of both patients and their families.

Disclosure: No conflict of interest declared

1162

**Evaluation of sociodemographic characteristics in the cancer patients**

U. Ucar, R. Kutlu, S. Civi, N. Demirbas

*Department of Family Physician, Meram Medical Faculty, Konya Necmettin Erbakan University, TURKEY, Konya, Turkey*

**Objective:** Cancer is a chronic disease that has effects on their social, work, family/ marital life. This study was carried out to describe the sociodemographic features of the cancer patients.

**Methods:** This descriptive study was performed among 418 cancer patients receiving treatment at Medical Oncology Department of Meram Medical Faculty. Data were obtained via a questionnaire form and revealed socio-demographic characteristics.

**Results:** In this study, of the participants, 220 (52.6%) were male, the mean age was 57.3±13.2 (range:18-85), 36.1% were living in the city, 37.8% housewives, 60.0% married, 37.1% retired, 37.1% middle/high school education, 49.8% overweight, 7.7% obese. There was 6.7% cancer in first degree relatives, 35.6% cancer cases in secondary relatives. The most common cancer types were seen as 22.0% breast, 20.6% gastrointestinal system, 19.9% respiratory tract, 15.8% colorectal, 11.7% genitourinary tract cancers, respectively. Only 26.8% were first stage. The economic status, living place and marital status had not affected the type of cancer. Age, education, being overweight/ obese, occupation, cancer in first/secondary degree relatives had affected the type of cancer statistically. All types of cancer except breast cancer were seen in males rather than females. Except breast and genitourinary tract cancers, all types of cancer were frequently seen in retired individuals. The most common diagnoses in female were breast, gastrointestinal, colorectal cancer, whereas diagnoses of respiratory, gastrointestinal, colorectal cancer were prevalent among males.

**Conclusion:** Screening tests reduce the incidence and help to detect a higher proportion of cancers at early and more treatable stages.

Disclosure: No conflict of interest declared

1189

**The role of nurses in screening of colorectal cancer in the Czech Republic**O. Klapka<sup>1</sup>, N. Král<sup>2</sup>, J. Vojtíšková<sup>3</sup>, B. Seifert<sup>3</sup><sup>1</sup> *Nemocnice milosrdných sester K. Boromejského, NMSKB, Prague, Czech Republic;* <sup>2</sup> *Institute of General Practice, First Faculty of Prague, Charles University of Prague, Prague, Czech Republic;*<sup>3</sup> *Lékařská ordinace Vyšehrad s.r.o., Lékařská ordinace Vyšehrad s.r.o, Prague, Czech Republic*

**Introduction:** Screening of colorectal cancer (CRCA) has long tradition in Czech Republic. Despite a number of changes in the past, the results are not satisfactory and adherence of target population is up to 30%. There are many articles about screening methods, types of screening tests, but we often forget that in many countries with oportunistic screening plays an important role nurse who offers the test to the patients, who educates patients and evaluates tests.

**Methods:** We used google application, we have prepared an electronic questionnaire and sent it to general practitioners in all parts of the Czech Republic. Email contacts we found via the internet, the total number of contacts was 264.

**Results:** The response rate was 37, 8%. Questionnaire was completed by 100 nurses, 16 men and 84 women. 99% reported that screening is providing in the GP's office, 1% doesn't provide screening at all. 89% consider that they are sufficiently informed about screening of CRCA. 86% would like to have special information papers for patients in GPs offices and 88% of nurses would like to enhance their own education. 65% of nurses actively invite people for screening and 71% of them consider the time to explain the test the patient as sufficient. 98% of nurses consider screening effective.

**Conclusion:** We should not underestimate the role of nurses and we should allow them to further education and offer them materials and informations about screening. This survey shows the space how to increase the adherence of the Czech population to screening in systematic work of nurses.

Disclosure: No conflict of interest declared

1209

**Priapism as the first manifestation of chronic myeloid leukemia**L. de Unamuno Lumbreras<sup>1</sup>, V. Parent Mathias<sup>2</sup>, M. Sarmiento Cruz<sup>3</sup><sup>1</sup> *El Palo Health Center, Andalusian Public Health System, Málaga, Spain;* <sup>2</sup> *Emergency area, Carlos Haya University Regional Hospital, Málaga, Spain;* <sup>3</sup> *Son Gotleu Health Center, Balearic Institute Health System, Mallorca, Spain*

We would consider important to submit the report of a twenty -year- old man with no previous diseases of interest at that moment who came to the health care center by presenting penile erection for ten hours. It was the second time consulting because of that in the same day. In our center we have the possibility to perform a blood test, and in this patient was detected a rise in the level of leukocytes. It's in this moment when we decided to refer the patient to the Hospital Emergency.

After study of peripheral blood immune markers and bone marrow aspirate the patient was diagnosed Chronic Myelogenous Leukemia.

Although hematologic diseases are rare cause of priapism, they should be considered in the differential diagnosis and ruled by an analytical study.

As far as we are concerned pathological penile erection itself also has to be assessed to avoid long-term complications, as we could check it out in this report.

Disclosure: No conflict of interest declared

1262

**Do GPs have a pro-active approach to patients with progressive incurable conditions? An interview study**S.J.J. Claessen<sup>1</sup>, A.L. Francke<sup>2,1</sup>, B. Onwuteaka-Philipsen<sup>1</sup>, L. Deliens<sup>1,3</sup>

<sup>1</sup> Department of Public and Occupational Health/EMGO Institute for Health and Care Research, VU University medical center, Amsterdam, Netherlands; <sup>2</sup> NIVEL, Netherlands Institute for Health Services Research, Utrecht, Netherlands; <sup>3</sup> End-of-Life Care Research Group, Ghent University and Vrije Universiteit Brussel, Brussels, Belgium

**Objective:** The objective of this study was to explore whether Dutch GPs have a pro-active approach or a reactive approach to patients with progressive incurable conditions and whether this depends on the stage of the disease trajectory.

**Methods:** We conducted qualitative semi-structured interviews with 25 GPs. These GPs were interviewed about their approach to patients who receive palliative care. Questions involved were for example: "Do you discuss end of life preferences with your patients?" and "Do you take the initiative to contact patients with incurable conditions?" All interview data were analysed qualitatively, with support of the programme Atlas.ti.

**Results**

At the end-of-life GPs have a pro-active approach to patients with progressive cancer, COPD, heart failure or general frailty. They plan telephone appointments or visits at the patient's home regularly. GPs also look forward with the patient and the family what kind of care wishes the patient and the family have. However, in earlier stages of the disease trajectory, GPs often only act in reaction to signals or questions of patients, family or other care providers. They then do not want to patronize the patient or give more support than needed. When the patient is still treated by a medical specialist, GPs keep themselves at the background and see their role as supportive and attainable in case of questions.

**Conclusions:** GPs have a pro-active approach if patients have clear care needs and when the death is imminent. In the early stages of the disease trajectory, GPs have a more reactive approach.

Disclosure: No conflict of interest declared

1362

**"Doctor...I have a swelling in the neck!"**S.Gonçalves<sup>1</sup>, E.Silva<sup>2</sup>, C.Salgueiro<sup>2</sup>

<sup>1</sup> ACES Cávado I – Braga, USF S. João de Braga, Braga, Portugal; <sup>2</sup> ACES Ave III- Vila Nova de Famalicão, USF S. Miguel-o-Anjo, Vila Nova de Famalicão, Portugal

**Background:** Melanoma is the most devastating skin cancer because of its resistance to chemotherapy and high potential for metastasis. It is the 6th most common cause of cancer in young adults. Exposure to ultraviolet radiation is the main culprit in its etiology. Photoprotection is the leading primary health strategy in preventing melanoma.

**Case Description:** Female, 32 years, Caucasian, Nuclear family, functional, phase I Cycle Duvall. In March/2011 patient presented to Family Physician with a painless, hard, irregular, non-adherent to the deep planes swelling, on the anterolateral region of the neck, present for 2 months. On physical examination at the outer edge of the left auricle, she had a 5 mm diameter hyperpigmented nevus with regular edges and heterogeneous staining. An ultrasound of the neck revealed a nodular solid image of 35x17mm which provided intimate contact with the posterior-inferior left submandibular gland. The patient was urgently referred to Dermatology where fine needle aspiration cytology was performed, revealing lymph node metastasis of malignant melanoma (MM). After excision of nevi and histological confirmation of MM, lung and nodal metastases were found. The patient was sent to IPO – Porto where she later died in April/2012.

**Discussion:** Despite advances in the treatment of metastatic disease, detection and treatment of MM in its early stages still remains the best chance for cure. The prognosis of MM is multifactorial, depending on its depth, histopathology, and lymph node involvement. A preventive strategy is fundamental for disease control, which encourages and improves photoprotection in the general public.

Disclosure: No conflict of interest declared

1439

**Tongue carcinoma – a case report**J. Araújo<sup>1</sup>, F. Mateus<sup>2</sup>, N. Nogueira<sup>3</sup><sup>1</sup> Family Medicine, USF Terras de Souza, Paredes, Portugal; <sup>2</sup> Family Medicine, USF S. Martinho, Penafiel, Portugal; <sup>3</sup> Dental Medicine, Clínica Dentária de Penafiel, Penafiel, Portugal

**Objective:** A clinical case report adjusted to the Primary Health Care (PHC), which will outline Family Doctors (FD) role on tongue squamous cell carcinoma (SCC) diagnosis, evaluation and guidance.

**Methodology:** A literature review was conducted through UpToDate and Pubmed databases published between 2008 and 2012, using MeSH terms: “squamous cell carcinoma”, “tongue”.

**Results:** A 64 year male patient, caucasian, inserted in a functional extended family, Graffar III. Pathological history of smoking, chronic alcoholism and peptic ulcer. Visits the FD due to an exophytic lesion, about 2 cm diameter, irregular surface, on the left edge of the tongue, with 3 months of evolution, caused by dental trauma. Also reported asthenia and anorexia during previous months. No palpable lymphadenopathy in the cervical and submaxillary chains. Was immediately referred to hospital for surgery consultation by highly suggestive tongue carcinoma.

After biopsy, was diagnosed tongue SCC. Performed neck, thorax and abdomen CT; Revealed pulmonary micronodules of probable infectious nature. Upper endoscopy showed chronic gastritis with intestinal metaplasia. The patient underwent surgery for excision and adjuvant radiotherapy.

**Conclusions:** Tongue carcinoma is one of the most common carcinomas of the oral cavity, and SCC accounts for 90% of all cases, often preceded by premalignant lesions, clinically detectable but mostly asymptomatic. The PHC assumes a key role in early detection and orientation of these lesions, thus allowing an effective treatment and increased quality of life.

Disclosure: No conflict of interest declared

1479

**Male breast cancer, a clinical report**R. Pires<sup>1</sup>, S. Barros Cardoso<sup>2</sup>, C. Novais<sup>3</sup><sup>1</sup> Family Medicine, USF Nova Era, Recarei, Portugal; <sup>2</sup> Family Medicine, USF Salvador Lordelo, Lordelo, Portugal; <sup>3</sup> Family Medicine, USF S. Martinho, Penafiel, Portugal

**Introduction:** Breast cancer in men is a relatively rare disease. However, in recent years, there's an increasing incidence of this diagnosis. This disease is usually related to the feminine image and there's a lack of information and increased difficulty in the differential diagnosis in men leading to a delay in detection when compared to women. This delay leads to a late therapeutic approach associated with a worse prognosis when compared to women.

**Clinical report:** 47 yo, male, construction worker, married, inserted in nuclear family, phase V. Personal history of dyslipidemia, obesity, hypertension and gynecomastia. No relevant family history was found. A lump in the right breast with a month of evolution led him to a scheduled appointment with his GP. The physical examination showed a painless, periareolar node of 0.5 cm with no visible signs of inflammation and without axillary lymphadenopathy. An echographic exam followed by an aspiration biopsy confirmed breast cancer. The diagnosis was confirmed by excisional biopsy which showed ductal carcinoma. After a right total mastectomy with sentinel node research he waits further decisions regarding complementary treatments.

**Discussion:** Medical resilience in including breast cancer in diferencial diagnosis in males can lead to a late stage diagnosis. This report is keen to remember the value of patients complaints and the importance of a good interview and physical examination: although uncommon, some diseases may be a reality and the GP must be aware of their presence! Also, the GP should be familiarized with the approach and screening of this disease.

Disclosure: No conflict of interest declared

1486

**Talking with children about the death of a parent**

J. Araújo

USF Terras de Souza, ACES Tâmega II – VSS, Paredes, Portugal

**Objective:** Discuss the experience of grief in children and adolescents who lose their father and/or mother's death from various causes, particularly in the context of long-term care and hospice.

**Methods:** Bibliographical research of technical guidelines and review articles published in Portuguese, English and Spanish, between 2004 and 2012, using MeSH terms: "Grief of parents", "child".

**Results:** Anticipating the death of an adult who is the parent of young children is particularly distressing for families and medical providers. Concerns about the children's welfare, and impulses to protect children from the pain of parental loss create challenges to honest communication. Nonetheless, attention to children's developmental stage and specific needs can guide clinicians in helping surviving family members to support children during the end-of-life period and into bereavement. The study describe the experiences and events related to the loss of parents, their impact on the emotional development, strategies to face the mourning in each age group, resilience in the face of loss suffered and the risk factors.

**Conclusions:** The untimely death of a parent is one of the most challenging events for families and the clinicians who care for them. Attention to children's needs during this time is an important aspect of clinical care, and is much appreciated by adults in the family. A basic knowledge of child development and the ways that children understand illness and death can provide a template with which to engage families about how to help their children during this time and into bereavement.

Disclosure: No conflict of interest declared

1534

**Palliative care guideline in primary care – development and initial evaluation**D. Nowels<sup>1</sup>, G. Bereskin<sup>2</sup>, J. Ballentine<sup>3</sup>, T. Carruth<sup>4</sup>, M. Johns<sup>4</sup><sup>1</sup> Department of Family Medicine, University of Colorado School of Medicine, Aurora, Colorado, United States; <sup>2</sup> Medical Direction, The Denver Hospice, Denver, Colorado, United States;<sup>3</sup> Administration, LifeQuality Institute, Denver, Colorado, United States; <sup>4</sup> Guidelines/Evaluation, HealthTeamWorks, Denver, Colorado, United States

**Objective:** Specialty palliative care is effective and growing in the United States but cannot meet the palliative needs of most people with serious illness. Primary care providers are uniquely positioned to deliver primary level palliative care services across illnesses and throughout illness trajectories. We developed and are evaluating a guideline to aid the delivery of primary palliative care services in primary care settings.

**Methods:** Two organizations with expertise in palliative care education or primary care practice transformation collaborated with community stakeholders to develop and disseminate a guideline for primary level palliative care in primary care settings. The educational organization provided content expertise and assisted with guideline dissemination while the practice transformation organization organized the evidence based guideline development and publication efforts. Using qualitative methodology we are initiating an evaluation of the applicability of this guideline in primary care practice through semi-structured interviews of primary care providers. Interviews will be analyzed using a team-based general inductive approach followed by development of a conceptual model of the findings.

**Results:** Through collaboration, a guideline addressing application of palliative care principles in primary care practice was created and disseminated to over 4000 primary care providers in Colorado. Uniquely, the guideline to be presented is designed to lead providers in addressing palliative care issues across illnesses and throughout the illness trajectory. We are in the early stages of guideline evaluation and will report progress and results, along with their implications for primary care practice, as they are available at the time of the conference.

Disclosure: No conflict of interest declared

1706

**Oncological profile of patients in Obrenovac district during the period 2004-2012**

P. Rosic, S. Jokic, T. Bakic

**Aim:** The aim of this study was to analyze by age and type of malignant disease our patients during the period from the year 2004 to 2012.

**Patients and methods:** The patients in Obrenovac district, Serbia, were stratified by age and sex into four groups: I group over 83 years, II 63 to 83, III 43 to 62, IV group younger than 43. The total number of patients was 1611.

**Results:** The most affected age group by malignant disease was the second group. Males were more commonly affected by malignancy in this group (male to female ratios, starting from the year 2004 was 80 to 47, 2005- 65 to 45, 2006- 104 to 76, 2007- 115 to 75, 2008- 102 to 76, 2009- 90 to 75, 2010- 91 to 65, 2011- 115 to 84 and in 2012- 103 to 77). The males were most commonly affected by bronchial carcinoma and females by breast cancer.

The total number of patients in the third group was 362, with male to female ratio 1:1.14.

Twenty two patients were affected by malignancy in the group IV, younger than 43. Five patients in this group had pulmonary carcinoma and five brain cancer.

**Conclusion:** We can conclude that the patients in the group II are at the highest risk for malignancy. The most common type of malignant disease in this age group was pulmonary carcinoma for males and breast carcinoma in female population.

Disclosure: No conflict of interest declared

1724

**Oncological profile of patients in Obrenovac district during the period 2004-2012**

P. Rosic, S. Jokic, T. Bakic

*Palliative care, Health Center Obrenovac, Belgrade, Serbia*

**Aim:** The aim of this study was to analyze by age and type of malignant disease our patients during the period from the year 2004 to 2012.

**Patients and methods:** The patients in Obrenovac district, Serbia, were stratified by age and sex into four groups: I group over 83 years of life, II 63 to 83, III 43 to 62, IV group younger than 43. The total number of patients was 1611.

**Results:** The most affected age group by malignant disease was the second group. Males were more commonly affected by malignancy in this group (male to female ratios, starting from the year 2004 was 80 to 47, in the year 2005 the ratio was 65 to 45, 2006- 104 to 76, 2007- 115 to 75, 2008- 102 to 76, 2009- 90 to 75, 2010- 91 to 65, 2011- 115 to 84 and in 2012- 103 to 77). The males were most commonly affected by pulmonary carcinoma (196 patients) and females by breast cancer (62 patients).

The total number of patients in the third group was 362, with male to female ratio 1:1.14.

Twenty two patients were affected by malignancy in the group IV, younger than 43. Five patients in this group had pulmonary carcinoma and five brain cancer.

**Conclusion:** We can conclude that the patients in the group II are at the highest risk for malignancy. The most common type of malignant disease in this age group was pulmonary carcinoma for males and breast carcinoma in female population.

Disclosure: No conflict of interest declared

1759

**Multiple myeloma: a case report**

A. Alves, B.A. Castro, M. Cunha

*USF S. Nicolau, ACES Alto Ave, Guimarães, Portugal*

**Objective:** Multiple myeloma is an uncommon type of malignant hematological neoplasm. It has been seen more commonly in older adults and can present with various clinical manifestations. Bone pain is the most common symptom affecting nearly 70% of patients. With this report the authors present the case of a patient with bone pain and reemergence of zoster infection in the setting of multiple myeloma.

**Methods:** Data were gathered from clinical records using the electronic medical record system SAM<sup>®</sup>.

**Results:** A 85-year-old woman presented with a painful unilateral vesicular eruption, in a dermatomal distribution in the lower back, which was consistent with herpes zoster. She had been started on a course of oral valacyclovir and analgesics that were effective in treating cutaneous lesions and improving pain. One month later, skin lesions recurred in the same distribution, and the patient developed severe and constant pain, localized primarily in the back with subsequent involvement of the lower limbs. The pain increased with movement and became very incapacitating despite adequate medical treatment. Plain radiographs of femoral bones showed multiple lytic lesions suggestive of multiple myeloma. A complete blood count with differential revealed anemia. The patient was therefore referred to the Internal Medicine department for further investigation.

**Conclusions:** The leading clinical symptoms of multiple myeloma are related to bone neoplasm and the diagnosis is often suspected with complaints of bone pain and lytic lesions discovered on skeletal films. Reactivation of varicella-zoster infection is frequent in the setting of immunosuppression.

Disclosure: No conflict of interest declared

### 3.20. TRADITIONAL AND ALTERNATIVE MEDICINE

31

**Management of leg calve perthes's disease with acupuncture: A case report**T. Set<sup>1</sup>, İ. Maraş<sup>2</sup>, A. Sattar Khan<sup>1</sup>, H. Özdemir<sup>2</sup>*<sup>1</sup> Family Medicine, Ataturk University, Erzurum, Turkey; <sup>2</sup> Special private clinic, İstanbul, Turkey*

A Leg Calve Perthes's Disease (LCPD) is a rare temporary hip joint deformity mostly effect to young children from 4 to 10 years of age. It affects mainly the head of femur that soften and breaks down due to interruption of blood supply (avascular necrosis). Usually it tends to get better with age in early childhood and there are different modalities of treatment available to cure the disease. A 12 years old boy reported to an orthopedic clinic in 2006 with limping in his walking and diagnosed as a case of LCPD, where surgeons have applied orthosis however didn't achieve improvement so decided to perform surgery in 2008. In the meanwhile parents decided to visit an acupuncture clinic in same year. A needle acupuncture applied on body for 20 minutes and laser acupuncture applied locally on hip join area for 5 minutes. After having 30 sessions at clinic the boy started improve clinically and after imaging it was shown that in femur head new bone cells started to develop. And after 130 sessions in 2010 radiographic results depicted almost 90% improvement and after 196 sessions in August 2012, he is fully improved. Thus a needle acupuncture therapy could be an option for management of LCPD.

Disclosure: No conflict of interest declared



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**Treatment of pain in people with multiple sclerosis with hydrotherapy.**G.A. Matarán-Peñarrocha<sup>1</sup>, A.M. Castro-Sánchez<sup>2</sup>, M.E. Aguilar-Ferrándiz<sup>3</sup><sup>1</sup> *Medicina Familiar y Comunitaria, Servicio Andaluz de Salud, Jódar-Jaén, Spain ;*<sup>2</sup> *Departamento de Enfermería, Fisioterapia y Medicina, Universidad de Almería, Almería, Spain ;*<sup>3</sup> *Facultad de Ciencias de la Salud, Universidad de Jaén, Jaén, Spain*

**Background:** Multiple sclerosis (MS) is a chronic demyelinating neurological disease. Several studies have reported that complementary and alternative therapies can have positive effects against pain in these patients. The objective was to investigate the effectiveness of an Ai-Chi aquatic exercise program against pain and other symptoms in MS patients.

**Methods:** In this randomized controlled trial, 73 MS patients were randomly assigned to an experimental or control group for a 20-week treatment program. The experimental group underwent 40 sessions of Ai-Chi exercise in swimming pool and the control group 40 sessions of abdominal breathing and contraction-relaxation exercises in therapy room. Outcome variables were pain, disability, spasm, depression, fatigue, and autonomy, which were assessed before the intervention and immediately and at 4 and 10 weeks after the last treatment session.

**Results:** The experimental group showed a significant ( $P < 0.028$ ) and clinically relevant decrease in pain intensity versus baseline, with an immediate posttreatment reduction in median visual analogue scale scores of 50% that was maintained for up to 10 weeks. Significant improvements were also observed in spasm, fatigue, disability, and autonomy.

**Conclusion:** According to these findings, an Ai-Chi aquatic exercise program improves pain, spasms, disability, fatigue, depression, and autonomy in MS patients.

Disclosure: No conflict of interest declared

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**Aerobic exercise program and relaxation techniques on anxiety, depression, quality of sleep, and quality of life in patients with fibromyalgia.**G.A. Matarán-Peñarrocha<sup>1</sup>, A.M. Castro-Sánchez<sup>2</sup>, M.E. Aguilar-Ferrándiz<sup>3</sup><sup>1</sup> *Medicina Familiar y Comunitaria, Servicio Andaluz de Salud, Jódar-Jaén, Spain ;*<sup>2</sup> *Departamento de Enfermería, Fisioterapia y Medicina, Universidad de Almería, Almería, Spain ;*<sup>3</sup> *Facultad de Ciencias de la Salud, Universidad de Jaén, Jaén, Spain*

**Background:** Fibromyalgia is considered as a combination of physical, psychological and social disabilities. The purpose of the present study was to determine the benefits of aerobic exercise program and progressive relaxation techniques on anxiety, quality of sleep, depression and quality of life in patients with fibromyalgia.

**Method:** An experimental study was performed with a placebo control group. Fifty-six fibromyalgia patients were randomly assigned to intervention (aerobic exercises and progressive relaxation techniques) and placebo (sham treatment with disconnected magnet therapy device) groups. Outcome measures were anxiety (STAI- State Trait Anxiety Inventory), quality of sleep (Pittsburgh sleep quality index), depression (Beck depression inventory) and quality of life (questionnaire SF-36). Measures were performed at baseline and after 10-weeks treatment.

**Results:** After 10 weeks of treatment, the intervention group showed significant reduction ( $p < 0.05$ ) in sleep duration, trait anxiety and quality of life.

**Conclusions:** The combination of aerobic exercise program and progressive relaxation techniques contribute to improve night rest, trait anxiety and quality of life in patients with fibromyalgia.

Disclosure: No conflict of interest declared

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**Variability of *Satureja* sp. botanical drugs: the case of essential oils**S. Aleksic<sup>1</sup>, P. Blagojevic<sup>2</sup>, M. Pesic<sup>2</sup>, N. Radulovic<sup>2</sup>, I. Milenkovic<sup>2</sup>, V. Bogdanovic<sup>1</sup><sup>1</sup> Family medicine/general practice, Health station Lira, Nis, Serbia; <sup>2</sup> Department of Chemistry, Faculty of Science and Mathematics, Nis, Serbia

**Objective:** *Satureja* sp. (Lamiaceae) are widely used taxa in traditional medicine (self-medication) and are occasionally recommended by physicians for the treatment of fever, cold sores, nausea, diarrhea, viral infection. Ethnopharmacological usage of these species was scientifically justified by numerous studies. Many of them were focused on *Satureja* volatile metabolites (*viz.* essential oil) and confirmed (*in vivo* and/or *in vitro* tests) that these have large span of various biological/pharmacological activities: antioxidant, analgesic, antiseptic, antidiarrheal, anti-inflammatory, antimicrobial. However, botanical drugs are known to often “suffer” from variability/inconsistency of chemical composition. Consequentially, biological activity/safety of botanical preparations can also significantly fluctuate. Bearing all previously mentioned in mind, we decided to assess variability of the volatile profile of four commercial *Satureja* sp. botanical drugs available in Serbian vendor and sold under the same trade name “Rtanjski caj”.

**Methods:** Essential oils were isolated by hydrodistillation in Clavenger-type apparatus (100g of dry plant material per sample; above ground parts) and were analyzed by gas chromatography and gas chromatography-mass spectrometry.

**Results:** The most abundant components found in the analyzed samples were as follows: *p*-cymene (0.9-10.0%), borneol (6.7-17.6%), terpinen-4-ol (3.1-9.2%), carvacrol (1.9-14.9%), caryophyllene oxide (3.3-6.1%), *p*-cymen-8-ol (0-6.5%), geranyl acetate (0-3.6%).

**Conclusion:** The obtained results revealed significant variability, both quantitative and qualitative, of the volatile profiles of studied botanical drugs, pointing out once again that strict control of such mixtures is needed.

Disclosure: No conflict of interest declared

400

**The effect of acupuncture in a patient with Bell's palsy: a case report**

Y. Cayir, T. Set, Z. Akturk

Ataturk University Faculty of Medicine, Department of Family Medicine, Erzurum, Turkey

**Background:** Bell's palsy (BP) is an acute peripheral facial nerve paralysis usually affecting only one side of the face. The incidence of BP is 15-40/100000. The etiology of BP is uncertain, and treatments aren't curative. We aimed to demonstrate the effect of acupuncture in a patient with BP.

**Case:** The subject was a 41-year-old man with a sudden onset of facial asymmetry. He had BP for 4 months and didn't respond to steroid in the acute phase. His eyes were asymmetric, and he couldn't close his right eye. He had synkinesis. When he closed his eyes, there was involuntary rightward deviation on his mouth. House-Brackmann facial nerve grading system (HBS) before treatment was grade 4.

Patient was given 20 acupuncture treatment sessions in 2 months. On the affected side we selected ST4, ST6, ST8, GB14, GB21, *Yintang*, *Taiyang*, TE17, TE23, SI18, SI19, LI20, GV24 acupuncture points, bilateral LI4, and ear shenmen. The needles were retained for 30 minutes. Photographs were taken before and after the treatment.

The patient rated an overall improvement of 70%. Self-perceived muscle strength when smiling and puffing out cheeks, and the strength when raising eyebrows increased from 20% to 70%. Synkinesis was attenuated. HBS changed to grade 2 after treatment.

**Conclusions:** Current treatments like invasive treatments and physiotherapy for BP have been employed to relieve symptoms, but achieve no optimal effect. This study showed that acupuncture can be effective in improving functional and cosmetic outcome for BP.

Disclosure: No conflict of interest declared

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**Effects of the inhalation of negative air ions on heart rate variability (HRV) and capillary blood flow velocity**

S.A. Youn, W.S. Choi, C.M. Kim

FAMILY MEDICINE, The Catholic University of Korea, Seoul St. Mary's Hospital, Seoul, Korea

**Background:** This study was conducted to fine out the effects of negative air ions(NAI) exposure on the heart rate variability(HRV) and capillary blood flow velocity among smokers.

**Methods:** Twelve healthy smokers aged 20 to 50 were recruited through advertisement. The subjects were either studied in the presence or absence of NAI after smoking a cigarette. After 1 week, they switched and examined in the opposite circumstances. Before and after smoking, the subjects were measured by HRV and capillary blood flow velocity. We analyzed the data with STATA. Differences between the mean values in the presence and absence of negative ions were tested by pared t-test.

**Results:** The differences of the mean value of HRV indices and flow velocity before smoking were not significant. However, after smoking, the heart rate values were lower in the presence of NAI than in their absence. The mean of SDNN, RMSSD and flow velocity were higher in the presence of NAI than in their absence.

**Conclusions:** The result of this study suggests that negative air ions mediate the regulation of autonomic nervous system activity and enhance the parasympathetic activity.

**Keyword:** Negative air ions Heart rate variability; capillary blood flow velocity

Disclosure: No conflict of interest declared

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**Effects of respiration rate on heart rate variability**

W.S. Choi, S.A. Youn, C.M. kim

Family Medicine, The Catholic University of Korea, Seoul, Korea

**Background:** This study was conducted to find out the effects of respiration on heart rate variability.

**Methods:** Fifteen healthy volunteers(29.1±3.4 years, mean age±SD,) were studied. All the subjects gave their informed consent, and the study was approved by Institutional Review Board of the Korean society of complementary and alternative medicine. While subjects controlled their respiration rate using digital metronome to 6, 9, 12, 15, 18, 20 breaths/minute, beat-to-beat HRV data was recorded by SA-2000E(Medicore co, Korea).

**Results:** The mean heart rate was significantly lower at 15, 18 and 20 breaths/min than spontaneous breathing(P=0.001, 0.029, 0.012). SDNN was significantly high at 6 breaths/min(P=0.000). RMSSD didn't show significant difference among each respiration rate. Approximate entropy was significantly low at 6, 9 breaths/min(P=0.000, 0.000). Total power at 6 breaths/min(P=0.000), normalized LF and HF at 6, 12, 15 breaths/min(P=0.000, 0.002, 0.021), and LF/HF ratio at 6, 12 breath/min(P=0.000, 0.007) showed significant difference compared to spontaneous breathing.

Repeated ANOVA revealed that there were significant differences in all indices of HRV except RMSSD.

**Conclusion:** The result of this study suggest that mean HRV indices were changed by respiration rates, so respiration should be considered in measurement and analysis of HRV.

**Key words:** heart rate variability, respiration

Disclosure: No conflict of interest declared

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### Preliminary evaluation of a pilot demonstration of stress relief by Chinese pipa music in a university in Hong Kong

S.M. Lo, M.H. Chan, H. Huang, S.Y.K. Ho, P. Ng

University Health Service, The Hong Kong Polytechnic University, Hong Kong, Hong Kong

#### Objectives:

To find whether the participants found Chinese Pipa Music can help in stress relief.

#### Methods:

- There was a Pilot Health Talk on stress relieving strategies with live demonstration of Chinese Pipa Music by a Family Medicine Specialist in October 2012. Participants were given an anonymous questionnaire to fill in at the end of the health talk.
- There are 2 main types of Chinese Pipa Music, including "Gentle tunes" which creates a relaxing environment, and "Battle tunes" which boosts up an exciting environment. As some patients may have anxious mood when receiving Acupuncture from our Traditional Chinese Medicine Clinic, "Gentle tunes" are played during Acupuncture. Participants are given anonymous questionnaire to fill in after the procedure, to assess their perception and acceptance to the Combination therapy of Chinese Pipa Music and Acupuncture.

#### Results:

A total of 79 participants attended the Health Talk, including university staff and students, with the response rate of returning the questionnaire up to 92%. The study showed that 96% of the respondents agree that their understanding of using music for stress relief was enhanced. Results for the evaluation of Combination therapy of Chinese Pipa Music and Acupuncture are pending.

#### Conclusions:

Most participants agree that the Health Talk on Stress relief by Chinese Pipa Music can enhance their understanding to the mentioned topic. If the results for the Pilot Combination therapy of Chinese Pipa Music and Acupuncture are positive, more resources can be allocated to further proper research in this pioneer area.

Disclosure: No conflict of interest declared

1046

### The role of Paneurhythmy in prevention programs for children and adults

S. Alekova<sup>1</sup>, K. Atanasova<sup>2</sup>, I. Ovcharov<sup>3</sup><sup>1</sup> general practice, trakia university, stara zagora, Bulgaria; <sup>2</sup> financial department, ESTRE OOD, sofia, Bulgaria; <sup>3</sup> urology, trakia university, stara zagora, Bulgaria

**Introduction:** Paneurhythmy is a unique healing system of dance and movement, which founder is the spiritual master Beinsa Douno – Petar Deunov. His system of rhythmic musical and physical exercises, often described as 'circle dance', integrates music, poetry, motion, philosophy and interaction with nature in a harmonious unity. The increased interest to this art therapy is due to its positive effects on the nervous system, cognitive processes, muscles' reaction, locomotory system, blood circulation, cardiac function, etc.

**Objective:** The goal of this study is to present one of the types of art therapy methods -paneurhythmy and its role in common medicine as a means for improvement in patients spiritual, mental and physical health.

**Methods:** Scientific-analytical approach is utilized with the available materials on the discussion topic. Analysis and research of publications in the field of psycho-emotional and physical status of patients is performed.

**Results:** Paneurhythmy is a unique Bulgarian method for self-improvement, which through music and poetry supports the health of human beings and striving to develop friendliness, communication and positive attitude towards other people, life and nature.

**Conclusion:** Paneurhythmy represents a unique dancing system that encompasses communication in groups and collective meditation. We have concentrated in our study the broad spectrum of application of this art therapy in medical practice as an alternative method for medical treatment. Participation of patients in paneurhythmy courses performed in the morning in the open casts a significant influence on their behavior, way of life, emotions, physical activity and vitality.

Disclosure: No conflict of interest declared

1208

### Complementary therapies: what about their use by patients of our health centers in Sant Boi de Llobregat (Barcelona)?

S. Moraleda Asensio, M. Leal Negre, A. Garijo Borja, C. Alvarado Montesdeoca, C. Domenech Rodríguez, M. Tramunt Mestre, F. Ruiz Valverde  
C.S.Sant Boi., ICS, Sant Boi de Llobregat (Barcelona), Spain

Complementary and Alternative Medicine (CAM) raises a wide range of reactions, from uncritical enthusiasts to uninformed skeptics. The fact that the use of traditional medicine remains widespread in developing countries, and the use of CAM is increasing in developed countries, led us to want to study this issue in our population nowadays.

We performed a cross-sectional descriptive study of 328 completed surveys and anonymous self, in the health centers of Sant Boi de Llobregat, to determine the prevalence of the use of different complementary therapies, determine what are used for, self efficacy perceived, if these habits have changed after use, how often they use, and the reason to continue using them or not.

For the statistical analysis was used SPSS. It was used measures of central tendency and dispersion for quantitative variables and proportions for qualitative variables.

According to 35.4% of respondents use complementary therapies, the user profile of women is about 50 years old, with medium-high studies.

Among the therapies used are; Phytotherapy, Homeopathy, Acupuncture.

Health problems that are most commonly used for these therapies include mood problems, musculoskeletal pain and improve overall health.

The self perceived efficacy of these therapies is high with an average of 6, users who use the usually frequent it sometimes.

No change in eating habits or exercise in these people who use these therapies.

Stop using these therapies in 33.3% highlight is the reason be expensive, which still uses therapies, mostly use them proactively to keep health.

Disclosure: No conflict of interest declared

1297

### What do patients take when we don't see them? Use of alternative therapies

I. González-Saavedra, C. Casanovas, R. Isern, A. Boada, A. Altaba, A. Herrera  
ABS Baix Guinardó. CS Maragall, ICS, Barcelona, Spain

**Objective:** We believe that use of alternative therapies is widely spread between our patients to treat minor illnesses. Although patients don't talk about it, we need evidence to demonstrate this usual practice.

The objective is to identify alternative therapies used by patients of an urban health center(UHC).

**Methods:** Descriptive and cross-sectional study conducted on an UHC attending 25000 patients. Information was requested through a self-completed survey handed out to patients who came to be visited by 6/19doctors of our medical team during 2 weeks of February. Patients were asked to fulfill this survey with age, sex, alternative therapies used during last year and disease that originated their use. To avoid biases, no more personal data were asked. Fulfilled surveys were left in a box right after leaving doctor's office. From all patients attending UHC,323(32,4%) answered our survey.

**Results:** Average age:62 years.62% women.66% had used some therapy. Average therapies for patient:1,7. They used:49% phytoteraphy,14% massages,8% homeopathy,7% osteopathy,6% acupuncture,4% yoga/taichi,3% foot reflexology, less than 1%:Bach flower, chiropractic, hypnosis/meditation, Reiki, laughter therapy, aromatherapy, music therapy. Phytotherapy group used an average of 2,1 products per person, emphasizing:19% chamomile,16% honey,15% lemon,9,5% lime, 6%garlic,5%aloe vera. Diseases that originated use of alternative therapies were:osteoarticular 24%,psychiatric 19%,gastrointestinal 17%,respiratory 15%,hypertension/diabetes/dyslipidemia/obesity 10,5%,dermatology/allergies 6%,headaches 3,5%,other 5%.

**Conclusions**

1-2/3patients who answered the survey admitted having used some alternative therapy during last year.

2-Almost 1/2patients used phytotherapy. Mostly traditional home remedies.

3-It's remarkable that no patients admit having used therapies such as curanderismo.

4-Almost half(44%) of all diseases were osteoarticular and psychiatric.

Disclosure: No conflict of interest declared

1318

**Experience report: medicinal plants and people's knowledge**

J. Constante, F. Cunha, C. Santos, D. Santa, A. Mourao, F. Santos, J. Fonseca, R. Aranha  
*Department of Obstetrics and Gynecology, Institute of Medical Sciences, Rio de Janeiro State University, Rio de Janeiro, Brazil*

**Objective:** Considering the Declaration of Alma-Ata and the creation, in Brazil, of the National Policy on Medicinal Plants and Phytotherapics, the goal of this paper is to present an experience report of a health education activity intended to evaluate people's knowledge on twelve plants available as phytotherapics in Family Care Clinics and stimulate the use of those plants.

**Methodology:** The activity, performed in a park and on the streets, consisted of an epidemiological questionnaire, a game and an informative booklet. The game consisted of two dodecahedron dices, photographs of the twelve plants, questionnaires about them and answer sheets. Each participant, after answering the questionnaire rolled the dice. The number on the dice corresponded to a plant that they were asked questions about. As the person was evaluated, he/she was provided with information about the usage and the adverse effects of the plants. Later on, data was analyzed on Microsoft Excel

**Results:** 110 people, mainly adults, were interviewed. 64% were women and 36%, men. 58% of them made use of medicinal plants, 65% and 90% had a regular knowledge about medicinal plants and phytotherapy, respectively. Besides, specific knowledge about each plant was unsatisfactory

**Conclusion:** A huge number of people uses medicinal plants, however many are unaware of important information about those, which shows that the use of the plants is cultural. That showed the importance of activities that provide information on the use of the plants and researches to verify the knowledge of undergraduate students and family doctors about medicinal plants.

Disclosure: No conflict of interest declared

1335

**Do the patients discuss about self-administered alternative/complementary medicine with their General Practitioners**

H. Jasa<sup>1</sup>, M. Vrcic Keglevic<sup>2</sup>

<sup>1</sup> Health Center Zagreb – Centar; Health Center Zagreb – Centar, Zagreb, Croatia; <sup>2</sup> Department of Family Medicine, „A. Stampar“ School of Public Health, Medical School, University of Zagreb, Zagreb, Croatia

**Introduction:** Complementary/alternative medicine (CAM) is popular within Croatia population. The researches have shown that 20% to 40% of the population is temporary or permanent users. It is also well known that the patients informed their General Practitioners / Family Doctors (GPs/FDs) very rarely. What is a situation in Croatia is the question we would like to answer.

**Methods:** A cross-sectional survey was carried out in 15 GPs/FDs practices all around Croatia. A sample consisted of the patients, consumers of the different CAM methods, and come to the practice within predefined two days. Validated and for the purpose of this study developed questionnaire, contains 35 questions including those related to the role of GPs/FDs.

**Results:** Out of 244 participants, 121 of them discussed with their GPs/FDs the CAM methods they used. 52.9% of the patients informed their GPs/FDs because they believed that doctors have enough knowledge about CAM necessary for discussion. Additional 18.2% patients thought that their GPs/FDs had enough knowledge and also were ready to discuss. Opinions that the use of CAM methods were patient's personal choice was the main reason why the patients did not inform their GPs/FDs. Lack of doctor's interest (20.3) and lack of knowledge (10.6) were the other reasons. The elderly were more ready to discuss ( $\chi^2 = 10.873$ ,  $df=2$ ,  $p=0.0043$ ). We did not found any other differences regarding patient's socio-demographic characteristics.

**Conclusions:** Those responsible for the education as well as the professional organization should take in consideration the results of this study.

Disclosure: No conflict of interest declared

1366

**Acupuncture therapy for nocturnal enuresis in children – Is there evidence?**S.Gonçalves<sup>1</sup>, E.Silva<sup>2</sup><sup>1</sup> ACES Cávado I – Braga, USF S.João de Braga, Braga, Portugal; <sup>2</sup> ACES Ave III – Vila Nova de Famalicão, USF S.Miguel-o-Anjo, Vila Nova de Famalicão, Portugal

**Introduction:** Nocturnal enuresis is defined as repeated loss of urine at night at least twice a week for three consecutive months in children over five years in the absence of congenital or acquired defects of the central nervous system or urinary tract. This disease affects up to 20% of children and 2% of young adults. Current treatment includes pharmacological and others interventions such as acupuncture.

**Objective:** Review the evidence base of acupuncture as a therapy to relieve the symptoms of nocturnal enuresis and to improve the quality of life of young people under 18 years.

**Methodology:** Search meta-analysis(MA), systematic reviews(SR), randomized controlled trials(RCT), guidelines in English and Portuguese since January/2000 to December/2012 in Pubmed, Cochrane, NHS, NGC, DARE, Bandolier and Portuguese Medical Journals, using the MeSH terms „Nocturnal enuresis“ and „Acupuncture“. For assessment of the levels of evidence the Strength Of Recommendation Taxonomy(SORT) was utilized.

**Results:** 99 articles obtained: selected were 3 guidelines, 4SR and 3RCT. The guidelines supported the efficacy of acupuncture, decreasing the average number of bedwetting episodes and increasing the rate of disease resolution. The SRs report that acupuncture is a valid treatment increasing the number of dry nights and quality of life of the patient. The RCTs also support acupuncture therapy as it is non-invasive, painless and increased the percentage of dry nights.

**Discussion:** There is evidence to recommend the use of acupuncture in symptomatic relief of nocturnal enuresis(SOR B), and improving the patient quality of life(SOR C). More studies are needed, with more rigorous methodologies and long-term monitoring to obtain more consistent results.

Disclosure: No conflict of interest declared

1544

**Evaluation of the Efficacy of an Acupuncture Program at the MGH-Community Health Associates Wellness Center**B. Patel<sup>1</sup>, K. Miller<sup>2</sup>, D. Mehta<sup>2</sup><sup>1</sup> Department of Society, Human Development, and Health, Harvard School of Public Health, Boston, United States; <sup>2</sup> Community Health Associates Wellness Center, Massachusetts General Hospital, Revere, United States

**Objectives:** According to the 2002 National Health Interview Survey, 2.13 million Americans reported recent use of acupuncture. The NIH Consensus Development Conference in 1997 reported that there is sufficient data to support and consider the complementary use of acupuncture. The objective of the acupuncture program evaluation at MGH-CHA Wellness Center was to 1) conduct a process evaluation in order to help improve program delivery and 2) conduct an impact evaluation to determine how the program affects the patient's health outcomes.

**Methods:** This was a mixed methods study consisting of a focus group discussion and a questionnaire. Participants included patients currently enrolled at MGH-CHA Wellness Center who received acupuncture between August 2011 and January 2012.

**Results:** Of the 137 eligible patients, 72 returned the mail survey. The response rate was 52.6%. Most of the patients had received more than ten acupuncture sessions and felt much better after receiving acupuncture. There was a significant correlation between the number of acupuncture sessions and the change in the participants' health and wellbeing after the acupuncture treatment ( $p=0.003$ ) and a resulting decrease in the intake of pain medications ( $p=0.039$ ).

**Discussion:** It can be concluded that the services rendered at MGH-CHA has a beneficial impact on the population it serves, and patients consistently report high satisfaction. There is a significant relationship between the number of acupuncture sessions and the perceived change in health and wellbeing suggesting that patients are feeling better regardless of whether there is an actual effect or a placebo effect, or both.

Disclosure: No conflict of interest declared

## 3.21. OTHERS

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### Effect of multi-modal approach on obesity management at polyclinic: an interventional clinical trial

M. Isik, A. Sattar Khan, U. Avsar, Y. Cayir  
Family Medicine, Ataturk University, Erzurum, Turkey

The aim of this study was to investigate the effect of reduced calorie diet restricted for only three times meal per day with combination of provision of exercise facility in clinics, providing counseling on healthy lifestyle and behavioral changes, and maintenance counseling.

It was non-randomized single group pre- and post-interventional clinical trial, conducted in healthy lifestyle center of Ataturk University Hospital, in Erzurum, Turkey with 48 randomly selected obese patients with a minimum body Mass Index (BMI) index of 30 kg/m<sup>2</sup>, who admitted to our obesity polyclinic between January 2011 and May 2012 were included in the study. A multi-intervention treatment plan, including changing physical activity, eating habits, decreasing daily caloric intake and daily meal number, provision of exercise facility in clinic, providing counseling on healthy lifestyle and behavioral changes was used. Paired samples t test and Pearson correlation analysis were performed.

The results depicted that after the intervention mean body weight decreased from 92.19 ± 14.80 to 84.7 ± 13.3 kg (p < 0.001) and mean BMI decreased from 37.6 ± 5.7 to 34.6 ± 5.4 kg/m<sup>2</sup> (p < 0.001). Pearson correlation analysis showed a significant positive correlation between duration of adherence to the program, and weight and BMI differences (r = 0.677, p < 0.001 and r = 0.692, p < 0.001).

Long-term multi-intervention treatment is effective in obesity management.

Disclosure: No conflict of interest declared

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### Family APGAR as a tool for family function assessment in developing country: an experience in Thailand.

W. Rattananan<sup>1,2</sup>, S. Chunharas<sup>3</sup>, U. Porntaveevut<sup>4</sup>

<sup>1</sup> Former Family Medicine resident, Department of Family Medicine, Lerdsin Hospital, Bangkok, Thailand; <sup>2</sup> Neurological Sciences, University of Nebraska Medical Center, Omaha, NE, United States; <sup>3</sup> Family Medicine, Lerdsin Hospital, Bangkok, Thailand; <sup>4</sup> Pharmacy, Lerdsin Hospital, Bangkok, Thailand

**Introduction:** Family APGAR Questionnaire was developed for measurement of family function. Usage of the test is limited due to insensitivity and uncertain specificity. However, Family APGAR is the shortest screening test (requires less than 5 minutes) and may be suitable for busy clinical setting in developing countries.

**Objectives:** To evaluate usage of the questionnaire in Thai population. The family function and possible related factors were analyzed.

**Methods:** Cross sectional survey with systematic sampling. The questionnaire was translated to local language and evaluated for validity and reliability.

**Results:** The questionnaire had Cronbach's alpha of 0.73 and inter-item correlations ranging from 0.25-0.45. 388 subjects were included. Demographic data showed urban citizen attribute with mean score of 7.53 (95%CI 7.32-7.73). The scores were associated with occupations and education levels (p < 0.05), with government/public services and student groups having higher scores. Strong relationships among occupation, education level and income (p < 0.001) were noted.

**Conclusions:** The reliability of the questionnaire is rated fair. The family function is related to socioeconomic factors. These findings are comparable to previous studies and represent a context of Thai community. Family APGAR may be a helpful screening test for family function in developing countries where clinics are usually busy. Further prospective study is needed to evaluate pattern of score change overtime, and whether serial measurements will provide more sensitivity than one-time testing.

**Acknowledgement:** The study was accepted by The Royal College of Family Physicians of Thailand in 2005. Use of Family APGAR Questionnaire in the study was considered fair use for education.

Disclosure: No conflict of interest declared



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**Web Radio Health and Accessibility: Promoting Communication in Health**

D. Ramos Henrique, A.V. Machado Mendonca, G. De Sousa Pereira, R. Paz Silva, O. Gomes Araujo, C. Sabia, M. F. De Sousa, W. Vieira, R. Ysdyxyam, R. Santos  
*PUBLIC HEALTH, UNB, BRASILIA, Brazil*

Started in 2011 at the Federal University of Rio Grande do Sul (UFGRS) by students of Public Health, the project web radio health mission was to record experiences from successful experiences and events of the Unified Health System (SUS) through interviews, workshops and real-time transmission of video and audio with health issues. Today also linked to the University of Brasilia (UNB), the initiative has added to the communication process a chance to those who are not present at the event, also have access to content with discussions related to health. The health communication is a big challenge for academia as well as for services. Talking about health requires more than knowledge and mastery of the tools of transmission. Thus, the project aims to produce audio and video content over the public health field; evaluate the processes of health communication through the Web Health Radio; register the successful experiences and innovative SUS from monitoring critical events, interviews and workshops for health communication in real time using the tool in their presentations of audio description, subtitles and also Brazilian Sign Language – POUNDS – as interpretation for those with communication difficulties, limitations and / or special educational needs. The initiative has been driven by the voluntary participation of students, with a focus on citizenship, democratization of communication and access to information saúde. A event coverage communicates quickly, cheaply and practice, in order to minimize gaps in communication health.

Disclosure: No conflict of interest declared

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**Pain in primary care**

V. Rubio, A.L. Renfigo, M.Chueca, I. Garmendia, M.C. Sanchez, A.S. Alvarez, E. Cossio, C. Grau, N. Garate, L. Arriaga  
*Primary Health Care Centre Irun, Servicio Vasco de Salud, Irun, Spain*

**Objective:** To determine the frequency of pain as a reason to visit a Primary Care, characteristics, treatment and resolution.

**Methodology:**

Design: Descriptive study

Setting: Primary Health Care Centre.

Participants: All patients who attend the Health Care Centre with pain symptoms, as the main reason for consultation. During a period of 73 days.

Measurements: Origin of pain, intensity measured by visual analogue scale (VAS), additional tests, therapeutic. Information of evolution and response to the treatment obtained by telephone call after a month of first visit.

**Results:** From 2374 visits, 245 patients with pain symptoms, 10.3%. Mean Age 58 years old. 66% women. 67% musculoskeletal pain, 9% traumatic, 8% abdominal. 13.6% mild intensity of pain, between 1 and 4 (VAS). 49% moderate intensity, between 5 and 7 (VAS) and 37.4% severe intensity, between 8 and 10(VAS). Analgesics were used as treatment in 13.6%, nsaid 39.5%, analgesics and nsaid combination 13%, opioids 3%, co-analgesics 8%. Additional tests were requested in 35%. It was possible to contact with 200 patients, 82%. 26.5% of those patients did not have any pains, 75% of patients were still in pain. 37% improved greatly, improvement of three points in VAS, 58% without significant changes, 2% worsened. Bad tolerance to medication in 11%.

**Conclusions:** Musculoskeletal pain is the most frequent reason to visit the doctor. It is perceived as moderate to severe intensity. Nsaid alone or combined with analgesics are the most used. Limited resolution of the problem with high persistence of pain and little improvement of the intensity.

Disclosure: No conflict of interest declared

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**Adisson's disease in polyglandular autoimmune syndrom type II**

N. Jovanovic

*General Practice, Dom Zdravlja Sabac, Sabac, Serbia*

**Objective:** POLYGLANDULAR AUTOIMMUNE SYNDROM (PAS) is an autoimmune condition associated with multiple endocrine gland insufficiencies. ADISSON'S DISEASE is chronic primary adrenal insufficiency.

**Aim** of this work is to show the role of primary care physician in diagnostic of rare diseases.

**Methods:** CASE RAPORT

**Results:** In January 2010 a 31 year old man came into my office complaining of general weakness, fatigue, anorexia, weight loss, nausea, abdominal pains with diarrhea. In physical examination I found hypotension, tachycardia, hyperpigmentations on his thorax and the ECG showed short QT interval and tall T wave. His laboratory results showed hyperkalemia, hyponatremia and hypoglycaemia. I suspected it was an Adisson's disease case. I did a blood analyse to check level of ACTH and cortisol. The results showed elevated level of ACTH and low cortisol. I directed him to University endocrinology clinic where a diagnosis was confirmed. After receiving a glucocorticoid replacement therapy his laboratory results showed hyperglycaemia and low levels of thyroid hormones. Further examinations showed that he suffered from polyglandular autoimmune syndrom type II which included Adisson's disease, Diabetes mellitus and Haschimoto thyroiditis. Now my patiente is treated with hydrocortison, L-tiroxin and insulin therapy. His condition is under control.

**Conclusion:**

This case proved that listening to patients' complaints and physical examination is more than half the diagnosis. Being a primary care physician is a very responsible job and knowing our patients we hold the key to proper diagnosis.

**Key words:** Adisson's disease, polyglandular autoimmune sindrom

Disclosure: No conflict of interest declared

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**Blue digit syndrome**G. Lovatón<sup>1</sup>, L. Pérez<sup>1</sup>, L. González<sup>1</sup>, M.J. Cortés<sup>1</sup>, E. Gregorutti<sup>1</sup>, C. Gutiérrez<sup>1</sup>, M. Bianchi<sup>2</sup>, C. García<sup>2</sup>, C. Fernández<sup>1</sup>, A. Guarido<sup>1</sup><sup>1</sup> CAP Est, Consorci Sanitari de Terrassa, Terrassa, Spain ; <sup>2</sup> Rheumatology, Hospital de Terrassa, Terrassa, Spain

**Introduction:** Blue digit syndrome is a cutaneous manifestation of multiple diseases that produce acute or subacute ischemic compromise in one or more fingers or toes. The most frequent cause is a reduction in arterial blood flow due several pathogenic mechanisms, including thrombosis, embolism, severe vasoconstriction, or inflammatory or non-inflammatory lesions.

**Clinical case:** A 58 year old male patient, obese, smoker, with a history of chronic obstructive pulmonary disease and Chron's disease with ankylosing spondylitis associated, in treatment with azathioprine and infliximab, was admitted to the hospital for digital cyanosis located at fourth right toe and fourth and fifth left toe, a necrotic lesion at fourth left toe and intermittent claudication at 150 meters associated with pain.

Lower left extremity with ankle-braquial index of 0.54. Echocardiogram: atherosclerotic plaques in ascending aorta. DIVAS: occlusion of the left iliac axis, with a stenosing plaque in superficial branch of right medial circumflex femoral, left anterior tibial with sub occlusive stenosis. Hypertriglyceridemia, lupus antibody and anticardiolipin antibody IgG positive.

The patient was anticoagulated with enoxaparine and after a second determination of lupus antibody and cardioliipin antibody positive within twelve weeks, the diagnosis was antiphospholipid syndrome. Anticoagulation was changed to acenocumarol.

**Conclusions:** Antiphospholipid syndrome, an acquired hypercoagulable state, predispose to thrombotic complications.

In this patient had to be considered other causes than embolisms due to atheromatosis. Independently of the cause, blue digit syndrome is a medical emergency requiring rapid diagnosis and specific treatment, given the risk of progression to irreversible necrosis.

MeSH Terms: fingers, blood supply.

Disclosure: No conflict of interest declared

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### The evaluation of serum alpha-1-antitrypsin levels in patients receiving intramuscular vitamin B12 therapy

Y. Sezgin<sup>1</sup>, M. Kartal<sup>2</sup>, A. Dilek Güldal<sup>2</sup>

<sup>1</sup> *Tonya public hospital, the ministry of health, Trabzon, Turkey;* <sup>2</sup> *Family Medicine, Dokuz Eylül University Tıp Faculty, İzmir, Turkey*

**Objective:** Alpha-1-antitrypsin loses its antiprotease activity as a result of oxidation of the methionines in its structure. However, vitamin B12 plays an active role as a co-factor during methionine synthesis. It is, thus, claimed that Vit-B12 therapy may lead to increased alpha-1-antitrypsin synthesis by providing continuous and stable levels of methionine.

**Methods:** The research was planned as an observational study. One hundred sixty nine patients were enrolled. The levels of serum alpha-1-antitrypsin and vitamin B12 were compared based on demographic characteristics of the patients. Among the 169 patients, only 27 have accomplished the therapeutic protocol and their alpha-1-antitrypsin levels after treatment have been compared to their levels before treatment.

**Results:** It was found that the higher the age and the Body Mass Index (BMI), the lower were the alpha-1-antitrypsin levels. Among the patients who use medications due to chronic diseases serum alpha-1-antitrypsin levels were found higher. Following treatment with vitamin B12, the levels of serum alpha-1-antitrypsin (pre-treatment 121.67±13.884, post-treatment 138.04±16.922, P=0.001) were found to be increased.

In conclusion, our findings show that vitamin B12 deficiency plays an important role in the ethiopathogenesis of many diseases associated with alpha-1-antitrypsin deficiency, including particularly chronic obstructive pulmonary disease.

Disclosure: No conflict of interest declared

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### Prevention of contrast nephropathy

M. Sotiraki, E. Efthimiou, E. Gkalitsiou, G. Fioretos, G. Stratiotis, S. Giannakaki  
NEPHROLOGY, TZANEIO GENERAL HOSPITAL, PIREAS, Greece

Glomerular filtration rate(GFR) calculated using Crockcroft and Gault formula in 63 patients undergoing coronary angiography,peripheral angiography or intravenous urography between January 2011 to December 2012.

**Methods and results:**Based on GFR values,patients were divided into two groups. Group 1(n=33)

patients had GFR>60ml/min with normal serum creatinine and received usual dose of ionic contrast as required for the procedure.Group 2 patients had GFR<60ml/min i.e stage 2 CDK received low ionic die less than 125ml,N-Acetylcysteine for three days,one day prior and 2 days after the procedure and oral sodium bicarbonate for three days one day prior and two days after the procedure to make blood pH alkaline during the procedure (pH>7.42).GFR calculated next day after the procedure and repeated further if found deterioration.GFR values +2.5ml/min from baseline is considered improvement,while <2.5ml/min is considered as deterioration.

21patients of group 1 and 12 patients of group2 had no significant change in GFR(21/33 vs.12/30) p=ns.5 patients of group 1 and 10 patients of group2 had improvement in GFR(5/33 vs 10/30)p<0.01.6 patients of group 1 and 8 patients from group2,showed deterioration of GFR(6/33 vs 8/30),P<0.05.Only one patient of group1 showed GFR reduction below 15ml/min,but eventually stabilized with GFR 33ml/min.None of the patients in group 2 had GFR below 15ml/min.

**Conclusion:**We recommend these precautions for all patients undergoing contrast procedure with GFR<60ML/MIN

Disclosure: No conflict of interest declared

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**Patients' Views About Organ Donation**

G. Sahin, MK. Sahin, FA. Artiran Igde, MF. Dikici, F. Yaris

Family Medicine, Ondokuz Mayıs University School of Medicine, Samsun, Turkey

**Objective:** Despite the high number of patients waiting for transplantation in Turkey, organ donation is extremely inadequate. We aimed to investigate patients' views and knowledge level and the reasons for avoidance of organ donation.

**Methods:** A questionnaire containing sociodemographic data and 19 questions about organ donation applied to patients admitted to the family medicine outpatient clinic between June and November 2012.

**Results:** The total number of patients who participated in the study was 109 and their ages varied between  $26.26 \pm 9.99$  (18–71) years. 41 patients (37.6%) were male while 68 (62.4%) were female. 84 (71.8%) of them were students, 20 (23.9%) public servant, 4 (3.4%) worker, 1 (0.9%) retired. The answers of statement 'Would you like to make a donation?' 41 (38.5%) were yes 17 (15.6%) were no, and 51 (45.9%) were undecided. Among the most reasons for avoidance of organ donation were, 22 (20.2%) "Can take my organs before death", 17 (15.6%) "My family doesn't allow", 17 (15.6%) "I don't want corrupting the integrity of my body" and 15 (13.8%) "I don't trust doctors". Among the most reasons for willing of organ donation were; 32 (29.4%) "save a life", 24 (22%) "my organ will work instead of decay".

**Conclusions:** There is a great lack of people willing to donate organs and they carry various concerns about the organ donation. To correct this negative attitude it's necessary to increase the level of knowledge and awareness of the society.

Disclosure: No conflict of interest declared

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**Multiple chemical sensitivity and fibromyalgia in a spanish primary care center**G.Lovatón<sup>1</sup>, L. Pérez<sup>1</sup>, C. García<sup>2</sup>, A. Griñó<sup>1</sup>, A. Guarido<sup>1</sup><sup>1</sup> CAP Est, Consorci Sanitari de Terrassa, Terrassa, Spain; <sup>2</sup> Reumatology department, Hospital de Terrassa, Terrassa, Spain

**Background and objective:** Multiple chemical sensitivity (MCS) is characterized by a loss of tolerance, to various environmental chemicals. Comorbidities as chronic fatigue, fibromyalgia, irritable bowel syndrome or dysthymia are often associated. The Quick Environmental Exposure and Sensitivity Inventory (QEESI) is an instrument that gauges five scales: intolerance to chemical exposures, intolerance to other exposures, symptom severity, masking and life impact. The objective of this study was to determinate MCS in patients with fibromyalgia.

**Patients and method:** Patients of a primary care center in Terrassa, Spain; with the diagnosis of fibromyalgia by a rheumatologist were included. All patients completed the QEESI questionnaire, validated in Spanish population.

**Results:** Thirty-five patients were included, the average age (standard deviation) was 53.37 (7.2) years, and thirty-four were females. The origin of the syndrome could not be associated with any specific toxic exposure. The QEESI showed mean scores of 68.74 (21.1) on the chemical inhalant intolerance scale, 41.91 (18.6) on the other intolerances scale, 76.74 (15.5) on the symptom severity scale, 6.02 (2.0) on the masking index and 59.54 (25.1) on the life impact scale. Thirty patients (85.7%) met criteria for MCS.

**Conclusions:** MCS is a persistent and under diagnosed disorder in patients with fibromyalgia that affects middle-aged women. The QEESI questionnaire is an instrument that assesses MCS in these patients and general practitioners should be familiarized with it. The correct interpretation would help to improve management and quality of life in these patients, which is seriously affected.

MeSH Terms: Chemical Sensitivity, Multiple, Intolerance.

Disclosure: No conflict of interest declared

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**Möbius syndrome. A case report.**I.Gil<sup>1</sup>, M.A. Caballero<sup>2</sup>, P. Chinarro<sup>2</sup><sup>1</sup> *Pediatra, Centro de Salud Alhaurín de la Torre, Málaga, Spain;* <sup>2</sup> *Pediatra, Centro de Salud Miraflores de los Angeles, Málaga, Spain*

Möbius syndrome (MS) is defined as congenital facial weakness combined with abnormal ocular abduction. In 2007 it was estimated that 2000 individuals worldwide have the condition.

It's caused by the absence or underdevelopment of the 6th and 7th cranial nerves, although others cranial nerves may be affected

Etiology appears multifactorial (genetic predisposition, vascular interruption o toxics) but not birth trauma.

**Case report:**

18-months-old girl.

Shortly after birth external ocular palsies is noticed, and also lack of facial movement even with crying, but normal blinking.

Cranial ultrasound and NMR was normal. Karyotype 46XX normal variant.

She was clinically diagnosed of SM.

**Evolution:** She breastfed well. Beikost at 5 months. She's eating solids since 12-months without problems.

Vision and hearing are normal.

Motor development is slightly delayed because of muscle weakness. The language is delayed. She communicates through gestures and guttural sounds, and says some disyllabic. She understands and relates well despite her deadpan.

She also presents: pectus carinatum, growth percentile 3, delayed teething and recurrent otitis. Nutritional and immunological studies are normal.

She continues her checkups and go to physical and speech therapy twice a week.

**Conclusions:**

MS diagnosis is clinic.

MS is not progressive. Complications depend on the severity of the patient's deficits (poor nutrition, *dysphagia*, aspiration pneumonia, and corneal ulceration/abrasion).

Children with MS usually benefit from physical and speech therapy to improve their gross motor skills and coordination.

As children get older, the lack of facial expression may become the dominant visible symptom.

Disclosure: No conflict of interest declared

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**Clinically Significant Drug Interactions In Elderly**

M. Sapalas, K. Simanuskas, N. Burokiene, V. Kasiulevicius, V. Sapoka

*Family Medicine Center, Vilnius University Hospital Santariskiu Klinikos, Vilnius, Lithuania*

**Introduction:** Drug-drug interactions – a process which changes the therapeutic effect of one or more co-administered drugs. Pathogenetic mechanisms of drug interactions are often mixed and complex, due to the drug's pharmaceutical, pharmacodynamic and / or pharmacokinetic properties, their incompatibility, and often involve the cytochrome P450 enzyme system. Drug-drug interactions has become of increasing interest in the last decade, partly because of many documented adverse clinical consequences, also of the rise in polypharmacy.

The aim of the study was to access possible drug-drug interactions with their adverse effects in chronically ill patients.

**Methodology:** We performed a research of literature data on drug interactions most dangerous to elderly in long-term care. Then we chose a randomized sample of 70 patients from a total of 450 and investigated drug-drug interactions and their side effects among these patients.

**Results:** Most of the patients were men (57.1%) with a mean age of 68,9 years. Patients used 8 different drugs and their combinations. 5 potentially dangerous drug interactions were observed, with the most frequently being warfarin use with NSAIDs. 37.1% ( $p<0.05$ ) of the patients used potentially dangerous drug combinations. Drug-drug interaction side effects rate was 1.43% ( $p<0.001$ ).

**Conclusions:** The results show that an important amount of patients use inappropriate drug combinations. To avoid serious harm, primary care practitioners must be aware of and manage potentially dangerous interactions.

Disclosure: No conflict of interest declared

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**The association of satisfaction with control, current severity and duration of peripheral neuropathic pain, with the likelihood of anxiety or depression**M. Monella<sup>1</sup>, R. Pollard<sup>2</sup>, J. de Courcy<sup>2</sup><sup>1</sup> Medical Affairs – Pain, Astellas Pharma Europe Ltd, Chertsey, United Kingdom; <sup>2</sup> Statistics Department, Adelphi Real World, Bollington, Macclesfield, United Kingdom

**Objective:** Neuropathic pain (NP) can be a chronic disease and is often associated with depression, anxiety and impaired quality of life. We investigated the hypothesis that dissatisfaction with NP control, a greater severity of current pain and longer duration of disease in NP all increase the likelihood of a patient experiencing anxiety or depression.

**Methods:** Data were drawn from the 2012 Adelphi NP Disease Specific Programme, a cross-sectional study involving 413 primary care physicians and specialists across France, Germany, Italy, Spain and the UK. Physicians completed a questionnaire on patients with peripheral NP (excluding diabetic peripheral neuropathy) detailing age, gender and date of NP diagnosis. These patients answered questions about their pain severity (on a scale of 0=no pain to 10=worst pain imaginable), anxiety and depression. Logistic regression analysis was used to assess the relationship between anxiety or depression and time since diagnosis, current pain severity, satisfaction with treatment, age and gender.

**Results:** Of 1023 patients who completed a questionnaire, 511 were at least 'moderately anxious or depressed'. Independent of age or gender, greater current pain severity (OR 1.39,  $p<0.001$ ) and dissatisfaction with the control of their condition (OR 2.02,  $p<0.001$ ) both showed a significant association with increased likelihood of anxiety or depression. A longer time since diagnosis (OR 1.13,  $p<0.001$ ) was also significantly associated with an increased likelihood of anxiety or depression.

**Conclusions:** Early treatment, increasing satisfaction with NP control and reducing current pain may decrease the likelihood of an NP patient experiencing anxiety or depression.

Disclosure: Mario Monella is an employee of Astellas Pharma Europe Ltd. Both Ryan Pollard and Jonathan de Courcy are employees of ARW. The ARW neuropathic pain Disease Specific Programme is a multi-sponsor programme, of which Astellas Pharma Europe Ltd were a contributing sponsor. ARW do not have any interests do disclose regarding the data in this abstract.

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**Neuropathic pain treatment regimens that contain the capsaicin 8% patch may be associated with a greater reduction in pain**M. Monella<sup>1</sup>, A. Roughley<sup>2</sup>, J. de Courcy<sup>2</sup><sup>1</sup> Medical Affairs – Pain, Astellas Pharma Europe Ltd, Chertsey, United Kingdom; <sup>2</sup> Statistics Department, Adelphi Real World, Bollington, Macclesfield, United Kingdom

**Objective:** Neuropathic pain (NP) is a chronic and difficult-to-manage disease. We compared the change in pain level since the start of current treatment between patients prescribed capsaicin 8% patch (QUTENZA™) and those prescribed other drug treatments.

**Methods:** Data were drawn from the 2012 Adelphi NP Disease Specific Programme, a cross-sectional survey involving 413 physicians including primary care and specialists across France, Germany, Italy, Spain and the UK. Physicians completed a questionnaire on patients with NP (excluding diabetic peripheral neuropathy) detailing age, gender and current NP treatment. Physicians answered questions about patients' pain severity at present and at the start of current treatment (on a scale of 0=no pain to 10=worst pain imaginable). Linear regression analysis was used to assess the relationship between the change in pain severity and the current treatment received, while controlling for confounding factors (duration of current regimen, age, gender, number of regimens received and pain rating at start of current regimen).

**Results:** Of 3313 patients currently receiving NP treatment, 376 (11%) were receiving capsaicin 8% patch. Mean pain reduction, regardless of confounding factors, was greater in patients receiving capsaicin 8% patch than those not (2.57 vs. 2.03,  $p<0.001$ ). This was also true after controlling for confounding factors. In this case, treatment regimens including capsaicin 8% patch significantly reduced pain by 0.280 ( $p=0.019$ ) compared with other regimens.

**Conclusions:** Patients with NP prescribed capsaicin 8% patch treatment may benefit from greater reductions in pain than if they were prescribed other treatment regimens without capsaicin 8% patch.

Disclosure: Mario Monella is an employee of Astellas Pharma Europe Ltd. Both Adam Roughly and Jonathan de Courcy are employees of ARW. The ARW neuropathic pain Disease Specific Programme is a multi-sponsor programme, of which Astellas Pharma Europe Ltd were a contributing sponsor. ARW do not have any interests do disclose regarding the data in this abstract.

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**Change in mental status over one year in independently functioning, community living, old elderly.**M. Godwin<sup>1</sup>, F. McCrate<sup>1</sup>, W. Parsons<sup>1</sup>, A. Pike<sup>1</sup>, V. Gadag<sup>2</sup>, K. Parsons<sup>3</sup>, S. Buehler<sup>2</sup>, A. Sclater<sup>4</sup>, R. Miller<sup>1</sup><sup>1</sup> Family Medicine, Memorial University of Newfoundland, St. John's, Canada; <sup>2</sup> Community Health and Humanities, Memorial University of Newfoundland, St. John's, Canada; <sup>3</sup> Nursing, Memorial University of Newfoundland, St. John's, Canada; <sup>4</sup> Medicine, Memorial University of Newfoundland, St. John's, Canada**Objective:** To determine if there was a change in cognitive status (measured by overall and component MMSE scores) in a cohort of patients participating in an Eldercare study over the course of one year.**Methods:** 235 independent, community dwelling, cognitively intact (MMSE score  $\geq$  25) individuals aged 80 and over were interviewed in their homes as a part of a RCT which involved a one year nursing intervention of home delivered care.**Results:** At baseline the average overall MMSE score was 28.49; this did not change significantly after 1 year (28.58). The recall component score did significantly differ. At baseline 84.3% of the participants recalled all three items; after one year only 69.9% could recall all three (RR 0.52, 95% CI 0.36-0.77, P=0.001). Subgroup analysis revealed that this effect remained regardless of gender or education level but did not occur in the younger age group (80-85 years) or in those who were married and living with their spouse. Logistic regression revealed that the effect remained when controlled for age, gender, education, marital status, and randomization group (i.e., the intervention had no effect).**Conclusion:** There was a significant change in the ability of this cohort of independent, community living old elderly to recall all three items on the recall component of the MMSE after one year. While recall is but one component of cognitive functioning, it is one that causes a great deal of stress in patients and caregivers. Even in the old elderly who are functioning well, providers should monitor recall as an early sign of impairment.

Disclosure: No conflict of interest declared

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**Risk factors and their impact on stroke**B. Djukic, V. Antonić-Kovljenović, D. Adamovic  
Family Medicine, Home Health, Banjaluka, Bosnia-Herzegovina

Stroke is the abrupt onset neurological disorder caused by disturbances of the circulation in the brain which leads to malnutrition certain parts of the brain with oxygen and nutrients.

Some diseases are risk factors for stroke that can be controlled, such as high blood pressure, heart disease, heart rhythm disorders work (atrial fibrillation), diabetes, elevated blood lipids, significantly narrowing of the carotid arteries.

The aim of this paper is to examine the prevalence of certain risk factors, as well as the association of risk factors to stroke.

**Methods:** The study was a retrospective study in which data were collected on patients suffering from stroke. Data were collected in five teams of family medicine. All patients identified age, smoking status, laboratory analysis, the occurrence of hypertension, atrial fibrillation.**Results:** During the study we have registered 52 patients with stroke.

94.2% of patients had hypertension as a risk factor, 25% diabetes, 48% elevated levels of fat in krvi. 30, 7% of patients had a positive family amnamnesis, 21.1% of atrial fibrillation as a risk factor, 26.9% of smokers.

Three or more associated risk factors had 40.38% of patients. 53.8% had uncontrolled blood pressure or come regularly for check ups.

**Conclusion:** The most of the patients had positive risk factors. Significant number of patients had associated risk factors. High blood pressure as a risk factor is most common.**Keywords:** stroke, risk factors, the incidence of

Disclosure: No conflict of interest declared

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### Dialogue between knowledge in construction of comprehensive health care in primary health services

J.I. Pedrosa<sup>1,2</sup>, E. Monteiro<sup>3,2</sup>, A.A. Pedrosa<sup>3</sup>

<sup>1</sup> Medicina Comunitária, Universidade Federal do Piauí, Teresina, Brazil; <sup>2</sup> Mestrado em Ciências e Saúde, Universidade Federal do Piauí, Teresina, Brazil; <sup>3</sup> Vigilância de Doenças Crônicas, Fundação Municipal de Saúde de Teresina, Teresina, Brazil

**Objective:** To build comprehensive care protocols articulating popular knowledge and scientific knowledge in Primary Health Care

**Methods:** Based on in-depth interviews conducted with families in an area of the Family Health Program in Teresina, Piauí, Brazil, were developed: a) mapping of popular practices developed by families caring for women, children and the elderly; b) systematization of popular practices; c) sensitization workshops with professional services, c) payment of knowledge workshops

**Results:** Families use a repertoire of popular practices of care especially for pregnant women, children under 5 and the elderly. For children popular practices relate to nutrition and prevention of diseases and accidents; women to care for nutrition, protection of the fetus and the pregnancy for elderly care practices included use of medicinal plants, and spiritual care supply. These practices were systematized into three categories: health promotion, preventive care and coping with illness.

The workshops of payment indicated connections between technical and popular in children's nutrition, care during the prenatal and puerperium, use of herbal and spiritual care, allowing the construction of protocols: attention to child growth and development emphasizing nutrition in the first year, immunization, accident prevention, prenatal care with an emphasis on nutrition, information and protection of pregnant women, elderly care focusing on chronic disease management, nutrition and spiritual care.

Disclosure: No conflict of interest declared

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### Amyotrophic lateral sclerosis: our experience in primary care for 30 years.

J. Martínez Lozano<sup>1,2</sup>, P. Martínez Andrés<sup>3</sup>, J. Martínez Andrés<sup>4</sup>,  
M. C. Martínez Lozano<sup>5</sup>, N. Martínez Lozano<sup>6</sup>, M. D. Martínez Lozano<sup>7</sup>,  
M. A. Martínez Lozano<sup>8</sup>, J. V. Ramírez Villaescusa<sup>9</sup>

<sup>1</sup> Health Center of Banyeres de Mariola, Agència Valenciana de Salut, Banyeres de Mariola (Alicante), Spain; <sup>2</sup> Medical Director, Clínicas Martínez Lozano, Spain, Spain; <sup>3</sup> Plastic Surgery, General Hospital University, Albacete, Spain; <sup>4</sup> Medical School, Catholic University „San Vicente Ferrer“, Valencia, Spain; <sup>5</sup> Medical Director, I. N. S. S., Albacete, Spain; <sup>6</sup> Rehabilitation, General Hospital University, Albacete, Spain; <sup>7</sup> Neurology. Dementia's Unit. Medical Director, General Hospital University, Castellón, Spain; <sup>8</sup> Dentistry, University „Cardenal Herrera“ C. E. U. Master Medical Director, Valencia, Spain; <sup>9</sup> Traumatology, General Hospital University, Albacete, Spain

**Purpose:** Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease of unknown etiology, characterized by progressive loss of motor neurones brain, stem encephalon and spinal cord. We intend to analyze cases of ALS (also called disease LOU-GEHRIG) for 30 years in a semi-urban habitat.

**Materials & Methods:** We conducted a prospective study between 1.981 to 2.011, a quota of 2.371 individuals assisted population. 100% of the suspected cases were confirmed by reference Neurologist Hospital.

**Results:** Our study demonstrates the following:

- Number of cases: 7.
- Gender: 2 females and 5 males.
- Average age: 56.7 years.
- Predominance of symptoms: a) Respiratory 32%. b) Muscle weakness in upper limbs 25%. c) Dysphagia 15%. d) Weakness, muscle atrophy and fasciculations 20%. e) Mood symptoms 8%.
- Average survival time: 2.3 years.
- Palliative treatment (gastrostomy): Accepted by 2 patients, a man of 67 years old survived 6 months of its completion; a 74 years old woman died after 2 days from complications of the gastrostomy.
- Place of decease: Their own homes within the 7 cases.

**Conclusions:** The results are similar to other series, having found no studies in Primary Care. All patients received care at home, giving much importance to the availability of the Doctor and the emotional support. All of them died at home. emotional support. All of them died at home.

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**The medication reconciliation at primary care**

L. Arriaga<sup>1</sup>, N. Garate<sup>1</sup>, A.L. Rengifo<sup>1</sup>, I. Odriozola<sup>2</sup>, M. Jimenez<sup>1</sup>, V. Rubio<sup>1</sup>, P. Iturrioz<sup>3</sup>, M. Olarreaga<sup>1</sup>, K. Fernandez<sup>1</sup>, G. Borja<sup>1</sup>

<sup>1</sup> Primary health care, centre Irun center, Osakidetza, Irun, Spain; <sup>2</sup> Primary Health Care, Centre Dumboa. Irun. Gipuzkoa, Osakidetza, Irun, Spain; <sup>3</sup> Unit of Family and Community Medicine Gipuzkoa, Osakidetza, San Sebastian, Spain

**Objective:** To evaluate the medication reconciliation in primary care center after the hospitalary discharge in patients older than 65 years old.

**Methods:**

Desing: Transversal descriptive study

Location: Primary care centre

Subjects: All the patients older than 65 admitted and discharged at the hospital, during a month.

Measures and interventions: Personal details: sex and age. Number of medicaments. To go to a primary care consult after the discharged. Medication reconciliation. Types of modifications in the treatment.

**Results:** During the study period 58 patients were discharged from the hospital. The middle age was 79.5 years old (SD 7.19), 55.2% were women, 69.5% took more than 5 medicaments and 8.6% more than 13 medicaments. After being discharged, 77.6% went to the primary care consult, 66.7% of them in the first week with an average of 8.24 days (SD 7.17). The medication reconciliation was made in 97.7% of the participants. At the hospital, the treatment was modified in the 44.4% of the patients. The most common changes in the treatment were adding a new drug in the 38% and replacing the drug in the 13.8%.

**Conclusions:** After the hospitalary discharge, medication reconciliation is made in most of the patients. Nearly half of the patients suffer modifications in their treatment, basically adding or changing a medicament.

Disclosure: No conflict of interest declared

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**Association between Body Mass Index and haematological parameters in children**

C. Aypak, Ö. Türedi, H. Yikilkan, S. Görpelioglu

Family Medicine, Dışkapı Training and Research Hospital, Ankara, Turkey

**Objective:** The prevalence of childhood obesity is increasing all over the world, leading to an increase in obesity-related health problems. Our aim is to identify the impact of obesity on haematological parameters and determine whether there is an association between metabolic profiles and complete blood count (CBC).

**Methods:** Medical records of prepubertal patients who attended the outpatient clinics of paediatrics (Dışkapı Training and Research Hospital, Ankara, Turkey) between April 2012 and October 2012 (6-month period) were retrospectively reviewed. Overweight was defined as body mass index (BMI) between 85 and 95 percentile and obesity as BMI higher than 95 percentile for the age and sex. Patients without any congenital or any acute/chronic inflammatory diseases, including anaemia and those not taking iron supplements were eligible.

**Results:** A total of 324 patients were enrolled in the study, with a mean age of 7.3±1.9 years (47.8% female). They were divided into three groups (lean controls (n=129; 39.8%), overweight (n=66; 20.4%), and obese (n=129; 39.8%). Increased white blood cell (WBC) count and decreased haemoglobin (Hgb) levels were significantly found in obese subjects. While WBC was found to be positively correlated to BMI ( $r=0.123$ ;  $p=0.027$ ) there was an inverse association between BMI and Hgb ( $r=-0.127$ ;  $p=0.023$ ).

**Conclusions:** Elevated WBC and decreased Hgb could be due to low-grade systemic inflammation, a known pathogenetic mechanism underlying most long-term complications of obesity. Our findings suggest that standard, clinically relevant CBC variables could serve as markers of systemic complications in paediatric obese patients.

Disclosure: No conflict of interest declared

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**Evaluation of the effectiveness of a dental care program in the quality of life of head and neck cancer patients**J. Baldisserotto<sup>1,2</sup>, C.S. Funk<sup>2</sup>, C.M. Warmling<sup>1</sup><sup>1</sup> Faculty of Dentistry, Federal University of Rio Grande do Sul, Porto Alegre, Brazil; <sup>2</sup> Center of Technical Education and Research in Health, Grupo Hospitalar Conceição – Ministry of Health, Porto Alegre, Brazil

**Objectives:** a randomized clinical trial (RCT) to evaluate the impact of dental care program on the quality of life (QL) of head and neck cancer patients under oncological treatment.

**Materials and Methods:** the study design was a parallel RCT where 46 subjects with a diagnosis of head and neck primary neoplasia were randomly allocated to the control (CG) or test group (TG). Both groups received basic dental care but the TG received a complimentary care before and during, oncological therapy. Data related to general (WHOQOL-Bref) and specific (EORTC QLQ H&N 35) quality of life (QL) were assessed before and 15 days after the conclusion of the oncological therapy.

**Results:** the TG showed an improvement in the general and specific QL, while the CG showed a worsening in these indexes but without significative difference. The variation between the initial and final measures in the TG shows a tendency of significant improvement along the time. A reduction in candidiasis ( $p < 0,05$ ) and mucositis was observed in the TG.

**Conclusion:** dental care was able to reduce damage from the oncological therapy contributing for an improvement in the QL of these patients.

**Clinical Relevance:** provision of continuous dental care for head and neck cancer patients can reduce deleterious side-effects of the oncological treatment.

Disclosure: No conflict of interest declared

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**Does gender matter in Health Professionals in Primary Care?**C. Carrazoni<sup>1</sup>, M.J. Morro<sup>1</sup>, E. Perpinya<sup>2</sup>, M.J. Cubell<sup>3</sup>, R. Casas<sup>4</sup>, N. Navas<sup>5</sup>, M. Diamanti<sup>5</sup><sup>1</sup> ABS Via Roma, Institut Catala de la Salut, Barcelona, Spain; <sup>2</sup> ABS Sants, Institut Catala de la Salut, Barcelona, Spain; <sup>3</sup> ABS Gracia, Institut Catala de la salut, Sabadell-Barcelona, Spain; <sup>4</sup> CSMA Rubi, Consorci Sanitari de Terrassa, Rubi-Barcelona, Spain; <sup>5</sup> CS Almozara, Insalud, Zaragoza, Spain

**Background:** We have observed that in the last decades there has been an important change in gender proportion among the Primary Care Health Professionals. Nowadays most of them are women. We have carried this study out to know the patients' opinion.

**Objective:** To know how important the gender of Health Professionals is for patients in Primary Care.

**Methods:** A descriptive observational study has been carried out in different Primary Care Health Centers of the Public Health System of Spain for two months in 2012. Data were collected from anonymous interviews. Sample: 176 patients (67 men, 109 women). Average age: 57,5 years old.

**Results:** 52% of patients (41% women, 11% men) prefer women as Health Professionals, no difference on age is appreciated. 42% of patients (25% men, 18% women) do not care about health professionals' gender, 65% of this group is younger than 65 years old. 6% do not care about doctor's gender but prefer a woman nurse. Only 2 patients say that they prefer a man as a doctor or nurse.

**Conclusions:** Patients seem to be satisfied with their Health professionals. The 52% that prefer women say that they feel more confidence, can talk about anything and feel they are better cared for. 42% do not care about health professionals' gender; most of them are younger than 65 years old, what probably means that they do not come so often for consultation and most of their pathologies are acute problems.

Disclosure: No conflict of interest declared

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**Measuring impact of family conferencing skill workshop on icu clinicians**

H. Sigua

*Family Medicine, STFM, Pasig City, Philippines*

**Objectives:** This study aims to conduct a training workshop on multidisciplinary family conferencing skill among TMC clinicians and to measure the impact of such workshop on their knowledge and confidence to perform the skill, actual videotaped performance, as well as on patient/family satisfaction. Well-conducted family conferences have been shown by several studies to affect clinical outcome as well as family satisfaction, yet many clinicians lack the skills for conducting them and many healthcare facilities have no idea how to go about enhancing this skill or whether they have significant impact.

**Methods:** The quasi-experimental study was conducted on 40 clinicians from various specialties utilizing small-group demo-return demo activity and process checklist/outcome forms, as applied to *in-situ* families of ICU patients, by a single trainer.

**Results:** A pre- and post survey among participants was done, as well as qualitative feedback on the module and its conduct. Patient/family satisfaction surveys for each participant were also obtained and compared pre- and post-workshop. Recommendations were elucidated given the findings.

Disclosure: No conflict of interest declared

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**Restless leg in family medicine and improvement of symptoms with vitamin B12 therapy: A case report**H. Kahraman<sup>1</sup>, M. Kartal<sup>2</sup>, N. Ozcakar<sup>2</sup>, Z. Sisli<sup>2</sup>*<sup>1</sup> Primary Health Care Center, Ministry of Health, Erzurum, Turkey; <sup>2</sup> Family Medicine, Dokuz Eylul University, Izmir, Turkey*

Restless Leg Syndrome (RLS) is a sensorimotor disorder causing strong, irresistible desire to move the legs affecting quality of life of patients dramatically; however it's hard for patients to express their symptoms. Although only a detailed history is sufficient for diagnosis, it's rarely diagnosed and properly treated in primary care.

A 69-year-old male who admitted to our outpatient clinic mentioned his leg pain and insomnia when asked for presence of any complaint. He had pain in his right leg from time to time for about 20 years, with tingling. He told about the need for moving and shaking his legs while watching television in the evenings, and woke up shortly after falling asleep with pain, symptoms relieved by moving, rubbing legs.

He had no pathologic signs in his physical examination, laboratory results were Hb:15.2g/dl, ferritin:26.7ng/ml, vitB12:<150pg/ml. After vitB12 and iron replacement, symptoms were relieved. He was referred to neurologist with prediagnosis of RLS and 0.25mg pramipexol prescribed for RLS. Shaking movement of the leg healed completely, insomnia symptoms improved. Patients' symptoms should be evaluated in depth in Family Medicine. Also it's essential for a family physician to follow up and interfere appropriately when needed. Patient's leg complaints at rest reiterated after two years and again ferritin and vitB12 levels were low. His symptoms relieved completely after vitB12 and iron therapy.

There's a limited literature on symptom improvement of RLS with parenteral vitamin B12 therapy. However when remission of symptoms is insufficient as this case its prescription can be noteworthy.

Disclosure: No conflict of interest declared

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**Characteristics of people with diabetes in comparison with metabolic syndrome presence**

S. Conic, M. Brkic, M. Stankovic, D. Melentijevic, J. Topalovic, J. Mitrovic  
GP, Health Center Cukarica, Belgrade, Serbia

**Introduction :**Metabolic syndrome (MS) represents coincidental existence of more metabolic disorders, and the dominant among them is insulin resistance. People with MS are at high risk of coming down with DM (Diabetes Mellitus). Aim of work was to examine correlation of blood pressure value and biochemical parameters in people with DM, in relation with MS presence.

**Method of work:** Research included 40 examinees with diabetes, and based on criterion for MS (IDF 2005.) they were divided in two groups. Anthropometric measurements (body weight-BW, BMI), blood pressure measurement (BP) and determination of biochemical parameters (glycemia and lipid status) were done to all examinees. Correlation of parameters among groups was tested.

**Discussion and results:** Research included 40 examinees with diabetes: 16 males and 24 females. In relation with MS presence, examinees were divided in two groups: Group I (DM with MS)-21 people and Group II (DM without MS)-19 people. Average age was 57±9.63 in Group I, and 60.0±8.22 in Group II. Average BPs (Systolic blood pressure) and BPD (Diastolic blood pressure) were also higher in Group I, BPD statistically significantly higher; BPs-139.76±15.53; BPD-87.62±8.16. Glycemia values were not significantly different among groups. Average value of total cholesterol in group I: 7.25±1.21 (p<0.001); Average value of LDL-cholesterol was higher in group with MS (4.60±1.05) and triglycerides (3.93±3.23), as well. HDL cholesterol was higher in group without MS (1.33±0.37), but without any statistical significance.

**Conclusion:** Obesity, BPD, as well as the pathological values of triglyceridemia and LDL cholesterol are lot more common at examinees DM with MS. BPs and HDL cholesterol were not significantly different at people with DM, regardless of MS presence. Key words: diabetes, metabolic syndrome

Disclosure: No conflict of interest declared

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**Minor surgery in a health center: deriving injury and usual procedures**

J. Paz Galiana, J.P. García Paine, L.A. Calleja Cartón, J.M. Santa Cruz Talledo, F. Alcaine Soria, F. Gámez Ruíz  
El Palo Health Center, Málaga Sanitary District, Málaga, Spain

**Objective:** To Know the most common injuries that we send to minor surgical consultation and the technique used in our clinic.

**Material and methods:**

**Design:** descriptive transversal

**Area of study:** Urban Health Centre with two rural clinics.

**Selection Criteria:** Patients referred for minor surgical consultation from January 2012 to November 2012.

**Subjects:** Patients attending minor surgical consultation at the health center in the months of January to November 2012. Is selected one day a week. A sample of 155 patients of the 37 selected days.

**Measurements:** Age, sex, reason for referral, priority goes to consultation, technique performed, pathologic examination.

**Results:**

we included 155 referrals of 37 selected days. The mean age was 48.91 years (4-87 years). 55.5% were women. The most frequent reasons for referral were: fibromas by 20%, followed of papillomas 16.77% and a simple warts 14.19%. The ingrown toenail corresponds to 4.51% of the referrals. 82% of the patients attended their appointment. To 39.9% underwent tumor excision by electrocautery. The second technique used was 23.9% cryotherapy. In 24.5% were not collected in history technique was used. In 69% said no pathologic analysis, by 19.4% if it was not collected in a precise and 11.6% sample was sent to study; the most common being epidermoid cyst in 44.4% of the analyzed, melanocytic nevi 16.6%, 11.1% seborrheic keratosis, and keratoacanthoma dermatofibroma 5.5% each. 38.1% of patients had a priority 3 (the slightest).

**Conclusion:** The minor surgical consultation is an important activity in our health center. The electrocautery management is essential in our center. Fibroids and papillomas are the most common diseases treated.

Disclosure: No conflict of interest declared

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**Early detection of chronic kidney disease (ckd) with elderly patients with hypertension**

G. Jelisijevic, G. Vujovic, M. Zecevic Petkovic

General practice, Healthcare center „Vozdovac“, Belgrade, Serbia

Kidney disease can occur in all ages of human life. Hypertension and diabetes are the two most frequent causes of the kidney damage, and in our country, number of people who developed end-stage renal insufficiency, is continuously growing. Simultaneously, number of elderly patients who require dialysis treatment is growing. Early disclosure of renal diseases in the GP office must be imperative, because we know how many of our patients got risk factors and possible complications.

**Goal** of this study was to investigate the incidence of CKD depending on age and duration of hypertension, compare these risk factors, and show the number of early detected or newly discovered CKDs.

**Method:** 3 general practitioners at the office conducted a screening test in the period May-July 2012. We examined 127 patients who were younger than 60 years and had hypertension, and older than 60 and without hypertension. According to the protocol the following parameters were used—age, sex, weight, height, family history, duration of disease, arterial pressure, nicotine addiction, complete laboratory tests of blood and urine.

**Results:** All examined were divided into three groups. First group aged around 65, had hypertension, and not suffering from CKD, second group aged about 51 with hypertension, and third aged around 69 with hypertension. The data in medical records has been checked, and all subjects performed the blood and urine tests, and blood pressure examination.

**Conclusion:** The results showed that people with longstanding hypertension and above 60, suffer from chronic health conditions such as CKD for decades.

Disclosure: No conflict of interest declared

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**Melatonin in primary insomnia: what is the evidence?**R. Costa<sup>1</sup>, I. Martins<sup>2</sup><sup>1</sup> USF S. Félix da Marinha, ACES Espinho/Gaia, Vila Nova de Gaia, Oporto, Portugal; <sup>2</sup> USF Lagoa, ULSM, Matosinhos, Oporto, Portugal

**Objective:** To review the existing evidence on the use of melatonin in relieving symptoms of Primary Insomnia and improving quality of life in patients  $\geq 55$  years of age.

**Methods:** Bibliographic search of meta-analyses (MA), systematic reviews (SR), randomized controlled trials (RCT) and clinical guidelines using the MeSH terms *Melatonin and Sleep Initiation and Maintenance Disorders*, published between August 2007 and August 2012 in English, Portuguese and Spanish on the PubMed Database and sites of Evidence Based Medicine (*Cochrane Library, National Guideline Clearinghouse, EBM online, DARE, Bandolier*) and Index of the Portuguese Medical Journals. The American Family Physician's Strength of Recommendation Taxonomy was used to establish the quality of the studies and define the strength of the recommendation.

**Results:** Of the 72 articles found, six were selected: five RCT and one clinical guideline. The RCT reported that melatonin has significantly improved the quality of sleep, morning alertness and quality of life compared with placebo. There was also a significant reduction in sleep latency. In these trials there were no withdrawal effects after discontinuation of treatment. The clinical guideline recommends the use of melatonin instead of a hypnotic in the treatment of insomnia in patients  $> 55$  years of age.

**Conclusions:** There is sufficient evidence to recommend the use of melatonin in the symptomatic relief of Primary Insomnia (SOR A), and improvement of the quality of life (SOR B). However, further studies are needed with rigorous methodologies and long-term monitoring to obtain more consistent results.

Disclosure: No conflict of interest declared

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**Raynaud's phenomenon – approach of the family physician.**A. Moreira<sup>1</sup>, J. Santos<sup>2</sup>, J. Couto<sup>3</sup><sup>1</sup> UCSP Oliveira do Douro, ARS-Norte, Vila Nova de Gaia, Portugal; <sup>2</sup> USF Arco do Prado, ARS-Norte, Vila Nova de Gaia, Portugal; <sup>3</sup> USF Ribeirão, ARS-Norte, Vila Nova de Gaia, Portugal; <sup>3</sup> USF Ribeirão, ARS-Norte, Vila Nova de Gaia, Portugal**Objective:** The aim of this study is to review the approach of Family Physician (FP) towards an adult with Raynaud's Phenomenon (RP).**Methods:** Bibliographic research was carried out in Pubmed, UptoDate, Índice de Revistas Médicas Portuguesas, and in several databases of evidence medicine, between 2002 and 2012, using as MeSH terms *Raynaud disease, Primary Health care, Therapeutics* and *Vasodilator Agent*.**Results:** Were found 1379 publications and 15 were considered. The diagnosis of RP is clinical, being essential to differentiate between primary and secondary RP. The primary RP is the most frequent. It is symmetric, associated with multiple daytime episodes, with predominance in females and younger ages, and usually precipitated by stress or migraine. The secondary RP is asymmetric, occurs in both genders and at older ages, is usually more severe and associated with edema of fingers and sometimes ischemia and skin ulcers. The primary RP is often controlled using general measures. Vasodilators, most evidence for calcium channel blockers, are the first-line drug therapy in relieving symptoms. The secondary RP should be detected as early as possible for timely referral and treatment of the underlying disease.**Discussion:** The approach of a RP is not always easy, and may be associated with other pathologies of slow evolution. Therefore, it is important that the FP has the ability to determine the likelihood and subjective risk disease, initiate first aid and timely refer to Rheumatology.

Disclosure: No conflict of interest declared

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**Nephrotic syndrome, a silent complication of a hidden enemy**M. D. Graure<sup>1</sup>, A. C. Coman<sup>1</sup>, M. A. Garcia Hernández<sup>2</sup>, M. Molina Núñez<sup>2</sup>, S. Martin Soto<sup>1</sup>, E. Esparza Perez<sup>1</sup>, J. Flores Torrecillas<sup>1</sup>, E. Esteban Redondo<sup>3</sup>, F. Guillen Cavas<sup>1</sup>, P. F. Molina Martinez<sup>1</sup><sup>1</sup> Cartagena Casco Antiguo Health Center, Servicio Murciano de Salud, Cartagena, Spain;<sup>2</sup> Nephrology Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain;<sup>3</sup> Occupational Health Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain**Objective:** To describe a case of nephrotic syndrome due to IgA glomerulonephritis.**Methods:** Revision of a case of nephrotic syndrome using as main variables the symptoms and signs of disease, diagnostic procedures, etiology, treatment, complications and evolution.**Results:** A 16-year-old male patient consults his General Practitioner for presenting periorbital and malleolar matutinal edema, dark urine and abdominal pain. A blood and urine analysis is performed showing hypercholesterolemia, proteinuria (>500 mg/dl) and hematuria. He is admitted to the Nephrology Unit where a diuretic and antihypertensive/antiproteinuric treatment is started, the new tests showing hyperlipidemia, hypoalbuminemia, polyclonal hypogammaglobulinemia, proteinuria of 6.025 g/day and albuminuria of 4.2 g/day. A biopsy is performed and a stage IV IgA glomerulonephritis is diagnosed. Corticosteroids are started, but after one week he presents generalized edema, leukocytosis, altered renal function, proteinuria of 9.246 g/day and granular and red blood cells casts in urine. The computerised tomography scan demonstrates the presence of anasarca and an albumin and diuretic treatment is started with good response. Immunosuppressive therapy with cyclophosphamide and mycophenolate mofetil is not well tolerated but the proteinuria decreases, with no episodes of nephrotic syndrome for one year and a half.**Conclusions:** The nephrotic syndrome is due to an alteration of the filtration membrane of the glomeruli and usually, the only features that it may present are edema, proteinuria >3.5 g/day/1.73m<sup>2</sup>, hypoalbuminemia and hyperlipidemia. The final etiologic diagnosis is obtained by renal biopsy. The main treatment consists of diuretics, albumin, antiproteinuric drugs and preventing the complications.

Disclosure: No conflict of interest declared

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**Diplopia as main symptom of idiopathic intracranial hypertension in a young woman**

A.C. Coman<sup>1</sup>, M.D. Graure<sup>1</sup>, P. Gea Fernandez<sup>1</sup>, C. Zambrano Clavier<sup>2</sup>, E. Pagan Dato<sup>1</sup>, F. Guillen Cavas<sup>1</sup>, S. Martin Soto<sup>1</sup>, E. Esparza Perez<sup>1</sup>, A. Canovas Ingles<sup>1</sup>, A. Zapata Perez<sup>3</sup>

<sup>1</sup> Cartagena Casco Antiguo Health Center, Servicio Murciano de Salud, Cartagena, Spain; <sup>2</sup> Los Dolores-Cartagena Health Center, Servicio Murciano de Salud, Cartagena, Spain; <sup>3</sup> Fuente Alamo Health Center, Servicio Murciano de Salud, Fuente Alamo, Spain

**Objective:** To describe a case of diplopia in a young woman due to idiopathic intracranial hypertension

**Methods:** Describe the symptoms, medical test results and evolution.

**Results:** A 24-year-old woman consults for episodes of binocular diplopia during the last week. The neurological examination shows horizontal nystagmus in the right eye when looking to the right side with concomitant horizontal diplopia. She is remitted to the hospital and admitted to the Neurology Unit where ANA and AntiRo/SSA antibodies are detected in the blood analysis. Bilateral papillary edema was demonstrated at the first ophthalmologic examination, with altered visual acuity and fundus examination of the right eye. No alterations are found on the brain CT-scan, thus a brain MRI is performed showing that the amygdala is 4mm bellow the foramen magnum without a clear herniation, colpocephaly of both occipital horns and hypoplasia of left sigmoid and transverse sinus. Two lumbar punctures are performed both showing high pressures (40/26 mm H<sub>2</sub>O). An improvement of visual acuity and swelling in both eyes is seen after the second ophthalmologic examination. Treatment with acetazolamide and prednisone is initiated while hospitalized, but due to the good clinical status the patient is discharged with a diagnosis of idiopathic intracranial hypertension.

**Conclusion:** The idiopathic intracranial hypertension is characterized by increased cranial pressure without the involvement of a brain tumor. In our case the main form of presentation was the diplopia

Disclosure: No conflict of interest declared

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**Analysis of activities to the people in temporary housing from a view of Occupational Balance in Minamisoma city, Fukushima**

H. Shimazaki<sup>1</sup>, K. Harasawa<sup>2,3</sup>, S. Onoda<sup>4</sup>, H. Miyaguchi<sup>5</sup>, T. Oikawa<sup>6</sup>, Y. Kanazawa<sup>7</sup>

<sup>1</sup> Human Behavior of occupational Therapy, Graduate School of Biomedical and Science, Hiroshima University, Hiroshima, Japan; <sup>2</sup> General Practice and Home Care Medicine, Minamisoma Municipal General Hospital, Minamisoma, Japan; <sup>3</sup> Family Medicine, Kameda Medical Center, Kamogawa, Japan; <sup>4</sup> Rehabilitation, Minamisoma Municipal General Hospital, Minamisoma, Japan; <sup>5</sup> Professor, Human Behavior of occupational Therapy, Graduate School of Biomedical and Science, Hiroshima University, Hiroshima, Japan; <sup>6</sup> Assistant Director, Neuro Surgery, Minamisoma Municipal General Hospital, Minamisoma, Japan; <sup>7</sup> Director, Minamisoma Municipal General Hospital, Minamisoma, Japan

**Objective:** People living in the temporary housing in Minamisoma city, Fukushima, lost their activities after the disaster. Their life changed dramatically. The purpose of this study is to survey the current living conditions of the people, and analyze from a view of Occupational Balance. Occupational Balance shows proportion of daily life consisting of the four areas of Work, Self-care, Leisure and Rest. The perception of balance is individualized. Cooking may be Leisure by some, and Work to others. Occupational imbalance causes problem in health and well-being.

**Methods:** The subjects were 38 male and 52 female ranging in age from 28 to 92. They were asked (a) basic information included in employment, economic condition, health status by SF-36, (b) to list activities of typical day and classify the listed activities for four areas.

**Results:** The subjects had less time rate of Work(18.0%) and Leisure(12.6%) than other areas. Work contained activities provided by volunteers. Similarly, Leisure contained activities provided. Of the 90 subjects, 76(84.4%) had no employment but 50(65.8%) of unemployed were in good economic condition. Their value of SF-36 was under the standard of Japanese at almost all subparts.

**Conclusions:** The subjects have Occupational imbalance, and offset it with provided activities. Giving activities is effective to the people robbed activities. However many of subjects are unemployment, over half of them are in good economic condition. To pay compensation looks useful, but it is not enough. This study indicates it is important to support for the victims by activities, not only economic.

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**An integrative biopsychosocial framework for the management of childhood obesity**L. Mulyadi<sup>1,2</sup>, L. T. Mulyadi<sup>3</sup>

<sup>1</sup> General Practice, Narre Warren Medical Centre, Melbourne, Australia; <sup>2</sup> Department of General Practice, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, Australia; <sup>3</sup> Melbourne Dental School, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Melbourne, Australia

**Objective:** Obesity in childhood is common worldwide and is associated with significant psychological and medical morbidity. The cause of obesity is multifactorial. Obesity is related to a number of environmental changes including technological, social and economic changes, as well as factors within the individual.

In the treatment of childhood obesity, strategies must be introduced in a fun, child-friendly way that also incorporates the developmental (including, nutritional and growth) needs of the child as well as addressing the multiple potential causative factors. This paper proposes a biopsychosocial framework for the management of childhood obesity. It discusses the different levels of involvement, including the community, school, social, family and individual levels. Furthermore, it discusses a variety of factors within each level, including dietary, physical, dental, mental, social and community health.

**Methods:** A literature review of articles relating to childhood obesity and published between 2000 to 2012, was conducted and analysed to ascertain the key areas found to be essential for the treatment of childhood obesity. A framework for the management of childhood obesity was then developed and its use assessed over the course of 2012-2013.

**Results and Conclusions:** Childhood obesity remains a serious health concern worldwide and due to the multifactorial nature of the condition, doctors and other health professionals must provide individualised holistic care of these patients. This integrative biopsychosocial framework incorporates strategies at the community, school, social, family and individual level and provides clear concise steps in treatment and enables more effective comprehensive care of children with obesity.

Disclosure: No conflict of interest declared

1263

**A rare case of neuro-Behçet's disease in a young woman**M. D. Graure<sup>1</sup>, A. C. Coman<sup>1</sup>, F. J. Rodriguez Martinez<sup>2</sup>, J. Moreno Morales<sup>2</sup>, C. G. Zambrano Clavier<sup>3</sup>, J. Flores Torrecillas<sup>1</sup>, F. Guillen Cavas<sup>1</sup>, P. Gea Fernandez<sup>1</sup>, R. M. Requena Ferrer<sup>1</sup>, A. Canovas Ingles<sup>1</sup>

<sup>1</sup> Cartagena Casco Antiguo Health Center, Servicio Murciano de Salud, Cartagena, Spain; <sup>2</sup> Rheumatology Department, Santa Lucia Hospital, Servicio Murciano de Salud, Cartagena, Spain; <sup>3</sup> Los Dolores Health Center, Servicio Murciano de Salud, Cartagena, Spain

**Objective:** To describe a case of Behçet's disease with severe neurological involvement.

**Methods:** We describe a case of neuro-Behçet's disease using as main variables the symptoms, diagnostic procedures, treatment and evolution.

**Results:** A 25-year-old woman consults her physician for presenting diplopia, headache, ptosis of the left eyelid, facial asymmetry and fever. She is immediately admitted to the Neurology Unit presenting: decreased visual acuity, unilateral third cranial nerve palsy, vertical diplopia, right supranuclear facial palsy, hypotonia of the right extremities, right Babinski sign, bilateral dysmetria and cerebellar ataxia. The blood analysis shows only a slight leukocytosis, the autoimmunity and serological tests, the chest X-ray and brain CT-scan all being normal. A lumbar puncture is performed which shows a polymorphonuclear pleocytosis but with negative cultures. On the MRI scan a T2 and Flair signal hyperintensity in the left midbrain and thalamus is seen. The visual evoked potentials test and electromyography show a motor demyelinating neuropathy. After a thorough anamnesis it seems that the patient had a personal history of bilateral knee arthritis, erythema nodosum and recurrent oral and genital ulcers, thus a Behçet's disease is diagnosed. High doses of corticosteroids are administered with resolution of the acute symptoms. As primary treatment she receives Infliximab, Azathioprine, Colchicine and Prednisone with good results.

**Conclusions:** The Behçet's disease is a vasculitis which affects all kind of blood vessels. Frequently the diagnosis is clinical, thus a thorough anamnesis is necessary. Neurological and ophthalmologic complications are usually severe and high doses of corticosteroids and immunosuppressants are needed.

Disclosure: No conflict of interest declared



1271

**The Behçet's disease: a case report**

J. Araújo

USF Terras de Souza, ACES Tâmega II – VSS, Paredes, Portugal

**Objective:** Describe a case report of Behçet's Disease (**BD**).**Methods:** Analysis of the disease. **BD** is a chronic and multisystemic inflammatory disorder. It has remission periods that alternate with periods of exacerbation. **BD** is a rare disease, with an unknown etiology, present in both genders, which may occur at any age, especially between 20-40 years. The disease is more severe in males, especially at younger ages, which in turn gives to the Family Physician (**FP**) a key role in early diagnosis and guidance.**Results:** Case Description: male, 40 years, Caucasian, married, integrated in a nuclear family, functional, stage IV of the Duvall's Family Life Cycle and level III in the Graffar Social Scale. The patient presented a case of arthralgia, low back pain, oral and genital aphthous ulcers, diarrhea and bilateral axillary and inguinal lymphadenopathies. He mentioned an exuberant reaction to needles and insect bites, with local papule. The analytical study presented no abnormalities. Radiology of the spine, knees, hands, elbows, hips, legs and feet only revealed a sacroiliitis. Endoscopy revealed erosion of the distal esophagus and complete colonoscopy has detected micropolyps. The patient was treated with topical corticosteroids and colchicines and referred to hospital consultation.**Conclusion:** The **FP** must be aware of this kind of pathology, which, although rare, induces a limitation on the individual's functional capacity. **FPs** are in a privileged position for early detection and guidance of those cases as well as subsequent referral and linkage with secondary cares.

Disclosure: No conflict of interest declared

1337

**Medication overuse headache: patient awareness, medical advice and repeat prescribing in primary care – an audit**N. Mahamy<sup>1</sup>, S. Begg<sup>2</sup><sup>1</sup> Medical School, St George's, University of London, London, United Kingdom; <sup>2</sup> Begg Surgery – St. John's Hill, Wandsworth PCT, London, United Kingdom**Introduction:** Headaches are one of the commonest presenting complaints in primary care and are frequently treated with prescription and over-the-counter medications including paracetamol, NSAIDs, combination analgesics and triptans. However, overuse of these medications – defined as use of certain drugs on 15 days per month for three months – is now thought to be responsible for up to 1 in 50 cases. NICE's first clinical guideline on headaches (September 2012) sets out criteria for recognising, advising and managing patients with medication overuse headache.**Objective:** To establish patient awareness of medication overuse headaches and medical advice given within a primary care cohort and to use this data to audit the implementation of the NICE clinical guideline, particularly with respect to management and advice.**Methods:** This project will consist of a questionnaire survey of data collected from a primary care cohort identified from a GP database in South London. Data will be used to audit the implementation of NICE guidelines on headache diagnosis and management, with reference to overuse of prescribed and over-the-counter medications.**Significance:** Headaches are a significant cause of morbidity and are responsible for a substantial proportion of GP consultation, prescribing and secondary care referral. Implementation of NICE guidelines can lessen the burden caused by medication overuse headache by increasing patient awareness, improving self-management and reducing repeat prescriptions. This study aims to establish whether the NICE recommendations have been followed, with implications for the GP practice audited and primary care in general.**Results and conclusions:** To be displayed on poster

Disclosure: No conflict of interest declared

1379

**Attitudes to working as general practitioner in rural areas – survey among Swedish medical students**M. Hedman<sup>1</sup>, M. Hedman<sup>2</sup>, H. Sandstrom<sup>1</sup>, A. Edin-Liljegren<sup>2</sup><sup>1</sup> Department of public health and clinical medicine, division of family medicine, University of Umeå, Umeå, Sweden; <sup>2</sup> Centre for rural medicine, Västerbotten County Council, Storuman, Sweden

**Objective:** There is a shortage of general practitioners (GPs) in rural areas in Sweden. To improve recruitment of GPs to rural areas, this study aimed to see what attitudes exist among medical students in Sweden towards rural medicine (RM) and if they differ between students studying and practicing in a rural compared to an urban context.

**Methods:** A questionnaire was created based on a literature review about factors important for recruitment and retention. Data was collected from 453 medical students from the 1<sup>st</sup>, 6<sup>th</sup> and 11<sup>th</sup> semester, in autumn 2012. The students came from the universities of Umeå and Uppsala, in a rural county and an urban county, respectively. Data was analyzed using SPSS.

**Results:** Participation rate was 82,7%. Positive attitudes towards RM were significantly higher in Umeå, 54%, than in Uppsala, 40% (p=0,004). Those familiar to the concept of RM prior to the study had more positive attitudes towards RM, 65%, than the others, 37% (p=0,000). Respondents with positive attitudes towards RM reported a higher gain of insight into the rural GP profession (p=0,000) and developed a more positive view on RM (p=0,000) during education, compared to their peers.

**Conclusions:** Medical education and practice in a rural county is associated with more knowledge about and more positive attitudes towards rural medicine. As knowledge about RM is associated with more positive attitudes towards RM, this implies that increased elements of education about RM during medical school may help recruiting GPs to rural areas.

Disclosure: No conflict of interest declared

1395

**After a fall...**F. Gomes<sup>1</sup>, L. Rocha<sup>1</sup>, S. Peres<sup>1</sup>, J. Almeida<sup>2</sup><sup>1</sup> USF Anta, ACES Grande Porto VIII, Vila Nova de Gaia, Portugal; <sup>2</sup> USF Camélias, ACES Grande Porto VII, Vila Nova de Gaia, Portugal

**Background** – Myasthenia Gravis is a rare autoimmune disease of the neuromuscular junction. It is a diagnostic challenge because of its fluctuating character and variety of manifestations and nonspecific symptoms. The therapy is effective so early diagnosis is crucial.

**Objective** – Report a case of Myasthenia Gravis in an older adult and emphasize the role of the GP in diagnosis and management of these cases.

**Description** – 77 year old man, married, retired, belonging to a nuclear family in the VIII phase of Duvall Cycle, average class of Graffar. Personal history of hypertension, congestive heart failure, rheumatoid arthritis and divergent strabismus. Family history was not relevant. Until April 2012 he used to perform frequent walks. At that time he started to complain of dizziness, anxiety, sleeping disorders and was in a depressive mood. These conditions led him to several visits to the GP and to treatment with betahistine and mirtazapine. Later, after falling at home he was transported to the ER. In the ER he referred progressive loss of muscle strength. Skull's Computerized Tomography showed no evidence of acute injuries. Electromyography performed on admission revealed an endplate dysfunction suggestive of Myasthenia Gravis. He started therapy with prednisolone and pyridostigmine, with progressive improvement of the clinical situation.

**Conclusions:** Psychiatric disorders in the elderly are a common cause of weakness and inability, but the GP must consider possible organic causes. Being a rare condition, the diagnosis of Myasthenia Gravis requires a high clinical suspicion.

Disclosure: No conflict of interest declared

1445

**Peripheral facial paralysis: what can we do?**P. Teixeira<sup>1</sup>, V. Henriques<sup>2</sup>, E. Alves<sup>1</sup><sup>1</sup> USF Renascer, ACeS Gondomar, Gondomar, Portugal; <sup>2</sup> Department of Otolaryngology – Head and Neck Surgery, Centro Hospitalar do Alto Ave, Guimarães, Portugal

**Introduction:** Facial nerve dysfunction is a common clinical entity in primary care (PC). Several conditions may cause facial paralysis on the affected side. However, if no specific cause can be identified, the condition is known as Bell's palsy (BP). This is the most frequent form of peripheral facial palsy (PFP), with an estimated incidence of 20–30 cases per 100.000 people, corresponding to 60–80% of all facial palsies. Thus, due to the high frequency of PFP cases, it becomes necessary to implement criteria for evaluation and management, according with the best available evidence.

**Objective:** To present a possible approach to PFP in PC context.

**Method:** It is performed a search, in the Medline database and on Evidence-Based Medicine web sites, for systematic reviews and guidelines, published between 2006 and 2012 in English, Portuguese, French and Spanish, using the MeSH term „Facial Paralysis“ and “Bell Palsy”.

**Results:** Different articles summarize the main aspects to have in attention on the approach to the patient with PFP, from the history and physical examination, till the diagnostic exams, ending with the most appropriated clinical decision. Moreover, it is also highlighted the predictors of poor prognostic, including: old age, hypertension, diabetes mellitus, impairment of taste and complete facial weakness.

**Discussion:** PFP remains a complex and mysterious entity from a pathophysiologic perspective. Therefore, family doctors need always to take into account the most updated guidelines, in order to make the best medical decision.

Disclosure: No conflict of interest declared

1461

**Case report: adenopathy study.**M. González-Solanellas<sup>1</sup>, N. Bernaus-Miquel<sup>1</sup>, R. Moreno-Feliu<sup>2</sup>,P. Rodríguez-Blanco<sup>1</sup>, A. Torres-Sánchez<sup>1</sup><sup>1</sup> CAP Raval Nord, Institut Català de la Salut, Barcelona, Spain; <sup>2</sup> CAP Ciutat Meridiana, Institut Català de la Salut, Barcelona, Spain

A 32-year-old man complained of fever in the last 48 hours with profuse sweating, tiredness and symptoms of a cold. Smoker. Allergy to penicillin. On examination: Pharyngeal hyperemia and a painless cervical adenopathy of 4cm on the right side. Clarithromycin was prescribed.

A week later the symptoms persisted. On examination: The same adenopathy and abdominal pain. It requested a blood test and a chest X-ray. ESR 116, CRP 223, HGB 11,6 g/dl, WBC 6.4 10<sup>9</sup>/l, Platelet 529 10<sup>9</sup>/L, AST 68U, ALT 76, GGT 108, ALP 291. Negative serologies for Epstein Barr, CMV, Brucella, Salmonella Typhi, Syphilis, Hepatitis A, B and C, and HIV. Chest X-ray: Infiltrate in the right lower lobe, paratracheal and parahilar lymphadenopathy on the right side. The patient was referred to hospital.

He had fever, a worsening of liver function tests, thrombocytopenia and a coagulation disorder. Chest computed tomography (CT): Infiltrates in the right lower lobe, mediastinal lymphadenopathy and pleural effusion of lung bases. Abdominal CT: Hepatic and splenic nodules, hepatomegaly, ascites and paraaortic lymphadenopathy. Biopsy of the cervical adenopathy: Hodgkin lymphoma. A modified chemotherapy was started by the concomitant treatment of pneumonia. The patient presented a progressive deterioration with multiple organ failure and he died.

Additional tests to study adenopathy are: Blood count, ESR, CRP, liver biochemistry, renal, electrolytes, chest radiograph and Mantoux. To evaluate the clinical request as serologies, rheumatoid factor, proteinogram and autoantibodies. Consider biopsy if adenopathy doesn't decrease in 4-8 weeks, supraclavicular lymphadenopathy, abnormal chest radiology, size >4cm, toxic syndrome and hepatosplenomegaly.

Disclosure: No conflict of interest declared

1469

**Benign paroxysmal positional vertigo: an evidence-based algorithm approach**M.F.M.J.Costa<sup>1</sup>, R.F.Maia<sup>2</sup><sup>1</sup> *USF Serpa Pinto, ARS Norte, ACeS Porto Ocidental, Porto, Portugal;* <sup>2</sup> *UCSP Carvalho, ARS Norte, ACeS Porto Ocidental, Porto, Portugal*

**Objective:** Benign paroxysmal positional vertigo (BPPV) is a clinical syndrome characterized by brief recurrent episodes of vertigo with considerable morbidity.

The objective of this work is to present an evidence-based algorithm of the family physician approach to posterior BPPV.

**Methods:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms „benign paroxysmal positional vertigo“ and „therapy“, published from January 2008 to November 2012, in Portuguese and English.

**Results:** Dizziness can be caused by a myriad of causes, such as iatrogenic problems, central (brainstem, cerebellum) and periferic (middle and inner ear) diseases. The characterization of dizziness (duration, accompanying symptoms) and physical examination are the cornerstone of the correct diagnosis. The impact on daily activities should also be asked. Posterior semicircular canal BPPV is confirmed when vertigo associated with nystagmus is provoked by the Dix-Hallpike maneuver. According to the best available evidence, the preferred therapy is Epley maneuver; however Semont maneuver can also be used. The use of vestibular suppressant medications is not recommended and should only be used in case of emetic incapacitating symptoms. The actual evidence does not recommend the use of postmaneuver activity restrictions. To evaluate symptoms resolution, family physicians should reassess patients within one month. If treatment failures, hospital referral is necessary.

**Conclusions:** BPPV is a very prevalent symptom in the family physician practice and it is necessary to have the knowledge to manage these patients and to achieve symptom resolution.

Disclosure: No conflict of interest declared

1500

**A case report of thymoma in a young adult female**

A.C. Coman, M.D. Graure, P. F. Molina Martinez, A. Canovan Ingles, R.M. Requena Ferrer, E. Pagan Dato, J. Flores Torrecillas, F. Guillen Cavas, E. Esparza Perez, P. Gea Fernandez

*Cartagena Casco Antiguo Health Center, Servicio Murciano de Salud, Cartagena, Spain*

**Objective:** To describe a case of thymoma in a young woman

**Methods:** For the description of this case we used the patient's medical history, clinical examination and diagnostic procedures.

**Results:** A 27-year-old woman consults for atypical chest pain ongoing for 3 weeks, with fatigue and sometimes heart palpitations during the last year. Also refers an increase of the left breast, with no masses, in the last year. Cardiac auscultation reveals an abnormal systolic sound. The rest of the physical examination is normal. The electrocardiogram is normal. A chest X-ray is performed which informs of a mediastinal mass. She is remitted to the hospital for investigation. The blood analysis, including tumor markers, is normal. Echocardiogram informs of moderate pericardial effusion. The mammography reveals benign changes (BI-RADS type 2). Breast ultrasound is normal. Thoracic computer tomography shows a mass of 87 x 93 x 66 mm in the anterior mediastinum which compresses the pulmonary artery, with a possible diagnostic of thymoma versus hygroma. She is remitted to the Thoracic Surgery Department to remove the tumor. After the intervention the patient recovers well, without any more symptoms.

**Conclusions:** The thymoma is a rare tumor, most likely diagnosed in persons between 30-40 years, but cases have been described at all ages. The symptoms are mostly caused by compression of the surrounding organs: superior vena cava syndrome, dysphagia, cough or chest pain. Surgery is the main treatment, sometimes with neoadjuvant treatment, depending on its size.

Disclosure: No conflict of interest declared

1503

**When the patient plays doctor**A. Pedro<sup>1</sup>, P. Bastos<sup>2</sup><sup>1</sup> USF Arco Íris, ACES Amadora, Lisboa, Portugal; <sup>2</sup> UCSP Monte Abraão, ACES Cacém, Lisboa, Portugal

**Introduction:** Communication is essential in medical care. If patient doesn't understand doctor's information, adherence to treatment will be in risk. We describe a case of a patient with iatrogenic hyperthyroidism, who decided to increase the medication dose instead of following doctor's advice by reducing it.

**Case report:** 77 years old women, with hypothyroidism and hypertension, presents to her family physician in September 2012, because alteration digestion patterns. Ambulatory medication: levothyroxine, carvedilol and enalapril. She reported increasing intestinal traffic speed, with diarrhea for some days from 2 months ago, and complained about loss of weigh (BMI 22) and sleeping problems. We suspected iatrogenic hyperthyroidism, and reduced the levothyroxine dose. Three weeks later the patient felt worst (palpitations, anxiety, lack of sleep and diarrhea) and appeal to urgent consultation. Laboratorial tests: negative fecal culture, normal routine analyses and undetectable serum thyroid stimulating hormone (TSH) level. We reviewed all consultation steps and questioned patient about medication. She revealed to have increased dose of levothyroxine, instead of reducing it, because in her mind, if there is a thyroid problem she need more medication and not less! We explained why she have had complains and shown her that the best treatment was the medication dose reduction. One month later the patient was better, without complains.

**Conclusion:** Creating a good inter-personal relationship between doctor and patient, exchanging information and involving patient in treatment related decision can improve adherence to the treatment and reduce iatrogenic problems.

Disclosure: No conflict of interest declared

1541

**When the patient neither speaks nor listens...**

M.T. Silva, J. Gabriel, M. Teixeira

USF Mactamã, ACES X – Cacém / Queluz, Lisbon, Portugal

**Introduction:** Verbal and nonverbal communication is an essential tool which the family doctor uses daily in is practice. This is why this it must be trained during time, with adequacy for each case, each patient, in a way to make the message assertive, effective and comprehensible. Sometimes during consult there are some unexpected situations that appear regarding communication challenges. The clinical case which is presented is an example of this situation in which the communication needed is mostly nonverbal, demanding and extra effort of the doctor

**Clinical case:** A family formed by 3 generations in which all members shares a similar diagnosis – they are deaf. Grandmother with 82 years, daughter with 56 years, son in law with 52 and a granddaughter with 23 years – all deaf. With an autonomous life and perfectly integrated in society, this family is a frequent user of the primary care system, mainly because of chronic diseases control and national programs of prevention. With consult is a challenge for the family doctor when trying to comprehend the problems that the patient as well as express himself effectively. It is an unique opportunity to train and perfect communication skills.

**Discussion:** Contributing to one of the essential pillars of the medical doctor relationship, communication must be improved, optimized and adequate to each patient. It is crucial that the doctor identifies is difficulties and is able to create and adapt strategies, using cases like the one mentioned.

Disclosure: No conflict of interest declared

1621

### DICE-APER (Diagnosis, Information, Coordination, Epidemiology): An online protocol for improving care for people with rare diseases and their families in primary care settings

M. Verde<sup>1,2</sup>, B. Tarazona<sup>3,2</sup>, A. Conejero<sup>2</sup>, R. Gómez<sup>3</sup>, S. Grandes<sup>1,4</sup>, M. Blanco<sup>1</sup>, G. Esteban<sup>1</sup>, I. Ejarque<sup>1</sup>, M. Garcia<sup>1</sup>, M. Posada<sup>5</sup>

<sup>1</sup> Group of rare diseases and clinical genetics, SEMFYC, Madrid, Spain; <sup>2</sup> Barrio del Pilar Health Center, Saludmadrid, Madrid, Spain; <sup>3</sup> International SEMFYC, Vasco da Gama, Madrid, Spain; <sup>4</sup> Puerta Bonita Health Center, Saludmadrid, Madrid, Spain; <sup>5</sup> Carlos III Research Institute of Rare Diseases, Saludmadrid, Madrid, Spain

**Objectives:** The Spanish Society of Family and Community Medicine (SemFYC) and the Carlos III Rare Diseases (RD) Research Institute have developed a protocol for improving care and information for people with RD and their families at GP practices.

**Methods:** It is an easy online application, simple, homogeneous, free and exportable to other levels of care and to other countries. This initiative provides primary care professionals a very useful tool for the improvement not only of the coordination of medical care provided at the different levels of the Health system and the support, but also for providing the knowledge to be alert to the symptoms and signs, including family histories. Computerized decision support systems may further facilitate the management of RD and the referral to other specialist when is necessary, helping to coordinate the care of this patients and their families between different specialist and facilitate the collection of epidemiological data to research, monitor and evaluate this registers to assess improve the planning and decision-making.

**Results:** Although individually these diseases are uncommon, together they form a substantial Group affecting between 5-7% of the population, which in the case of Spain translates into 3 million affected persons and a Family physician may treat 15 patients with RD per year.

**Conclusions:** The DICE-APER protocol is a useful tool and is exportable to other countries for approach to these diseases in the context of primary care

Disclosure: No conflict of interest declared

1687

### Omega 3 in attention deficit hyperactivity disorder

A. Maia, V. Monteiro

USF do Mar, ACES Povoá de Varzim/Vila do Conde, Póvoa de Varzim, Portugal

**Background:** Attention deficit hyperactivity disorder (ADHD) is a major problem in children and adolescents, characterized by age-inappropriate levels of inattention and impulsivity. Several pharmacotherapies have demonstrated efficacy for the treatment of ADHD, specially psychostimulant medications, which can be associated with side effects. So, alternative and complementary treatments such as natural supplements are often used by families to treat ADHD.

**Purpose:** Evaluate the efficacy of Omega 3 fatty acids on the treatment of ADHD, comparing to other forms of treatment.

**Methods:** It was performed an evidence based review, by searching systematic reviews, meta-analysis, randomized controlled trials and guidelines on Pubmed, Tripdatabase, Guidelines Finder, National Guideline Clearinghouse, Canadian Medical Association Infobase, The Cochrane Library, Bandolier, in English, Portuguese, and Spanish languages, with Mesh terms “ Omega 3 fatty acids ” AND “ attention deficit hyperactivity disorder”, since January 2002 to October 2012. To evaluate the quality of the studies/articles and the recommendation strength, it has been used the Strength of Recommendation Taxonomy of the American Family Physician (SOR).

**Results:** There were found 51 articles. Only 7 articles meet the inclusion criteria: a meta-analysis, 2 systematic review, a randomized controlled trial, 2 double blind controlled study and a clinical guideline.

**Conclusions:** There is no evidence that omega 3 fatty acids are effective in the treatment of attention deficit hyperactivity disorder (SOR B). More studies are needed, controlled, randomized, high quality to evaluate treatment with omega 3 in ADHD.

Disclosure: No conflict of interest declared



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