

Abstract Book

# 17th WONCA EUROPE 2011 CONFERENCE

8-11 September 2011  
Warsaw, Poland



Family medicine  
– practice,  
science  
and art



**Wonca**

World family doctors. Caring for people.

EUROPE



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Thursday, September 8<sup>th</sup> 18.00-20.00

**The state of the art of primary care in Europe**

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*Netherlands*

Primary care (PC) has been given a vital role in contributing to the United Nation's Millennium Development Goals. Whether this expectation is realistic remains to be answered. Progress in the impact of PC on health system outcomes cannot easily be realised without reflecting on its performance as a sub-system within the health care system. Recent EU-wide comparative research results show a diverse picture of the state of the art of health care systems' ability to structure their PC system and organise PC services delivery processes. Europe consists of countries with a relatively strong, medium, and weak PC system. Considering the structure of health care systems, countries tend to have a consistent PC focus in how they organise their system's governance, economic conditions, and workforce development. However, considering the process of services delivery, there does not seem to be a clear relationship among access, continuity, coordination, or comprehensiveness of care. This suggests that each of the process dimensions can independently be targeted for policy improvement actions. It is however questionable whether each of the process dimensions are equally important in contributing to health system outcomes. If countries aim to improve their PC system, there are a number of common issues that would need to be addressed across Europe, including e.g. interregional inequities in access, and the threatening workforce shortages. A basic precondition for PC system performance improvement is the availability of a complete and high quality PC information infrastructure. There is a high variation in the potential capacity of European countries to evaluate and monitor the state of their PC system, identify improvement areas, and be accountable and transparent on system performance. If countries continue to give PC a vital role in achieving health system outcomes, there is an urgent need to invest more in improving the PC information infrastructures, both at national and international level.

**European collaboration in primary care research**

Verheij T.

*Netherlands*

In the last ten years international collaboration among primary care researchers has grown rapidly. The European General Practice Research Network (EGPRN) has played an important and initiating role in this process. In addition several so-called WONCA Europe Special Interest Groups (WESIGs) have established themselves as active networks where research is a main theme. Initially the EGPRN and WESIGs focused mainly on informing each other on results of national studies and organising symposia and other presentations on their theme on International congresses. Gradually however funds for international projects were obtained and at this moment several European studies in primary care are conducted successfully. Using the preparation and execution (tract infections), some pivotal issues concerning international collaboration in primary care research will be of the so-called GRACE project (a large EU funded study on diagnosis and treatment of lower respiratory addressed during this presentation. In addition some problems, for instance regarding acquiring EU funds and Good Clinical Practice Rules for clinical trials across Europe will be discussed.

Friday, September 9<sup>th</sup> 2011, 12.00-13.30

**The science of Family medicine**

Mathers N.

*United Kingdom*

The principles of the science of general practice are those of all good science – open minded enquiry, the critical evaluation of data derived from experiment or observation, problem solving and the publication of results. The use of combined qualitative and quantitative methods of scientific investigation enables us to get closer to the realities of clinical practice. A number of exemplary individual general practitioners have made exceptional contributions to clinical practice and our discipline – in particular Edgar Hope Simpson and Lawrence Craven whose work has not been widely recognized. Scientific research in general practice needs to be both credible and robust, aligned with our values and be relevant to our clinical practice.

Saturday, September 10<sup>th</sup> 12.00-13.30

**Economic Crisis, Aging Populations and the Practice of Family Medicine**

Chawla M

USA

The rapidly aging population of Europe is bringing significantly higher health needs, simply because the elderly have a higher average demand for medical care in their later years, especially for chronic care. Conventional acute-care delivery models do not do well when it comes to caring for older persons, who need a holistic approach to care that involves significantly higher levels of coordination of ongoing attention, continued geriatric assessment, and regular clinical and psychosocial follow-up. The practice of family medicine has already started filling this niche healthcare space, and the role and responsibilities of the family doctor will continue to evolve in keeping with the pace and direction of changing age-structures. Keeping older people healthier than their comparator age-groups of a few decades ago is rapidly going to become the foremost challenge for family doctors, and it is their success in pushing the threshold of frailty and disability into later years of life that will eventually determine the financial balance of the health sector. Adding to the inherent pressures that an aging body naturally brings, the recent economic crisis has exposed countries and populations to new kinds of challenges. At the household level, the crisis has resulted in reduced disposable incomes, and thus reduced availability of resources for goods and services that maintain health. At the government level, the crisis has reduced public sector funds, which has strained health systems even more and adversely affected groups, such as the elderly, that are particularly dependent on those systems. This paper argues that as the elderly continue to grow in number and constitute an even larger population group, one that is especially vulnerable to economic shocks, the practice of family medicine will have to undergo a huge transformation and emerge as the central pillar supporting the entire edifice of a country's health system.

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**Prevention of cardiovascular disease – from dreams to reality**

Gielsvik B

Norway

Prevention of CVD has been under debate for the last 30–40 years, and many of the controversies have been between an organ-specialist based perspective, and a general practice/public health view. This was raised to an organizational level when Wonca Europe decided to withdraw its support to the 2003 European Joint Task Force Guideline for Prevention of CVD. The presentation discusses the main sources of disagreement, and the roots and implications of these disagreements – ethical, in a public health and an economic-political perspective, and the ways this was dealt with in the 2007 European Guidelines, where Wonca Europe took part and initiated important changes. The most important points to discuss have been the levels of risk when treatment should be offered, which treatment is best documented and should be recommended, and what should be the treatment goals. New guidelines have later emerged, and the latest Norwegian Guideline for prevention of CVD (2009) introduced a new principle of age-dependent risk levels. Pharmacological treatment should be offered to all persons aged 40–49 years with 10-year mortality risk > 1%, all

persons aged 50–59 years at > 5% risk, and all persons aged 60–69 years at > 10% risk. Lower thresholds for younger persons are based on the fact that life years lost will be considerable if drugs are prescribed only for risk levels above 5%. For persons aged 60–69 years, age is the dominant risk factor and the benefits of treatment are smaller. The evidence base for the Norwegian Guidelines and the implications of the recommendation is discussed, both at an individual and a societal level. The new Norwegian guidelines shift the emphasis of treatment from older to younger persons. Compared to the European 2007 guidelines, the total sum of life years gained is about the same, but the number of patients treated is considerably lower. The practical use of the total risk tools and the treatment recommendations will be demonstrated.

Friday, September 9<sup>th</sup> 8.30-10.00

## IPCRG I – symposium

955

### Wheezing and asthma in children

*Tsiligianni I, Reid J, Høegh Henrichsen S*

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This will be a symposium with adequate time for audience interaction and discussion. The symposium will address issues as: wheezing- not all children who wheeze have asthma . We will try to discuss on what to look for as well as how do we diagnose asthma, in childhood. Further we will cover issues as treatment of asthma in childhood, asthmatic exacerbations, and asthmatic children difficult to treat.

## EGPRN 1 – symposium

966

### The European General Practice Research Network (EGPRN): capacity building through courses, workshops and meetings-what's in it for you?

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**Aims:** This will provide an overview of the European General Practice Research Network EGPRN activity, focusing on EGPRN research activity : courses, workshops and meetings. Demonstrating how the organisation can actively support research in family medicine locally.

**Material and methods:** EGPRN's main aims are to promote and stimulate research in general practice and primary care, to initiate and coordinate multinational research projects, and to exchange research experiences and by doing so to develop a valid international base for general practice. These aims are pursued by - organisation of international workshops, - learning from other research experiences in Europe through international networking, - stimulating research in and for general practice in Europe through the development of common definitions and relevant research, - conducting international research courses, - supporting the development of research projects.

**Results:** We will demonstrate how local needs assessment has led to the development of research courses in a variety of European countries and circumstances. In particular we will discuss how this has supported GPs to develop locally relevant research and supported capacity building.

**Conclusions:** We will conclude with an open discussion of facilitators and barriers to GP research and reflection on how EGPRN can help.

## EUROPREV 1

962

### Do patients in European countries differ?

*Bulc M, Brotons C, Durrer D*

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**Aims:** Discuss the results of EUROPREVIEW study, stimulating participants to analyze their attitude and performance of preventive activities in their everyday practice work.

**Material and methods:** The workshop will be based on results of the Europeprev study. An overview of GP/FM patient's view on healthy habits and preventive activities will be used to start a discussion on national, gender and age differences in participants practices. - Mateja Bulc : CV risk 15 min - Dominique Durrer- Obesity 15 min - Carlos Martins-Vaccination and cancer 15 min

**Discussion:** What differences among countries, gender and age may mean for your practical work? (30 min)

**Results:** Patients' views identified in the EUROPREVIEW will be used to stimulate discussion on similarities and differences in risk management, practice counseling and collaboration with other health professionals.

**Conclusions:** Group work will provide a forum for the exchange of the ideas which activities and approaches are essential for success in preventive activities and counselling in GP/FM.

## VdGM + EURIPA 1

959

### Joint workshop of Euripa and Vasco da Gama Movement: Produce a specific programme of training in rural medicine for trainees and young Family Physicians in memory of Claudio Carosino

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**Aims:** "To continue collecting ideas and initiatives to create and develop the foundations for a specific Programme in Rural Medicine for Trainees and Young Family Physicians in Europe.

**Material and methods:** The interest in Rural Medicine has increased in recent years in the group of Trainees and Young Family Physicians. At the same time, different initiatives have been undertaken throughout Europe to publicize and disseminate the specific characteristics of rural practice with in Family Medicine. From this evidence has emerged the initiative to produce a specific Programme of Training in Rural Medicine as a tool to help Trainees and Young European Family Physicians to complete their competences for working in rural areas. The participants in this workshop will be divided into different groups that will discuss and share the

different proposals put forward on key issues in Rural Medicine to include in this training programme. (The conclusions from a workshop, in the same field, held in Malaga during the 16th WONCA Europe Conference will be presented)

**Results:** Both literature and professional experiences indicate that Rural Medicine has characteristics that makes it distinct within the practice of Family Medicine. The collection of the essential proposals in Rural Training arising from this workshop will be considered for their inclusion in an initial draft of the Programme for Training in Rural Medicine.

**Conclusions:** Rural Medicine will gradually find the place it deserves within the practice of Family Medicine. We believe that creating a basic programme of training in this field may encourage young family physicians to have the confidence and interest to work and stay in small rural communities.

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## EFPC – symposium

946

**European forum for primary care emerging messages on costs related to primary care, on primary care for ethnic minorities and on patients involvement in primary care**

*Schäfer W, de Graaf P, Rotar Pavlic D*

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**1.QUALICOPC, a multi-country study evaluating primary care against criteria of quality, costs and equity - Schäfer W**

The QUALICOPC (Quality and costs of primary care in Europe) project aims to evaluate primary care systems in Europe against criteria of quality, equity and costs. The project is funded under the 7th Framework Programme of the European Commission. In this presentation the complexity of the study design of the project will be explained.

**Aim** is to inform medical professionals and primary care researchers on the importance of this action for primary care system strengthening by discussing the methodology and expected outcomes.

**Material and methods:** QUALICOPC is coordinated by an international network of European partner institutes and runs for a period of three years as of May 2010. The project makes use of existing data sources on primary care at the national level, e.g. the Primary Health Care Activity Monitor Europe (PHAMEU) database. Furthermore, new data will be collected by means of surveys among GPs and their patients in 31 European countries. The survey covers a variety of themes such as the GP task profiles, collaboration and coordination within primary care and between primary and secondary care and accessibility of primary care. The outcomes of the patients' survey will be linked to the GP practice. The data will be analysed using multilevel analyses, taking into account three levels of primary care: the national level, the level of the GP practice and the level of the patient. The analyses will focus on several themes, including avoidable hospitalization, process quality of primary care, patients' perceived outcomes, costs, access and equity and good practices of primary care.

**Results:** This study will enable to answer questions like, which elements of structure and organisation of primary care are associated with access to high quality services against affordable costs. It will provide an answer to the question what strong primary care systems entail and which affects strong primary care systems have on the performance of

overall health care systems. To make insights tangible, good practices will be identified and disseminated. The study results will be disseminated to the research community, policy makers and other stakeholders in the European health sector. The outcomes will help policy makers in different countries shape their health systems and make decisions regarding the organization of primary care.

**Conclusions:** The QUALICOPC project will contribute to the knowledge on primary care systems performance and will provide with evidence regarding the effective components of primary care related to general health system goals.

**2. Patients and Primary Care the progress made at the latest European Patients' Rights Day - de Graaf P**

**Aims:** Putting Citizens at the center of Health Policy begins with guaranteeing patients' rights are respected. The reinforcement of Patients' rights will become effective only with the cooperation and commitment of all healthcare stakeholders in every EU country. It is thus essential to increase awareness regarding the importance of patients' rights and everyone's responsibilities in guaranteeing their respect.

**Material and methods:** Active Citizenship Network (ACN) together with a group of European citizens organisations in 2002 drafted the European Charter of Patients' Rights, which states 14 patients' rights that together aim to guarantee 'Chigh level of human health protection' and to assure the high quality of services provided by the various national health services in Europe. The Charter sets forth 3 rights of active citizenship(1). They allow individuals and groups of organized citizens to promote and verify the implementation of patients' rights and as such, they are the necessary corollary of the Charter. On the 11-12th of April 2011 ACN organized the European Conference of the 5th European Patients' Rights Day to bring together different health stakeholders to discuss the real conditions of citizens in the health care services in Europe. The European conference served as a spring board to generate dissemination events of the conference results and of the best practices identified. In each event there will be also the presentation of the Report on Assessing Patients' Rights in Europe. The aim is to widespread, at different levels, the instruments for the empowerment of the civic organizations in the Health field. As a matter of fact, this workshop shall give the chance to promote a discussion among healthcare stakeholders as the European GP's and to produce concrete actions of civic participation to be implemented.

**Results:** Knowledge about the broad network that will continue to support the European Patients' Rights Day and to disseminate information regarding patients' rights within professional associations as WONCA - Europe.

**Conclusions:** The reinforcement of the European Charter of Patients' Rights becomes effective only with the cooperation and commitment of all healthcare stakeholders, including the European GP community.

**3. How Roma react to signs of illness and their use of primary care facilities - Rotar Pavlic D.**

**Aims:** Putting Citizens at the center of Health Policy begins with guaranteeing patients' rights are respected. The reinforcement of Patients' rights will become effective only with the cooperation and commitment of all healthcare stakeholders in every EU country. It is thus essential to increase awareness regarding the importance of patients' rights and everyone's responsibilities in guaranteeing their respect.

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**Results:** Knowledge about the broad network that will continue to support the European Patients' Rights Day and to disseminate information regarding patients' rights within professional associations as WONCA - Europe.

**Conclusions:** The reinforcement of the European Charter of Patients' Rights becomes effective only with the cooperation and commitment of all healthcare stakeholders, including the European GP community.

## Financing and organization 1

126

### Efficiencies and inefficiencies in Family Practice: learning from each other

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**Background:** Professional satisfaction is key to effective clinical practice. This interactive workshop addresses common inefficiencies in family practice and possible and proven strategies to improve efficiency/effectiveness. Inefficiencies are frustrating for practitioners, patients and support staff. They do not merely waste time and effort; they can also contribute to errors, reduced productivity and hurt the bottom line (Young 2010). This workshop borrows from the extensive experience of fee-for-service, salaried and alternate payment physicians and a business manager and informatics coordinator with over 60 years collective experience in a dynamically changing environment. They are active participants in a Primary Care Network and Access Improvement Measures in western Canada.

**Methods:** Short presentations, reflective practice exercises, small group discussion/reporting, resource and reference material Objectives: 1) Identify common efficiency/inefficiency challenges facing family physicians; 2) Identify both theoretical and successfully applied solutions; 3) Develop a 'work-flow' approach to common problems; 4) Identify system and systemic barriers to more efficient and quality focused family practice; 5) Provide participants with a summary document of issues and solutions and reference material Key Themes: Physician Supply and Demand Issues; 'Physician Only' Work; Remuneration Systems; Paper and Electronic Medical Records; Screening Reminders; Time Savers; Prescription writing/reconciliation; Self-Tests of Office Efficiency, Physician Behaviours.

**Conclusions:** Practices and practitioners may fail to address inefficiencies despite the adverse consequences on professional life, patients' lives and the quality of patient care. The identification of common problems and proven solutions will foster quality improvement in primary care.

## ESPCG – symposium

939

### State of the art in gastro – intestinal disease in primary care in Europe

*Rasmussen M, Agréus L, Nixon Andreasson A, Engstrand L, Lundin E, van Hout A, Peeters P, Rutten F, de Wit N, Helsper C, van Essen T, Frijling B*

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#### 1. Colorectal cancer screening programme in Finland - Rasmussen M

**Aims:** Main aim to reduce colorectal cancer mortality.

**Material and methods:** A population-based screening programme, which is centrally planned, organized and run. Target population 60-69 yrs old individuals gradually implemented over time (randomisation into screening and control arms at individual level). Gradual expansion over regions in Finland starting in 2004. Gradual start among target age-cohort during six first years. Fecal occult blood test (FOBT) kits included in the invitational letter. Test results mailed to screenees. Colonoscopy provided for test-positive individuals by information of local contact nurse. Regionally organised colonoscopies. Repeated screening every second year, no exclusions.

**Results:** Results are reported over years 2004-2007. The screening and control arm included 74592 and 74377 patients respectively. Attendance to the programme sending in FOBT yearly has been 77,4-80,3% for women and 61,9-68,3% for men. Positive FOBT rates have been 2,9% on the first round and 3,8% on the second round totally, men 3,9% and 4,9% and women 2,1% and 2,9% respectively. A total of 1811 colonoscopies were performed, 232 colonoscopies were missed for various reasons (no contact 10, declined 64, in follow-up 13, done recently 61, other 84). In those individuals who came for colonoscopy colorectal cancer was found in 106 (5,8%) and colorectal adenomas in 689 (38%)

**Conclusions:** The programme has appeared to be feasible to run, accepted by the population, randomisation being no problem. Effectiveness (mortality) not yet available-randomised implementation gives unbiased estimates after some 5-10 years. Essential to proceed with the randomised scheme. Possibility to change test after some years. Not yet compulsory for the municipalities to organise. Cheap cost (inbetween cervical and breast cancer screening).

#### 2. The association between overall abdominal pain but not sole epigastric pain and poor self-rated health is explained by depressive symptoms – Agréus L, Nixon Andreasson A

**Aims:** Functional gastrointestinal disorders (FGID) irritable bowel syndrome (IBS) and dyspepsia involve chronic pain without determined organic cause, although psychoneuroimmunological mechanisms have been suggested. We investigated if IBS and dyspepsia were associated to poor self-rated health (SRH) dependent on overall abdominal or sole epigastric pain and if an association



between pain and poor SRH was explained by depression or inflammation.

**Material and methods:** This analysis is based on 1244 participants attending the medical examination in a population based colonoscopy study, including 164 IBS and 74 dyspepsia cases defined by the Rome II questionnaire. Logistic regression was used to calculate the association between FGIDs, abdominal (n=220) and epigastric pain (n=312; Romell questionnaire), depressive symptoms (HADS), C-reactive protein (CRP) and SRH (SF-36; dichotomized good v.s. neither, poor), adjusted for age and gender.

**Results:** Both dyspepsia and IBS were associated with poor SRH. These associations were dependent on epigastric and abdominal pain, respectively. The association between abdominal pain, but not epigastric pain, and poor SRH was in turn explained by depressive symptoms. Higher CRP-levels within normal range were associated with poor SRH, without affecting the associations between FGID and SRH.

**Conclusions:** Depressive symptoms seem an important link between pain and poor SRH in IBS, but not in dyspepsia. The association between higher CRP-levels and poor SRH lends further support to the notion that inflammatory factors are involved in subjective health perception.

### 3. No support for the hypothesis that links IBS onset to disturbances in the microbiota - *Agreus L, Engstrand L, Lundin E*

**Aims:** Irritable Bowel Syndrome (IBS) affects between 10 and 20% of the world's population. It is a rather diffuse condition showing a disturbed muscle and nerve function and it is defined by certain symptom criteria. In order to investigate the prevalence of IBS in Sweden, an extensive population-based randomized study (Popcol) was in 2005 conducted in Stockholm, Sweden. The Popcol material was also the foundation for a smaller study using the next generation sequencing technique 454 pyrosequencing platform (Roche) for sequencing of the 16S rRNA gene in search for differences between a healthy and an IBS associated microbiota.

**Material and methods:** The study material from Popcol is comprised of health questionnaires, physical status, blood, colon biopsies and fecal samples. Over 500 variables of patient information have been collected for each of the around 3000 participants. Out of the participants, 746 went through an ileocolonoscopy and of these, 120 individuals were selected for the study of the mucosa-associated microbiota composition. Biopsies from 40 diagnosed IBS cases were matched to two healthy controls each.

**Results:** As previously shown, Bacteroidetes and Firmicutes are the most dominant phyla in the control group but as our results show, also in the IBS group. Despite of the large number of 454 sequences, on an average 2500 with a length of < 200 bp per sample, and extensive bioinformatic and statistical analyses, no differences in microbiota composition could be found between the IBS and the control group. Since the microbiota show large inter-individual diversity it is likely that diseases are associated with the functions of the intestinal bacteria rather than the bare presence of them.

**Conclusions:** IBS and healthy controls showed no differences in the microbiota of the colon and the hypothesis that dysbiosis is linked to IBS is not supported in the present study.

### 4. Determinants of patient's and doctor's delay in diagnosis and treatment of colorectal cancer - *van Hout A, Peeters P, Rutten F, de Wit N*

**Aims:** Colorectal cancer (CRC) is the third most common malignancy in the Western World with an annual incidence of 6 per 10,000 persons. Treatment of CRC has improved over the years; the five-year survival rate at present is estimated at

50-60%. Early recognition, quick diagnosis and prompt start of treatment are presumed to be the key to a better prognosis. Although delay in consultation and diagnosis is generally thought to contribute to disease progression this could not be confirmed in previous studies. In this study we aimed to assess determinants of patient's and doctor's delay in consultation, diagnosis and treatment of CRC.

**Material and methods:** We performed a retrospective analysis of the routine care data of the Primary care Network Utrecht (PCNU), an academic network of 23 general practices with 60.000 patients in the Netherlands. All patients registered with an ICPC code D75, Colorectal cancer (CRC) between 1997 and 2007, with a histological confirmed adenocarcinoma of the colon or rectum, and with initial consultation for GI symptoms in primary care were eligible. Time between initial symptoms and onset of treatment was categorized into 4 periods: time to first GP consultation, time to first specialist consultation, time to histological diagnosis, and time to start of treatment. With multivariable logistic regression analysis, determinants of delay were investigated.

**Results:** We identified 197 patients with colorectal cancer. The mean age at time of diagnosis was 69 (SD 12) years. The number of symptoms per patient ranged from 0 to 5 (mean 1.9; SD 1.1), 68% of all patients presented with one or more alarm symptoms. The median time from onset of symptoms until start of treatment was 138 days. Median time for the 4 periods to: first GP consultation, first specialist consultation, histological diagnosis, and start treatment were 30, 14, 27 and 18 days, respectively. Rectal blood loss and weight loss were significantly related to patient delay, while psychiatric co-morbidity was related to delay in referral by the GP. For delay in histological diagnosis and start of treatment no determinants were identified. Delay was not associated with more advanced disease stages.

**Conclusions:** There is considerable delay in the management of CRC, especially in time to consultation and time to onset of clinical treatment. Education of the general public about the importance of alarm symptoms and increasing efficiency of the diagnostic process in hospital setting are key to improving CRC disease management.

### 5. Routine follow up for hepatitis C in patients with mild ALT elevation is an effective strategy for case finding in primary care - *Helsper Ch, van Essen T, Frijling B, de Wit N*

**Aims:** Hepatitis B virus (HBV) and hepatitis C virus (HCV) infection can lead to serious complications such as liver cirrhosis and liver cancer if left untreated. Unfortunately these infections often remain undetected in primary care. The Alanine aminotransferase (ALT) test is the most commonly used parameter for evaluation of liver disease in primary care. Even though there is accumulating evidence that mild ALT elevation (30-100 IU/L) could be associated with an increased prevalence of HBV, HCV and other liver pathology, these findings frequently remain without diagnostic follow up. The aim of our study is to determine if mild ALT elevation can be used as tool to effectively identify hidden HBV and HCV infection in the primary care population. If so, we aim to determine a cutoff point above which routine follow up is indicated.

**Material and methods:** Primary care patients referred for a liver enzyme test were selected by the Saltrio Diagnostic Centre. First, a random sample of 750 samples was taken to attain 250 samples in each of three categories of ALT elevation (30-50 IU/L, 50-70 IU/L, 70-100 IU/L). In follow-up these samples were anonymously tested for HBV and HCV. Second, the National prevalence of the different levels of identified ALT elevation was estimated by analyzing all the ALT tests of primary care patients referred to the Saltrio Diagnostic Centre from July 2009 to June 2010.

**Results:** The overall prevalence of confirmed HBV and HCV infection among patients with a mildly elevated ALT test result

was 0.1% and 0.9% respectively. In the group with an ALT level of 30 to 50 IU/L no HBV or HCV was found. In the 50 to 70 IU/L ALT group no HBV was found, but 4 patients (1.6%) were HCV-RNA positive. In the 70 to 100 IU/L group 1 patient (0.4%) was found HbsAg positive and 3 patients (1.2%) were HCV-RNA positive. The estimated annual number of ALT tests performed in primary care patients in the Netherlands was 1.1 million. Of these tests 69% had a normal ALT level (0 to 30 IU/L), 21% had an ALT level of 30 to 50 IU/L, 6% had an ALT level of 50 to 70 IU/L, 3% had an ALT level of 70 to 100 IU/L and 2% had an ALT level of 100 IU/L or higher. Consequently approximately 1,350 HCV patients could be identified in one year.

**Conclusions:** Among primary care patients with mildly elevated ALT levels of 50 to 100 IU/L the risk of HCV is tenfold the population prevalence, whereas the HBV prevalence is not increased. These results indicate that ALT can be used to identify hidden HCV and legitimate routine follow-up for HCV in patients with mildly elevated ALT levels of 50 to 100 IU/L in daily primary care practice.

## PCDE 1 – symposium

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### Community based aspects of diabetes care

*Martinez L, Rossignol L, Magnier A, Rutten G, Wens J, Verstraete S, Muylle F, Decochez K, Devlieger R, Verhaegen A, Mathieu C, Cos X, Tuomilehto Jo, Barengo N, Costa B, Mundet X*

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#### 1. The cost-effectiveness of early detection of type 2 diabetes - *Martinez L, Rossignol L, Magnier A*

**Aims:** Early detection of type 2 diabetes mellitus (T2DM) remains controversial in terms of cost-effectiveness (CE). The estimated cost of management of diabetes worldwide (treatment and prevention) was US\$232 billion in 2007, and is expected to rise to US\$302.5 billion in 2025. This study aimed to assess whether early detection of T2DM decreases its economic burden.

**Material and methods:** This presentation intends to provide key messages on the cost-effectiveness of screening for T2DM. So we conducted a review of literature from January 2007 to February 2011 on the CE of screening of T2DM. For inclusion, the study should assess the CE of screening.

**Results:** Twelve out of the 79 identified studies met the inclusion criteria. Screening relying on a non-invasive risk score plus fasting plasma glucose showed a good sensitivity (80,3%), specificity (78,1%) and positive predictive value (22,3%) for detecting diabetes. It required only 24,1% of people to enter lifestyle intervention and had a low screening cost per case of diagnosed diabetes. Opportunistic screening for undiagnosed T2DM in African Americans of 45 - 54 years old and one-time opportunistic screening in hypertensive persons aged  $\geq$  45 years was cost-effective (ICER < \$50 000 US). When considering age at initiation and frequency of screening, the 2 best strategies regarding CE were starting systematic screening between the 30 - 45 years old, with screening repeated every 3-5 years. These 2 strategies added 171 and 149 quality-adjusted-life-years (QALYs) respectively compared with control per 1000 people after 50 years of follow-up. Their expected cost per QALY of

screening compared with control after 50 years of follow-up was respectively 10 512 US\$ and 15 509 US\$.

**Conclusions:** This review offers clear messages the cost-effectiveness of early detection of T2DM. Compared with no screening, early identification of diabetes seems to be cost effective. This could be achieved through opportunistic or mass screening of asymptomatic individuals. Testing should begin as early as 30 years old and screening should be sequential.

#### 2. Screening for Diabetes in primary care: where are we now? – *Rutten G*

There is continued uncertainty concerning feasibility, uptake and the overall costs and benefits of population-based screening for type 2 diabetes mellitus. One of the criteria by which a screening programme can be assessed is attendance. Previous studies suggest that the nature of the diabetes screening programme may influence uptake, with more burdensome and invasive methods being associated with lower attendance rates. The performance of screening programmes including questionnaires is sensitive to variations in response rates. A recent modeling study suggested that screening for diabetes may have acceptable cost-effectiveness when started between the ages of 30 and 45 years, with screening repeated every 3-5 years. It also provided evidence that screening for diabetes should be combined with screening for hypertension and lipids. In this lecture data from different populations, health care systems and screening programmes will be discussed to answer the question how GPs should screen for diabetes.

#### 3. Zoet Zwanger (sweet pregnancy) project: promoting long term follow-up of gestational diabetes in Flanders : Belgium - *Wens J, Verstraete S, Muylle F, Decochez K, Devlieger R, Verhaegen A, Mathieu C.*

**Aims:** Women with a history of gestational diabetes (GDM) are at the highest risk of developing diabetes type 2 early in later life. This clearly offers unique opportunities for diabetes prevention and early diagnosis. However, long term follow-up is often lacking. The 'Zoet Zwanger' project was launched in October 2009 in the region of Flanders, Belgium, to promote metabolic follow-up and lifestyle interventions in women with previous GDM.

**Material and methods:** This presentation will give a literature overview on the relation between gestational diabetes and the following type 2 diabetes mellitus. The Belgian follow-up project will be presented briefly. The first part of this project consists of an awareness campaign directed at women with GDM and their healthcare providers. Secondly, women diagnosed with GDM are prompted to participate in a follow-up system (recall register) with annual reminders asking them to see their general practitioner for a fasting blood glucose measurement.

**Results:** All hospitals in Flanders (n=61) have been informed about the project and after one year 83% were actively promoting it. In 2009 (most recent data) 67.534 mothers delivered in Flanders. With a GDM prevalence of 2,14%, 1.396 mothers were eligible for registration in 2009. From 01/10/2009 (start of the project) to 01/03/2011 (most recent data after 18 months) 1.010 women voluntarily registered after their pregnancy for follow-up. More than half of the GP's who were informed about the registration of their patient, confirmed their willingness to actively support the project. Mean age of participating women was 33 +/- 5 years. 20% of those women had a BMI  $\geq$  30 kg/m<sup>2</sup> before pregnancy. Preliminary results from the follow-up of registered women one year after delivery show a screening rate of 66%.

**Conclusions:** This project offers a clear practice framework to promote diabetes prevention and early diagnosis in women with previous GDM. The registration is successfully implemented and results of the first recruitment period are promising.

#### 4. Risk factor profile and lifestyle habits of people with impaired glucose tolerance in European populations 45-74 years-of-age within the framework of the DE-PLAN study - Cos X, Tuomilehto J, Barengo N, Costa B, Mundet X

**Aims:** To assess the risk factor profile and lifestyle habits of people with impaired glucose tolerance in the European population and to investigate which component of the FINDRISC questionnaire predicts best IGT.

**Material and methods:** Within the DE-PLAN (Diabetes in Europe - Prevention using Lifestyle, Physical Activity and Nutritional intervention). The FINDRISC questionnaire was distributed using opportunistic sampling techniques in 17 European countries during 2006-2008. In addition to the FINDRISC questionnaire, serum lipids, fasting and 2-hour glucose levels as well as systolic and diastolic blood pressure were measured in all study participants. The risk of IGT was calculated using logistic regression analysis. The odd ratios (OR) and the respective 95% confidence intervals (CI) are presented.

**Results:** The final sample size consisted of 12 692 men (46%) and 14 938 women (54%) with both a mean age of 59 years. Mean body mass index (BMI) was 28.5 kg/m<sup>2</sup> in men and 29.8 kg/m<sup>2</sup> in women, respectively. Mean waist circumference was 101 cm in men and 95 cm in women. Men with less than 30 min daily physical activity had a 23% increased risk of IGT (95% CI 2-49%). The respective odds ratio (OR) for women was 1.25 (95% CI 1.06-1.48). Overweight (OR 1.40 (men) and 1.33 (women)) and obesity (OR 1.93 (men) and 2.13 (women)) were significant predictors of IGT before additional adjustment for central obesity. After additional adjustment for central obesity, the OR became non-significant in both gender. However, central obesity increased the risk of IGT in men (OR 1.46; 95% CI: 1.14-1.88) and women (OR 1.76; 95% CI: 1.40-2.22) even after adjustment for BMI.

**Conclusions:** Physical activity and central obesity seem to be independent predictors of IGT in both men and women in European population. Waist circumference may be the better predictor for IGT than BMI.

well as heart failure disease management programs have been shown to improve prognosis. This emphasizes the importance of early recognition of HF to improve prognosis. Diagnosing (or excluding) HF is, however, notoriously difficult because of nonspecific signs and symptoms and prevalent co-morbidity. Especially in primary care where more advanced diagnostic tests such as ECG, chest X-ray and echocardiography are not readily available and referral of all elderly patients suspected of HF is not an option, diagnosing heart failure is a challenge. The availability of new plasma markers and rapid access diagnostic out-patient clinics may be instrumental in reducing the prevalence of unrecognized HF. In addition, several studies aimed at developing diagnostic algorithms, including a limited number of signs, symptoms and additional diagnostic tests, in suspected HF in primary care patients were performed. During the session the diagnostic value of signs and symptoms and of additional tests, such as (NTpro)BNP levels, will be critically reviewed and the potential value of diagnostic algorithm to diagnose or exclude HF in primary care will be discussed.

**Session 2:** Update on treatment options in heart failure. Professor Richard Hobbs Heart failure is an increasingly important problem for most developed healthcare systems. The condition is almost as common in older adults as diabetes mellitus, occurring in around 2% of the adult population, rising to 30 per thousand in over 75 year olds. Unlike most cardiovascular diseases, which have declined in prevalence in developed healthcare systems over the last 20 years, the incidence of heart failure continues to rise, due in part to improved survival following acute myocardial infarction and an increasing elderly population. Symptomatic heart failure has a major impact on patients and healthcare systems: all grades combined heart failure has a worse prognosis than breast or prostate cancer and is only second to stroke in terms of healthcare utilisation costs, mainly due to high rates of hospitalisation. In addition to the high mortality rates, patients with heart failure also suffer from a grossly impaired quality of life, with significant morbidity from symptoms such as dyspnoea and fatigue. Accurate and early diagnosis is important since angiotensin converting enzyme (ACE) inhibitors improve both morbidity and mortality in all grades of symptomatic heart failure due to LVSD, and can delay or prevent progression to symptomatic heart failure. More recently, the significant prognostic benefits of beta-blockers and angiotensin receptor blockers in heart failure due to LVSD, and aldosterone blockade in severe heart failure, have been demonstrated.

**Session 3:** How to more effectively diagnose and monitor hypertension. Professor Richard McManus Treatment for hypertension is one of the commonest reasons for a person to consult in primary care and millions of individuals are receiving treatment across Europe. It is important as raised blood pressure is a key risk factor for Coronary Heart Disease, the leading cause of morbidity and mortality worldwide. However, diagnosis often relies on 19th century technology with monitoring haphazard and influenced by clinical inertia. Gold standard diagnosis might reduce unnecessary treatment and therefore be cost saving. Improving monitoring could reduce workload whilst improving outcome. This session will review the evidence for diagnosis of hypertension and explore how monitoring might be made more efficient and patient centred as we enter the second decade of the 21st century.

## EPCCS 1 – symposium

994

### EPCCS Clinical update 1: Hypertension and heart failure

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**Session 1:** Issues for Heart Failure Diagnosis. Professor Arno Hoes Heart failure (HF) is a clinical syndrome that primarily affects the elderly. The mean age of men and women diagnosed with HF is around 75. The prognosis of heart failure is relatively poor, but several interventions, including life style interventions, drug and device therapies as

Friday, September 9<sup>th</sup> 10.20-11.50

## IPCRG 2 – symposium

956

### Poorly controlled asthma

*Reid J, Tsiligianni I, Rodriguez M*

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This will be a symposium with adequate time for audience interaction and discussion. The prevalence and perception of asthma control will be addressed, the differentiation between poor control and asthma severity will be covered as well as treatment and management options. The presenters are family physicians with a special interest in respiratory medicine.

## Equip 1

952

### Quality of chronic care: how can we make disease management work?

*Rochfort A, Flamm M, Sönnichsen A*

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**Aims:** Disease Management Programs (DMPs) are proposed to enhance the quality of chronic care and thereby improve health outcomes and curtail costs. Yet, the evidence on the ability of such structured approaches remains unclear. The aim of this workshop is to provide an overview of the currently available evidence on the effectiveness of DMPs, including the results of a randomised controlled trial on a DMP for diabetes mellitus type 2 in Austria and a project on patient self-management of chronic disease by ICGP in Ireland. Based on our experiences we will present and discuss measures to optimise disease management (DM) for the most frequent chronic diseases like diabetes mellitus type 2 or cardiovascular disease in the primary care setting.

**Material and methods:** The workshop will be organised into presentations, analysis and discussion on: (1) the main results of the Austrian evaluation studies (randomised controlled trial and subsequent open observational study over a total observation-period of two years ) on the DMP "Therapie Aktiv" for diabetes type 2, designed and implemented by the Austrian public health insurance; (2) the extent of non adherence to medication guidelines for diabetic patients in primary care and the measured effects of guideline adherence of the programme; (3) concrete examples of implementation of improvements in DM in primary care settings, including a special focus on strategies involving patient self-management.

**Results:** At the end of the workshop participants will be able to (1) describe the gap between "the ideal" Disease

Management Programme and the common problems faced in transferring Disease Management into daily practice of primary care; (2) list the pros and cons of DMPs (based on the example of the Austrian programme) (3) identify practical DMP activities for implementation into primary care, including patient self management of chronic disease from the ICGP project in Ireland.

**Conclusions:** By participating in this workshop, participants will explore how improvements in the quality of chronic disease management in primary care can be implemented in practical terms.

## EUROPREV 2

963

### Prescribing for lifestyle interventions in general practice

*Drenthen T, Durrer D*

Netherlands, Switzerland

**Aims:** To know the experiences of the implementation of different health promotion and lifestyle programmes in general practice.

**Material and methods:** The workshop will be based on the results of the Euroreview study on beliefs and attitudes to lifestyle, nutrition and physical activity among almost 8,000 patients in Europe. 1. Brief presentation of the Euroreview data on nutrition and physical activity (15 min: Dominique Durrer / Ton Drenthen) 2. Examples of programmes and strategies in general practice (45 min): -The Netherlands' programme 'Exercise on prescription' (BeweegKuur) in patients at risk for diabetes and people with obesity (Ton Drenthen) -Two Swiss programmes: Physical Activity Prescription in Primary Care (PAPRICA), and the Diafit programme, a Physical activity programme and nutritional workshop for diabetic type 2 (Dominique Durrer) 3. Discussion with the workshop participants to exchange experiences with the implementation of lifestyle advices on nutrition and physical activity in general practice in different countries. (30 min.)

**Results:** The participants will learn about the effectiveness and feasibility of the existing lifestyle interventions in different countries, and about the possibilities for implementation of these programmes in general practice.

**Conclusions:** A debate will be opened to discuss specific issues raised in the presentations and opportunities from differences approaches, and to share experiences with other countries in Europe.

## Public health issues

832

## Radiation risk communication in pediatric imaging- role of family doctors

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**Aims:** to present a tool to communicate radiation risks in pediatric imaging

**Material and methods:** When a radiological procedure is appropriately prescribed (justification) and properly performed (optimization) the individual benefits exceed the radiation risks. However, this balance does no more favour the benefits if the procedure has not a clear clinical indication or when patients receive higher doses than necessary. This is critical in children, as they are significantly more sensitive to radiation-induced cancer risk than adults. The World Health Organization (WHO) convened a meeting on Radiation Risk Communication in Pediatric Imaging gathering 22 international and regional organizations and specialized national agencies including representatives of pediatricians, family doctors (represented by WONCA delegates), parents, radiologists, physicists, technicians, nurses, researchers, and regulators. A working group was established to develop a communications strategy and produce a risk communication tool addressed to physicians who prescribe pediatric imaging procedures, in particular pediatricians and family doctors.

**Results:** a first version of the tool was developed. The document provides information on radiation doses and risks, resources and advice on communication strategies as well as key messages to use in different scenarios. This tool is complemented with a more concise booklet targeted to patients, parents, and general public. It is planned to present the document to family doctors during a workshop to discuss the different chapters and gather end-users feedback on its format and content. The workshop will also include the results of a survey among family doctors on level of awareness about radiation doses, radiation risks and principles of radiation protection applicable to the medical uses of radiation.

**Conclusions:** this tool will improve radiation protection culture among family doctors, towards a safer and more radiation in pediatric imaging.

## EURACT 1

982

## Teaching in Family Medicine- what does an expert look like?

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**Aims:** To present and discuss the framework of educational expertise in GP/FM education and its impact on defining

different levels of expertise.

**Material and methods:** Project "Framework for Continuing Educational Development of Trainers in General Practice in Europe" is co-financed from European Union resources under the Leonardo da Vinci Programme. One of its aims is to develop a framework to define educational expertise in General Practice/Family medicine education. This important development can only be achieved by uniting the current knowledge of GP/FM training, current approaches and existing expertise within the European region, in order to develop a new high quality conceptual framework. The framework will provide the basis for the development of educational courses for GP/ FM teachers on 3 levels.

**Results:** The project uses the model first proposed by the Dreyfus brothers – a 4 stage model, defining the characteristics of functioning at each level: 1.Novice 2.Competent 3.Proficient 4.Expert The examples for each level of expertise as applied to GP/FM education, as well as examples of educational activities in order to achieve mentioned levels of expertise, will be presented during the workshop, followed by the discussion in small groups.

**Results** of the discussion will be used for further development of the framework.

**Conclusions:** This framework in future would be expected to guide the development of GP/FM educators and set the basic standards for training the trainers at different levels, monitoring their progress, assessing their achievements etc.

## Financing and organization 2

879

## Exploring case mix applications' potential impact on primary health care delivery.

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**Aims:** As has been demonstrated in both public and private healthcare systems worldwide, case-mix applications contribute to improved equity and efficiency in the delivery of primary care. The aim of this workshop is to demonstrate how case mix can be applied to regional primary care systems, primary care clinics as well as at the individual provider level. In addition, the recent development of the ACG System to utilize ICPC codes makes it applicable to countries/regions utilizing or considering ICPC codes while adding value to the ICPC coding system.

**Material and methods:** The Workshop will open with an introductory presentation on the numerous applications of case mix within the primary care sector, an overview of the ACG System as well as its new ICPC capabilities. This hands-on workshop will address real world scenarios demonstrating three applications: - Population Management /Resource Allocation / Population profiling - Performance Management / Provider profiling - Case Management / Patient Identification The workshop would conclude with a summary of the take home messages and include a discussion on the future of case-mix in primary care. Audience: The workshop is intended for policy decision makers, payer organizations, health care managers, health care consultants, primary care providers and all those interested in improving the delivery of primary care.

## Health promotion and disease prevention 1

867

**Family and Peer Health Coaching Programs: future directions for global learning***Botelho R*

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We have yet to learn how to reverse the epidemics of unhealthy habits. Our interventions for addressing these complex problems are too simplistic. We overly rely on scientific evidence produced by expert researchers. Evidence-based guidelines do not work for the vast majority of patients because brief interventions predominately address surface change. Innovation Challenge: Patients are the greatest untapped resources within our health care systems for quality improvement. We need longitudinal, experiential and innovative learning programs that activate groups of learners to collaborate in how to develop their own personal evidence about deep change. With this paradigm shift from scientific to personal evidence, individuals become the principal investigator of their own behavior change. As part of a learning community, they can discover their own solutions for behavior change.

**Aim:** With appropriate supports, our professional organizations can disseminate family and peer health coaching (FPHC) programs to contribute toward reversing these epidemics.

**Educational method:** FPHC programs can help patients and families develop personal evidence about deep change.

**Outcome:** The implementation of FPHC programs needs continuous improvement and evaluation in both primary care and community settings. Social Media: Social media and online learning programs will play expanding roles in making these low-cost, innovative programs widely available and accessible to all. Leadership and

**Dissemination:** We must link these learning and peer health to leadership development programs. Our leaders can implement FPHC programs for our students, practitioners and staff in our educational and health institutions in ways that create learning organizations about behavior change. In turn, our learning organizations can disseminate these programs in ways that create learning communities for patients and their families. Learning organizations and communities will enhance our capabilities and capacities to develop professional and social movements that promote healthy habits.

**VdGM 2 – symposium**

989

**Highlights from Vasco da Gama Movement preconference, young doctors' role in globalized primary health.***Poppelier A, Amini L, Streit S, Pettigrew L, Chovarda L, Moszumanska M*

Switzerland, Greece, Poland, France, Sweden,

andrepoppelier@hotmail.com

**Aims:** The workshop will link the pre-conference to the main conference by presenting the conclusions of the preconference to those interested in the issues involving Globalization of Primary Health care and what the role of young doctors is.

**Material and methods:** Results of the preconference, which will take place in September 7-8th 2011, will be shared with interested participants of the conference, young and established family doctors, trainees, teachers and students by short presentations of preconference group work followed by a plenary discussion.

**Results:** Presentation of the Global perspective of Primary Health and how young doctors can contribute.

**Philosophy and ethics 1**

274

**Labyrinths and their impact on medicine***Bendova J, Busch U*

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**Aim(s) and background:** The Greek myth of the Minotaur and labyrinth on Crete are well known worldwide. A labyrinth is on the other hand an ancient symbol that relates to wholeness. Labyrinths and mazes have often been confused. Labyrinths have long been used as a device for meditation and as a praying tool. Today labyrinths can serve as a useful tool in medicine too. There are proven medical effects of labyrinths, e.g. blood pressure and pulse rate lowering. Labyrinths are being built in medical centres worldwide in order to assist patients suffering from cancer, ADHD, bipolar disorders etc.

**Material and methods:** Literature search of labyrinths and their use in medicine will be followed by direct experience. Participants of the workshop will draw, walk and experience the labyrinth: 1. Draw a labyrinth 2. Follow a drawn labyrinth with their finger 3. Walk a Cretan labyrinth drawn on the floor 4. Participants will take a part in a survey filling out a questionnaire about their experience

**Results:** Walking a labyrinth can have a healing effect and reduces stress. This workshop provides an opportunity to experience its benefits for health professionals and patients. Join our labyrinth with an open mind and an open heart.

**Conclusions:** Labyrinth is a practical tool to relax, still ones mind, reduces stress. It is a useful tool particularly for patients with mental disorders and cancer. It can also be used as stress prevention and management tool for health professionals, families/carers, medical students etc. and as a part of a holistic approach to medical care.

Friday, September 9<sup>th</sup> 13.45-15.15

## Education in FM/GP 1

508

**Writing Case Reports about patients seen in family medicine/general practice**

*Kidd M*

Australia

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Case reports continue to make an important contribution to medical knowledge. Reports by individual clinicians, especially in primary care, can influence clinical medicine, for example, through the first reports of side effects of new medications, new off-label uses of medications, different diagnostic indicies, adverse event reporting, reports on patterns of co-morbidity, the presentations of new and emerging diseases and early notification of public health communicable disease detection. Lessons learned from our patients as part of our daily clinical work can also act as a stimulus for new research. Accurate recounting of clinical experience is essential to the progress of medicine. Case reports provide important and detailed information about an individual, which is often lost in large research studies. This workshop is being facilitated by the editor-in-chief of the world's first medical journal dedicated solely to the publication of case reports from all medical disciplines. It will assist family doctors/general practitioners to prepare case reports for publication, examine common mistakes to avoid in writing case reports, discuss how our patients can contribute as authors of case reports, and explore how each of us can make a difference and save lives through the publication of case reports. Declaration: Professor Michael Kidd is editor-in-chief of The Journal of Medical Case Reports (www.jmedicalcasereports.com), published by BioMed Central.

## IPCRG 3

957

**The important role of primary care doctors in early diagnosis and management of Chronic Obstructive Pulmonary Disease (COPD). Early diagnosis does matter!**

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The interactive workshop 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. COPD is an increasingly common condition resulting in considerable morbidity and mortality. Annual costs of COPD including direct and indirect are high. Many of these costs could be reduced by earlier diagnosis and intervention. Most patients remain undiagnosed. Diagnosis of patients usually occurs at a stage where significant lung function has already been lost. By the time patients recognize their symptoms, they usually have an FEV1 of about 50% predicted: a level

where health status has already fallen and there is a significant amount of systemic inflammation leading to co-morbidities. A growing body of evidence suggests that early detection of airflow limitation and early intervention can delay lung function decline, reduce the burden of COPD symptoms, and improve patients' quality of life.

## EQUIP 2

950

**Medication safety: interventions for Quality Improvement in Primary Care.**

*Sönnichsen A, Lainer M, Godycki-Ćwirko M, Kosiek K*

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**Aims:** The LINNEAUS Euro-PC (Learning from International Networks About Errors And Understanding Safety in Primary Care) collaboration seeks to address the deficit in activity and coordination related to patient and medication safety in primary care in the European Union. Medication safety and medication errors are a major topic regarding patient safety and quality of life in primary care. One of the problems regarding medication safety is a lack of a valid taxonomy of medication incidents as a prerequisite for the development of tools for the improvement of medication safety. Many tools for quality improvement have been developed like checklists, computerized physician order entry systems, standardized handoffs, pharmacist-led interventions, incident reporting systems and patient safety workshops. There is only limited evidence on the effectiveness of these interventions. The aim of this workshop is to present a usable taxonomy of medication incidents and get an overview of the current best evidence regarding interventions to improve patient and medication safety for primary care in Europe.

**Material and methods:** The workshop will be organized into two presentations, starting with the presentation of a survey on the taxonomy of medication incidents, conducted with general practitioners and pharmacists from a large number of European countries. This will be followed by a presentation of current best evidence for medication safety IT-interventions based on a systematic review of the literature. Both presentations will be followed by ample opportunity for discussion, with a special focus on the implementation of interventions in practice.

**Conclusions:** At the end of the workshop participants will understand the importance of medication incident taxonomy, will be able to identify evidence based interventions in primary care settings to reduce patient adverse events, and will be motivated to implement patient safety measures in their professional environment. Furthermore this workshop will open up opportunities to network and become part of a pan European collaboration of primary care researchers and practitioners involved with patient safety.

## Mental health 1

0088

**To recognize and to treat bipolar disease and substance use disorder in primary care : yes, we can!**

*Moeremans P*

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**Aims and background:** Many practitioners are reluctant to care for bipolar disease and substance abuse. Poor outcomes, huge time expenditures and risks of suicide can incite to turn a blind eye on these disorders. These illnesses disrupt family life and put a high burden on society. Family practice can offer cost effective treatments. To support participants to deal with difficult patient interviews : therapeutic and management strategies.

**Materials and methods:** Workshop organization: mini conference - Declaration of interests: none 1. Family genogram studies offer a unique opportunity for early diagnosis and treatment of bipolar disease. 2. Quetiapine has been proven to be safe, effective and efficient in primary care. 3. No major adverse events occurred in 374 cases. We present 5 clinical vignettes (cases): - bipolar disease - borderline - frequent attenders - cocaine abuse - double diagnosis

**Results methodology:** group discussions Learning objectives : for each of the vignettes we present 3 slides with Slide 1: history taking Slide 2: a picture showing what went wrong Flipchart: question round: The observer will note the answers on the flipchart Flipchart : alternatives : to treat or not to treat? Slide 3: How do they manage their lives with treatment? Flipchart: Obstacles to treat mental illness by yourself? Number of participants: free

**Conclusion:** "Seven good reasons for integrating mental health into primary care" : - the burden of mental disorders is great; - mental and physical health problems are interwoven; - the treatment gap for mental disorders is enormous. Primary care for mental health enhances access, promotes respect for human rights, is affordable and cost effective, generates good health outcomes.

## EURIPA 2

991

**Oncalls/out-of-hours in rural locations as part of educational strategy and workforce retaining**

*Kravtchenko O*

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**Aims:** To analyze the role of out-of-hours and oncalls in everyday rural practice and to compare its implementation on educational process (pre- and post-voc. training) and retaining of workforce in different rural European locations. To define the network required for the successful performance of a rural practitioner during oncalls and out-of hours. To discuss practical tools (communication devices, surgical and

medical equipment etc.) necessary for the abovementioned. To reflect upon possible implications of the oncalls and out-of-hours on the social and professional performance of a rural practitioner in different rural European locations. To find out if the oncalls and out-of-hours play any positive role in retention of the workforce in rural European locations. To compare oncalls and out-of-hours in rural and urban European locations.

**Material and methods:** The participants will be divided into 2-3 different groups to discuss the abovementioned aims, to share the different experiences and to develop the mutual strategy crucial for the state-of-the-art performance during oncalls and out-of-hours in rural European locations.

**Results:** Both experience and literature recognize the oncalls and out-of-hours as a critical point in everyday medical practice of GPs and in clinics. It's also most vulnerable area both for the medical practitioners and the patients. The sharing of the expertise from different rural parts of Europe will be essential to create a mutual programme. The workshop could be partly combined with the Educational Workshop EURIPA/VdGM.

**Conclusions:** The defining and recognition of mutual strategy in conducting of oncalls and out-of-hours at the state-of-the-art level plays an important role in education of younger colleagues and in retaining the medical workforce in rural locations.

## EURACT 2

973

**European trainers exchange**

*van Leeuwen Y, Maagaard R, van Hemert R, Carelli F, Gomes F*

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**Aims:** Postgraduate trainers from the different European countries have unique sellingpoints, challenges and educational problems to solve. They seldom meet, which leaves exchange as a valuable source of information unexplored. In this workshop we facilitate the exchange between postgraduate trainers of the European countries on matters as: the dayly educational trainer-trainee-encounter , monitoring the growth of trainees, feedback on trainees, the train the trainers programme etc.

**Material and methods:** The format of the workshop is as follows: - 30 min introduction and getting to know each other (person and setting) - 60 min exchange, supervised by EURACT chair (inner cicle-outer circle) - 40 min unique selling points and general discussion - 20 min summary and statements; follow up: bilateral exchange between countries.

**Results:** We hope to establish new insights among participants concerning GP educational methods and opportunities in practice.

**Conclusions:** Trainers exchange is useful; next year 'choosing the EURACT- trainer of the year'.



### Financing and organization 3

985

#### Successful establishment of a vivid organisation of young general practitioners – the Czech experience

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In 2010, we have successfully founded a vivid organisation of Czech Young GPs, based on the European definition of young GP. Members are trainees in the specialty of General Practice and Family Medicine and young doctors in the first 5 years after specialisation in GP/FM. After one year of existence, we actively participate in all important issues concerning young GPs including education, curriculum development, choice of the GP-trainers and young GPs financing in the Czech Republic. We also actively collaborate with the European organisation of the young GPs (Vasco da Gama Movement), of which we are a member organisation, and with their individual members, for example under the young GPs exchange program. There are two main goals of the workshop: 1) to share and discuss our experiences with founding the new organisation of young GPs, especially with participants from who are about to found a new organisation or are planning to found an organisation in their home country. 2) to share and discuss plans for the 2013 WONCA World conference in Prague from the point of view of young GPs 1) Our experiences Since the foundation of the organisation, Czech Young GPs have welcomed 127 members (about 80 GPs graduate in the Czech Republic every year). At this workshop, we are going to present the following aspects of the Czech Young GPs experience: - our strategy of founding the organisation - the main difficulties of the foundation, - communication with our members using interactive web-pages, - the funding strategy of our organisation, based on member fees and on commitment to avoid the conflict of interest that would stem from financial ties to healthcare business. 2) Plans for the 2013 WONCA world conference in Prague We are going to present our intentions and ideas about the (pre)conference of the young GPs in Prague. With the participants of the workshop, we are going to discuss the strengths and weaknesses of our project and to ask for the participant suggestions on how to optimise our plans.

### Health promotion and disease prevention 2

93

#### Implementation of an evidence-based cardiometabolic health-check in Dutch general practice

*Drenthen T, Dijkstra R, Nielen M, van der Meer V*

Netherlands

**Aims:** Patients increasingly ask for health checks, which are offered by different care providers and health institutions. However, these preventive health checks are often based on non proven strategies. Therefore the Dutch College of GPs

developed an evidence based practice guideline for stepwise screening of cardiovascular disease, diabetes and kidney disease, followed by lifestyle advice and treatment. A pilot study in 16 general practices showed the feasibility of this check.

**Material and methods:** People of 45-70 years old are invited by their GP to fill in a digital questionnaire in order to estimate their risk. People with low or medium risk receive a lifestyle advice; people at high risk for cardiovascular and renal disease are referred to the GP. From October 2009 - May 2010 the prototype of the guideline has been implemented and tested in 16 general practices. Based upon the evaluation results, the practice guideline and the educational materials for GPs and patients were adapted. After the publication of the guideline (February 2011) the national implementation will start, depending on the financial and organisational conditions. Aim of this workshop is to present the content of the guideline and the experiences with the implementation in daily practice, and to exchange experiences with preventive health checks in different countries. Program: - Introduction about the content of the guideline (Ton Drenthen) and results of the pilot study (Mark Nielen or Victor van der Meer) - Discussion with the participants about preventive health-checks in other countries - Presentation of implementation materials (Rob Dijkstra) - Discussion about bottlenecks and opportunities of preventive health checks in primary care.

**Results:** The pilot in 16 GP practices showed that the preventive cardiovascular health check is feasible and effective. The participants will learn about the possibilities and limitations of evidence based health checks in general practice.

**Conclusions:** General practitioners are able to carry out in their practice setting a preventive health check on cardiovascular disease, diabetes and kidney disease.

### Quality of life

616

#### Physician heal thyself

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**Aim:** This is a workshop to teach practice based techniques for managing stress, anxiety and related symptoms. The importance of being aware of your own health care will also be discussed, along with the possible benefits of literature and writing in the doctors life. The greater aim of the workshop is emphasised by the title which is a proverb meaning that all people should take care of their own defects and not just correct the faults of others.

**Workshop Organisation** 1. Audience to identify what they hope to personally gain from the workshop 2. Discuss the definition of stress, identifying features and common symptoms and reactions 3. Identify barriers doctors face to asking for help, how to ask and who to ask 4. Teach 3 simple breathing exercises based on the theory of mindfulness which can be performed at the work desk 5. History of accupressure 6. Stress and headache relief with accupressure 7. Have available handouts of above activities for participants as wanted Learning Objectives Through involvement in this workshop, it is intended that participants will be able to reach the following goals; 1. Identify personal learning goals 2. Review how to identify whether you are personally stressed

3. Understand the importance of having an independent GP  
 4. Learn 3 breathing techniques (based on mindfulness) which can be used in-practice  
 5. Understand the history of accupressure and why it is beneficial  
 6. Learn relevant accupressure points which can be used personally for the participants benefit  
 Impact Following delivery of the workshop it is anticipated that participants will be able to instigate use of techniques they have learnt in order to care for themselves on a daily basis. Through applying more awareness and care of their own health, the GP will be more effective and efficient in patient care.

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Friday, September 9<sup>th</sup> 15.45-17.15

### Education in FM/GP 2

213

**Cinema to foster arts and humanism in family medicine education: a 10 year experience**

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**Background and aims:** Experienced Family Medicine educators have long recognized how engaging learners emotionally and promoting their reflection are essential elements of stimulating useful discussions about values and ethics. Since 2000, the Brazilian Society of Family Medicine has developed a cinematic teaching methodology, focused on movie-clip and comments: a useful educational experience because it stimulates a reflective attitude in the learner. Through this workshop the audience will understand the cinema teaching methodology, with special emphasis on the movie clip variation. They will learn how to apply this methodology in their particular teaching setting and how to use movie clips to help students, residents and doctors to be more reflective and promote empathic attitudes, enrich professional values, and develop well-rounded qualities as human beings.

**Methodology:** This workshop aims to share our experience in building movie clips: how to select specific scenes from several movies and what types of comments could be added to enhance the viewing experience. After introducing the project, the presenters will show a movie clip, followed by the discussion in which the participants will be able to give feedback on these clips, and generate new themes for discussion, as well as suggesting other movie scenes and themes to use with their learners.

**Results:** We expect an interactive discussion with the audience, high feedback from the participants, and a pleasant scenario to better understand how humanities, arts and movies help in building a humanistic perspective of doctoring.

**Conclusion:** The cinema teaching scenario provides Family Medicine educators with another way they can broaden the range of human experience, facilitate reflection among their learners, and link their own experiences with family medicine core values.

### IPCRG 4 – symposium

954

**Allergies in General Practice-Epidemiologi / Common allergies :how to diagnose and treat**

*Høegh Henriksen S, Panaitescu C, Tsiligianni I*

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This will be a symposium with adequate time for audience interaction and discussion. We shall try to address the following

topics and questions: Allergies seem to be increasing - what should we tell parents to avoid (primary prevention?) Which test should we use to diagnose allergies in general practice? Treatment plans. How to diagnose and treat allergic rhinitis and its implication for asthma control.

## EGPRN 2

965

### Translational Medicine and Patient Safety in Europe (TRANSFoRm): developing the primary care infrastructure to support research based on electronic health records in Europe

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**Aims:** TRANSFoRm is a collaborative research project for the integration of primary care clinical and research activities, to support patient safety and clinical research. It aims to develop the rich capture of clinical data in electronic health records (eHR), to enable the interoperability of eHR data to enable large-scale studies/clinical trials, and to develop software tools and services to enable integration and reuse of clinical research data. TRANSFoRm is supported by a research grant from the EU FP7 framework and is conducted by a multi-disciplinary consortium of ICT and clinical researchers from across Europe.

**Material and methods:** The first year of the project has defined three clinical research and three knowledge translation 'use cases' which will underpin the development of the software and its evaluation. An analysis of requirements of these use cases, linking to the relevant EU legal and Ethical frameworks has informed the development of a confidentiality and privacy framework. This framework is reflected in plans to manage provenance (audit and tracking), security (access control) and the plans for development of the system architecture.

**Results:** In this workshop we shall present the requirements of the use cases and the plans for managing confidentiality and privacy as well as the results of a survey of networks and available data for use by the project. Participants will be encouraged to explore the proposals and to offer critique and suggestions. 1. Use cases: Three clinical research use cases will be explored with an emphasis on the challenges that they raise for the project. These are, a phenotype-genotype study of risks of complications and response to oral medication in Type 2 diabetes mellitus, a case-control study of the risk of developing adenocarcinoma of the oesophagus relating to gastro-oesophageal Reflux Disease symptoms and Proton Pump Inhibitor use, and an RCT of on-demand v continuous PPI use in GERD with patient-related outcomes. 2. Confidentiality Framework: A functional 'zone model' has been developed where identifiable data (both clinical care and non-clinical care-related) are protected but made available for research by a combination of linkers and privacy filters. This model allows researchers to use completely anonymised data and linked- 'pseudo-anonymised' data as appropriate for the project and the local legal requirements. 3. Mapping of networks and available data: In a first step and in close collaboration with the European General Practice Research Network (EGPRN), the aim is to assess the capacity and readiness of existing national/regional health care databases for linkage to the project, their interactivity with high quality eHR-systems and their overlap with active

research networks in primary care practices across Europe.

## Mental Health 2

96

### Psychotherapy in GP's consultation: Enhancement of a creative and appropriate practice

*Tabouring D, Farghadani H, Leveque M, Minguet C,*

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**Aims:** GP's are confronted every day with patients presenting psychological problems in various forms. By the nature of the GP's consultation, the therapeutic bond between the GP and the patient is special and unique. The practitioner is confronted with the question of the most appropriate psychological support or psychotherapy (PSP). The objectives of this workshop are to: - Clarify the competences (of GP's) for an optimal practice of PSP - Clarify the practical implementation for PSP - Clarify how to improve the competences of GP's in PSP - Clarify the criteria GP's can use for proposing a specific and most appropriate type of PSP.

**Material and methods:** First, it seems important to clarify the basic competences, and the specific capacities GP's should ideally acquire, before practicing any form of psychotherapy. Second, we seek to clarify which criteria are most useful for choosing a specific form of psychotherapy, most likely helpful to our patient. (Analytic, cognitive-behavior, systemic etc) Different working subgroups will treat these points.

**Results:** Every group will present their conclusions and underline what is most helpful to implement in the practice of General medicine.

**Conclusions:** GP's constitute frequently the sole therapeutic help for patient with psychological suffering. The quality of GP's interventions in this domain depends on their competence and personal capacities. We are confronted with the crucial questions of empathy and how to express it, optimal communication skills, compassion, equanimity, and psychological mechanisms like transfer and projections. We are confronted with the question of the most appropriate type of PSP, and the difficulty to choose between the various forms of therapy which actually exist. We are confronted with the time problem in our everyday practice. To clarify these questions, is the aim of this workshop.

## EURIPA 3

958

**A Rural Health Strategy for Europe and rural practitioners' expectations. How do we influence policymakers**

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**Aims:** To collate the different European nations' rural healthcare delivery systems and compare their policies at the rural level. To display EURIPA's and the rural practitioners' policy-development point of view. To strengthen the rural practitioners' networking, in order to pursue a fit-for-purpose workforce.

**Material and methods:** Different national Family Medicine Societies as well as WONCA's networks and other stakeholders will be invited to discuss the state of the matter as well as their expectations for rural healthcare delivery policies. The EURIPA board will also display its 3-year long term plan, and its achievements up to date, in order to develop a Pan-European Rural Health Strategy for the 21st century.

**Results:** General practitioners, healthcare professionals, healthcare technologies, policy development, professional education, as well as the own rural patients' delivery of care and of their communities will be shown to need a special consideration: significant threats exist for rural communities and rural health care and the session will demonstrate that there is a need to develop a proper political strategy to cope with them. EURIPA's four main strategy areas (Research, Education, Quality and Policy development) will be highlighted as the key issues, in which the latter becomes related to the first three, and where: EURIPA believes that research is an essential element of rural practice and undertaking research fills important gaps in knowledge, improves the status of rural health and informs future rural health policy. EURIPA believes that rural patients have the right to the same quality of service that their urban counterparts have. EURIPA believes that education and training are crucial in developing a rural workforce, which is trained to deal with clinical problems that arise in the rural setting and is also sensitive to the cultural and social issues.

**Conclusions:** All the inputs at the session will help to develop a strategy which aims to identify a future direction for Rural Health and Rural Family Practice in Europe, and should remain committed to EURIPA's mission statement: "To ensure that all the rural and isolated populations in Europe have access to high quality health care irrespective of location, culture or resource".

## Writing for publication

481

**Writing for publication: an inter-active workshop with journal editors**

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**Aims:** This workshop aims to give participants information and insights about the publication of primary care literature in three major journals - the British Journal of General Practice, the European Journal of General Practice and the British Medical Journal.

**Materials and methods:** These journals are important media for the publication of peer reviewed research carried out in general practice and primary care and also for discussion and analysis of health policy and for the dissemination of clinical information. Three brief presentations by the editors of each of these journals will describe their places in international primary care publishing and will then focus on the submission and peer review systems and approaches to publication of research papers.

**Results:** There will be opportunities for discussion of topics such as the factors which enhance the chances of successful submissions, web publishing, open peer review systems, the advantages and costs of open access publication, the use of advanced information technology, such as apps and podcasts, to deliver journal content in the future and the role of publishing bibliometrics in research assessment.

**Conclusions:** There will be ample time for questions and discussion and the editors are keen to receive feedback on all these topics, and in particular to discuss with potential authors, readers and reviewers ways of making their journals as relevant as possible to the needs of the primary care community.

## Financing and organization 4

160

**From LOVAH with love. A national organisation of GP trainees is needed to increase and maintain quality of education**

*Honkoop P, de Hosson M, Joziassse I*

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The Dutch organization of general practitioner (GP) trainees (LOVAH) was founded in 1980 to increase the influence of GP trainees on their vocational training. To date, over 99% of all Dutch GP trainees are member of the LOVAH. Since 1980 much has changed. For example, the LOVAH is now involved in the decision-making of the terms of employment and salary (2001, 2008), which improved substantially. Moreover, 50 GP trainees are allowed to visit the WONCA Europe yearly at the expenses of the national employer of all GP trainees (SBOH). In addition, frequent evaluation using national questionnaires has resulted in pinpointing omissions in the curriculum leading to adjustments in the educational programs. The

LOVAH is structured as a horizontal organization. The highest organ in this structure is the member council, which convenes each month at a central location in the Netherlands. The member council consists of representatives of all 8 regional departments of GP trainees. The board of executives is elected and controlled by the member council. The board of executives attends to the interest of Dutch GP trainees by maintaining contacts with organizations such as the national GP associations, the SBOH and the Dutch organization of GP education. Additionally, several task forces exist within the LOVAH that concentrate on specific topics. For example, the LOVAH taskforce of European Affairs promotes the exchange and integration between Dutch and other European GP trainees. Attending this presentation will give you full insight in our organization, enables you to talk to active LOVAH-members and provide you with all the details necessary to start a similar organization in your own country.

## Information and technology

609

**eHEALTH in primary care: a workshop on what's new and how do know it is making a difference?**

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**Aims and background:** There have been several developments in eHealth in family practice in the last decade, including: the uptake of clinical software by family doctors; the extraction and analysis of clinical data and the development of quality improvement strategies based on these; electronic exchange of clinical information between health service providers; and decision support tools. This workshop has two aims: to describe recent eHealth innovations occurring in a number of countries; and to describe their evaluation. The latter will help us better understand whether these innovations make a difference to patient care and patient health.

**Methods:** Recent advances in computing will be explained by representatives of the Wonca Informatics Working Party and the European Association of Quality in General Practice (EQuiP). The main emphasis of these presentations will be to discuss the evidence that these innovations make a difference to either processes of care or patient health outcomes. The audience will learn not only about eHealth developments but evaluation methods for information technology and information management.

**Results:** Examples will include but not be limited to: the Summary Care Record and Patient Electronic Health Record (United Kingdom); the Breakthrough Series methodology or Collaboratives (United States); quality assurance through data capture from electronic medical records (Denmark); and cdmNet, a web-based chronic disease management tool (Australia).

**Conclusion:** eHealth covers national projects as well as small scale innovations which apply to specific computing tasks in family practice. This workshop will describe what is new, how various countries are tackling these issues, and, importantly, how we know which ones are worth investing in. The experiences of members of the workshop audience will contribute to our understanding of the issues.

## VdGM 3 – symposium

990

**Junior champions in primary care research – presenting the Vasco Da Gama Movement Junior Researcher Award 2011.**

*Freund T, Lygidakis H, Chovarda L, Poppelier A, van Royen P*

Germany, Italy, Greece, France, Belgium

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**Aims:** Family Medicine is known to be an emerging field for research activities all over the world. It's comprehensive, population-based scope implies special demands for multi-methodological research skills. The Vasco da Gama Movement (VdGM) aims to promote a generation of junior family doctors who include research skills with patient care as a life time career. VdGM therefore provides an annual Junior Researcher Award which honours outstanding research and researchers' careers in GP-trainees or junior GPs with up to 5 years working experience after graduation. Organization: Every national representative of VdGM was asked to propose one national candidate for the award. The three finalists selected by the international jury of the VdGM Junior Researcher Award will present both their scientific work and personal career. Every presentation will be followed by a discussion. At the end of the workshop, the jury will announce the winner of the 2011 VdGM Junior Researcher Award. Impact: Future research in family medicine depends on successful training and support of upcoming juniors. This workshop will provide a forum for junior champions to present their work in the context of the VdGM Junior Researcher Award. This may get European GP-trainees and junior GPs enthusiastic about a future lifetime career in research and practice.

## Cross-cultural medicine/Gender issues

1

73

**Broadening horizons: Hippokrates, the international exchange programme for General Practice!**

*Pettigrew L, Kallestrup P, Laranjo L, Moszumańska M, Gómez Bravo R, Banqué-Vidiella J, Attridge M, Hernandez Santiago V*

Spain, United Kingdom, Poland

luisapettigrew@hotmail.com

**Aims:** This workshop aims to introduce the Hippokrates Exchange programme and inform participants how they can take part on the programme either as visitors or hosts. It will also explore other forms of international exchange in General Practice, such as the recent group exchanges that have taken place through the Vasco da Gama Movement network in Spain, the UK and the Netherlands. Participants will have the opportunity to reflect on the value of international exchanges and what can be gained from these from the perspective of a host or visitor. They will also explore the potential barriers they may face in trying to organise an exchange and solutions to these.

**Material and methods:** The workshop will be divided into 3 parts: Firstly participants will hear about the Hippocrates exchange programme. There will then be small group work looking at the value of taking part in such activities for trainees and GPs. Finally the participants will feedback their reflections to the main group.

**Results:** Participants should understand by the end of the workshop the reasons why international exchanges are valuable and how to organise one.

**Conclusions:** Encouraging exchange and mobility among GPs provides a broader perspective to the concepts of Family Medicine at both professional and personal levels. This will enhance the collaboration among national colleges of Family Medicine, that in turn can work together to reduce inequalities in the standards of GP training and primary healthcare provision in Europe.

Saturday, September 10<sup>th</sup> 8.30-10.00

## PCDE 2 + EGPRN 3

992, 967, 968

### European collaborative diabetes studies in primary health care

Kees G, Johan W, Cos Claramunt X, Topsever P, Khunti K, Jenum AK, Khalangot N, Goldfracht M, Rurik I, Berkhout C, Lionis C, Rutten G, Vermeire E, Rätsep A, Petek D.

Netherlands, Belgium, Estonia, Slovenia

topsever@gmail.com  
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#### 1. The European EUCCLID pilot study on care and complications in people with type 2 diabetes in primary care - Kees G, Johan W, Cos Claramunt X, Topsever P, Khunti K, Jenum A.K, Khalangot N, Goldfracht M, Rurik I, Berkhout C, Lionis C, Rutten G

**Background:** Studies on quality of primary diabetes care are scarce and prone to bias due to selection by indication.

**Research question:** This study aims to test the feasibility of the set-up and logistics of a proposed cross-sectional EUCCLID main study in random selected primary care DM2 patients in 11 European countries.

**Method:** In total 22 general practices (per country one rural and one urban) were asked to participate. From each practice five patients were randomly selected from a list of all DM2 patients known to the participating GPs for whom the GP is the main diabetes care provider. Medical history, anthropometric and biolab data and EuroQOL VAS of all participants were sent to a central laboratory and entered in a central database. Outcomes: feasibility of logistics, central laboratory and dataflow, prevalence of indicators of metabolic control.

**Results:** In all 103 patients were included from 22 GPs in 11 countries. A total of 1.184 DM2 patients participated from the rural practices (19 (Israel) to 524 (UK)) and 1.079 DM2 patients from the urban practices (9 (Israel) to 338 (UK)). After random selection, biomaterials and questionnaires were obtained from 52 patients from urban and 51 patients from rural practices. Patient characteristics: 55% female, mean age 66 years (sd 10.6). Biomaterials: mean BMI 29.2 kg/m<sup>2</sup> (sd 5.3) ranged from 26 (Norway) to 34.5 (Spain). HbA1c 7,1% (sd 1.3) ranged from 6.6 (UK and Hungary) to 8.0 (Ukraine), systolic blood pressure 134 mm Hg (sd 16.3) ranged from 126 (Hungary) to 144 (Ukraine) and total cholesterol 4.9 mmol/l (sd 1.2) ranged from 4.1 (UK) to 6.2 (Ukraine). Questionnaires: EuroQOL VAS mean 70 (sd 21,5) ranged from 46 (Ukraine) to 81 (Norway).

**Conclusions:** A European study on quality of care in a random selection of DM2 patients is feasible. There are large differences between countries.

#### 2. EUROBSTACLE: A Collaborative International Study On Obstacles To Adherence To Treatment Recommendations In People Living With Type 2 Diabetes – Vermeire E, Rätsep A, Petek D

**Background:** Adherence to treatment is known to be low. Diabetes is an interesting field to identify obstacles for adherence and self management. Earlier research did not show any consistent relations between more than 200

quantitative variables and adherence. Remarkably, the patient remained absent in the research. The conclusions of a qualitative research project at the University of Antwerp in 1999 pointed at the importance of the quality of the patient-health care provider relationship and health beliefs and representations as core issues in the process of adhering. In order to explore patients' obstacles to adherence, they need to be asked about their attitudes, expectations, and the problems they are facing in everyday life with the disease.

**Aims:** To explore whether the findings of the Antwerp study are transferable to other countries, the same research design using focus group discussions was carried out in 7 West and East European countries.

**Material and methods:** The Belgian qualitative findings were presented at the EGPRN meeting in 2000 resulting in a collaboration between the departments of primary care of Warwick (UK) and Antwerp (Belgium). A protocol was accepted for funding by EGPRN, and research partners were recruited for this collaborative research project: UK, the Netherlands, France, Slovenia, Croatia and Estonia. The same methodology was used to generate a primary interpretation in national languages. All the studies were published in national medical journals. It appeared soon that another methodology had to be applied to make a synthesis of the multilingual data using meta-ethnography.

**Results:** 39 focus groups with 246 participants were conducted. The comparison of the national data showed an astonishing comparability. The meta-ethnography produced a richer understanding of the phenomena. The third interpretation themes of the meta-ethnography were: the course of diabetes, information, person and context, body awareness, relationship with the health-care provider.

**Conclusions:** Eurobstacle is an example of a collaborative study realised by EGPRN members. It triangulated qualitative data of different nature and overstepped language barriers. This analysis was a valuable basis for the development of a questionnaire encompassing all the discovered barriers to adherence: the Diabetes Obstacles Questionnaire (DOQ). The project lasted for seven years and gave birth to 4 international and to 6 national publications and moreover to 3 PhD projects.

### 3. National and transcultural validation of the DOQ (Diabetes Obstacles Questionnaire) - Vermeire E, Rätsep A, Petek D

The EGPRN collaborative qualitative study EUROBSTACLE resulted in five common themes: the course of diabetes, information, person and context, body awareness and relationship with the health-care provider. Using the focus group discussion data from EUROBSTACLE, researchers from the departments of primary care of the universities of Warwick (UK) and Antwerp (Belgium) developed and validated an instrument for the measurement of obstacles to adherence. The instrument was validated in the UK and in Flanders (Belgium). The questionnaire contains 78 items in 8 thematic subscales: medication, self-monitoring, knowledge and beliefs, diagnosis, relationship with health-care professionals, lifestyle changes, coping, advice and support. This collaboration resulted in a new EGPRN collaborative study: DOQ (Diabetes Obstacles Questionnaire).

**Aim:** To validate the questionnaire in all participating countries in the first place and to establish cross-cultural validity in a second time.

**Material and methods:** A new EGPRN collaborative study: DOQ was set up. Five countries formed a new collaborative research group (France, Estonia, Turkey, Greece, and Slovenia). A validated translation procedure was performed for each language, and clarification of doubtful expressions in translation was done at a meeting of all researchers. Ten GPs in each country were approached to include 15 consecutive diabetes patients to answer the questionnaire. For validation purposes, all patients also filled out the PAID questionnaire. The value of HbA1 was obtained as a measure

of metabolic control. Each country validated the questionnaire in the native language. At the end all data were sent to Estonia for comparisons across the countries. Confirmatory factor analysis was used for fitting hypothetical models on different countries' data separately and for analysis of invariance of models on different countries' data.

**Results:** In six countries, altogether 860 questionnaires were filled out completely and entered the analysis for factor analysis. At the moment content analysis of the questionnaire is still performed. Transcultural validation is still ongoing and is performed by Anneli Rätsep from Tartu University in Estonia.

**Conclusions:** One of the aims of EGPRN is to promote collaborative research. EUROBSTACLE and DOQ show that it is possible to reach valuable research findings based on limited resources.

## Education in FM/GP 3

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### Talking and reflecting with your peers about your challenges in teaching: a faculty development workshop

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**Aims and background.** Faculty face challenges when they teach alone. 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. Faculty seldom think about themselves and usually lack the time to disclose their feelings before encountering new challenges. When searching for excellence in teaching, one's fellow teachers are useful resources. After all, our colleagues can teach us a great deal about ourselves and our craft and we must recognize this doesn't happen usually among family medicine faculty. Is it possible to use the regular peer contact to help each other and improve their teaching skills? This is what we aim to share in this faculty development workshop.

**Methodology:** This workshop is proposed to those who are involved in family medicine teaching. To make easy and smoothly the discussion a small group (25-30 people) is required. The facilitator will ask the audience to introduce themselves, and then list the main topics they are worried their teaching set. Their experience will be the basic issue for starting the discussion, enriched with exchanging experiences, and with some classical thoughts taken from well-known family medicine educators.

**Results:** We expect an interactive discussion with the audience, high feedback from the participants, and an opportunity to start a peer feedback scenario on teaching.

**Conclusion:** Peer discussion among faculty members could be an excellent resource to support family medicine teachers motivation and enrich their teaching skills.

**EURIPA 4 - symposium**

996

**Consensus statements and report from the 2nd euripa rural forum meeting on quality in rural practice: implications for education, training, research, clinical governance and engagement with policy.**

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The 2<sup>nd</sup> EURIPA Rural Forum meeting will take place in Sinaia, Romania 12-15<sup>th</sup> May 2011 (<http://www.euripaforum2011.eu/>). This meeting's main theme is: 'The Provision of Quality Care in Rural Practice' and it will be focussed on 8 themes and namely: patient safety, clinical governance, setting professional standards, reflective practice, education and training, environments for working, the Patient experience, and research in rural practice. The two moderators (from the Euripa Executive and the Romanian Society) will be preparing position papers for each topic before the conference and this will help focus the discussion on each individual theme. The moderators will then collate the discussion elements from each of the groups for incorporation into the final papers and proceedings. This symposium aims to present the key issues of the 8 position papers and discuss their implication on education, training, research, clinical governance and engagement with policy. It is expected that the constructive discussion within this symposium will contribute to the formulation of a set of actions towards the development of a rural strategy within the WONCA Europe setting.

**EPCCS 2 - symposium**

995

**EPCCS Clinical update 2: Vascular Risk.**

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**Session 1:** What's new in biomarkers and how do I assess risk? Professor Arno Hoes Cardiovascular disease is an important cause of death and disability in both men and women around the globe. Prevention of cardiovascular disease (CVD) by means of life style advice and interventions and drugs aimed at specific cardiovascular risk factors is crucial to reduce the (future) burden from CVD. In view of limited resources and potential side effects of these interventions, preventive measures, typically drug therapies, are usually targeted at those at predicted CVD risks above a predefined threshold. Currently, this threshold is a 10-year risk of fatal CVD of 5% in most European countries. In daily primary care practice and in accordance with current clinical guidelines, classical risk factors (such as age, sex, blood pressure and lipid level and smoking habits) are assessed to estimate an individual's 10-year risk. Often, charts based on the SCORE or Framingham risk equation are used for this purpose. To further improve CVD risk prediction a plethora of new biomarkers, including serum parameters (such as (hs)CRP, natriuretic peptides), imaging techniques (including

intima-media thickness, coronary calcium scores) and even genetic markers, have been studied and advocated as additional CV risk predictors. During the session the most important and potentially relevant biomarkers for the primary care setting will be reviewed critically. In particular, their potential value in CVD risk prediction in addition to classical risk factors will be discussed.

**Session 2:** What's new in lipids? Professor Richard Hobbs Cardiovascular disease (CVD) remains the leading cause of global morbidity and mortality, causing over 4 million deaths in Europe and 17 million deaths worldwide in 1999. Abnormal lipids, smoking, hypertension, diabetes, abdominal obesity, psychosocial factors, low consumption of fruit and vegetables, no alcohol intake and irregular physical exercise account for more than 90% of the risk of an acute myocardial infarction (MI) across age groups and in all regions of the world, according to the recent INTERHEART study. Since cardiovascular disease (CVD) is therefore a multi-factorial syndrome, guidelines need to guide clinicians on how to identify those at high risk, as well as provide preventative and treatment goals, whilst remaining simple to interpret and implement. Treating hypertension significantly lowered the incidence of CVD. As shown in 17 randomized trials of antihypertensive treatment, a net BP reduction of 10-12 mmHg systolic BP and 5-6 mmHg diastolic BP reduced stroke incidence by 38% and CHD by 16%. Interventions that lower LDL-C concentrations are also proven to significantly reduce the incidence of CHD and other major vascular events in a wide range of individuals. A meta-analysis of 14 statin trials showed that for every 40 mg/dL (1 mmol/L) decrease in LDL-C, it led to a 21% decrease in CHD risk after 1 year of treatment. These data are incorporated into clinical guidance such as the National Cholesterol Education Program (NCEP) Adult Treatment Panel (ATP) III guidelines and the Third Joint Task Force of European Societies guidelines, which both recognise the importance of dyslipidaemia, hypertension and smoking as the main risk factors for CVD. They also provide practical tools to assist risk estimation in individuals without prior cardiovascular disease. Recent data on lipid modification in stroke prevention and the meta-analysis updates will be presented

**Session 3:** What do I need to know about chronic kidney disease? Professor Richard McManus Chronic kidney disease (CKD) is common in primary care with a prevalence of at least 10% which seems to be increasing. Current equations allow identification of potential sufferers through routine blood tests. Very few people with CKD will require renal replacement therapy but cardiovascular disease is much more common, particularly in the presence of proteinuria. Current evidence for treatment is poor with many treatment trials specifically excluding renal disease. This session will review the epidemiology of CKD along with best practice for the diagnosis and treatment in primary care including identification of cases, risk stratification and treatment. Future areas for development in CKD management will be discussed.



## Education in FM/GP 4

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### Critical appraisal of scientific literature: a workshop of the Vasco Da Gama Movement in collaboration with the EGPRN

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**Target group:** General practitioners and General Practice trainees

**Background:** The Practice of evidence based medicine requires asking focused research questions to solve specific clinical problems. Further steps involve a literature search and finally critical appraisal of the existing literature.

**Aim:** To teach skills in critical appraisal of scientific literature and to evaluate the utility of research findings for application in patient care.

**Method:** We will provide insight in the proper structure and the key questions of high quality research articles in a short mini lecture. Subsequently we will go over selected articles in small groups, addressing relevant clinical problems in primary care and appraising the validity and applicability of research findings for patient care. The results of each group will then be presented and discussed in further detail in a wrap up session.

## Health promotion and disease prevention 3

440

### Less cancer screening – why and how?

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This workshop is part of the evolving concept "Less, More, Why and How" with representatives from the Nordic Risk Group and UK collaborators.

**Aims and background:** Screening programmes gain increasing importance in healthcare. Every GP meets potential screening participants and needs basic, updated knowledge about the topic. Screening tests are typically offered with reference to the idea "better safe than sorry". But things are not that simple; cancer screening can also do harm. Therefore these programmes have to be analysed in the light of the new Wonca concept "Quaternary prevention". No study has so far documented a decrease in total mortality after cancer screening, only decreased mortality of the specific cancer screened for. Some tumours grow very fast and occur between screening rounds. Other cancers grow slowly or even regress spontaneously and will therefore not affect life expectancy. The aim of this WS is to rethink cancer screening programmes in light of recent publications and

debates in major medical journals and media.

**Organisation:** Authors will highlight the main topics followed by discussion with the audience. Learning objectives: - Benefits and harms of cancer screening (update evidence) in the light of the concept of quaternary prevention. - The importance of understanding tumour biology to analyse cancer screening. - Overdiagnosis and overtreatment in the light of repeated screening which primarily detect non-aggressive, slow growing or even inconsequential cancers. - Informed participation in screening. Is it wrong to say no? - Who is going to inform, and how? - or should we not inform? - The GPs role in the debate, everyday clinical work, and as opinion leaders. - Gender perspectives regarding different screening programmes. - The use and misuse of statistics Impact: Deeper understanding of pros and cons of different screening programmes. In light of marginal benefit of cancer screening, its role in preventive measures can be questioned. Participation based on informed consent should be increased.

## Women's Health - symposium

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### Gender and health – womens health in general practice.

*Teunissen T, Stegeman M, Lagro-Janssen A, Souwer I, Buurman M, Gommers S, Wieskamp M, Bor J, van Rosmalen-Nooijens K,*

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### 1.Reasons why patients with urinary incontinence stop with conservative treatment - Teunissen T, Stegeman M, Lagro-Janssen A

**Aims:** To gain insight into the reasons for patients with urinary incontinence (UI) to stop conservative therapy given by a specially trained practice nurse.

**Material and methods:** Qualitative analyses of interview data. This study is part of a pilot study on the effectiveness of conservative therapy in case of urinary incontinence giving by a trained practice nurse. Patients with UI who had not been treated with conservative therapy in the past were referred to the practice nurse for treatment. Before the study the practice nurse have got a special training how to treat and guidance patients with incontinence. After start the conservative therapy, patients will be guidance during a year to keep them motivated. This study focused on reasons for patients to stop with the treatment. All patients who stopped the therapy were interviewed at home.

**Results:** Eight practice nurses working in 15 general practices got a training in treatment and guidance or urinary incontinence. In total nearly 100 patients with UI were referred to the practice nurse for training. In total 45 patients dropped out during treatment. Fifteen of them were interviewed. The analysis of the data is not finishing yet .

**Conclusions:** The data are being analyzed during the coming months.

### 2.How conservative are Dutch male and female physicians of different generations? - Lagro-Janssen A, Gommers S, Wieskamp M, Bor J

**Aims:** The number of women in medicine is rising considerably: the so-called feminization of medicine. This might change medical culture. Therefore, we were interested in the views of current and future physicians on feminization issues. To get to know the views of male and female physicians of different generations on women's entrance into medicine.

**Material and methods:** Students and physicians were asked to complete a questionnaire on current gender-sensitive statements in a Dutch medical opinion journal. After validation, the questionnaire consisted of 17 statements about three themes: the feminization of medicine, part-time work, and the importance of status. The answers to these statements were analyzed, and scores were computed. Negative views of the rising entrance of female physicians and of part-time work as well as a positive appraisal of status were defined as conservative.

**Results:** Gender influenced views much more than generation, with males holding more conservative views than females. Only the importance of status was influenced more by generation than by gender. Male students/residents held the most outspoken conservative views.

**Conclusions:** Gender is a more important factor than generation in explaining medical students' and physicians' conservative views. Gender differences are the most obvious in the youngest generation. Views on the importance of status are determined more by generation than by gender.

### 3. Risk factors for developing postpartum pelvic floor problems and women's help-seeking behavior for these problems - *Buurman M, Lagro-Janssen A*

**Aims:** 1 To explore women's perception of postpartum pelvic floor dysfunction and their help-seeking behaviour. 2 To define risk factors for developing postpartum pelvic floor problems and determine high risk patients in order to inform them about treatment options for pelvic floor problems.

**Material and methods:** 1 Qualitative interview study with 26 patients one to thirteen months after vaginal delivery in two family practices in the Netherlands. 2 Review study to define risk factors for developing post partum pelvic floor problems.

**Results:** 1 All women suffered to some extent from pelvic floor dysfunction such as urinary incontinence, pelvic floor pain, prolapse, haemorrhoids, anal fissure, constipation and dyspareunia. They expected their problems to improve by themselves. These women sought help of close initiates who offered emotional support but did not stimulate help-seeking behaviour. The initiates confirmed that the problems were an inevitable consequence of vaginal delivery and that there were no real treatment options. The women indicated they needed professional information about their pelvic floor problems but found it difficult to talk about these problems outside their inner circle. 2 The review is currently being done. The most important risk factors for developing postpartum pelvic floor problems found until now are: vaginal delivery, multiple parity, advancing age, obesity, prolonged second stage (of delivery), baby > 3500 grams and episiotomy.

**Conclusions:** 1 These dutch women discuss their pelvic floor dysfunction with their close initiates who confirm the idea that the problems will resolve spontaneously and that no treatment options are available. The women are not stimulated to seek professional help. However, the women do indicate they need professional information. They want to understand their problems and know how to deal with them. The authors are convinced that women will suffer less from postpartum pelvic floor dysfunction if they receive professional information on these problems and about treatment options. 2 Since the review is currently being done there are no definite conclusions to be mentioned.

### 4. Vitamin D3 doesn't help patients with chronic chilblains - *Souwer I, Lagro-Janssen A*

**Aims:** Chronic chilblains is a common disease causing major restrictions in daily life, nevertheless little is known about treatment. In a literature search, we found thin evidence of three interventions: fluocinonone cream, nifedipine and vitamin D3. We have conducted a study to assess the effect of oral administration of 2000 IU vitamin D3 per day on

patients suffering from chronic chilblains.

**Material and methods:** The design of the study is based on a self-controlled design. The study population consisted of patients with a confirmed diagnosis. Outcome measurement was the change in severity of the complaints and disability. We checked for interference by temperature and other confounders. Limitations. The study population consisted of 33 patients.

**Results:** The fraction of patients reporting fewer complaints or less disability after correction for the effect of confounders was 19% ('Complaint') and 6% ('Disability') after 3 weeks placebo, with equal figures after 7 weeks vitamin D3.

**Conclusions:** Oral administration of 2000 IU Vitamin D3 per day is not better than placebo in the treatment of patients with chronic chilblains.

### 5. Little people, a lot to worry: Creating a web-based self-support method concerning reproductive and sexual health for children and adolescents who witness intimate partner violence (IPV). Presentation of a new research Project - *van Rosmalen-Nooijens K, Vergeer C, Lo Fo Wong S, Prins J, Lagro-Janssen A*

**Aims:** The goals of the project are to clarify the mechanisms by which Intimate Partner Violence (IPV) affects sexual and reproductive health in several phases in reproductive life, hereby developing better opportunities for treatment for children witnessing IPV and, most importantly, to create a web-based self-support method for children of mothers facing IPV, based on the attitudes, views, needs and wishes of these children, their mothers facing IPV and their GP's.

**Material and methods:** The study group will consist of about 70 mothers who face IPV and their children. From the literature we can assume that these children have witnessed partner violence and for most of them on a regular base. All children of the included mothers, of age 12-25 years old are asked to take part in the study. GP's who were trained to identify victims of IPV, working in Nijmegen and around and agreed to participate are included (n=60). We will start by collecting some general characteristics. We will fill in the questionnaires on the moment of inclusion and about 6 months later. From the mothers facing IPV: general characteristics, the socioeconomic status (SES), the severity of the abuse using the composite abuse scale (CAS), the general well-being using The Symptom CheckList-90 (SCL-90), coping strategies with the Utrecht Coping List (UCL) and the degree of autonomy by the Autonomy-Connectedness Scale (ACS-30). From the children age 12-18: general characteristics, the Youth Self-Report (YSR) and the Impact of Event Scale (IES). From the children age 18-25: age, the SCL-90, the UCL, the IES and ACS-30. A literature review will be conducted on IPV and consequences for sexual and reproductive health, both for victims and witnesses. The goal is to get more insight in the mechanisms by which IPV affects reproductive and sexual health. We will focus on adolescent health and the effectiveness of existent interventions for children and adolescents, taking into account facilitating factors and barriers for implementation. The records of the women facing IPV and their children will be investigated to see if they visited their GP for issues concerning reproductive and sexual health, such as contraception, STD's or abortion. Based on the review and the records we will compose a semi-structured interview guide to interview the women facing IPV. Subjects in the interview will be the reproductive and sexual history, including previous IPV, and current health issues. In-depth interviews will be held with all adolescents, both females and males, age eighteen to twenty-five. We will lay emphasis on their ideas on sexual and reproductive health, their wishes for support and their ideas for a self-support web-based method. To answer the question on the attitudes and views of GP's concerning their role in supporting children witnessing IPV on the areas of reproductive and sexual health, we will hold focus-groups with GP's. During the

project, a web-based support method will be developed. We will start by creating a website based on existing literature and websites, as to provide the children and adolescents age 12 to 25 years old with a starting point. We will adjust the website on a continuous base during the project. Results from the medical record investigation, the interviews with the mothers, the interviews with the adolescents age 18 to 25 and the focus-groups will be included. With the website we intend to collect data on attitudes, views, needs and wishes on reproductive and sexual health as well as input on website subjects and lay-out.

**Results:** A web-based self-support method for children and adolescents age 12 to 25 years old who witness Intimate Partner Violence, which will form in collaboration with children and adolescents who witness IPV, their mothers, their GP's, medical record investigation and existing literature.

#### 6. Evaluation of a day hospital treatment for women with a history of sexual abuse - van Rosmalen-Nooijens K, van Bakel E, Scherpenzeel R, Lagro-Janssen A

**Aims:** Violence in families mostly affects women and children. At least 15% of Dutch women experienced some form of domestic sexual violence before age 16 and 25% of Dutch women have been confronted with sexual violence outside their home, which means that almost half of Dutch women experience a form sexual violence before age 16. Abuse of a young child had major implications for the development from child to adult. It contributes to significant morbidity, such as depression and anxiety disorders. Sexual abuse also has implications for the development of coping strategies: women with avoidant coping strategies have a high risk of developing psychopathology. Few studies are available on the effectiveness of treatments for these adult survivors. This study evaluates a day hospital treatment for women with a history of sexual abuse. It aims to investigate the effects on symptoms and coping strategies of these women.

**Material and methods:** The study has a retrospective and descriptive character. The effects of the therapy were measured by analyzing the results of validated questionnaires, being the SCL-90, the UCL and the Dutch Short MMPI, which the participants filled in before starting therapy and after therapy. The women were asked to give their opinion of the therapy.

**Results:** All sub-scales of the used questionnaires improved significantly. Coping strategies changed in a more active coping style. The use of avoiding and depressive-regressive coping styles decreased. After therapy, the women showed similar results on coping strategies compared to a non-psychiatric norm-group.

**Conclusions:** This day hospital treatment has immediate positive effects for women with a history of sexual abuse. After treatment women have fewer symptoms and more active coping strategies. Further research should be conducted to investigate whether results sustain.

### Social problems

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#### Integrated Primary Care: family medicine, addiction medicine and research - interim results of an ongoing National Institutes of Health Funded Study.

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**Aims:** Family medicine is at the center of clinical care and research. Integrating these into professional life can improve the conduct of each, but is challenging. The aim of this 2-part workshop is to discuss ways of implementing both aspects in a medical career. The presenters' successful clinical practice and research activities will serve as the context for this discussion.

**Material and methods:** Part 1 will describe the author's practice, which blends primary care, addiction and integrative medicine. Evidence suggests that "integrated care" improves treatment outcomes. Part 2 will present interim results of a randomized controlled trial (RCT) that is evaluating a promising behavioral therapy (mindfulness based relapse prevention, MBRP) for alcohol dependence - a common, disabling and costly disorder. The study will randomize 112 alcoholics, recruited from the addiction treatment centers, to usual care or usual care and MBRP intervention. The primary outcomes are self-reported alcohol use and related harms; secondary outcomes are mental health measures and stress/illness-responsive biomarkers.

**Results:** To date, 15 MBRP participants who attended 82% of meditation sessions reported abstinence on 95% (SD 7) of study days. Their scores of depression, anxiety, stress ( $P < 0.05$ ) and craving ( $P = 0.08$ ), documented relapse triggers, improved, as did the mindfulness ( $P < 0.05$ ) and interleukin-6 ( $P = 0.05$ ) levels. The meditation course was rated as very important (9/10, SD 2) and useful (9/10, SD 2). There were no negative effects.

**Conclusions:** Integrating clinical and research enhances both activities. Introduction of mindfulness has changed local treatment patterns; many treatment centers have added MBRP to care strategies. Adding specialty care in a primary care setting may increase access to treatment, especially for undertreated conditions such as addictive and other mental health problems. MBRP may be an effective adjunctive therapy, and seems to be feasible and safe for relapse prevention in alcohol dependence.

### EUROPREV 3

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#### Putting prevention into practice: how to plan substance abuse prevention in primary care ?

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**Aims:** Discuss implementation of substance abuse prevention taking into account national programs and challenges from daily practice.

**Material and methods:** The workshop will start with an overview of countries' situation of substance abuse (alcohol, tobacco and drugs) policies in primary care based on an online inventory by europrev members: L Pas (Belgium) - National Dutch programs on tobacco and alcohol: T Drenthen (the Netherlands) 15 min - Asking for one or different substances to detect abuse? Practice approach based on the Europrev study L Pas (Belgium) 15 min - GP role and multidisciplinary care for alcohol use : developing a model for stepped care. E Bruyninckx, E Cornelis, L Pas (Belgium) 15 min

**Results:** Based on a descriptive comparison of primary care policies for tobacco, alcohol and substance abuse in primary care and selected programme descriptions implementing in practice detection, counseling and multidisciplinary

collaboration for substance abuse will be discussed.

**Conclusions:** A debate (20 min) will be opened to discuss specific issues raised in the presentations and opportunities from differences approaches, and to share experiences with other countries in Europe. Development of European guidance for the implementation of prevention of drug abuse in the general practice setting will be suggested.

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## EURACT 3 - symposium

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### Educational research in undergraduate and postgraduate GP training.

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**Aims:** Educational research involves a variety of methods in which different aspects of education will be evaluated, including student learning, teaching methods, teacher training, and classroom dynamics. In cooperation with the participants of the Workshop we will launch the agenda of European Educational Research .

**Material and methods:** The workshop starts with a brief presentation on the meaning and purpose of educational research followed by the presentation of a few projects as examples (5 minutes for each). Next the participants will be divided into small groups for discussion and suggesting possible research questions concerning education as well as valid research methods. The questions presented for discussion among the participants (small groups of 4-5) are: 1. Choose three issues for which research is urgently needed as they are considered too much on face value. 2. Pick out one of the chosen issues and formulate an original and stimulating research design.

**Results:** At the end of the workshop the results of the group work will be presented to all participants followed by discussion.

**Conclusions:** Participants will gain ideas in educational research to be implemented into everyday practice.

decision making. Strengthening primary health care is essential. Research and policy makers have pointed to a shift in health care management towards primary health care and general practice. To meet these challenges we need to continue recruiting motivated and skilled primary health care doctors (GPs). Family medicine is still, in many European countries, generally considered to be a less popular speciality than some of the more traditional specialities like surgery and internal medicine. Recruitment of young doctors to general practice will therefore be a vital task for the years to come. In both recruitment and maintaining the motivation of aspiring GPs, success is dependant on the young doctors experiencing academic and organisational guidance and back up. To meet these issues, several national organisations for young GPs have in recent years been founded, focusing on professional and social cohesion and empowerment.

**Objective (of session):** We want to identify motivating factors when young doctors choose their vocational ("specialist") training in family medicine. We also seek information about how we can organise young GPs in order to support and motivate their training. Organisation (of session) - Organising GPs in training - 2013 why and how? - Group work and discussion. - Main questions for discussion: How can we motivate students and young doctors to start a career in General Practice? How do we initiate and organise a national organisation for GPs in vocational training?

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## Financing and organization 5

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### How to recruit and organise young and future general practitioners

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**Background/Issue** The Vasco da Gama movement (VdGM) is an organisation for young and future general practitioners (GPs) in Europe (www.vdgm.eu). The movement provides a network for GPs during their vocational training and up till 5 years after completing their specialisation in family medicine. In VdGM, the "Beyond Europe" group focuses especially on issues concerning recruitment of young doctors to general practice, and how GPs in training can become influential in

Saturday, September 10<sup>th</sup> 10.20-11.50

## Education in FM/GP 5

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### Multisource feedback as a way to improve general practitioner performance

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**Aim and background:** One of the methods commonly used to assess students and doctors in practice is multisource feedback (MSF). MSF implies the collection of feedback on various tasks from 1) peers with knowledge of a similar scope of practice, 2) co-workers with whom GPs collaborate and 3) the end users of health care: patients. The premise of MSF is performance improvement by providing feedback that guides professional development and self-directed learning. However, research consistently shows that performance improvement does not automatically take place: one third of MSF-recipients report not to make a change in their behaviour and of those who intend to improve in practice only a small part succeeds. Literature suggests, however, that performance improvement can be enhanced by a mentor who delivers the feedback and by stimulating MSF-recipients to reflect on feedback.

**Material and method:** Therefore, in the Netherlands 100 GPs have tested a new assessment system which incorporates MSF, the use of a portfolio and a formative interview with a trained mentor.

**Results:** The results of the new assessment system will be presented.

**Conclusions:** The assessment system including multisource feedback can be a significant part of the system of performance improvement. This workshop will deal with techniques that mentors can use to heighten the chance of real performance improvement. After a short introduction, participants will have the opportunity to practice with delivering multisource feedback and encouraging reflection. Barriers to the use of MSF and performance improvement in practice will be discussed, and teaching tips and background information will be shared.

## Education in FM/GP 6

411

### The general practitioner of the future

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**Aims:** The goal of this workshop is to explore the different perception of our profession by younger and older doctors, to

consider possible future developments and, lastly, to offer suggestions for an ideal of the future general practitioner.

**Methods:** In small-group work the audience will work out differences in the perception of our profession between different generations and nations. Then we will summarize the results and try to build an "ideal" of the future general practitioner.

**Results:** The participants will learn about the different perception of our profession between generations and countries.

**Conclusion:** This presentation will demonstrate how doctors from different generations and nations can learn from each other in order to create a satisfying and sustainable occupational image of family medicine.

## Rural medicine 1

516

### Professional development, remuneration or good prospects for the family: what does it take to attract young doctors to general practice?

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**Background and aim:** Many European countries experience a shortage of general practitioners. Recruitment and retention is an ongoing challenge. Career development programmes, financial incentives and targeted education policies have been recommended. We aim to present pertinent research and discuss what makes general practice worthwhile.

**Methods:** Participants are invited to take part in group discussions about preferences for certain attributes of general practice, such as location, remuneration and prospects of professional development. Three presentations will follow: 1) Interns in general practice: What can we learn from their stated career preferences? 2) Will the current remuneration system attract young physicians to general practice? 3) Fee for service or fixed salary - what do current GPs prefer? A general discussion concludes the session. Results: Among interns in general practice 55% would consider working as a GP in the future, and 1 in 5 would consider working in a rural area. Prospects of professional development, work for the spouse and living close to family and friends were the highest ranked attributes when considering future career options. Among last year medical students and interns, 47% claimed that the current remuneration system in Norway - a combination of capitation and fee for service - would not influence their preferences for or against general practice. However, the current system was most attractive to men and risk tolerant persons. Among established GPs 3 of 4 preferred the current system to a fixed salary. GPs with specialty attainment, long patient lists and urban practices were more likely to prefer the current system. Conclusion: Professional development programmes, remuneration systems and good prospects for the family may be essential issues for recruitment and retention in general practice. Workshop participants interested in recruitment and retention of GPs may get deeper insight into what it takes.

**EQUIP 3**

953

**Guidelines, quality and decision support.***Kunnamo J, Ketola E, Winell K, Virtanen M*

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**Aims:** Health care organizations need tools for implementing evidence, planning health care activities, essential resources and rational allocation of tasks. As many health care related activities as possible should be based on sound evidence. The ultimate task is to achieve health gain on all levels - patient, clinician and organizational.

**Material and methods:** The session includes brief presentations showing examples of the usefulness of evidence in practice performance. Each presentation is followed by a brief discussion.

**Results:** Many tools are needed to combine the relevant information on individual patients, structures, processes and clinical outcomes. Structured electronic patient records and guideline-based indicators as quality tools combine evidence with processes and clinical outcomes, and together they could help to target resources where the potential health gains are. The topics presented and discussed include issues such as what should be done, how does it help clinicians, how does it help in organizing practices, and how to make both patients and clinicians owners of sustainable improvement.

**Conclusions:** This workshop provides insight and tools to GPs interested in practice performance and evidence based decision making.

**Education in FM/GP 7**

424

**Educating health professionals in an interdependent world: debating the implications for family practice***Berlin A*

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There are increasing interconnections and interdependence between health professionals within and between nations. In parallel there are calls for greater social accountability by academic training organisation. These trends have important implications for the education and health systems in which primary care and family practice play a key role globally. This workshop aims to initiate a stimulating international discussion and debate on these seminal issues of relevance to all family practitioners. The workshop discussion will be informed by brief overviews of the two aspirational documents published in 2010 to mark the centenary of the Flexner report, 1."Health professionals for a new century: transforming education to strengthen health systems in an interdependent world (Lancet, Frenk, Chen et al) offers a detailed analysis and offers a big vision for transformational and transdisciplinary education systems in synergy with comprehensive health systems. The ambitious scope is welcome and a thorough reading raises many questions not

least because of the rather limited role afforded to primary care observing that it has stalled on a global scale in terms of the Alma Ata goals and casting it as a subordinate to more technical specialised care rather than an essential partner providing locally adapted and cost-effective, patient-centred care across a spectrum of interventions in increasingly diverse and ageing populations. 2. "Global Consensus for Social Accountability of Medical Schools" which, highlighting required improvements Respond to current and future health needs and challenges in society and Reorient their education, research and service priorities accordingly

**Health promotion and disease prevention 4**

447

**Why should we really talk with our patients, and about what and how?***Kirkengen A, Getz L, Mjölstad B, Pétursson H, Reventlow S*

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**Aims and Background:** This workshop is part of the evolving concept "Less, More, Why and How" with representatives from the Nordic Risk Group and UK collaborators. Human beings are characterized by a unique capacity for self-reflection and search for meaning. It is a major scientific challenge to understand how personal experiences, embedded into socio-cultural values and relations, are "inscribed" and interact in the lived body. Modern stress research in general, and the concept of allostatic overload in particular, describe how mental and physical challenges and stressors over time, mediated via reciprocal and reinforcing mechanisms, can lead to pathogenetic disturbance of the human beings adaptability, thus jeopardizing health. It is also documented that experiences of human support and acknowledgement can contribute to strengthen or re-establish health. In this workshop, we want to demonstrate that both biology (anamnesis and examination related to the body) and biography (life stories) must be taken into consideration if doctors and patients are to understand the roots of complex disease and suffering and strengthen their ability to identify potentials for recovery and healing.

**Material and methods:** The workshop will contain four short presentations: 1) Human biology - saturated with meaning. Recent results from translational and biomedical research (LG/ALK); 2) Personal accounts in medical communication (BPM); 3) Technology and experience - living by numbers (SR); 4) Integrating science and art in the healing interaction: an old dialogue explored within a new frame (ALK/HP/LG).

**Results:** Open discussion 30 min.

**Conclusions:** We hope this workshop will 1) help you realize that experiences have a deep and lasting impact on human biology, and 2) help you feel more secure and professional when listening and talking with your patients about life stories that matter, literally speaking.

## Cross-cultural medicine/Gender issues 2

287

### Workshop migrant care, international health and travel medicine in General Practice

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**Aims:** Nowadays doctors all over the world are confronted with a growing migrant population, those staying for a longer period as well as travellers, and their specific health problems. Especially vulnerable are refugees and undocumented (or illegal) immigrants. Due to language and cultural barriers, different illness patterns, the administrative complexity and often financial constraints, delivering primary care to these groups requires specific skills. General practitioners experience problems in the field of communication, access to healthcare and specific knowledge on ethnicity and culture. Increasingly there is research being done on these problems and on the specific competences GPs need to deliver good care to an ethnic and cultural diverse population. The aim of this workshop is to exchange and discuss good practices in migrant care and in training for GPs delivering this care.

**Material and methods:** Design The workshop is organized by an international group of general practitioners experienced in caring for these patients. After five short introductory presentations, participants exchange experiences and discuss examples of good practices and training in migrant care. Presentations: 1. international health and family medicine or travel medicine and the General Practitioner 2. migrant care in Greece 3. experiences on the AMP programme in the United Kingdom 4. the new consultation center for undocumented in Basel. 5. training in cultural competences: Dutch national masterclass for GP's in disadvantaged areas

**Results:** Learning objectives Participants will acquire knowledge about good practices and training initiatives in migrant care, international health and travel medicine.

**Conclusion:** impact for daily practice The acquired knowledge can help GPs to improve their care for migrants and travellers and to develop local training initiatives.

## VdGM 4

987

### Discovering general practice in Europe and beyond: a guided tour for future and young GP's

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**Aims:** This session will offer a brief introduction for GP-trainees and junior GP's to the landscape of General Practice in Europe.

**Material and methods:** To do so, this session will be divided

in two parts. The first part will be dedicated to the vocational training and the second part will be to present WONCA Europe and its different working parties to junior participants. During this session, different working parties and special interest groups (all part of WONCA Europe) will present themselves and their activities. All of them will answer one principal question: what do they have to offer for a future or young GP in Europe?

**Results:** This interactive session will provide a first occasion for GP-trainees and junior GP's to get acquainted with different kinds of vocational training in Europe. After a brief introduction, the participants will be split up in smaller groups to explore differences and similarities in their vocational training.

**Conclusions:** For those who want to push forward this discovery, the end of the session will be dedicated to the Hippocrates programme: a way to get to know primary health care in other countries of Europe.

## Patient relationship 1

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### Adolescent interview: hands on HEADS

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Interviewing an adolescent is a challenge for every primary care physician. Adolescents usually don't want to be there, do not know how to say what they want from the physician, if they ever know! The reasons behind this behavior are numerous: lack of trust, not knowing how to express things. Understanding the reasons for this behavior is a first step in making most out of the interview. Setting the stage for success needs also to be addressed by physicians dealing with adolescents. Techniques for interviewing adolescents allow the primary care physician to tackle all subjects pertinent to this population in a non-threatening way. The HEADS questionnaire is a mnemonic to get a psychosocial history from the patient in an organized way. Throughout the workshop, participants will also practice, via role-plays, techniques to improve communication with adolescents during the medical consultation.

## EGPRN 4

964

### What do medical students and educators think about the discipline of family medicine and how does it influence career choice? An international cross case comparison

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**Aims:** Family medicine remains a paradoxical phenomenon: policy makers and scholars repeatedly highlight the importance of primary health care, while fewer and fewer medical students choose family medicine as a career path. This phenomenon is documented in many Western countries. Different factors may help explain this negative trend: a gap

between specialists and generalist incomes, advances in medical technology and prestige. The construction of professional identity in family medicine is a process that starts in medical school. As a result we wanted to explore two related questions: - What do medical students and educators think about the discipline of family medicine? - What is the influence of these views on medical students' career choice?

**Material and methods:** We adopted a case study research design, the cases being located in the medical schools involved, these were located in four different countries: Canada, France, Spain and the UK. We used a number of approaches for data gathering: focus groups involving students, individual interviews with Faculty educators and documentary analysis. We used thematic analysis with a shared data analysis framework across the countries involved to report experience in each country, and also an international comparison.

**Results:** We will present the results for each country: Spain, France, Canada and the UK before making cross-country comparisons. We found that in Spain and Canada there was a double discourse: primary care was held to be essential to health care delivery, but was not held to be prestigious. There was a lack of exposure to role models and local working conditions impacted on choices. Competitiveness & excellence encouraged students to choose family medicine. In countries where - Students are exposed to family medicine early and intensively during their undergraduate training - Family Medicine is considered an academic discipline in its own right - Physicians working conditions are better E.g. in the United Kingdom Family Medicine has a better reputation, therefore it is easier for students to identify with this practice.

**Conclusions:** We must more overtly value the biopsychosocial perspective that is characteristic of Family Medicine and underline the importance of interpersonal skills and communication as essential technology in medical excellence. We should improve the conditions of practice in the health care system to enhance the appeal of Family Medicine. In practice this means: - Underline the importance of personal values (altruism, social justice) - Facilitate the students' exposure to positive role models in academic centers - Facilitate balance between quality of life and professional objectives - Increase the presence of Family Medicine in decision-making positions at academic centers - Define strict selection criteria for residency programs in Family Medicine - Raise the profile of the accepted definition of Family Medicine - Secure political support for the development of research agendas in Family Medicine.

symptoms is often atypical, especially in PE. Of all patients presenting with VTE symptoms, only 15-20% will be diagnosed with either PE or DVT, about 1-2 cases per 1000 patients a year. Once a diagnosis is established, effectiveness of anticoagulant treatment is widely accepted. Yet optimal therapy duration remains uncertain. Can you justify major bleeding events if your goal is to prevent recurrent VTE? For GPs, the challenge is to deal with these uncertainties in every day clinical practice, preferably supported by empirically based clinical rules and guidelines. The aim of the workshop is to recapitulate and update the current strategies on diagnosis, treatment and prevention of venous thromboembolism in general practice. Workshop organization: During this interactive meeting, the presenters will guide the audience through the basic concepts of VTE pathophysiology, the use of clinical decision rules and biomarker tests (eg. point of care D-dimer test) in the diagnostic process and the current guidelines on VTE therapy, all from a primary care perspective. Learning objectives: - To increase physicians' knowledge and skills to use primary care clinical decision rules and D-dimer tests whenever VTE is suspected, in order to identify all low risk patients for whom referral to secondary care is unnecessary. - To deal with treatment strategies and durations for different types of VTE, and to consider the responsibilities during the anticoagulation therapy. Impact of workshop for daily practice: By attending this workshop, we aim to increase the level of confidence of general practitioners to deal with both diagnosing in patients with suspected VTE and treating patients once a diagnosis is ascertained.

## Cardiovascular diseases

692

**Outlining the framework of current diagnostic and therapeutic strategies on venous thromboembolism - deep venous thrombosis and pulmonary embolism - in daily primary health care practice**

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**Introduction and aim:** Currently, general practitioners (GPs) experience several difficulties in dealing with the diagnosis and treatment of venous thromboembolism (VTE) - deep venous thrombosis (DVT) and pulmonary embolism (PE). The diagnostic process can be rather difficult as presentation of



Saturday, September 10<sup>th</sup> 13.45-15.15**Education in FM/GP 8**

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**Use of Personal Response System (PRS) technology as a tool to promote safe clinical decision making amongst final year UCL medical students, using materials developed from general practice (GP) situations**

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**Introduction and aims:** New medical graduates are expected to 'make clinical judgements and decisions, based on available evidence'. 'Medical schools should take advantage of new technologies to deliver teaching' (Tomorrow's Doctors, 2009). The aim of this study was to incorporate more opportunities for students to demonstrate this outcome in departmental GP teaching, using PRS, an electronic system that enables large numbers of users to demonstrate committed decisions simultaneously.

**Materials and methods:** Presentations were designed by Clinical Teaching Fellows, a Foundation Doctor and medical student, based on themes encountered in GP: a) medical, b) psychological, c) social and d) situational, to incorporate: 1) best evidence clinical guidelines, 2) case-based discussion and 3) situation-based discussion. Single-best answer (SBA) questions were designed for short vignettes and case studies and analysed using standard setting. Approximately 300 students were involved in this study. Student evaluations were assessed by questionnaire (60% response rate) and interview (with consent).

**Results:** Student evaluations were positive and constructive. Examples of student feedback include: 'Good use of cases and SBAs allowed me to approach patient scenario as if I was managing patient in real life'. It 'allows us to give answers without worry or embarrassment', an 'interactive session - comfortable atmosphere with voting system'. Students remain 'anonymous - therefore more likely to participate' as PRS allows 'participation without having to speak up!' Using PRS 'speeds things along', 'keeps you thinking and alert' and 'makes you commit to a decision, rather than just mull it over in your head', so it is 'good as it means we have to actually think about our answers'.

**Conclusion:** PRS promotes safe clinical decision making amongst undergraduates. Development of a bank of appropriately challenging SBAs for formative assessment will enable GP teachers to accurately pace and pitch their content, involve and 'motivate' learners, allowing increased transparency when justify their reasoning to empower students to become 'consciously competent' doctors.

**Education in FM/GP 9**

507

**Leadership for family doctors***Kidd M*

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As family doctors we are often asked to act as leaders, sometimes for the sake of ensuring the availability of high quality primary health care for the members of our communities. We need the skills to be effective in leadership roles. This interactive workshop will examine the skills family doctors require to become leaders of the teams in our clinics, leaders in our communities and the leaders of our professional organisations and will assist each participant in developing their own leadership skills. It will focus on the qualities of a good leader, leadership principles, leadership preparation, public speaking and working with media. Participants will be invited to reflect on their own leadership style, their strengths and areas for improvement. Lessons to be learned from other medical leaders will be shared. Participants will also learn about effective decision making, public speaking and the top ten hints for medical leadership. All conference delegates are invited to attend this workshop including medical students, doctors in training and those who are yet to undertake leadership roles.

**Cancer and palliative care**

337

**Cancer patients in agony. intervention of the family doctor: how far?***Teixeira F, Janeiro M*

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**Introduction and aim:** Cancer patients in pain are presented with crises needs that are exacerbated during this period. Therefore, the role of the family doctor becomes essential at this stage. The patient and family need, more than ever, for psychological, spiritual and social ladder and control of symptoms. The most prevalent symptoms in this period are: agitation, delirium, dyspnea and worsening pain. The workshop aims is exchanging experiences between the groups, in order to perceive in what way family doctors can plan an intervention to minimize these problems. We will approach the pharmacological and no pharmacological issues of the points discussed.

**Material and methods:** Work in small groups from different countries. The members will confront their different experiences and approach for the best solution for common needs. With a flipchart, each group will resume the main points of the discussion to the plenary.

**Results:** It is through the fans'experience that the doctors can create patterns of concerted actions.

**Conclusion:** The exchange of experiences between family doctors is important to monitorize terminal patients and help them to cope better with the various problems inherent to this situation.

**EQuiP 4**

951

**Doctors' Healthcare: improving the quality of healthcare provision for doctors by doctors.***Rochfort A, Modlińska B, Gensichen J, Seifert B*

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**Aims:** The aim of this workshop is to share opinions on a structured approach to quality improvement in healthcare for doctors by doctors. The key areas to be addressed will be categorised in terms of knowledge, skills and attitudes in order to refine a module for medical education in Europe on this topic. The quality of healthcare provision for doctors by doctors has been shown to be deficient in international literature reviews. Doctors who treat doctors have for a variety of reasons been shown to take short cuts with history taking and with clinical examination of colleagues, to avoid decision making, to fail to negotiate investigations, treatment and prescribing options, and to fail to arrange adequate referral arrangements or follow up. Paradoxically, doctors as patients are acknowledged to be 'difficult patients' due to their tendency to self direct their own acute and chronic medical care and their reluctance to behave 'as other patients do'.

**Material and methods:** The workshop will be organised into presentations, group work and open floor discussion on: (1) key findings from the literature, previous EQuIP workshops, expert opinions from the EQuIP Working Group on Professional Health and on feedback from general practitioners (GPs) in Ireland who provide and receive healthcare within a confidential health service for GPs - the ICGP Health in Practice programme. (2) Group work on the key measurable areas for improvement in healthcare for doctors and (3) open discussion on the practical aspects of implementing quality improvement in doctors healthcare; including who should do this and why.

**Results:** By participating in this workshop participants will be able to (1) identify the key areas to be addressed in a consultation in order to improve the quality of healthcare for doctors; and (2) outline practical measures that can be taken in Europe to initiate and enhance quality improvement activities within medical education and training to minimise deficiencies in doctors healthcare.

**Conclusions:** This workshop will explore quality improvement activities in doctors healthcare in order to optimise the quality of that care, focussing in particular on primary care services for doctors.

**Education in FM/GP 10**

913

**Including patient empowerment and continuous quality improvement. minor revision of the european definitions of General Practice / Family Medicine***Mola E, Eriksson T, Miftode R, Ram P, O Riordan M, Bueno-Ortiz JM, Kersnik J*

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**Aims:** The WONCA Europe Council decided that a minor revision of the European Definitions of General Practice in order to include two new concepts, Patient Empowerment and Continuous Quality Improvement, was necessary. The Commission set up for the task comprised 8 people from different countries and belonging to different networks. Its work will be finished before the end of the summer of 2011 and the results will be presented at the European Conference in Warsaw. The aim of the workshop is to discuss the results of the Commission in a large meeting involving people from many countries, to share and discuss the minor revision of the European Definitions with the greatest number possible of colleges and networks.

**Material and methods:** As an introduction the definition will be presented and two short presentations will describe the reasons for including the two topics into the Definitions and explain the work of the commission. Then the participants will be asked to fill in a questionnaire about the minor revision and will be divided into groups of 8-10 to discuss the two topics. The eight members of the Commission will be the chairmen of the groups. Plenum sum up will complete the session.

**Results:** At the end the results of survey will be compared with those of the work of the commission. The plenum discussion will sum up the opinions of the participants on the European Definition and will serve as background for further work on the issue.

**Conclusions:** A revision of an important document like the European Definitions of General Practice deserves a preliminary complex comparison involving different competence, attitudes and experiences. A discussion of the results in a large meeting is useful to share the conclusions of this work and set directions for possible further work.

**Financing and organization 6**

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**Playing football with General Practice: the story of the NHS***Hutt P, Heath I, Westin S, Sjönell G, Getz L*

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This workshop is part of the evolving concept 'Less, More, Why and How' with representatives from the Nordic Risk Group and UK collaborators.

**Background and aims:** As Poland prepares to host the European Football Championships, this workshop looks at the story of UK General Practice using the analogy of football along the way. The National Health Service was introduced to the UK in 1946. It has long been referred to as the 'jewel in the crown' of the welfare state. General Practice is now poised to take control of the majority of the healthcare budget - commissioning hospital health services. This change has divided public and professional opinion. What does this represent for the future of General Practice and what can other European countries learn from the UK experience? The Lancet has argued that this represents the 'end of the NHS' and the reforms are just a pre-cursor to wider privatisation.

**Methods:** The workshop will start with a broad overview of the history of the NHS, highlighting how General Practice has moved from a fringe player to a central stakeholder in the UK health service. Particular focus will be paid to the role that GPs will have in commissioning healthcare services. Audience members will discuss in small groups their pros and

cons of commissioning, feeding back to the wider group. There will be responses from SW and GS and how these changes relate to the situation in Norway and Sweden. Audience reflections will be invited. IH will chair the event. Learning

**Objectives/Results:** Become familiar with the shifting historical role of General Practice within the UK health service. Outline the pros and cons of commissioning. Reflect on whether such changes might be beneficial to other European countries. Consider how General Practice can seek to inform policy agendas in the cyclical nature of health service reform.

**Impact/Conclusions:** This workshop will empower participants to take a measured view of health service reform, consider the way in which commissioning may work and its problems, and to foster discussions about influencing health service reform in their own countries.

## Philosophy and ethics 2

418

### Ethical dilemmas in General Practice / FM

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**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.

**Goals:** It is the aim of the workshop to present situations involving ethical dilemmas as they occur 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 participants of situations demonstrating ethical dilemmas. The participants may then select specific situations, 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 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 approx. 90 minutes.

## Elderly care

125

### Identifying, assessing, and managing the medically at-risk driver: developing a protocol to assist the family practice community

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**Background:** The family physician/general practitioner often plays an important role in the identification of the medically-at-risk driver. This workshop addresses common challenges faced in identifying, assessing and managing the medically-at-risk driver. Participants will address questions related to difficult and successful experiences in dealing with 'fitness to drive' issues and address confidence issues in signing a driver medical form.

**Methods:** Short presentations, reflective practice exercises, small group discussion/reporting, a participant's evidence-based tools and resources kit (Medically At Risk Driver Protocol, the SIMARD MD and DVD series). Objectives: 1) Develop an understanding of the public health challenges associated with medically impaired drivers; 2) Identify the challenges and barriers for the family physician when identifying and assessing drivers with illnesses that affect or may affect driving; 3) Begin applying aspects of the evidence-based Medically At-Risk Driver Protocol to identify and assess medically at-risk drivers, including administration, scoring, and interpreting of SIMARD MD scores; 4) Develop an understanding of the physician's legal responsibilities and risk management practices related to medically at-risk and medically impaired drivers in the context of their state/province or country; 5) Consider the referral process in his/her jurisdiction and use of community resources to assist with driving cessation.

**Conclusions:** Younger and older drivers have fatality rates that are higher than other segments of the driving population. However, older drivers' crashes often are due to the presence of illnesses that affect driving ability rather than the result of normal age-related changes in sensory, motor, and cognitive functioning. For the family physician or assessing physician the focus should be on the functional impact of the illness/condition not simply on the presence of an illness or the age of the individual.

## Health promotion and disease prevention 5

868

### Family and peer health coaching programs: future directions for global training

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Our interventions for reversing the epidemics of unhealthy habits are too simplistic. Evidence-based guidelines do not work for the vast majority of patients because brief interventions predominately address surface change.

Innovation Challenge: Patients are the greatest untapped resources within our health care systems for quality improvement. We need longitudinal, experiential and innovative learning programs that activate groups of learners to collaborate in how to develop their own personal evidence about deep change. With this paradigm shift from scientific to personal evidence, individuals become the principal investigator of their own behavior change. As part of a learning community, they can discover their own solutions for behavior change.

**Aim:** To contribute toward reversing these epidemics, our professional organizations can train trainers to disseminate family and peer health coaching (FPHC) programs.

**Educational method:** Trainers can implement FPHC programs for our students, faculty, patients and their families

**Outcome:** The implementation of training programs needs continuous improvement and evaluation in both primary care and community settings. Social Media: Social media and online learning programs will play critical roles in making these training programs widely available and accessible to professional organizations.

**Leadership and Dissemination:** We must link leadership development programs to these training programs. Leaders can support their trainers to implement FPHC programs in our educational and health institutions in ways that create learning organizations about behavior change. In turn, our learning organizations can disseminate these programs in ways that create learning communities for patients and their families. Learning organizations and communities will enhance our capabilities and capacities to develop professional and social movements that promote healthy habits.

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## EURACT 4

972

**The role of General Practice / Family Medicine in basic medical education.**

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**Aims:** To present the work done by students in several different educational modules; to present and discuss the learning process in these modules; to show the involvement of General Practice/Family Medicine (GP/FM) in all the process (teaching/learning in GP/FM setting; learning under GP/FM inspiration; learning with GP Tutors).

**Material and methods:** Power point presentations; work in small group with facilitators; plenary discussion and take-home messages.

**Results:** The work presented by all the 4 different students (Comorbidity and polimedication, The Institutionalized Child, Medicalization of Women's Health, HPV - discussing the vaccine) was inspired by GP/FM, which is profoundly contributing to the learning process in Algarve University Medical Course. GP/FM is actively involved in the different learning modules presented and discussed.

**Conclusions:** General Practice/Family Medicine is an important element for the learning/teaching process in BME.

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## Patient relationship 2

823

**How to improve the patient-doctor relationship with the help of a simple systemic constellation for the doctor.**

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**Introduction and aim:** Every doctor has patients with whom the relationship is somehow difficult, as the efforts to improve it fail. The aim of this workshop is to offer a simple exercise for improvement of the relationship by changing your point of view a little bit.

**Method:** We use the method of systemic constellations. A systemic constellation is a spatial representation of an issue. By placing the elements of the issue in a spatial relationship to each other the dynamics behind the difficult communication can be explored, therefore providing a new perspective. The method is mainly nonverbal.

**Results:** After this workshop you have experience with a tool that can be used in your daily practice, on your own, in case you don't want to resign yourself to an unsatisfactory relationship with a patient.

**Conclusion:** Creating a good relationship with your patients is an art. The doctor can take advantage of the innovative, mainly non-verbal method of systemic constellations by applying a small exercise in his daily practice.

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Saturday, September 10<sup>th</sup> 15.45-17.15

## EGPRN 5

1002

### Research into cardiovascular disease in general practice

*Lionis C, Hobbs R, Hummers-Pradier E, Cos X*

Greece, United Kingdom, Germany, Netherlands

The European Primary Care Cardiology Society (EPCCS) is a WONCA Europe Special Interest Group and address the burden of cardiovascular disease in primary care in Europe. It develops certain educational activities that address certain clinical entities that health care professionals manage including hypertension, dyslipidaemia, heart failure, acute coronary syndromes, type 2 diabetes, metabolic disorders and cardiovascular consequences of cigarette smoking. The European General Practice Research Network (EGPRN) is a WONCA Europe network that mainly aims to promote and stimulate research in general practice and as well as to initiate and coordinate multinational research projects. The EGPRN has recently published the "Research Agenda for General Practice/Family Medicine and Primary Health Care in Europe" where the existing literature in regards to the core competence and characteristics of the WONCA Europe definition of general practice/family medicine has been explored, identified and summarized. In this joint workshop, delegates from the two networks will review the existing knowledge, identify and present key areas where research into cardiovascular disease in general practice is needed, explore new fields for innovative research and discuss research opportunities for funding. The following three presentations that would be included in this workshop: (a) Research into cardiovascular disease-The EGPRN experience (a review of the abstracts presented in the EGPRN meetings) [Xavier Cos] (b) Research into cardiovascular disease-The EPCCS experience (a review of the existing literature in general practice journals and reports from 3-4 European academic sites as well as FP7 European Projects) [Christos Lionis]. (c) Recommendations and key statements to EPCCS and EGPRN as well as WONCA Europe [Richard Hobbs and Eva Hummers-Pradier].

## Education in FM/GP 11

107

**Reviews- are there different types? Systematic reviews explained. A General Practitioner's experience of doing a Cochrane Systematic Review**

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**Aim:** To explore different types of reviews, To define what a systematic review is, To illustrate the difference between a Cochrane systematic review and a non-Cochrane systematic review, To illustrate why Cochrane systematic reviews are the

best form of evidence that one can use to facilitate the choices that doctors, patients, policy makers and others face in health care. To learn how to access the Cochrane database To demonstrate what a General Practitioner needs to do to become an author of a Cochrane systematic review.

**Material and method:** The history of Cochrane and Cochrane systematic reviews will be outlined including why Cochrane systematic reviews became necessary in the 1980's . The format of a Cochrane systematic review will be presented with special emphasis of its particular qualities. These qualities will be contrasted with those of non-Cochrane systematic reviews. Examples of similar topics reviewed in the Cochrane format and a non-Cochrane format will be provided.

**Results:** The presentation will demonstrate the structure of a review so that the reader will be able to find their way around it quickly. The participants will be informed of the quality of the clinical studies incorporated in the review, how the search strategy used includes English and non-English clinical studies, an explanation on why meta-analysis is used and an account of the highs and lows experienced by an General Practitioner as she led an international team doing a recently published Cochrane systematic review in a specialized neurological area.

**Conclusions:** This presentation will inform doctors of how to obtain the best quality, up-to-date medical evidence available to them at a very low cost in time and money. This presentation will inform General Practitioners how Cochrane systematic reviews will help them in their daily practice and encourage some of them to become part of the Cochrane Collaboration.

## Mental health 3

787

**Art therapy in Primary Health Care - enjoy some painting exercises and learn more about background, indications and implementation**

*Ephraim M, Krans M*

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**Introduction and Aims:** Anthroposophic art therapy (AAT; painting, clay modelling, music and speech exercises) is used in 28 countries. It is offered in most primary health centers in which anthroposophic medicine is integrated as complementary approach (see [www.ivaa.info](http://www.ivaa.info)), but also in conventional health institutions. In the Netherlands and Germany the costs are mostly covered by health insurances. Indications vary from mental health and behaviour problems, like depression, burnout and adhd, to physical diseases like chronic asthma and neurological diseases or as co-therapy for cancer patients. As a non-verbal therapy it supports creativity, expression, self-confidence, assertivity, concentration, coping and autonomy. Patients receiving art therapy had long-term reduction of chronic disease symptoms and improvement of quality of life (Hamre ea, 2007). Aims of this workshop are to give you a global view on the possibilities of art therapy in primary care and to offer you a possibility to experience it yourself.

**Material and methods:** Presentation of 'anthroposophic art therapy in primary care' with slides in about 30 minutes, including personal experience in a health center in the Netherlands and research of a cohort study in Germany. Practising some exercises of art therapy in about 45 minutes, then discussion and evaluation.

**Results:** After this workshop you have a global overview of the possibilities of anthroposophic art therapy and a starting experience with this therapy which can be used with sustainable success in primary care for certain groups of patients.

**Conclusions:** For some patients non-verbal therapies like art therapy open a perspective of treating mental health problems and of better coping with physical diseases. A properly educated art therapist complements the team of a primary care center in a pleasant and effective way: what about an atelier in your practice building?

## EQUIP 5

949

**PVKvalitet.se – an easy-to-use tool for quality improvement in primary care**

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**Aims:** In health care there are big gaps between science and practice that affects the quality of patient care. Clinical procedures regarding diagnosis, treatment and follow up of many common diseases differ from evidence based guidelines. To improve this, the critical starting point is the practitioners' awareness of their own habits in the treatment and follow up of their patients. For this purpose the Swedish Association of General Practice has defined a tool consisting of quality indicators for a number of common diseases in primary care.

**Material and methods:** At the workshop different tools for quality improvement will be discussed. The Swedish quality indicators will be introduced together with an easy method to use them. Participants will try to use some of the indicators and also practice the methodology for developing similar indicators suitable for the context (country) in which they will be used. Finally, a digital quality register based on the indicators, pvkvalitet.se, will be demonstrated. This system gives users immediate feedback benchmarked against recognized standards and other practitioners for each indicator.

**Results:** These quality indicators can be applied to both acute and chronic diseases. Examples of indicators for chronic diseases like heart failure or COPD and infectious diseases like tonsillitis and LUTS are included. Each indicator consists of a short background, aims based on national guidelines, and suggested standards.

**Conclusions:** At this workshop participants will learn how to use a simple tool for quality improvement. This tool can improve diagnosis, treatment and follow up of many common diseases in primary care.

## Education in FM/GP 12

355

**Early clinical exposure in primary care – an experience from slovenia**

*Petek-Ster M, Švab I, Kersnik J, Petek D, Klemenc -Ketiš Z, Kopčavar Guček N*

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**Aims and background:** Early clinical exposure (ECE) helps medical students to develop appropriate attitudes towards their learning and future medical practice. Many medical schools practice ECE in the first two years of the undergraduate course. New curriculum at the Medical School of Ljubljana, Slovenia in academic year 2009/2010 introduced ECE for the first year medical students. Our aim is to present the outline of the curricula and discuss on the experiences with the colleagues from other countries.

**Materials and methods:** With ECE we want to achieve several aims: providing students with knowledge on medical psychology teach them how to communicate with healthy people and patients, present them the rules for communication within a small group and help them to understand that good doctor-patients relationship is crucial for the successful treatment. The curriculum consists of theoretical part (lectures from medical psychology) and practical part (communication in a small group using prepared vignettes, interview with nursing home residents and observation of general practitioners' work during their 1-day practice attachment). The training of communication skills is supervised and assessed using students feedback. At the end of the course students assessed the programme.

**Results:** Students evaluated the curriculum as very valuable at the beginning of their learning. The practical part of the programme, in which they had contact with real patients, was highly appreciated.

**Conclusions:** The acquisition of knowledge regarding communication skills by medical students may be optimized when the training is given together with extensive supervised patients contact. ECE help medical students develop appropriate attitudes for their future professional carrier.

## Public health issues 2

464

**Treating the social gradient: what is the role of General Practice?**

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This workshop is part of the evolving concept, 'Less, More, Why and How', with representatives from the Nordic Risk Group and UK collaborators.

**Aims and background:** Numerous studies have confirmed

the presence of a social gradient in health. Addressing Health Inequalities (HI) has become a priority for many European countries, with a Marmot review of the social determinants and the health divide across Europe planned. Nevertheless HI persist and in some instances have become worse. Despite being championed as a key tool to address HI the role of General Practice is vague. This workshop aims to share expertise from European countries on how General Practice can more effectively help to tackle the social gradient.

**Method:** PH and IH will start the workshop with a broad overview of the development of HI from a fringe subject in the 1970s to a mainstream political concern today. Key demographics will be touched upon, while strategies, resources and recent policy developments pertinent to General Practice will be highlighted. AKJ, GR and LG will reflect on efforts in Norway, looking at health disparities in Oslo and governmental strategies. Audience members will be asked to reflect on what health inequalities mean to them, and how they see the role of General Practice in their own countries in tackling the social gradient. **Objectives/Results:** Reflect on what health inequalities mean to participants Highlight current controversies arising from the Marmot Review and 'The Spirit Level', and how these may relate to the doctors role Should it be a requirement for all doctors to address health inequalities, or just those who are motivated? How can GPs be better empowered to tackle health inequalities during their day to day work? How can the 'magic' of general practice be preserved whilst treating a population?

**Impact/Conclusions:** Participants will obtain a deeper understanding of the dilemmas in tackling the social gradient, and the role that General Practice might play. It is hoped that these themes will help shape future practice, research and education in what is an increasingly prominent European policy concern.

## WWPWF 2

998

### Dealing with Family Violence: from action to research and reverse?

*Pas L, Alonso -Fernandez C, Kenkre J,  
Hegarty K, Bacchus L*

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**Aims:** Our Special Interest Group and workshop aim to gather researchers and primary care professionals from over the world to exchange and develop evidence based practice how to deal with intimate partner violence.

**Material and methods:** This interactive workshop will provide an overview of exemplary projects around the world, discuss their applications in other countries and draw conclusions for a research strategy on family violence in primary care.

**Results:** Experiences from all continents and priorities for future work. Leo Pas

Lessons from Spanish Experiences . M Carmen Fernandez Alonso

Welsh examples. Joyce Kenkre

Training experiences. Lorraine Bacchus

50 min Debate on Research Framework proposal.

**Conclusions:** Longitudinal cohort studies after disclosure of

violence seem to be a feasible approach to collect comparative data across countries.

A members website is available to share specific country based proposals and materials.

Specific institutes will contribute to further protocol development by sharing and supporting standardised process and outcome measures.

### 1. Detection and support for Family Violence among Flemish GP's - Cornelis E, Pas L, Hillemans K.

**Background:** A randomized controlled trial on case management for family violence (FV) has started in Flanders. General practitioners (GP) receive a leaflet offering links to recommendations and flow charts to deal with partner violence, child abuse and elderly abuse; group training is suggested and individualised web based support is offered.

**Methodology:** A structured postal enquiry on psychosocial problems was sent with the leaflet to make a baseline measurement. GP accessing the website can answer a limited set of questions to access support. Randomizing is performed after answering the postal enquiry or first accessing the web.

**Results:** At abstract submission 74 GP have answered the postal enquiry; 62 GP accessed the website directly, with no major differences between the groups. One third of respondents are female practitioners and working in solo practices; 75% never received any specific training about FV, while 33% had no training on psychosocial problems. On the contrary 93% met cases of family violence last 6 months: 85% identified at least one case of partner violence, 27% child abuse and equally so elderly abuse. Most frequently associated are relational problems (65%). Half of the victims consulted for certification of battering (46%); vague complaints accounted for one third, while 19% indicated abdominal pain and 17% repeated trauma. All respondents indicate dealing with FV is an important task. Most feel very little prepared to deal with FV. Certification and recognizing signs are felt less problematic (3,3 on 5 point likert scale) than questioning, exploring problems and referral ( 2,5). Defining a safety plan and informing patients about their rights is considered most difficult. About half of GP deal with family violence themselves, while one third take advice of other services; on third refer to police or justice and one third to mental health services. However 5% indicate not to have taken any action. Mainly telephonic advice is taken (20%); patient folders were used in 18%. About one on ten used the recommendation published in November 2010.

**Conclusions:** Respondents show a clear selection bias for gender and group practices; GP mostly identify FV, but almost no specific training is indicated; the majority does not take advice. Reasons for detection are as published in other studies. The aims of our randomized controlled study are increasing detection, assessment and collaborative care through training and support. Standardized questionnaires, referrals and met problems will document comparison groups.

### 2. Implementation of the detection and attention service to gender violence in primary care of the health service of castilla y leon(spain) assessment at 3 years – Fernandez-Alonso MC

**Aims:** To implement a detection and support services female victims of gender violence (IPV) in Primary Care (PC) and to evaluate the process of implementation.

**Material and methods:** Design stages and preparation of the services were evaluated, including training of professionals, elaboration of the action protocol, piloting and service implementation.

Targeted population of the intervention: women over 14 years who visit PC for any reason.

Type of intervention: mass screening to every woman over 14 who visits PC.

Method: Through specific questions in the course of a clinical interview.

Development phases:

1. Analysis of situation and opinion study to professionals and victims
2. Training: design and development of a training Program in IPV for doctors, nurses, social workers, midwives, paediatricians, emergency and mental health professionals
3. Elaboration and approval of the protocol
4. Piloting
5. Implantation of the service in 246 health care centres and development of it
6. Evaluation

**Results:** Studies were performed to estimate prevalence of IPV, professionals' and victims' opinion prior to the start of the process. 6091 Professionals had received some kind of training between 2006 and 2010; most of them were PC professionals with clear predominance of women (doctors and nurses). Piloting of service was done in 2007 occurred in 22 PC Centres. Implementation was extended from 2008 till March 2011 to 246 health care Centres. Screened : 138.555 women (12,4% of the total) New cases detected: 2.288 (1,6 % of the respondents) . In Health Centers that had some training in IPV the screening was slightly higher (688.613;13,9 %) as well as the Detection rate : 2,6 %. Population quotas for professional trainers in DV : Screening 15.401 women ( 12,2%); but new cases detected were higher (8,13 % of de respondents).

**Conclusions:** The implementation of a screening and care program for IPV is a complex process requiring prior training of professionals, prevision of resources and systematic analysis of the results. Although screening has significantly improved from the baseline, cases detected in these two years are less than expected in relation to known studies. This result suggests us to review the used screening tool. Another interesting result is the direct relationship between level of training of professionals and detection of new cases

### 3. Routine enquiry for domestic abuse in Wales: implications for practice and policy – Kenkre J.

**Aims:** To highlight the results and recommendations of a research project conducted for the Welsh Government on routine enquiry during the antenatal period and consequences for practice and policy development.

**Material and methods:** In 2009 a four phase study was conducted to define the number of disclosures made during routine enquiry for domestic abuse, the impact this had on those who had disclosed and on the health care professionals.

**Results:** In 2009, there were 31,746 births in Wales and there were 322 disclosures by women of domestic abuse. The number of disclosures varied by Health Board by between 0.2 -6.25%. However, the level of enquiry varied by Health Board by between 24% - 65%. If extrapolated the potential disclosures could have been between 556-1529. The Health Board with the lowest level of enquiry had the highest level of homicides due to domestic abuse. This was included with other findings in the report to the Welsh Government .

**Conclusions:** The Welsh Government have positively and actively responded to the report on routine enquiry for domestic abuse. It is important to follow through following the conduct of a research project to ensure that any relevant findings are fed into practice and policy change.

### VdGM 5 - symposium

988

### Vasco da Gama Movement: general meeting.

*Streit S, Poppelier A, Pettigrew L, Chovarda L, Moszumanska M*

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**Aims:** Young and future GPs who participate at the WONCA Europe Conference have the possibility to meet each other and get in touch with the Vasco da Gama Movement.

**Material and Methods:** Vasco da Gama Movement is the organisation for young and future GPs. We will present ourselves, provide informations about our activities and present our network.

**Results:** Every participant of this workshop will understand who we are, what we do and why it's worth to be connected on a European level.

**Conclusions:** Providing a network for young and future GPs ensures motivation for General Practice and helps each country finding young and motivated persons who will take care for Family Medicine in the future.

### Health promotion and disease prevention 6

936

### EURACT WORKSHOP: do we MOTIVATE our patients as we should?

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**Aims:** To demonstrate and discuss the role of motivational skills, encouraging the participants to include this approach in preventive activities in their everyday practice work. Motivate workshop tries to address a European perspective ,a fundamental and key aspect : how to improve implementing and teaching about motivational skills among health and social professionals. The reason for this approach is based on a different aspects of knowledge: 1.About 50% of preventable mortality and morbidity is due to risk behaviours and lifestyle impact on health ( i.e. smoking, at-risk drinking, poor diet and lack of exercise) [McGinnis and Foege, 1993]. 2.In spite of this knowledge, very poor efforts on motivational skills are address on training programmes for health professionals and social workers. 3. This results in models of delivery services on health and social care, where professionals have very poor tradition in being confident enough to promote changes on lifestyle.

**Material and methods:** The workshop will be based on results of the European MOTIVATE project. 1. Nena Kopčavar Guček: The theoretical basis on motivation-20 min( lecture) 2. Marko Kolšek: Video session- an analysis of the taped examples (small group work)-40 min 3. Mateja Bulc: Role play by participants-30 min Discussion: What is your own experience of using motivational skills in your everyday practice? (30 min)

**Results:** Based on the experience and knowledge of the



participants the role of motivational skills will be underpinned.

**Conclusions:** Although a very well established and effective technique, by the active role of the participants in the video analysis, group work and role play, the participants will refresh the skills in motivational techniques and implement them in their teaching and practice activities.

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## EURACT 5

975

**Hot topics in gp-education: exchange of ideas and the role of euract in promoting the primary care view in medical education.**

*Kersnik J, Carelli F, Hellemann I, Bulc M, Petek-Ster M*

Slovenia , Italy, Austria

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**Aims:** To explore how primary care approach is taught in BME, ST and CPD in European countries.

**Material and methods:** EURACT Educational agenda core competences, Primary Care Management, Person-centred Care, Specific Problem Solving Skills, Comprehensive Approach, Community Orientation and Holistic Approach will be used as key words. Short sample presentations, small group work, discussion and summary will be used to provide an overview.

**Results:** An overview of educational activities in the field of teaching primary care. Early clinical exposure, practice attachment, field work, problem solving, seminar work and teaching art in medicine will be presented and discussed as methods to achieve teaching goals. A concept of community based training for undergraduate medical students in their practice based 5th - 6th year, goals of the one-to-one teaching in the GP-setting and differences to the traditional clinical practical experience in (university) hospitals will be presented. Group work will provide a forum for the exchange of the ideas, which methods and topics are essential and unique contribution for family medicine in learning process.

**Conclusions:** Will be based on the outcomes of discussions and should answer what is a unique contribution of family medicine and how EURACT can act as an agent in teaching future doctors.

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## Philosophy and ethics 3

474

**Challenges to our professional attitudes: the ethics of inequality in health care due to factors outside of primary care**

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**Background:** Equity in health is the absence of systematic and potentially avoidable differences in health status across population groups. It is an important health system outcome and is usually listed as a top priority for health care by professionals and politicians alike. This is also true for the discipline of General Practice / Family Medicine: in key publications and public statements, the discipline is presented as a service prerequisite or even the only service which guarantees equity in health care access for every citizen. However, there are factors other than disparities in the provision of primary care that influence equity in health care: social conditions, living conditions, working conditions, health policy, primary care coverage by health insurance, availability

of primary care services or affordability of primary care services. Based on these considerations, equity in health was not included as a practical dimension in the "European Primary Care Monitor", an instrument published in 2010. Family physicians usually have very little chance and power to influence or change these factors which affect equity for health. As a consequence, their professional attitude is challenged by the awareness of these factors or of citizens in need of help or by patients seeking health care.

**Method:** Four to five speakers from different countries with experience in disparities in health care will present their countries' situation. In particular, ways of how to react and potential solutions to this professional challenge by the respective workforce of family physicians will be presented.

**Outcome:** The presentations will be discussed with the audience and the symposium/workshop will conclude with the summary of factors influencing equality in health care outside of primary care and with a list of possible reactions of family physicians towards such a situation.

acquired tools in their family practices.

**Conclusion:** The participants of this workshop are given ways to practice and transfer their newly acquired skills to their residents as well as to other employees working at the family practice.

## Sickness certification

751

### Sick leave certifications for short lasting illness –how do GP's decide?

Melbye H., Halvorsen PA, Fleten N, Godycki-Ćwirko M, Gabbay M

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Sunday, September 9<sup>th</sup> 08.30-10.00

## Education in FM/GP 13

735

### The art of teaching and management at the workplace learning environment of family medicine

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**Introduction and aims:** The training of family medicine residents mainly takes place at the family practice office. Here, they learn family practice from working with and assimilating the artistry of master general practitioners. The master general practitioner has several roles in the workplace learning environment of the family practice: he serves as the residents teacher as well as the leader of the family practice. This means that he is caught in the middle of the dilemma between quality management of care and quality management of teaching and learning. The general practitioner needs certain specific tools to be able to perform both roles simultaneously. The aim of this workshop is to learn and practice some of these tools.

**Method:** After a short introduction about the different roles of teachers of family medicine, the participants of the workshop rotate through mini-workshops, learning and practicing specific tools needed for performing the different roles in the workplace learning environment. The topics of the workshops: - Teaching clinical reasoning skills at the workplace learning environment: the SNAPPS-, the One Minute Preceptor- and the Aunt Minnie method. - Situational leadership and delegation of activities at the workplace learning environment: leaders should adapt their style to the residents style of development, based on how ready and willing the resident is to perform required tasks. - Coaching for results: re-thinking the 'what' and 'how'.

**Results:** After this workshop the participants: - have insights in the dilemma between quality management of care and of teaching & learning. - have learned and practiced some tools needed for the different roles at the workplace learning environment. - go home with ideas to implement the newly

**Background and aims.** There is large variability in sick leave certification rates across Europe. Guidelines for issuing of sick leave notes have been implemented in some countries and are under consideration in others. However, determinants of GPs' decisions to issue sick leave notes are poorly understood. With a main focus on short lasting illness, we aim to present pertinent research and learn from the audience what support GPs might find helpful in their initial decisions on sick leave certifications.

**Materials and methods.** Participants are invited to take part in an onsite survey regarding decisions on sick leave notes based on clinical vignettes. Subsequently we present studies of sick leave certification for acute airway diseases in Poland and Norway, and qualitative research from UK based on consultations where sick leave was discussed. We will also present the background to, and findings of, the recent NICE guidance on reducing periods of sickness absence through Primary Care and employer interventions. Data from the onsite survey will be analysed and fed back to the audience. A general discussion concludes the session.

**Results:** Among working patients presenting with acute cough, 75 % and 56% were advised to stay off work in Poland and Norway respectively. The proportion of sick leave notes issued for more than one week was 36% in Poland vs. 6% in Norway. A follow up study based on clinical vignettes indicated that these findings might reflect differences in clinical judgment rather than different case mix. Patterns of within country variability indicated that GPs may be influenced by digit preferences when issuing sick leave notes. Our UK research provides a taxonomy of negotiation in consultations, risk factors for long-term absence and information about GP attitudes to sickness absence and certification.

**Conclusion:** Issuing sick leave notes are complex decisions. We expect participants (including faculty) to get deeper insight into determinants of sick leave certifications.

## Quality improvement 1

491

### Telephone based health coaching to support patient decision making – a multinational study and workshop

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**Aims and background:** The aims of this workshop are to: (i) present our findings and learning experience in establishing a telephone based health coaching service that supports patient decision making for chronic and preference sensitive conditions (PSC); (ii) hold a discussion forum for GPs on the value of integrating such a programme into primary care. PSCs are conditions for which a number of different evidence based options exist. Therefore, decisions about management of these conditions should reflect patients' personal values and preferences. We propose that health coaching programmes, which take an unbiased whole person approach, are one way in which doctors can ensure that their patients make informed decisions about their healthcare. We have implemented health coaching initiatives in the US, Europe and Australia. In the workshop we will show the impact these initiatives have had on patient satisfaction, healthcare utilisation and costs in different countries.

**Materials and methods:** A telephone based coaching programme was designed to support patients with chronic diseases such as cardiac conditions, respiratory disease, diabetes and hypertension. Our lead researcher from the US will open the workshop session with the findings of our original American study. We will then discuss our results and learning experiences in the UK and Spain, including the implementation challenges and outcomes. The second half of the workshop will open the discussion to the attendees to debate how such a programme might be implemented, and the challenges of integrating it into primary care.

**Results:** We will present results on patients' experience and satisfaction, as well as on costs and utilisation of emergency and in-patient admissions. The latter results are obtained from randomised control trials.

**Conclusions:** As the need to curb healthcare costs increases, so does the importance of having the patient at the heart of the decision making process. In the US we have demonstrated that these two principles are not mutually exclusive. The workshop hopes to show that the same can be achieved in other areas of the world regardless of the different healthcare settings.

## Musculoskeletal problems

87

### Low back pain: what can we do in our surgery?

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**Introduction:** Low back pain (LBP) is, after respiratory infections, the most frequent cause of consultation in primary

health care. Multidisciplinary and multinational evidence-based Guidelines for the prevention and treatment of acute and chronic LBP were issued by an European project launched by the European Commission (COST B13 Action). In Spain and other countries, multidisciplinary national Working Groups adapted COST B13 guidelines to their own setting. As recommended by those COST B13 guidelines, the prevention and treatment of chronic LBP should be multidisciplinary and include exercise and health education focusing on active management. Since 1995 we have run more than 60 Back-School Workshops in National and Regional Spanish Conferences. We will show you our results. GOALS: 1. Family doctors (FD) should acquaint with COST B13 LBP guidelines 2. FD should learn the possibilities of prescribing therapeutical exercises (TE) and postural hygiene (PH) to their patients with LBP. 3. FD should acquaint with the abilities to help the patient 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 FM will have a facilitator. Role-play followed by group discussion of LBP tackling in daily consultation. All TE and PH recommended for the patient will be performed by FD supervised by their facilitator. FD are recommended to wear sport clothes. KEY MESSAGE: Stay active

## WWPWF 3

993

### Resilience and doctors' wellbeing

*Howe A, Roy R, Taylor C, Thurlow C, Watson J*

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**Aims:** To assist participants to recognise and intervene in situations where doctors' mental health is at risk.

**Material and methods:** 1. Doctor's health. This session will outline some of the facts around doctors' health and recognising problems in oneself and others. It will also explore coping mechanisms and summarise the evidence for effective use of education as a stress preventer at individual and clinic / organisational level. It is the first of three sessions, utilising a keynote by Prof Howe then discussion. 2. Resilience and leadership in family medicine. Developing professionalism is a core expectation of modern health professional education. For medicine, this requires defining, learning and assessing "set of values, behaviours and relationships that underpins the trust the public has in doctors", which then need to be maintained and further developed throughout a clinician's working lifetime. Doctors have to sustain hard work, high levels of demand and responsibility, ever changing circumstances and increasing public expectations for care, while living up to the standards required of all doctors. Coping with these demands requires stamina, health, appropriate knowledge and skills, and the ability to respond positively to challenging experiences: a concept relatively little utilised in medical education literature called resilience. This session will summarise the existing evidence on resilience and how it can be developed and sustained (based on a recent article by Howe et. al). It will also look at cultural and gender differences in resilience, and how it can be developed in medical training. The discussion will focus on how we can identify and develop resilience in ourselves and others.

**Method:** Keynote then discussion with commentary from Drs. Taylor, Thurlow and Watson 3. Becoming ourselves. Early career doctors are often acutely aware of the stressors on doctors, and the difficulties of negotiating a work life balance, particularly because they often have less control over their working environments and because of life-stages around establishing practice alongside family commitments. This makes the challenges outlined in sessions 1 and 2 particularly visible in the first 5 years of working practice. This session will be led through case studies from Dr. Thurlow and others on work relating to career formation, and what key factors can assist younger doctors to stay healthy and be resilient.

**Results:** 27%+ UK doctors show significant stress, with 7% lifetime prevalence of substance misuse, and doctors have a higher suicide rate than the general population, and significantly higher than other professions such as lawyers. The causes are often unexplained, but sources of stress for doctors include the nature of the work, highly competitive environments, and difficulties in relationships with colleagues.

Sunday, September 11<sup>th</sup> 10.20-11.50

## Education in FM/GP 14

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### Continuous medical education related to drug therapy for older patients with multimorbidity in primary health care

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This workshop aims to critically discuss a first draft for a concept for continuous medical education for family physicians related to drug therapy for older patient with multimorbidity with a particular focus on educational/learning contents and program evaluation. The concept is based on the results of a needs assessment among family physicians and includes four major learning contents 1) drug/patient safety 2) health literacy 3) communication/ data transmission at the intersection from ambulatory to in-patient and in-patient to ambulatory care and 4) evidence-based guidelines. Workshop objectives: 1) Critically discuss the four major themes identified in the needs assessment and evaluate their relevance for primary health care practice. 2) Critically discuss typical case scenarios (vignettes) for continuous medical education purposes that seek to represent each of the afore-mentioned major themes 3) Identify access to and availability of evidence-based guidelines. Critically discuss the 'state of affairs' in primary health care-based research. 4) Critically discuss how to evaluate a continuous medical education program related to drug therapy for older patients with multimorbidity. Explore and identify relevant process and output as well as outcome measures. 5) Identify common research and continuous medical education interests as well as opportunities of collaborations with the aim to advance everyday-life based evidence and patient care.

## Rural medicine 2

752

### Planning sustainable rural health services: using Canadian maternity services as a case study

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**Aims and Background:** Rural and remote communities across Canada and internationally have seen a precipitous decline in services during the past decade due to regionalization of services and challenges in recruiting and retaining providers. This has led to a growing acceptance of women being evacuated from their communities prior to the onset of labour as a reasonable health service delivery solution despite the psycho-social stress this causes. There is also emerging data on compromised Maternal and Newborn outcomes based on distance to services for rural parturient women. This workshop will consider key dimensions of rural maternity services planning to meet the needs of rural

residents.

**Material and methods:** This workshop will focus on the following key components of a comprehensive and effective health services planning process: (1) identifying need based on population, isolation and vulnerability; (2) Linking the level of need with sustainable services based on health service modeling; (3) Understanding the role of general practitioners with enhanced skills in rural communities. Each workshop component will be informed by emerging data from our 5-year program of research on Rural Maternity Care.

**Results:** By the end of the workshop we anticipate that participants will have considered the conceptual issues relating a sustainable level of services and population need through a maternity care services lens. Service modeling will be contextualized within the way health services are organized within a given jurisdiction, the way professionals are trained and societal expectations.

**Conclusions:** Rural health services planning from a multidimensional perspective is essential to sustain rural health services and thus provide optimal health outcomes for rural residents. The case of maternity care provides an optimal example for showing how this can be done.

## Quality improvement 2

866

**Experiences from the Baltic sea region - pay-for-performance indicators and quality of primary health care services**

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After several decades of Semashko system of health care, intensive reforms in primary health care (PHC) have been introduced in Estonia, Latvia, Lithuania, Poland and also in some Regions of Russia. PHC in Belarus has been in transition since the late 1990s. All these countries had centralised health care system with predominant hospital care. Movement towards PHC-oriented health care has changed the systems during last twenty years. Currently, payment schemes and quality measurement tools are lively discussed. To address gaps in the quality of services in primary health care (PHC) an Expert Group of the Northern Dimension Partnership in Public Health and Social Wellbeing (NDPHS PHC EG) initiated a project ImPrim with a general objective to promote high quality PHC services in Baltic Sea Region (BSR) to increase cost efficiency of public health care systems. Actors in the project ImPrim have collected information concerning pay-for-performance - systems in the region, and health care systems of some BSR- countries are ready to introduce new quality indicators and improve PHC with pay-for performance models. Critical voices are also to be heard concerning pay-for performance systems. Are the available methods leading to a more technical understanding of family doctors work? Are used indicators an intervention to the work? Are they too powerful in their influence on the daily work? Is it possible at all to measure the central characteristics of family doctors work, as comprehensiveness, patient centeredness, holism and continuity of care? In this workshop, issues concerning the use of quality indicators, their positive and negative effects and consequences, will be discussed. Experiences from different countries and PHC - systems will be shared. As a final result of the workshop ideas for better, valid and more reliable quality and pay-for-performance - systems will be

developed to be used in the future.

## Cross-cultural medicine/Gender issues

3

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**Low health literacy, a common problem: tools for gps to improve patient information and health education**

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**Aims:** The Dutch population is increasingly divers, 10% has a non-western background. Almost half of them experiences misunderstandings with their GPs. Not only migrants face difficulties with communication. In the Netherlands an estimated 1,5 million people are semi- illiterate. Even more people lack the necessary skills to read and understand basic health information (low health literacy). Dutch institutions collaborate in the production of materials to be used by GPs in their daily practice. The materials aim to facilitate communication with migrants in the doctor's office and to increase health literacy among migrants and semi-illiterates. Aims workshop -To raise awareness on the implications of low health literacy -To experience the importance of communication through role play -To learn to recognise the level of literacy of your patient -To use/test materials developed by the Dutch College, Pharos and other institutions in the Netherlands Organization of the workshop: -Introduction -Short presentation on health literacy in the Netherlands and the collaborative approach in the production of health education materials -Working groups, role plays and distribution of materials (like visual aids) - Discussion and exchange of experiences

**Results:** -The participants get information on different approaches to improve health literacy in the Netherlands and an evaluation of their effectiveness. -The participants get tools to improve communication in case of a language barrier or an illiterate patient.

**Conclusions:** This workshop will raise awareness on the problems of low health literacy. It aims to improve the knowledge and skills of the participants to provide adequate information and health education to their patients with low health literacy or language difficulties

Friday, September 9<sup>th</sup> 08.30-10.00**Public health issues I**

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**Do polish family doctors prescribe generic drugs? – results of a questionnaire-based study***Lewek P, Lewek J, Kardas P*

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**Aims and background:** Generic drugs are cheaper equivalents of brand-name drugs. In order to introduce generic drug to the market the drug must undergo a bioequivalence study instead of expensive clinical trials. This difference although economically justified is a reason of questions risen by scientists all over the world. So far no evidence-based studies confirmed inferiority of generic drugs to brand-name products. In our study we wanted to check opinions and beliefs of family doctors on generic drugs.

**Material and methods:** This was a questionnaire-based study. Especially prepared questionnaire was distributed among randomly chosen primary care doctors of lodzkie province in Poland. Doctors were asked about their opinions on inferiority of generic drugs, beliefs related to generic drugs definition, their effectiveness, whether these drugs are advised by doctors and what are their experience with their use.

**Results:** The study was conducted on total number of 170 primary care doctors, aged 47 +/- 12.5, of which 70% were women. Out of all participants 96% knew the term "generic drug". Although 53.5% of doctors claimed that generic drugs are equal to brand-name drugs, 38.8% of them declared that generics were worse. The main sources of information for doctors about generic drugs were pharmaceutical companies representatives (77.6%), internet (73.5%) and medical conferences (50.0%). Two fifth of doctors (41.2%) did not know the term "generic substitution".

**Conclusions:** Our study reveals that although there is no evidence-based data on generics inferiority, almost 40% of studied doctors declare that generic drugs are worse than brand-name drugs. The reason for that may be the information received from brand-name companies' representatives, which may be seriously biased. In order to change that, an unbiased information about generic drugs should be disseminated using internet and medical conferences as a source of objective information for family doctors.

429

**Development of a practical tool to measure the impact of publications on the society***Dorner T, Niederkrotenthaler T, Maier M*

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**Background:** The use of bibliography-based indicators alone to assess scientific performance is increasingly criticised in

the literature. A societal impact factor that complements the scientific impact factor of a publication would contribute to a more adequate evaluation of performance, particularly in the applied sciences. Especially fields such as health services research and general practice, for which a translation of science into societal action and everyday practice is fundamental, would greatly profit from such a tool. Currently there is no tool available to quantify the societal impact of publications.

**Methods and main results:** Focus groups with 24 scientists working in the scientific fields general and family medicine, social medicine, environmental health, epidemiology, history of medicine and medical psychology at the Medical University of Vienna were conducted to develop a tool for assessing the societal impact of a publication. The tool developed consists of three quantitative dimensions of assessment, that is (1) the aim of a publication, (2) the efforts of the authors to translate their research results into societal action, and, if translation is accomplished, (3) the level in terms of the size of the geographical area where the translation was accomplished, its status (preliminary versus permanent) and the target group of the translation (individuals, subgroup of the population, total population). Five international experts evaluated this proposed tool with a standardized questionnaire. The expert evaluation of the comprehensibility, the relevance and the practicability of the proposed tool yielded acceptable results. The median time needed for assessment of a publication and calculation of its societal impact factor was between 20 and 40 minutes.

**Conclusions:** The proposed tool constitutes a novel and feasible approach to quickly measure the societal impact factor of research publications. Limitations include the currently limited experience with the tool, in particular in fields other than health sciences, an inherent subjectivity in the assessment and the fact that the measurement does not lend itself to computerized calculation.

540

**Randomized controlled trials in primary care worldwide: analysis of quantity, themes and quality***Kortekaas M, Van De Pol A, Meijer A, de Wit N*

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**Aim and background:** Research in the area of primary care medicine has developed substantially over time. The goal of our bibliographic analysis was to assess the number of primary care randomized controlled trials (RCTs) that have been conducted in the past. Numbers, themes and impact factors of published RCTs of the last 20 years were analyzed.

**Material and method:** Published primary care RCTs were identified through a systematic search in the Medline database (1990-2010). Pubmed limits were used to restrict search results to RCTs only. We included articles using predefined inclusion criteria, and focused on therapeutic trials only. Publication date, country of origin, study design, journal, and impact factor were recorded. We categorized research themes of studies using international classification of primary care (ICPC) codes.

**Results:** The amount of RCTs published each year has increased roughly from 50 in 1991 to 170 in 2009. The United States (30%), the United Kingdom (25%) and the Netherlands (10%) conducted the majority of studies. Most publications appeared in the BMJ (8%; impact factor 13.7), the British Journal of General Practice (4%; impact factor 2.4), and Family Practice (2%, impact factor 1.5). The mean

impact factor of publications was variable, ranging from approximately 4 to 7 over the years. Most RCTs assessed interventions in the area of psychiatric (code P; approximately 29%), circulatory (code K; 13%), general (code A; 13%), endocrinologic/metabolic (code T; 11%), and respiratory (code R; 10%) medicine. In the ICPC categories P, K and T chronic conditions are generally most prevalent (e.g. depression, hypertension, diabetes).

**Conclusions:** The body of primary care therapeutic research has increased steadily over the past 20 years. Most studies were performed in the areas of psychiatric, circulatory, endocrinologic/metabolic, and respiratory medicine. Future analyses should assess whether current research themes match the need for evidence in every-day primary care practice.

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### To drive or not to drive: the challenge for GP's in assessing and managing driving competence in their patients

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**Aims and background:** A general practitioners (GPs) role includes assessing patients fitness to drive and supporting the medically unfit to either relinquish their licences or undergo further specialised assessment. Screening patients driving competence is difficult. This study was designed to investigate how GPs recognise, assess and manage and patients fitness to drive, and their attitudes and beliefs about how the GP role can be supported.

**Methods:** Mixed methods, including a literature review, qualitative phase (face-to-face interviews and a focus group) and a survey circulated to GPs in metropolitan and rural Victoria.

**Results:** Seven GPs from metropolitan Victoria were interviewed and nine GPs from rural Victoria participated in a focus group. These results plus information from the literature review informed the development of a questionnaire. The questionnaire was mailed to 1028 GPs in metropolitan and rural Victoria. Twenty five percent completed and returned the survey and of these, 62% agreed that GPs should be the initial assessors of patients fitness to drive. Most agreed they were not particularly pro-active in conducting assessments and there was usually a specific trigger, such as a form from a driving licensing authority, an incident such as a driving accident, or contact by a concerned family member. Almost half (45%) were not comfortable conducting these assessments and accessing specialist assistance such as occupational therapists was often difficult, especially in rural areas. The majority felt that further education in this field would be beneficial.

**Conclusion:** GPs are a logical first point of call to assess patients medical capacity to drive. However, they lack confidence in their skills, and find certain aspects of assessment and management difficult. Further training and specialist support is required to assist GPs to successfully contribute to the challenge of assessing at-risk drivers.

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### Doctors' professional satisfaction

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**Aims:** Analysis of a primary health care doctors' satisfaction.

**Material and methods:** The authors have conducted a survey poll among polish GPs, which referred to their opinion about their social and professional position, their professional perspectives and the level of their professional position.

**Results:** During the last 10 years there has been a noticeable drop in the numbers of doctors who have declared reaching a professional satisfaction as a primary health care doctors.

**Conclusions:** Action must be taken in organizational, legal and financial field to ensure constant improvement of GPs' professional situation.

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### The evidence of use the Ottawa Ankle Rules in children

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**Introduction:** Acute ankle injury, a common musculoskeletal injury, can cause ankle sprains. The Ottawa ankle rules (OAR) are a set of guidelines to help the physician as to decision making regarding need for x-ray examination after ankle and mid-foot injury. The physical examination findings for the OAR are as follows: tenderness over the lateral malleoli, inability to bear weight, and tenderness over the posterior distal tibia and fibula. A patient that exhibits one of these characteristics is deemed in need of x-ray examination.

**Aim:** Review the evidence whether the OAR could be applied to children.

**Methods:** Research in Pubmed and Evidence Based Medicine sites of articles published between 2001 and 2009, written in English, with the keywords "Ottawa ankle rules" and "children". The evidence level was applied by SORT (Strength of Recommendation Taxonomy) Scale of the American Academy of Family Physicians.

**Results:** The Ottawa ankle rules was developed to assist decision making in adults, but studies reported on the accuracy of the instrument in children. Although the rules are designed for high sensitivity, their specificity is highly variable, ranging from 10 to 79%. The OAR are a valid decision making tool to determine the need for radiography in children with ankle and midfoot injuries. Their implementation, with negative results, leads to a reduction in radiography rate without leading to an increase in missed fractures.

**Conclusion:** The OAR are meant to be applied to children who have the ability to walk prior to their injury, and can localize pain with verbal communication. (SORT A).

## Infectious diseases I

150

### Systematic review of the protective efficacy and safety of hepatitis. A vaccines

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**Aim:** In many part of the world hepatitis A represents a significant cause of morbidity and socio-economic loss. Whilst hepatitis A vaccines have the potential to prevent disease, the degree of protection afforded against clinical endpoints and within different populations remains uncertain. The aim of this review was to evaluate the protective efficacy and safety of hepatitis A vaccination.

**Method:** The Cochrane Hepato-Biliary Group control trials register, Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, Science Citation Index Expanded and China National Knowledge Infrastructure were searched up to September 2010. Randomised control trials comparing HAV vaccine with placebo, control vaccines or no intervention were selected.

**Results:** 18 Randomised control trials including 1,450,415 participants met the inclusion criteria. Meta-analysis demonstrated that despite the included trials being of variable methodological quality there is convincing evidence that compared to placebo, other vaccines or no vaccination both inactivated and live attenuated HAV vaccines has good clinical protective efficacy (random effects RR = 0.09 95% CI [0.05 - 0.16], fixed effects RR = 0.08 95% CI [0.06 - 0.11]). The review also found that inactive HAV vaccine results in the significant production of sero-protective anti-HAV Ig-G and a comparable risk of adverse events. There was insufficient data to draw conclusions on sero-protection and adverse events for the live attenuated HAV vaccines.

**Conclusion:** This is the first systematic review conducted under Cochrane methodology that explores the clinical protective efficacy of inactivated and live attenuated HAV vaccines. Clinical protective efficacy is an important outcome to consider as it provides direct evidence of the beneficial effect of the HAV vaccine. The findings of this review have important implications for primary care including current policy surrounding HAV vaccination.

351

### Kissing disease... on the cheek - chronic parotiditis due to Epstein Barr virus

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**Introduction:** Chronic parotiditis due to EBV (Epstein Barr virus) always require a life-long follow-up to detect possible (mainly neoplastic) complications. Family doctors, who can follow each patient all life long, are in a privileged position for doing so and should be quite aware of these situations. Case Description A.M.S.A., a 13-year-old boy with history of

infectious mononucleosis at the age of 2, was admitted to the hospital because of a painful slow growing lump in the facial and submandibular left region in the absence of fever and worsened by chewing, with 4 other similar episodes in the following 5 months. He was put on fluid therapy, amoxicillin and clavulanic acid at each episode with rapid remission of symptoms, remaining asymptomatic between episodes. Salivary glands ultrasounds (during and between crises) showed an increased volume of both parotid glands and, on the side of the lump, a pattern compatible with an inflammatory process and several submandibular adenopathies. Blood tests revealed mild normocytic normochromic anemia (compatible with chronic disease), leukocytosis with neutrophilia and positive inflammatory markers during crises. Lymphocytic immunophenotyping (between crises) showed a mild predominance of T CD8+ lymphocytes, as in chronic EBV infections. Serologically, there was a typical pattern of an ancient infection. The lack of some more specific blood tests (determination of serum antibodies anti-early antigens and polymerase chain-reaction for EBV viral DNA) and parotid biopsy makes it impossible to conclude about the chronicity of this infection.

**Conclusion:** Although the diagnostic investigation is not yet accomplished, the most probable etiology for this situation remains EBV chronic infection. Both the rarity of this condition and the associated risk of developing a secondary neoplasia make it essential for family doctors to develop a high clinical suspicion not only for a correct diagnosis but also for an adequate follow-up.

386

### What recent advances in vaccinology have taught us about how vaccines work, the impact of innovative science on clinical practice

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**Introduction/Background:** Of any single medical intervention, vaccination has had the greatest impact on public health. The support of primary healthcare professionals has been and will continue to be critical to the success of vaccination programs. In order to further increase the impact of vaccination, novel vaccines will need to be developed.

**Methodology:** Over the past 20 years, there has been a tremendous evolution in our understanding of how the immune system protects us from pathogen invasion. This new knowledge has led to the development of innovative technologies aiming to enable the creation of new vaccines targeted at more complex diseases (e.g TB, HIV, Malaria) or at protecting vulnerable populations (e.g immunocompromised patients). These include technologies such as live vectors, DNA and adjuvants.

**Results:** To date the development of adjuvants has been the most successful with novel adjuvants included in several commercially available vaccines as well as in numerous candidate vaccines under late stage development. Recent data have demonstrated that when adjuvants are incorporated into vaccines, they can improve the adaptive immune responses (antibodies and cell mediated immunity) against vaccine antigens by stimulating the innate immune system. Direct comparisons between some vaccines containing novel adjuvants and traditional vaccine formulations have shown increased injection site reactogenicity (mainly local redness and soreness) for the novel adjuvanted vaccines which may be explained by the



mechanism of action described previously.

**Conclusion:** As novel adjuvanted vaccines become more prevalent in primary care practice, understanding the science behind vaccination and adjuvants will become increasingly important to practitioners.

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**Grey literature – a neglected source of information?! - A literature review on antibiotic resistance in primary health care in Austria**

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**Introduction and aims:** The increasing prevalence of antibiotic resistance is a major public health problem. More than 90% of antibiotics are being prescribed to non-hospitalized patients but the information concerning antibiotic resistance pattern is mainly based on samples from hospitalized patients. In the context of the EU-project called APRES (the appropriateness of prescribing antibiotic in primary health care in Europe with respect to antibiotic resistance) our aim was to gain detailed information about antibiotic resistance at the primary care sector in Austria by searching in both the scientific and the grey literature.

**Material and method:** A systematic review of the scientific literature, published between 2000 and 2010 in German and English with data from Austria was conducted by a search of PubMed and Medline databases. For the grey literature a search with Google was performed and manual searches of cited references and web links were conducted. Inclusion and exclusion criteria were defined.

**Results:** From the scientific literature only three articles could be retrieved. In contrast, the search of grey literature yielded a much higher number and variety of relevant publications. For example, the Austrian resistance report, published in German annually, contains data of several large microbiology laboratories from ambulatory care. Additionally, resistance reports of large laboratories, expert consensus documents and recommendations were found.

**Conclusions:** Comprehensive and relevant Antibiotic resistance data of different pathogens, isolated from samples at the community level in Austria, are available mainly in the grey literature. Only a small part of them is published in peer-reviewed journals. The reason for this publication pattern is unknown; however, the grey literature might be a valuable source of information as well in other fields or countries.

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**Outpatient antibiotic consumption in Poland in years 2004-2008. Is there any improvement?**

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**Aims and Background:** Majority of antibiotics in ambulatory care are prescribed by primary care physicians and mainly for respiratory tract infections (RTI). Analysis of antimicrobials

consumption reflects to a high degree physicians preferences of certain groups of antibiotics in the management of RTIs. Additionally monitoring of antimicrobial consumption over years may be applied to assess the effects of educational campaigns aiming at more judicious antibiotic use. The aim of the study was to analyze outpatient antibiotic consumption in Poland in years 2004-2008.

**Material and methods:** Reimbursement data on antibiotic sales in years 2004-2008 were obtained from the National Health Fund in Poland. Prescription data were analysed using the WHO defined daily dose (DDD) methodology. Data were expressed in DDD per 1,000 persons covered by the insurance and day (DID). All pharmaceuticals were classified by groups of anatomic therapeutic chemical (ATC) classification.

**Results:** Overall outpatient antibiotic prescribing rose from 17.88 DID in 2004 to 20.6 DO in 2008. In 2008 the most frequently prescribed groups of antibiotics were 1) penicillins (J01 C), 2) tetracyclines (J01 A), and 3) macrolides with lincosamides (J01 F). Between years 2004 and 2008 the proportion of prescribed penicillins decreased from 52.6% to 50.2%, and tetracyclines from 16.1% to 12.2% while the proportion of prescribed macrolides increased from 12.8% to 17.3%. The outpatient antibiotic consumption was characterized by very low narrow spectrum penicillin use (phenoxymethylpenicillin 0.14 DID in 2008), and very high use of wide spectrum penicillins (amoxicillin 5.71 DID) and combination of penicillins with beta-lactamase inhibitors (amoxicillin clavulanate-4.45 DID).

**Conclusions:** Outpatient antibiotic consumption in Poland does not show tendency to decline. The results suggest discrepancy between Polish guidelines on management of respiratory infections and physicians choices (minimal use of narrow-spectrum penicillins, tendency towards increased utilization of macrolides instead of beta-lactams).

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**Intervention to increase influenza vaccination among primary care health-care workers**

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**Aims:** To increase influenza vaccination among primary care health-care workers (HCW) during the season 2010-11

**Materials and methods:** Intervention study with 3 groups: control group (A), intervention of persons trained in vaccines of the centre (B) and intervention of experts from medical societies (C). The intervention was undertaken in randomly chosen Primary Care centres in Catalonia belonging to the "Institut Catala de la Salut". A preparatory course was given in September-October 2010 with slides prepared by vaccine experts. At the end of the vaccination campaign a self-administered questionnaire was completed by all the HCW. The variables collected were: centre with medical residents (yes/no), age, gender, type of worker, vaccination of the current season (yes /no) and in past seasons (yes /no). A descriptive analysis was performed, and also a multivariate analysis with logistic regression, being the dependent variable vaccination of the current season.

**Results:** A total of 816 questionnaires from 33 centres were collected (271 group A, 229 group B, 316 group C). 76.9% of the HCW were women and mean age was 46.1 years +/-10. The 35.5% were family doctors (FD), 38.4% were nurses,

8.1% paediatricians and 9.5% paediatric nurses (PN). The overall uptake of influenza vaccination was 54.3% (group A: 53.1%; group B: 53.4%; group C: 55.9%) (p=NS). The best results were in PN (65.3%). Only 6% of the workers were vaccinated for the first time. In the multivariate analysis not belonging to a centre with medical residents (OR:1.54;p=0.005), age (OR:1.02;p=0.039) and being PN with regard to FD (OR:1.75;p=0.046) were the significant variables.

**Conclusions:** Classic methods like the experts opinion or having people trained in vaccination at the centres may not increase the uptake of influenza vaccination among HCW. We have to change the strategies used in order to improve influenza vaccination rates and to study how some behaviours could be changed.

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**Impact the subclinic hypothyroidism in a basic primary health care area**

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**Objective:** Assess the prevalence of subclinical hypothyroidism in the general population of an urban health area and describe the main clinical and socio-demographic characteristics of patients with subclinical hypothyroidism.

**Method:** A retrospective descriptive observational study. We reviewed case histories from June 2005 to July 2007. We analysed the following variables: General data: age and gender. Family background: thyroid pathology and other diseases. Personal background: cardiovascular, lung, autoimmunity, gynaeco-obstetric alterations, diabetes, hypertension (HT), dyslipidaemia, obesity, alterations of psychiatric haematologic pathology, other laboratory data: TSH levels, free T4 levels, presence of antiperoxidase antibodies, total and partial cholesterol levels.

**Results:** The prevalence of our sample of 100 patients enrolled in 8 months was 3.8% with a mean of 4.2%  $\pm$  3 SD in the general population aged over 14 years, of whom 79 were women and 21 were men. The mean age was 46  $\pm$  19 years; 12% was associated with type 2 diabetes mellitus, 23% with HT and 40% with dyslipidaemia. Being overweight or obese revealed a mean of 23% for HT in 6.92-/+ 2.29(U/ml), while the mean free T4 was 1.16 -/+ 0.16 ng/ml

**Conclusions:** The prevalence of subclinical hypothyroidism was 3.8%. It was more frequent in women at a mean age of 46 years. Gynaecologic alterations were reported for 17% of females. The incidence of cardiovascular risk factors was relatively high: 13% with DM, 23% with HBP, 40% with dyslipidaemia and 23% with obesity. No common guideline exists for the management of subclinical hypothyroidism. Therefore, the implementation and promotion of action guidelines are required in Primary Health Care.

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**Training Courses Impact on The Implementation of Ambulatory Blood Pressure Monitoring**

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**Aims:** Ambulatory blood pressure monitoring (ABPM) predicts cardiovascular risk and identifies white-coat hypertension, masked hypertension, efficacy of treatment and it also illustrates on the circadian cycle of hypertensive patients. In our primary care center we introduced a nurse-drove ABPM training program in order to implement its use. We have evaluated this program on ABPM after 2-years follow-up period.

**Material and methods:** Twenty eight professionals (14 nurses and 14 doctors) were involved in the study carried out in a primary care center of the metropolitan area of

**Cardiovascular diseases I**

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**Cardiovascular disease prevalence in individuals with inflammatory arthritis, diabetes and osteoarthritis: a comparative cross-sectional study in primary care**

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**Aims:** There is accumulating evidence for an increased cardiovascular burden in inflammatory arthritis (as in diabetes, an established cardiovascular risk factor), but data from primary care records are sparse. We sought to determine the prevalence rate of non-fatal cardiovascular disease (CVD) in inflammatory arthritis, diabetes mellitus and osteoarthritis (non-systemic inflammatory comparator) compared to controls, in a primary care based cohort.

**Material and method:** Data on CVD morbidity (ICPC codes K75 (myocardial infarction), K89 (transient ischemic attack), and/or K90 (stroke/cerebrovascular accident) from patients with inflammatory arthritis (n=1,518), diabetes mellitus (n=11,959), osteoarthritis (n=4,040) and controls (n=158,439) were used from the Netherlands Information Network of General Practice (LINH), a large nationally representative primary care based cohort. Data were analyzed using multi-level logistic regression analyses and corrected for age, gender, hypercholesterolemia and hypertension.

**Results:** CVD prevalence rates were significantly higher in inflammatory arthritis, diabetes mellitus and osteoarthritis compared with controls. These results attenuated - especially in diabetes mellitus - but remained statistically significant after adjustment for age, gender, hypertension and hypercholesterolemia for inflammatory arthritis (OR=1.5) and diabetes mellitus (OR=1.3). The association between osteoarthritis and CVD reversed after adjustment (OR=0.8).

**Conclusions:** These results confirm an increased CVD burden in inflammatory arthritis to levels resembling diabetes mellitus. By contrast, lack of excess CVD in osteoarthritis further suggests that the systemic inflammatory load is critical to the CVD burden in inflammatory arthritis.

Barcelona. This center attends 34,289 inhabitants. The training project was driven by two nurses that held four educative sessions: 2 on cardiovascular risk and 2 on ABPM. Two hundred and four individuals were recruited for this study. Enrolled subjects had at least one of the following characteristics: 1) a documented diagnosis of Essential Hypertension (EP); 2) attendance to primary health care clinic with suspected EP; 3) treatment with antihypertensive drugs. ABPM was performed following guidelines of MAPAPRES (<http://www.cardiorisc.com>).

**Results:** In our set of 204 individuals, 83 were non dippers and 70 dippers. 41 subjects were riser and 10 extremely dippers. Before educational intervention on ABPM we registered 2.5 orders per month and this number increased at 8.9 and 15.5 orders per month following the 1st and 2nd ABPM specific educational intervention, respectively. Health professionals are grouped in Health Basic Units (HBU) composed by a nurse and a doctor. We had 14 HBU and we registered the assistance to the educational sessions for each HBU. Attendants that represented 50 % of HBU ordered 173 ABPM (85%) whereas non-attendants ordered 31 (15%).

**Conclusions:** Following a 1st and 2nd training sessions we found a 3.6- and a 6-fold increase in the number of orders of ABPM. Thus, effective implementation of ABPM needs specific training on hypertension and its management.

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#### Prevalence of arterial calcification and related risk factors. A multicenter population-based study

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**Aims:** Some studies have shown that ankle-brachial-index has a J pattern relation with cardiovascular morbidity and mortality, with shifts in 0,9 (lower values identifying peripheral arteriopathy) and 1,4 (upper values meaning arterial calcification) ankle-brachial-index values. The aim of this study is to know the prevalence of arterial calcification and its related factors among general population aged>49.

**Methods:** Cross-over study including 3786 people>49 years old, randomly selected from 28 centres.

**Results:** 235 subjects had ankle-brachial  $\geq 1.4$ , prevalence 6.2% (95%CI 5.6-7.0), two fold more among men than women. Patients with arterial calcification were older, had more previous cardiovascular events, diabetes and obesity, and were less able to perform physical activity.

**Conclusions:** We recommend to measure ankle-brachial index at Primary Care centers to detect arterial calcification among men, diabetics, overweight or obese, those with difficult to perform physical activity, or with left ventricular hypertrophy.

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#### Ultrasound markers in subclinical atherosclerosis evaluation in patients with rheumatoid arthritis and autoimmune thyroiditis

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Rheumatoid arthritis (RA) is often combined with autoimmune thyroiditis (AIT), which occurs in 1% - 20% of RA patients. Hypothyreosis, both clinical and subclinical, as a form of thyroid gland dysfunction seen in AIT, is the known risk factor for the atherosclerosis and cardio-vascular diseases development.

**Aim:** To determine, evaluate and compare the ultrasound subclinical atherosclerosis markers (ankle-brachial index (ABI), intima-media thickness (IMT) in RA patients with and without AIT.

**Material and methods:** ABI and IMT has been determined in three groups of RA patients: 20 patients without AIT and thyroid gland dysfunction (group I, average age 37,7 +/- 3,7 years, average disease duration 5,2 +/- 0,9 years, 17 women, 3 men); 20 patients with RA and AIT but without thyroid gland dysfunction (group II, average age 33,25 +/- 2,58 years, average disease duration 5,1 +/- 0,84 years, 16 women, 4 men); 15 patients with RA and AIT with hypothyroidism (group III, average age 36,7 +/- 3,8 years, average disease duration 4,86 +/- 0,79 years, 13 women and 3 men). 20 healthy persons of the same age and gender served as a control group. All patients and persons from control group underwent the general physical and rheumatological examination, standard thyroid gland ultrasound examination and laboratory tests for the thyroid dysfunction detection; ultrasound examination of both side carotid arteries with IMT measurement (IMT  $\geq 1,2$ mm was considered as a atherosclerotic plaque - AP) and ABI calculation (ABI  $\leq 0,9$  was considered as a marker of atherosclerosis).

**Results:** RA patients demonstrated different IMT: 0,80 +/- 0,04mm (I group); 0,88 +/- 0,011mm (II group), 0,97 +/- 0,012 mm (III group), AP was detected in 10% of III group patients. In the control group average IMT was 0,62 +/- 0,10mm (difference is significant between control group and each patients group, and between I and III patients group,  $P < 0,05$ ). In I group mean ABI was 0,93 +/- 0,32, in II group - 0,91 +/- 0,20, in III group - 0,88 +/- 0,10,  $P < 0,05$ ; in control group mean ABI was 1,2 +/- 0,08,  $P < 0,05$ .

**Conclusions:** RA patients have increased IMT and AP number, decreased ABI comparing to the age -matched healthy people, which is a evidence of the subclinical atherosclerosis presence. The comorbidity with the AIT and hypothyroidism can accelerate and worsen atherosclerotic process in RA patients.

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**Particular cases of supraventricular origin arrhythmias**

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**Aim and Background:** Management of patients with arrhythmological disturbances of supraventricular origin demands specific interventions in emergency prehospital settings. Successful differential diagnosis combined with the proper therapeutic approach constitutes interventions of major significance with obvious usefulness in the diseases good outcome. Aim of this study is to review the criteria for differential diagnosis of supraventricular origin tachyarrhythmias and the assessment of therapeutic options emphasising on the particularities of each patient's clinical profile.

**Material and methods:** The study of interesting cases of two male and one female patient with no previous medical history presenting with a rhythmic tachycardia of supraventricular origin with characters of sudden initiation and concomitant intense sensation of chest pain and palpitation. Methodology and criteria for differential diagnosis of supraventricular arrhythmias were assessed with findings of physical examination and 12-lead electro-cardiography. Vagomimetic maneuvers for lowering atrioventricular conduction were evaluated in conditions of constant monitoring and documentation of the cardiac pace.

**Results:** Valsalva maneuver as well as carotid sinus massage did not decelerate rhythm in two of the patients neither did they reveal fibrillating f waves so the arrhythmias were diagnosed as paroxysmal supraventricular tachycardias (possibly with a reentry mechanism). Rapid intravenous infusion of 6mg Adenosine resulted in sinus rhythm conversion. At the third patient a wide complex tachyarrhythmia was examined (aberrantly conducted) which was auto converted in sinus rhythm with evidence of ischemia.

**Conclusions:** Adequate knowledge of the differential diagnosis criteria for the evaluation of su-praventricular origin tachycardias is of vital importance for the management of the perspective patients with obvious significance to the good outcome of the disease.

**Education in FM/GP I**

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**Who goes for Family Medicine? The career choices of Polish first year medical students.**

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The career choices of medical students are of increasing concern to governments who strive to provide the right balance of medical professionals to meet the needs of the community.

**Aims:** This study was designed to give an insight into first year students' future career choices.

**Material and methods:** As part of multi-year questionnaire study, we have been surveying student career aspirations at four Polish medical universities. Participants answered several closed questions and handed in the anonymous surveys in class. Based on their answers students were divided into two subgroups: group A those who considered going into family medicine and B those who did not.

**Results:** In the studied group of 559 students (group A 95 and group B 464 students), there were 351 (62.8%) women and 208 men. Mean age was 19.7 years (SD 0.9786). There were no age or sex differences between the subgroups. The proportion of students living in big towns was bigger in group B compared with group A (39.22% vs 23.16%). The most important factor affecting career decision in both groups were perspectives for professional development. Most of students in both groups wanted to work in clinics (A 41% and B 56.9%). Students from group A more often pointed at convenient working hours as a important factor influencing their career choices. More students from group B compared with group A opted for working abroad (38.7% vs 26.32%). Reasons for going into family medicine were: professional development (17.9%), providing comprehensive and ongoing care (17.9%), low chances for other specialties (16.8%), convenient working hours (15.8%). Students from group B pointed at lack of in-hospital practice 33.19% and administrative work 26% as a disadvantages of family medicine.

**Conclusions:** 1. A large percentage of medical students (83%) did not consider family medicine as a career choice when they entered medical school. 2. Perspectives for future professional development are crucial in career choice.

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**The views of GP trainees in Ireland about minor surgical procedures in general practice***Persad S*

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**Aims:** Determine whether GP Trainees have performing minor procedures in GP Assess confidence levels in doing so or should they be required to do so Elicit fears that trainees have about performing minor procedures Identify whether trainees want formal surgical training, and in what form.

**Materials and methods:** Over 6 weeks, GP Trainees in 13 training schemes in Ireland were asked to fill out an online self devised 12 question questionnaire. Questionnaire responses were collected using an online collection and analysis tool (Survey Monkey) and were quantitatively analysed.

**Results:** 190 of 482 trainees replied. 55.9% of respondents had performed a minor procedure at some time with 69.1% of them being comfortable in doing so. Of the 44.1% who had never performed a minor procedure, 74.5% felt uncomfortable if now required to perform one. 94.1% of trainees felt that minor procedures would be important for their future practice. 97.3% of trainees felt formal surgical training would be beneficial with 67.8% wanting a GP led surgical skills course, 24% a Consultant led surgical skills course, and 8.2% a surgical rotation in hospital. Factors which trainees felt were important in deterring them from performing minor procedures in GP were risk of complications (97.3%), lack of ability (96.8%), medico-legal ramifications (92.6%), cost/time issues

(74.7%). 25.4% of all trainees surveyed felt that minor surgical procedures in hospital are associated with a better outcome.

**Conclusion:** Though over half of trainees have done minor procedures so far, most would like to be performing them in the future. Most trainees want formal surgical training, with a GP led surgical skills course being the preferred method. Risk of complications, lack of ability, medico-legal risk and cost/time constraints were influential deterrents to performing minor procedures in general practice. A quarter of trainees felt that minor procedures performed in hospital were associated with a better outcome.

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**New project proposal: Reaching Across Continents: educating medical students and future Family Doctors (FD) and General Practitioners (GP) about the medical needs of homeless families: early lessons from homeless women of Boston (Massachusetts, USA) and their doctor - nurse teams**

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**Introduction:** The number of homeless families residing in shelters in the state of Massachusetts rose 32% during 2008. Our teams caring for homeless women now see more geriatric and complex medicine than previously. Reform of American health care stimulates medical educators to create community-based classrooms and multidimensional, social awareness of primary care.

**Aims:** 1.To understand the medical needs and challenges of homeless patients, starting with experiences with women in homeless shelters in Boston 2.To assess the short term effects of exposure to 'shelter medicine' upon doctors in training 3.To follow up by surveying how GPs have integrated training in 'shelter medicine' into their long term practices years hence 4.To explore with European GP collaborators how this 'shelter medicine' teaching model could be transferred to European cities.

**Materials /Methods:** Our model has affected the training of many medical and nursing students, residents, and physicians, helping them to better treat underserved patients. Immediate, post hoc reflective writing pieces demonstrate the valuable insights gained by GP trainees. A qualitative analysis of these trainee evaluations is an initial goal. An e-mail survey of past participants will be conducted spring, 2011; this survey will follow participants' satisfaction, career choices, and community service long term.

**Results:** Preliminary qualitative results reveal significant initial impact on medical trainees. Such results have been presented at the Society of General Internal Medicine and the American Public Health Association. A related geriatric program will be discussed at the Society of Teachers in Family Medicine in New Orleans, spring 2011

**Conclusion:** Our training medical students and new GPs in caring for this special population-seen on early evaluation-seems fruitful. We plan on further evaluations as our trainees progress in their careers; we hope to share this model with our European colleagues; we look forward to learning from European GPs about approaches to underserved communities.

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**Appraising erosion of empathy among medical students during Medical School: a Brazilian study**

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**Aims:** Medical technical development gets along with decreasing level of humanism in the doctor - patient relationship. To foster human values, to develop interpersonal skills and, particularly, empathy are essential issues for proper doctoring. While the holistic approach of medical practice grows up, empathy becomes a primordial skill for improving doctor-patient relationship. However, several studies point out that during the undergraduate training medical students suffer what has been called erosion of empathy. In this paper we appraise the empathy level of Brazilian medical students set in different years of medical school, and we stress some topics involved in this process.

**Material and method:** The JSPE- Jefferson Scale of Physician Empathy has been developed by researchers from Jefferson Medical College to appraise empathy level among doctors. This scale is integrated by 20 topics, and the appraisal comes through a 7-point Likert Scale response. In this paper, the S version (for students) was applied to medical students at different years of medical school in the Universidade 9 de Julho (Uninove), São Paulo, Brazil. An interactive discussion was set for new data.

**Results:** Data coming from JSPE show low empathy scores among students from the last year of medical school. Analyzing data from the interactive discussion with a qualitative approach stress some topics which might be involved in empathy erosion as lacking role model for students, increasing technical contents in teaching, hostile environment for practicing, and emphasis in evidence based medicine.

**Conclusion:** Identifying empathy erosion along the undergraduate curriculum years and pointing out possible issues involved in this process may allow to construct new educational strategies for solving this emerging problem.

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**Adult vaccination for healthy ageing: an online training course for healthcare workers**

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*\*Michel J-P on behalf of the European Union Geriatric Medicine Society (EUGMS).*

**Aims and Background:** A large increase in preventable infectious diseases in older adults represents a major barrier to healthy ageing. It is associated with significant morbidity and mortality, and the problem is exacerbated by the ever-increasing number of ageing /aged people. This is highlighted by the fact that many more adults die from vaccine-preventable diseases than children. The key to addressing this issue is to increase the awareness of healthcare workers

of the health benefits that can be obtained through adult vaccination programs. Success will require the medical community to actively champion such initiatives. Thus, the aim of this presentation is to provide details of a CME accredited online training course which looks at infectious diseases associated with significant morbidity in older people.

**Materials and methods:** The online training course is divided into 4 parts which discuss the burden of preventable infectious diseases in older people, looks at why older adults are more susceptible (immunosenescence and other interacting factors), outlines the rationale and benefits for adult vaccination and provides an overview of European guidelines. This is followed by a 10 question quiz which is accredited by the European Accreditation Council on CME (EACCME).

**Results:** By completing the online course users can expect to better understand the burden that infectious diseases place upon older individuals living in the community. They will also learn why older people are at risk and, importantly, how vaccination is one simple preventive act with a major impact on public health.

**Conclusions:** European geriatric societies recognise the benefits and importance of life-long immunisation for improving the health status of older people. This will only be achieved with the full support of knowledgeable healthcare personnel who actively champion adult vaccination programs. EUGMS Website or

<https://login.e-campus.nl/v9r5/portal/custom/eugms>

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#### Continuing medical education in the republic of Srpska (Bosnia and Herzegovina)

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**Aim:** The aim of this paper was to describe the structure, organization and features of continuing medical education (CME) in the Republic of Srpska (RS), one of 2 entities of Bosnia and Herzegovina.

**Method and material:** Descriptive analysis of data collected over the past ten years. The data used in this study include the official information of state health institutions and non-governmental organizations in the RS.

**Results:** Total number of health care professionals in RS is about 8.500 (2.500 medical doctors). Supervision over the implementation of CME is performed by Chamber of Medical Doctors of RS (Chamber). Association of medical doctors of the RS in cooperation with pharmaceutical companies-sponsors periodically provides CME events that Chamber assigned credits. Criteria for renewing a license: every 5th years, minimum 60 points, proving the presence of teaching certificates usually 1-3 points for passive participants. 1 credit corresponds to one hour of event. The Chamber was established in 2002 and until today supported 640 CME events and issued a total number of 84490 certificates. Foundation Fami supported by Ministry of health through training of trainers and preparation of internal curriculum in nine health centers in the RS allows maintaining and enhancing CME in primary health care. The curriculum is determined by using the Delphi method. These activities in addition to the positive effects for the individual have its structural importance. Without internally organized education

any health center can not meet the criteria in the accreditation process, defined by the competent institutions for accreditation.

**Conclusion:** CME structure in RS is similar to its neighboring countries in Western Balkan. Become a member state of the European Accreditation Council for Continuing Medical Education is a basic requirement for standardization programs, their quality improvement and proper evaluation, which would recognize all relevant medical associations in Europe.

#### GRIN-GRACE I

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#### Patient and clinician interpretations of antibiotic resistance: GRACE-02 a qualitative european study

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**Aims and background:** As part of the GRACE Network of Excellence a large-scale interview study was carried out to explore clinicians' and patients' beliefs about antibiotics and resistance in Europe. This paper focuses on the way in which the term antibiotic resistance is understood and to consider implications for strategies to help combat antibiotic resistance.

**Material and methods:** Qualitative, semi-structured interviews with 121 adult patients who had recently consulted a primary care clinician with symptoms of Lower Respiratory Tract Infection (LRTI), and 81 primary care clinicians in primary care networks from nine European countries. Data were subject to Framework Analysis.

**Results:** Using data extracts, we show that while clinicians' used the term antibiotic resistance in the accepted scientific sense, the majority of patients believed that antibiotic resistance arose from having or developing a 'resistant body' and the body 'getting used to' antibiotics. Less commonly, patients correctly conceptualised antibiotic resistance as a property of bacteria.

**Conclusions:** Most patients were aware of the link between responsible antibiotic use and antibiotic resistance. However, the misinterpretation of antibiotic resistance as located in the body should lead to patient-clinician discussions and public health interventions which are much clearer about the location and mechanism of antibiotic resistance. We suggest using the metaphor of 'super-bugs' in community settings to explain the transferability and societal relevance rather than focusing on individualised risk.

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**Detecting pneumonia in patients with acute cough in primary: results from the european GRACE study**

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**Aims:** To quantify the diagnostic value of history, physical examination and the added value of inflammation markers in detecting pneumonia in patients presenting with acute cough in primary care.

**Material and Methods:** 2820 adult patients attending their general practitioner with complaints of cough <28 days, were recruited from 12 European countries. Patient's history and physical examination were recorded on the day of presentation. C-reactive protein (CRP) and pro-calcitonin (PCT) were drawn from venous blood samples and chest radiographs were taken within the next three days. Pneumonia was diagnosed by chest X-ray. With multivariable logistic regression a diagnostic model was developed for diagnosing or ruling out pneumonia.

**Results:** 140 patients had radiographic pneumonia (5%). Symptoms and signs with independent diagnostic value were: absence of runny nose, presence of breathlessness, diminished vesicular breathing and crackles on auscultation, tachycardia (pulse >100/min), and temperature >37.8°C. Combined these items showed an area under the ROC curve of 0.70 (95% confidence interval 0.65-0.75). A combination of the 2 strongest predictors (crackles and temperature >37.8, n=30) had a positive predictive value for pneumonia of 37%. Analysis of the added value of CRP and PCT is in progress; results will be available in the presentation.

**Conclusions:** Radiographic pneumonia is uncommon in adults presenting in primary care with acute cough. Brief history and physical examination can help discriminate between those at high and low risk for pneumonia.

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**Aetiology of lower respiratory tract infections in the European GRACE primary care network**

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**Objectives:** The microbial aetiology and especially the role of the newly recognised viruses are not well known in adult respiratory infections in the community. We therefore investigated the role of *S. pneumoniae* (S.pn), *Haemophilus spp* (H.spp) and viral aetiology in lower respiratory tract infections (LRTI) at the GPs office in the European GRACE primary care network (PCN) using culture and real-time nucleic acid amplification tests (NAATs) for the detection of bacterial and viral pathogens, respectively.

**Materials and methods:** From October 2007 through April 2010, a total of 3102 adult patients with LRTI in the

community were enrolled in a 3 year prospective study in 16 PCNs in 12 European countries; a follow up visit was planned after 4 weeks. Nasopharyngeal flocked swabs (NPFS) (COPAN) and, if possible, sputa for culture of S.pn and H.spp, were collected and sent to the local laboratory to be frozen until transport to the central lab in Antwerp for nucleic acid (NA) extraction by the NucliSens EasyMAG (bioMérieux). Aliquots of NA extracts were sent to the collaborating LUMC and UMC-U for detection of influenza viruses (INF) A/B, parainfluenzavirus (PIV)1-4, human rhinoviruses (HRV), human metapneumovirus (hMPV), respiratory syncytial virus (RSV), adenovirus (HAdV), Bocavirus (BOCA), coronaviruses (HCoV) OC43, NL-63, 229E, polyomaviruses KI and WU by in-house mono and multiplex real-time PCR.

**Results:** In 3082/3102 (99.5%) of the patients a NPFS could be collected. An aetiological agent was detected in 77% of the patients: S.pn and H.spp in 9.1% and 14.9% respectively; a respiratory virus in 53.1%: HRV 18.6%, INF 11.1%, HCoV 7.4%, hMPV 4.4%, RSV 4.4%, polyomaviruses 2.8%, PIV 2.5%, HAdV 1.4%, BOCA 0.5%. Polyomaviruses WU and KI were detected in 40 and 22 specimens respectively. For most viruses no significant differences were observed in prevalence between the 3 winter periods; however, differences between PCN's were observed. In <5% of patients persistence of respiratory virus was seen in the follow up visit.

**Conclusions:** This is the largest aetiological study on LRTI in primary care ever done: in nearly 80% of the patients a microbial aetiology could be documented, of whom over 50% presented with a viral infection: HRV's account for the majority followed by influenza- and HCoV's but also RSV and hMPV are prevalent in adults. Use of real-time NAATs results in a significant improvement of the aetiological yield in diagnosing LRTI.

**Cross-cultural medicine/ Gender issues**

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**Dealing with depression: does gender make a difference?**

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**Introduction and aim:** Over 6% of the Dutch population is currently diagnosed with depression, one in every five inhabitants will be affected by this disease during his or her lifetime. It is a disease that affects not only those individuals but the society as a whole through immense economic costs. Depression occurs two times more often in females than in males. Regardless of this fact, research on depression is mainly focused on the effectivity of medication but hardly looks at the possible gender related differences regarding the subject. The aim of this study is to determine if gender plays a role in how individuals perceive depression and the treatment of the disease. The aim is to use these outcomes to better explain gender-specific occurrence differences as well as to make recommendations for the improvement of the diagnosis and treatment of depression.

**Material and method:** A qualitative study using semi-structural in-depth interviews with patients from two general

practitioner practices.

**Results:** The total research population included 19 persons between 19 and 72 years; 8 men and 11 women. The majority of men describes their depression as a motivation problem, whereas with the majority of the women the negative ideas are the main characteristic. The possible future prognosis concerning depressive complaints also tends to be more positive in men than in women.

**Conclusions:** There is a gender-specific difference in the description of depressive impairments. These results coincide with the differences between men and women related to their socialization and views about their personal influence on this disease. Current DSM-IV criteria are more targeted on the "female" than the "male" depression. More attention to gender-specific differences and fitting in of sex-specific characteristics in diagnostic criteria for depression can and will contribute to better care.

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### Research and assessment of intimate partner violence in primary care

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**Background and aim:** The physical, psychological and social implications of intimate partner violence (IPV) are overwhelming. Nevertheless, Greece lacks GP-provided data regarding women experiencing IPV by male partners. The aim of this study was to estimate the prevalence, types and frequency of IPV.

**Material and method:** 219 women were selected randomly among the health users of the Health Centre of Chrisoupolis (average age 46.4 years, range 18-83). IPV was assessed using the Women's Experience with Battering (WEB) scale, questions from the Behavioral Risk Factor Surveillance System (BRFSS) and the Conflict Tactics Scale (CTS). Furthermore, the alcohol consumption and possible misuse were investigated with the use of the Alcohol Use Disorders Identification Test (AUDIT-10). Psychiatric conditions and medications, and drug use were explored for both women and their partners.

**Results:** 65 (29.7%) women experienced IPV at some point in their current relationship; 45 of them were married. According to the WEB and BRFSS, 25.6% experienced psychological battering, 15.5% physical violence and 10.0% sexual violence. The proportion of women reporting recurrent and very frequent IPV ranged from 2.3% (physical injury) to 17.4% (negotiation). Negotiation and psychological aggression were more frequent in women with lower educational level ( $r=-0.33$ ,  $p=0.004$  and  $r=-0.40$ ,  $p=0.006$  respectively). Notably, 19.6% of the women felt ashamed of their partner's actions and 16.9% acknowledged that his actions caused problems in their relationship. Women misusing alcohol were 7.73 times more probable to report IPV (95%CI = 1.52-39.38).

**Conclusions:** The findings of this study confirmed a high prevalence of IPV and suggest that GPs should be aware and prepared to identify abuse in primary health care settings.

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### Qualitative study on lifestyle modification and drug administration among Thai Muslim patients with diabetes mellitus type 2 during Ramadan

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**Aims:** To understand the lifestyle modification and the drug administration among Thai Muslim patients with diabetes mellitus type 2 during Ramadan. **Material and Methods:** Use the in-depth semi-structured interview. In-depth interviews were conducted during September - November 2007. Two researchers coded and did the content analysis independently before making the conclusion together.

**Results:** Total 20 Muslim patients in Nakhonnayok was interviewed age 39-77 years. Most patients didn't prepare before fasting in Ramadan month. All intended to fast every years but only one could fast strictly throughout the whole holy month each year. The patients assessed their health while fasting whether they were able to hold on for the whole month. The obstacle was acute illness rather than their DM most common. They didn't think that DM had significant impact on their fasting. On the contrary, they thought that fasting in Ramadan helped them control their blood sugar. Only few thought that multiple DM drugs, especially insulin effected on their fasting. Physician was the important factor which impacted on their fasting. However, none of patients had any suggestion from their physicians for using drugs and adjusting lifestyle modification during Ramadan. Moreover, some were inhibited to fast or to take ritual fruit for this time. Patients adjusted drugs and dose by themselves. Many had hypoglycemic-like symptoms but not severe.

**Conclusion:** Thai Muslim patients with DM type II adjusted lifestyles and drugs by themselves during Ramadan without any physician's suggestion. Many had mild hypoglycemic-like symptoms. Physicians working in Muslim community should be cultural-sensitive to ask and advice medical intervention which proper to Muslim life during Ramadan month.

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### A collaborative project on research and intervention: intestinal parasitosis among school-age children in eastern Tigray; North Ethiopia.

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**Aims:** As a first part of a collaborative project on research and intervention, we aimed to assess the prevalence and distribution according to environment conditions of intestinal parasitic infections (IPI) in school-aged children from North



Ethiopia.

**Material and methods:** A cross-sectional survey was carried out in 12 primary schools in Tigray region, Ethiopia. Fifty children, aged six to fifteen, were randomly selected from each school. Stool specimens from them were collected and analyzed for IPI.

**Results:** From 600 children invited to participate, 583(97.2%) provided proper specimens. 303(51.9%) were female. Mean age was 11.3. Ten different species of parasites were identified. The overall prevalence of infection was 72.2% (421). By specimen, *Entamoeba Histolytica* (EH): 38.9%, *Heminealopys Nana* (HN): 21.4%, *Enterobius Vermicularis* (EV): 14.5% and *Schistosoma Mansoni* (SM): 13.4 were the predominant parasites detected. Concomitant infection (two or more parasites) was observed in 156(26.7%) cases. Proportion of infection among male (72.8%) and female (71.6%) was not statistically significant. Related to age, parasite infection was more prevalent in the age groups 10, 11 and 12. It was observed a different distribution of type of parasites according to schools: in two schools infection by EH was much higher than in the others (64% and 58%). 40% of children from another school were positive for Hookworm (HW) comprising 64.5% of the total HW positive children in the survey. 48.7% of cases with SM and 64.3% of *Ascaris Lumbricoides* were observed in schools around main city in the region and all the cases of *Strongyloides Stercoralis* were diagnosed in the rural areas. 75% of infections with *Taenia* were identified in children from the urban settings.

**Conclusions:** A high prevalence of IPIs is shown. It seems that, as distribution of specimens is different according to children's environment, prevention strategies should consider this point.

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#### Education of Croatian family physicians in the field of domestic violence

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**Aim:** Domestic violence is one of the leading public health issues in the world. Croatia, as a member of the international community, has accepted all international acts associated with this problem and has developed its own acts. Among one of them is the National strategy of protection against family violence. Presented in this strategy were inaccurate facts that doctors of family medicine aren't interested in education in areas of family medicine. In the second part of the strategy, actions supposed to reduce the amount of family violence were presented, which mostly consisted of notifying the police, guidance to social care centers and shelters. Until now there were no actions organized by the state in terms of education. Aim of this article is to present the education of Croatians doctors of family medicine in field of domestic violence.

**Material and methods:** Croatian family physicians coordination decided to start "Strengthening the part of family medicine doctors in the domestic violence issue" workshops in collaboration with the Autonomous women's house (which was the first to open shelters for women in East Europe). Length of the workshop was 5 hours.

**Results:** The first two workshops gathered 15 participants. The content of these workshops covered themes from history, law, statistical data from Croatia, health of women exposed to domestic violence, how to converse with a victim of domestic violence and how to keep medical documents on domestic

violence in order. A form on medical documentation which the spectators commented on was offered. Individual presentations as well as complete courses were rated with the highest ratings. An IT company has decided to introduce the form about the documentation of domestic violence into their software, which is used by a large quantity of family doctors.

**Conclusions:** A well organized course by family physicians and co-working practices enables a large attendance and an increase of interest for further education in the area of domestic violence. After the course, a form is written about the documentation of domestic violence which will be suggested to the Ministry of health and social welfare.

454

#### The use of chaperones in General Practice in Australia

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**Aims/Background:** The use of medical chaperones (or the presence of a third party observing) during clinical examinations, including intimate examinations, is variable. Practice varies between countries and also within them. The literature on the use of chaperones globally is limited, often confined to the secondary care setting with isolated international reports relating to general practice. The Australian literature on this topic itself is very scarce. None relate to the general practice setting where the vast majority of consultations occur. The use of chaperones is thought to be inherently different in Australia, in part due to a wide variation in clinician and public attitude (at times historic), diverse cultural influences and the unique geographical setting of general practice in Australia. Although there is some guidance for GPs in Australia on this topic, it clearly highlights that most of the relevant research has been conducted abroad and may not be applicable to Australia. This raises the question of what is appropriate and feasible in the Australian setting.

**Materials and methods:** This pilot study focused on one group - the GP educator - and explored their views on the use of chaperones in Australia by means of a purposively developed, anonymous questionnaire.

**Results:** Thematic analysis of the findings will be presented and contrasted with current known international practice.

**Conclusion:** As a way forward towards establishing best practice for Australia, it is hoped to receive commentary from an international audience and possible cross-cultural participation and feedback.

890

#### Are the General Practitioners-Family Doctors sensitive to the biopsychosocial model?

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**Background:** Thirty years ago, Engel challenged the biomedical approach, stated that patients physical symptoms and signs couldn't be separated from patients' psychological and social context. But, it seems that biomedical model of thinking and acting is still prevailing in medical schools and in

medical practice. The main aim of the study was to investigate if the GPs educated in traditional medical schools are sensitive to the biopsychosocial model in the patients care.

**Subject and methods:** Subject were general practitioners (GP) participating at In-service Vocational training (weekly organized teaching and learning) all over Croatia. Out of 127 GP, 92 (72,4%, 18 male, 74 female), voluntarily participated in this study. A data were collected under the normal conditions of the GP's everyday work. At the end of the consultation, GPs were asked to assess, marking from 0% to 100%, relative contribution of biomedical, psychological and social factors in the etiology of the problem presented by the particular patient. In the same protocol, established diagnosis (ICD-X) as well as the patient's social and demographic data was recorded. In total 1787 consultations were recorded

**Results:** In total, a relative contribution of the biomedical factors in the etiology of patients problems were 67,6%, psychological 21,6%, and social 10,8%. But, we found the differences related to the patients characteristics. A higher contribution of biomedical factors was found in male and in employed patients and psychological factors in female, unemployed and single-living patients. A higher contribution of social factors was found in unemployed, single-living patients and patients from small cities.

**Conclusion:** Croatian GP participating at In-service Vocational training are sensitive to the biopsychosocial model in the patients care.

Friday, September 9<sup>th</sup> 10.20-11.50

## Public health issues II

725

### ABC Project – European initiative to improve patient adherence to medication

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**Objectives:** Medication non-adherence is highly prevalent across all conditions, and represents a major barrier for realizing the benefits of evidence-based therapies. A major surprise has been the finding that life-threatening diseases do not, ipso facto, enforce strict execution of prescribed regimens. Despite several decades of scientific research, effective policies to address medication non-adherence are still lacking, at both national and European levels. Therefore, a number of European experts have gathered to design the ABC project, which aims to produce evidence-based policy recommendations for improving patient adherence and thus more effective use of medications by Europeans.

**Methods and Results:** The project intends to cover several crucial aspects of patient non-adherence. First, it reached a consensus on terminology and taxonomy of non-adherence, in order to enable reliable comparison of clinical trials results and effective benchmarking of adherence-enhancing interventions. The determinants of patient adherence were identified by a systematic review of the available literature, and a survey across European countries, followed by the conduct of an aptly designed experiment. Current practices of adherence management by healthcare professionals and the pharmaceutical industry were assessed, as well as educational programs in schools of medicine and pharmacy. Adherence-enhancing interventions were compared in terms of practicality, clinical- and cost-effectiveness.

**Conclusion:** The ABC Project is an innovative European initiative to produce policy recommendations on strategies to improve patient adherence to prescribed therapies. The Project's findings may help health policymakers to take right decisions in order to minimize the negative impact of non-adherence. (Funding: 7th Framework Programme of European Union)

748

### The Ecology of Medical Care in Austria -- prevalence of illness and size of contribution of primary care to overall health care services (preliminary results)

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**Introduction and aims:** The demographics of the European population with regard to age distribution and proportion of citizens with migrational background is in flux. Proper allocation of limited resources and meeting the needs of underserved populations have become increasingly

important. Providing efficient and effective health care is therefore a constant challenge. Data on the prevalence of health problems and the utilization of health care resources is vital for informed decisions. We therefore aimed to measure the one month prevalence of any health complaint and the subsequent help seeking behavior including underserved minority groups - migrant populations, elder people, and female gender.

**Methods:** A professional, CATI supported telephone survey of a sample (n=4000) of the Austrian population conducted in 5 languages.

**Results:** at the time of the conference will be based on 3000 (75% of the planned total) interviews. We already found a 66% one month prevalence of illness. Of those who report a health complaint the attending rates were respectively 66% for primary care, 11% for secondary care and 0.8% for tertiary care.

**Conclusion:** The prevalence of health complaints in the community is high and predominantly dealt with by the primary health care sector. Resource allocation, professional esteem and quality of education are inversely related. Our analysis of the data obtained should help to clarify some hitherto undocumented aspects and should provide the evidence for building a better health care infrastructure with equality of access and efficient coordination. Decision makers should pay more attention to the economic and educational situation at that level of medical care that shoulders the majority of the population's disease load. We also hope that this information can help to allocate resources strategically according to needs and cost-efficiency in health care.

809

#### The secrets of publishing primary care research in the BMJ

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**Aim:** To help researchers publish their work in the BMJ. The BMJ is the highest impact international journal (Impact factor 13.66) publishing original primary care research every week. Its declared aim is to help doctors make better decisions. In selecting papers for publication, researchers and journals have slightly different priorities. Both aim to increase knowledge to improve health. But, journals seek to communicate the best quality research to their readers and researchers seek publication increasingly, for personal and institutional esteem. Pure academic interest isn't enough for BMJ editors or most importantly for readers, who mainly comprise doctors-whether they're practicing clinical medicine, working in public health, developing and implementing health policy, or working mostly as researchers.

**Method:** This will be a presentation/dialogue with potential authors describing how researchers can increase their chances publishing their work in the BMJ? The three criteria used by the BMJ are: 1) that it is new, novel, or original. 2) That the method is appropriate and robust and, 3) that it will help doctors make better decisions. We will focus on primary care papers, the type of research, the methods used, flaws and pitfalls, geographical origin, and impact of these papers. The objective is to help researchers achieve greater publication success. We are happy to meet with authors to discuss their research and work with them towards publication. Please bring your research ideas and potential papers for discussion.

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#### How is severity of knee osteoarthritis associated with smoking?

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**Background and aim:** Several factors are responsible for osteoarthritis (OA). There are contradictory references about the association between smoking and OA, as even a protective effect of smoking for OA has been previously suggested by other studies. Given the high prevalence of smokers in Greece, there is a high interest in investigating the aforementioned association. The aim of the research was to assess the severity of knee OA in smokers and non-smokers.

**Material and method:** 199 patients aged 40 years and older (mean age = 69.40) with symptomatic knee OA were checked up by 7 GPs from different rural surgeries. The interview was performed by a web-based questionnaire and consisted of demographics, knee x-rays, which were assessed according to the Kellgren-Lawrence grading scheme, the index of severity for knee OA (Lequesne index) and WOMAC physical function subscale. Self-reported history of smoking behavior was used to calculate pack years and a dichotomic approach was also employed among the different groups (smokers, former smokers, non-smokers).

**Results:** 62.3% of the patients were non-smokers, 23.6% were smokers and 14.1% were former smokers. No significant associations were found between smoking and the radiographic assessment of OA. However, women that were either current smokers or former smokers seemed to perform better in the Lequesne index (current smokers:  $r=0.73$ ,  $p=0.006$ ; ex-smokers:  $r=0.81$ ,  $p=0.010$ ) and WOMAC scale (current smokers:  $r=0.83$   $p=0.002$ ; ex-smokers:  $r=0.94$ ,  $p=0.003$ ). In fact, women who never smoked in their lifetime were 4.36 times (95%CI=1.46-13.02) more probable to have a severe to extremely severe OA according to Lequesne index. Likewise, pack years were inversely correlated with the Lequesne index in females that were current smokers ( $r=-0.54$ ,  $p=0.047$ ).

**Conclusions:** The severity of OA and the physical disability appear to be worse in women that never smoked, even though it seems that there is no radiographically confirmed association.

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#### Polish patients' attitudes toward generic drugs – results of a questionnaire-based study

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**Aims:** Generic drugs are cheaper equivalents of brand-name drugs. In order to introduce generic drug to the market the drug must undergo a bioequivalence study instead of expensive clinical trials. This difference although economically justified is a reason of questions risen by scientists all over the world. However family doctors' clinical

practice shows that patients use generics equally to brand-names. In this study we wanted to assess the patients' opinions on generic drugs.

**Material and methods:** This was a questionnaire-based study. Especially prepared questionnaire was distributed among randomly chosen patients of primary care settings of Lodzkie province in Poland. Patients were asked about their preference of generic drugs, do they know the term generic drug, do they switch brand-name drug to generic one at pharmacy, who advises this to them.

**Results:** The study was conducted on total number of 264 outpatients, age 34 +- 16 years, of which 59.5% were women. Out of all participants only 13% knew the term generic drug. More than one third (39%) of patients admitted that their family doctor did not inform them about possibility of buying cheaper equivalent of brand-name drug in pharmacy. Half of patients admitted that generic drugs were equally effective as brand-name drugs. Most of the patients were being informed about generic drugs from their doctors (61%). More than two thirds of patients (70%) had never switched the prescribed drug to its cheaper equivalent on their own, despite the law that allows for generic substitution in Poland.

**Conclusions:** Our study reveals that awareness of generic drugs existence among Polish patients is low. Because studies show that generic drugs usage is connected with better medication adherence and better cost-effectiveness of treatment, broad promotion of generic drugs should be advised. Family doctors as a main source of knowledge about drugs should spend more time on informing patients about cheaper equivalents of brand-name drugs.

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#### Nursing leading the management and resolution of spontaneous visits in primary care

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**Introduction and aim:** A cornerstone to achieving excellent organization within the health system is effectively managing spontaneous visits which have been increasing in recent years. Our team, to respond to this phenomenon, has created the Nursing Consultation High Resolution, increasing nursing autonomy in decision-making. The aim of this study is to demonstrate nursing's resolution ability in the spontaneous visits in a primary care center and check which issues solves alone.

**Material and method:** An eight months descriptive study, where a nurse attended all adult patients who requested spontaneous visit. The study sample were all patients, without any preselection. The visits were solved by our own protocols. We consulted all clinical histories looking for the reason of visit and type of resolution, which was performed by dividing the resolution in two blocks: "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. For comparison of data was used chi-square test for qualitative variables.

**Results:** Nursing resolved 63% of total visits. The resolution increases with time and reaches to 75.7% last month of study. Nursing resolved 98% of administrative visits, 80% of wounds/burns, 72% of the toothache and between 50% and

60% gynecology, ophthalmology, internal medicine and digestive issues.

**Conclusions:** More responsibility and resolution capability of nurses produces good health and organizational results, reason why nurses are highly qualified in the management of spontaneous visit. A peculiarity of this study is that all visits are resolved in this query, which reduces patient stress by not having to wait elsewhere to be attended by different professionals, and moreover, for nurses as an active part of the process and witnessed of the ending of the visit, facilitates their learning and increases their experience, thereby increasing the resolution.

779

#### Blending practice with academics: how we teach medical students family medicine core values in their community training

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**Purpose:** Since 1988, Brazil's public health system has tried to build a national health system. In 1994, the government created the Family Health Program to help carry out that goal. However, the academic model of medical schools is mainly based in specialties and focused on providing care at hospitals. Family doctors working at the primary care centers are quite distant from medical students, who in fact have little respect for their specialty, and they don't envision family medicine as a future career. In this paper the authors relate some successful experiences to promote family medicine among medical students through a teaching model able to blend and integrate the academic family medicine core values with the clinical students training.

**Method:** In here we relate experiences coming from three different medical schools in São Paulo, Brazil, in which the family doctors practicing at the primary care centers are teachers at the medical schools as well. Jundiai Medical School (9 week clerkship program), ABC Medical School (5 week clerkship program) and UNINOVE Medical School (5 week clerkship program) introduce medical students to family practice through an innovative teaching model. Results come from the student's appraisal of these clerkship programs.

**Results:** The results are quite similar in among the three educational experiences. Students gain high respect for family medicine, since they see in practice how family doctors are able to provide comprehensive care with continuity, based on relationship with patients and on strong scientific knowledge. Students realize that family doctors practice what they teach indeed. Theory at the classroom is transformed into an attractive doctoring model. Students change their minds and consider family medicine as a possible future career.

**Conclusion:** When family doctors are at the same time teachers at medical school they could promote several strategies to attract students to family medicine.

## Infectious diseases II

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### Models of Primary Care for Responding to Pandemic Influenza

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**Aims and background:** Different models of response to pandemic influenza H1N1 were used in primary care services across New Zealand. The lower North Island of New Zealand relied upon routine primary health care services to respond to the demand for care. The city of Christchurch in the South Island developed a centralized Community Based Assessment Centre (CBAC), to provide care outside the usual primary health care structure. This research aims to understand the capacity of routine general practice to respond to the high demand for health care arising from a pandemic, and to compare the model of using routine general practice with a centralized CBAC approach.

**Methods:** We used mixed methods, incorporating focus group information from practices in different areas, survey results from, and analysis of routinely generated utilization data from general practice and from the CBAC. We developed an algorithm for identifying presentations of influenza like illness from the written clinical notes of general practitioners.

**Results:** We found large scale local variability in the level of demand for care during the H1N1 pandemic. In the lower North Island, the excess number of attendees with influenza like illness in 2009 over and above the usual winter influenza period in 2008 was 1.8% of the total population. Approximately half of practices in the lower North Island reported that they had reached the limit of their capacity to provide care, and were forced to delay non urgent appointments. Practices in Christchurch reported a much lower level of demand for care during the pandemic.

**Conclusions:** A modest increase in presentations of influenza like illness over and above the usual winter peak represented a serious challenge to routine primary health care. In a major pandemic event the decision to either a) centrally direct primary care to cease inessential services, or b) to set up a centralized assessment centre must be made at a very early stage if routine primary health care services are not to be overwhelmed. Routine primary health care services in New Zealand would have had difficulty in responding to a more severe pandemic than that experienced in 2009.

709

### Should patients with abnormal liver function tests in primary care be tested for chronic viral hepatitis: a cost minimization analysis based on a comprehensively tested cohort

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**Aim(s) and background:** Liver function tests (LFTs) are ordered in large numbers in primary care, and the Birmingham and Lambeth Liver Evaluation Testing Strategies

(BALLETS) study was set up to assess their usefulness in patients with no pre-existing or self-evident liver disease. All patients were tested for chronic viral hepatitis (CVH) thereby providing an opportunity to compare various strategies for detection of this serious treatable disease.

**Material and methods:** The BALLETS cohort was used to compare various testing strategies for CVH in patients who had received an abnormal LFT result. The aim was to inform a strategy for identification of patients with CVH. We used a cost-minimization analysis to define a base case and then calculated the incremental cost per case detected to inform a strategy that could guide testing for CVH.

**Results:** Of the 1,236 study patients with an abnormal LFT, 13 had CVH. The strategy advocated by the current guidelines (repeating the LFT with a view to testing for specific disease if it remained abnormal) was more expensive per case detected than a simple policy of testing all patients for CVH without repeating LFTs. A more selective strategy of viral testing all patients for CVH if they were born in countries where viral hepatitis was prevalent provided high efficiency with little loss of sensitivity. A notably high alanine aminotransferase (ALT) level (>2x upper limit of normal) on the initial ALT test had high predictive value, but was insensitive.

**Conclusions:** Based on this analysis and on widely accepted clinical principles, a "fast and frugal" heuristic was produced to guide GPs with respect to diagnosing cases of CVH in asymptomatic patients with abnormal LFTs. It recommends testing all patients where a clear clinical indication of infection is present (e.g. evidence of intravenous drug use), followed by testing all patients who originated from countries where viral hepatitis is prevalent, and finally testing those who have a notably raised ALT level (>2x upper limit of normal). Patients not picked up by this efficient algorithm had a risk of CVH that is lower than the general population.

803

### Under-reporting of HIV in rural South Africa.

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**Introduction and aims:** Death notification forms (DNFs) provide essential demographic and underlying cause of death information that guides health care planning and provision. There is concern that HIV is under-reported on DNFs. The aim of this study was to assess the level of under-reporting of HIV in our department.

**Material and methods:** Retrospective review of DNFs produced by doctors working in the department of family medicine at a government hospital in South Africa. 120 case files and accompanying DNFs were reviewed over a period of 6 months from May to October 2009.

**Results:** 81 of 120 (68%) cases had proven HIV infection as an underlying cause of death. Of these, only 34 (42%) were attributed to HIV on the DNF. On 7 DNFs (9%) the word HIV was used while on 27 DNFs (33%) a euphemism was used i.e. Retroviral disease or immune suppression. Of the 81 cases with proven HIV, 47 (58%) had no record of HIV on the DNF.

**Conclusions:** This review demonstrates that HIV is significantly under-reported in our department. One of the main factors contributing to this is concern over the confidentiality of the DNF. HIV remains a cultural taboo and doctors are concerned about causing stigmatization or

disqualifying life insurance claims if confidentiality is breached. Our findings are consistent with previous studies and confirm that work still needs to be done to improve the accuracy and ensure confidentiality of the DNF if it is to retain its value as a tool in public health research and planning. (NB This poster was presented at 2010 RCGP Conference in Harrogate)

869

### Optimizing the diagnostic work-up of acute uncomplicated urinary tract infections

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**Introduction and aim:** Most diagnostic tests for acute uncomplicated urinary tract infections (UTIs) have been studied in so-called single-test evaluations, in which the result of a single test is compared with the urine culture. In real-life work-up, however, clinicians use several tests, which carry overlapping diagnostic information. We determined the added value of relevant tests from patient history and laboratory investigations by taking into account their mutual dependencies.

**Material and methods:** Otherwise healthy, non-pregnant women who contacted their GP with painful and/or frequent micturition underwent history questions, dipstick tests, microscopic examination of urinary sediment, and dipslide (= semi-quantitative culture method suitable for general practice). Urine samples were refrigerated and used to make a urine culture within 8h after urine collection by personnel unaware of the test results. The result of the urine culture was the dichotomous dependent variable, the other test results were candidate diagnostic indicators. Multiple imputations by chained equations was used to impute missing values. Logistic regression analysis using bootstrapped backward selection was performed to derive a parsimonious diagnostic index. We used parameterwise shrinkage to correct for over-optimism.

**Results:** We included 196 women. We have successfully imputed missing values and are currently finalizing the analysis. Preliminary results suggest that asking four simple questions discriminates between a positive and negative urine culture in most patients. Urinary sediment and dipslide seem to add little.

**Conclusion:** If our findings are confirmed by external validation, our multivariable diagnostic rule will allow more efficient diagnosis of UTIs by importantly reducing the number of tests needed.

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### Hepatitis B seropositivity in periodic health examination in Family Medicine Clinic of Ondokuzmayis University-Turkey

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**Aims:** We aimed to determine the seroprevalence of hepatitis B in the cases of periodic health examination.

**Methods:** The study was carried in Ondokuzmayis University Medical School, Department of Family Medicine in 2005-

2006. Venous blood samples of the healthy periodic health examination cases accepted the study were obtained. HBsAg, antiHBs and anti HBc IgG were serologically tested. Medical and family histories were recorded. The data were evaluated in number and percentage.

**Results:** Of the 135 cases, 73 (54.07%) were male, 62 (45.92%) were female. Of the cases 56 (41.48%) were 15-49 years old and 79 (58.51%) were over 50. Mean age was 50.47(15-79). Three (2.22%) patients were HBsAg (+). One case had already known he was carrier and he had operation, transfusion, family history. Two cases (1.48%) were newly diagnosed with negative medical history. 10 (7.47%) had been vaccinated and antiHBs (+). Of the antiHBs (+) (alone) 36 (26.66%) cases, 13 (36.11%) had operation history, 3 (8.33%) had transfusion history. There were 22 (16.29%) cases of both antiHBs & antiHBc IgG (+), 9 (40.9%) of them had operation, 3 (13.63%) had transfusion history. Of the antiHBc IgG positive (alone) 9 (6.66%) cases, 8 (88.8%) had operation history. Of the 73 (54.07%) cases with operation history, there were 16 (%21.91) antiHBs (+) cases, 16 (21.91%) antiHBs and antiHBc IgG (+) and 4 (5.47%) antiHBc IgG (+). 13 cases had transfusion history, 4 (30.47%) antiHBs (+), 3 (23.07%) had antiHBs hem antiHBc IgG (+).

**Conclusion:** Total 57 (42.22%) cases had Hepatitis B virus. Only 10 (7.41%) had been vaccinated. We recommended vaccination in the other cases. Serologic evaluation for periodic health examination is not routinely recommended. However, unawareness of the carrier and occult cases may increase the transmission of the virus. Family physicians must ask about operation, transfusion and family history and determine the seropositivity of their patients if needed during periodic health examination.

822

### Respiratory infections during the 2009-2010 Pandemic. Clinical and epidemiological associations observed during a large tertiary care center study.

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**Background:** We defined clinico-epidemiological associations of A (H1N1) infections in patients presenting with respiratory tract symptoms, during the pandemic period, in a tertiary care hospital in Greece.

**Methods:** Real time PCR was used for A H1N1 2009 detection in samples of patients, over the period of August 18th 2009-May 30th 2010. Clinical and epidemiological characteristics were collected through a structured case report form.

**Results:** 1384 patients [female 672 (48.6%), median age 29 yrs., IQR: 22-43 yrs.] with respiratory tract symptoms were evaluated. Median symptom duration was 2 days, (IQR: 1-3). The main presenting symptoms were fever [86.7%, median 38.9 0C(IQR 38-39.2 0C) and cough (77.1%). Rates of confirmed influenza A(H1N1) were 52.7 % (117/222 samples). Patients with a positive (+) test for influenza A(H1N1) compared to negative ones were younger (p <0.001), had higher rates of cough (OR 2.2, 95%CI: 0.94-5.1, p=0.08), fatigue (OR 11.7, 95%CI: 1.5-91.9, p=0.001), and nasal congestion (OR 3.3, 95%CI: 1.1-9.3, p=0.023). They also had lower WBC, but higher monocyte counts (p < 0.001). 38 patients had positive chest x-ray findings and from them 9 had influenza A H1N1 2009. 67 patients were admitted to the

hospital and 3 were admitted to the ICU. Admitted compared to non-admitted patients had more dyspnoea (OR 3.6, 95%CI: 1.3-9.8,  $p=0.02$ ), higher mean age, higher temperatures, lower O<sub>2</sub> saturation and higher CPK levels, (all  $p < 0.001$ , Mann-Whitney), and an underlying co-morbidity (OR 4.4, 95%CI: 2.6-7.7,  $p < 0.001$ ). No patient died.

**Conclusion:** Influenza A(H1N1) positive patients were more likely than negative patients to be younger, present with fever, cough, nasal congestion and fatigue and have leucopenia with monocytosis. Increasing age, co morbidities and higher CPK levels were noted for admitted patients.

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### Metabolic syndrome: prevalence, exercise and diet, in an urban Primary Attention Centre.

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## Cardiovascular diseases II

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### Primary care sensitive cardiovascular conditions hospitalizations in Central Brazil

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**Aims:** To evaluate trend of primary care sensitive cardiovascular conditions (PCSCC) hospitalizations rates in municipalities of Goiás, Central Brazil.

**Material and methods:** Ecologic study with 246 municipalities between 2000-2008 using data from the National Hospital Information System and National Primary Care Information System. The hospitalizations rates were calculate through the proportion between the number of PCSCC hospitalizations according to Brazilian List of Primary Care Sensitive Conditions and the population with 40 years and more. The triennial mean rates were evaluated according sex, age, distance to metropolitan centre and Health and Life Conditions Index (ICVS) and ESF coverage: A (2000-2002), B (2003-2005) and C (2006-2008) The ESF coverage was calculated according to Brazilian Health Ministry. The rates variability was evaluated with t test and ANOVA.

**Results:** Data of 1,407 thousand hospitalizations realized by Brazilian Health System (SUS) were analyzed. Of this 253,254 thousand had with basic cause an PCSCC (17,23%). The rates of PCSCC hospitalizations declined among the triennials A, B and C (213,5 +/- 104,6 (A); 199,7 +/- 96,3 (B) e 150,2 +/- 76,1 (C) with statistical difference between the periods A-C and B-C ( $p < 0,001$ ). The municipal population portage not influenced the trend of rates ( $p = 0,7$ ). Municipalities of metropolitan centre have highly rates ( $p < 0,001$ ). In all municipalities according to Health and Life Conditions Index the rates decreased ( $p < 0,001$ ) excepted these of percentile 1. Only in Northeast Region the rates increased. The reduction of PCSCC hospitalizations rates wasn't related with ESF coverage.

**Conclusions:** In the analyzed period the PCSCC hospitalization rates decreased in these municipalities. The ESF coverage not influenced in trend of these rates.

**Aim:** The main objective of our study is to determine metabolic syndrome prevalence in an urban primary attention centre. The secondary objective to determine physical exercise and diet in metabolic syndrome patients.

**Methods/design:** Cross sectional study of a sample of out-patients who had been visited to the primary health centre, during 2009-2011. We will select 458 subjects, stratified random sampling by age and sex, out of 31740 of population. We calculated in sample of 416 subjects, for 23% metabolic syndrome prevalence (Ford ES, Giles WH, Dietz WH, JAMA. 2002;287:356-9) and a 4% precision and increased it a 10% (458 subjects) anticipating possible losts. To detect the metabolic syndrome subjects we will is eth ATP III modified 2005 criteria. Inclusion criteria: Subjects >30 years old that accept to participate in the study. Exclusion criteria: patients without knowing Spanish language, with high doses of corticoids and thiazides, pregnancy or puerperium, terminal and demencial diseases, and patients in domiciliary health care. Variables: Socio-demographic, anthropometric, personal and pathologic antecedents, analytics, physical activity will be quantify in metabolic equivalents using a validated questionnaire (IPAQ) and diet questionnaires.

**Results:** pending.

**Conclusion:** The cardiovascular risks factors are very prevalent in our population as is known numerous studies published. We expect to have a metabolic population where it should be noted an increased realization of physical exercise and should be more aware of their diet. The exercise practice is necessary to recommend our metabolic syndrome patients as well as explain thoroughly about the diet they should do.

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### The evidence of uric acid in risk prediction of cardiovascular outcomes

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**Introduction and aim:** The cardiovascular epidemic is a worldwide phenomenon that accounts for almost 50% of all deaths in industrialized nations. Coronary artery disease (CAD) is one of the most serious forms of cardiovascular disease (CVD). While there is no doubt that multiple factors play different roles in the development of CVD, recent studies have revealed the potential role of hyperuricemia as a novel risk factor. Uric acid (UA) levels have been increasing in human populations over last 100 years and, thus, correlate with the CVD epidemic. There is strong evidence from clinical

studies that UA is associated with hypertension. The aim is to review the evidence of the utility of UA over traditional CVD risk factors in risk prediction of cardiovascular outcomes.

**Methods:** Research in PubMed and Evidence Based Medicine sites of articles published between 2001 and 2009, written in English, with the keywords: hyperuricemia and cardiovascular risk. The evidence level was applied by SORT Scale of the American Academy of Family Physicians.

**Results:** Recent studies regarding the role of serum UA on CAD risk stratification have revealed inconsistent results. Hyperuricemia per se was a significant risk factor for determining the development or severity of CAD in some studies, but UA was not an independent factor for CAD and related cardiovascular mortality. An elevated UA level predicted the development of both obesity and hyperinsulinemia in normal subjects and is universally present in patients with metabolic syndrome. Disparate conclusions regarding the clinical significance of hyperuricemia in CAD may be related to subject characteristics, study design or statistical methodologies.

**Conclusion:** Despite the consensus that hyperuricemia is a significant CVD marker, there are controversies regarding a causative role for UA in CVD (SORT B). Prospective clinical studies are necessary to investigate whether a reduction in UA levels prevents CVD.

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#### High iron measurements and metabolic syndrome: a prospective cohort study on a population phenotypically characterized

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**Aims:** Metabolic syndrome (MS) affects hundreds of millions of individuals worldwide with a clear trend to increase its prevalence. Increase in serum ferritin levels and in transferrin saturation (high iron measurements [HIM]) has been indirectly associated to MS. We recently drove a study on the prevalence of HIM associated and not associated to hereditary hemochromatosis on 2,739 Mediterranean individuals. Among them, we indentified 126 hepatitis-free subjects with consistent HIM but w/o any HFE hereditary hemochromatosis (HH) gene mutation. These individuals were matched with a control cohort in order to 1) prospectively analyze the relationship between HIM and MS among individuals with HIM but HH-free; 2) assess the effect of therapeutic interventions on the evolution of HIM and MS.

**Methods:** Dynamic prospective matched cohort study on selected individuals with HIM but w/o HH characterized by clinical, biochemical, molecular (HFE gene mutations screening) and abdominal ultrasonographic data. The analyses were carried out during a 2-year follow-up period.

**Results:** Prevalence of MS among patients with HIM or with normal iron measurements was 41% and 18%, respectively. Among MS components, essential hypertension (EH) was the most predominant variation in HIM group (2-fold higher prevalence) followed by BMI (1.6-fold increase). Modulation of these variations was paralleled by a decrease of HIM. Data on other biochemical and ultrasonographic studies support also a strong relationship between MS and HIM.

**Conclusions:** HIM are prevalent in patients with MS and without HH. Specific therapeutic modulation MS is paralleled with down-modulation of serum ferritin levels. Since heavy chain ferritin gene is regulated at a transcriptional level by several oncogenes, cytokines, etc., these data suggest that inflammatory processes involved in MS can also be

responsible of HIM in these patients.

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#### 24 hour EKG holter monitoring in family medicine practice

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**Aims:** 24 hours EKG holter monitoring is very important in family practice. Using ambulatory electrocardiography devices, we can explore appearance, time and type of arrhythmias. Aim of this article was to present significance of the 24 hour EKG holter monitoring in the family medicine practice.

**Material and methods:** We analyze Holter EKG 24 hour recordings in patients treated in Family medicine Department of the Health Center in Gracanica, during 2010. We use Holter recorders type Welch Allyn PCH 100.

**Results:** Totally we have 230 patients, 81 males (35,22%) and 149 females (64,78%). Middle age of our patients was 51 year. In complete ventricular arrhythmia count, male group was represented with 44,82%, female with 55,18%. 36 patients (15,65%) were without any ventricular arrhythmia during 24 hours monitoring. During 24 hours EKG recordings, most frequent time for ventricular arrhythmias in whole group, was between 9 AM and 2 PM with 36,99% of all ventricular arrhythmias. Precisely, 1 P.M. was time of mostly VES with 6,58% (or 18960 ventricular arrhythmias). In male group, results were nearly similar - 8,33% VES were detected in 1 PM, but in female group, VES peak time was in 11 AM with 6,80%. Least of all VES were recorded in 10 PM (2,00%) and 11 PM (2,01%). 63 patients have ventricular couplets (27,39%). Most often time was in 4 AM - 29,62%. Ventricular runs were founded in 14 patients (6,09%). Time interval between 1-2 PM was dominant with 52,88% or 468 ventricular runs. Total supraventricular arrhythmias (SVES) were in 73,17% recorded in male group and 26,83% in females. Isolated SVES were mostly recorded in 4 PM (5,95%) and 12 AM (5,14%). Least of all SVES were recorded in 7 AM (2,75%).

**Conclusions:** Arrhythmias are more often in male group. Noon interval is basically more frequent for ventricular arrhythmias. Runs are often in early afternoon period. Supraventricular arrhythmias are more common at noon and early afternoon period.

#### Education in FM/GP II

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#### Developing global standards in postgraduate family medicine education: next steps

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**Aims:** The Wonca Working Party on Education (WWPE) has been developing global standards with a view to promoting and enhancing family medicine education. These standards are intended to be guideposts for programs, and to trigger conversations amongst our global membership.



**Methods:** Building on the Singapore Statement of 2007, additional standards for postgraduate family medicine were suggested through a Delphi technique as well as Wonca meetings. These standards were applied to the World Federations for Medical Education's Global Standards and reviewed by the WWPE membership.

**Results:** The generated standards were readily organized according to the World Federation's standards. The dual level of the standards (basic and advanced) is challenging to write, but likely to be helpful in implementation.

**Conclusion:** The Global Framework for Postgraduate Education in Family Medicine has areas in need of further development, however the organization of suggested standards has been very helpful.

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#### The Department of Family Medicine and community of Baylor College of Medicine international internship program

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#### Educational needs in General Practice Vocational Training – results of the Vasco Da Gama (VdGM) survey among trainees in seven European countries

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**Aims:** Across Europe, recruitment for general (family) practice is a major concern to deliver future close to home care. Since European borders are luckily more open than ever, training schemes within Europe are an issue in recruitment. Moreover, there is substantial variation regarding the organization and content of vocational training. Aim of this analysis is to explore if educational needs perceived by trainees do differ between different Countries.

**Material and methods:** VdGM Education and Training theme group surveyed General Practice trainees in the Czech Republic, Denmark, Germany, Italy, Norway, Portugal and the United Kingdom during 2009. Where the targeted population was defined and accessible, representative sampling was applied, however in most countries, convenience sampling was used. The survey aimed to identify motivational factors for the career choice of GP, to explore workload and job satisfaction, to obtain expectations and satisfaction related to content and organisational aspects of vocational training (VT). Here, we present results of the analyses regarding aspects of VT.

**Results:** From the participants, 2533 were trainees. Trainees were on average 32.5 years old, 66% are female. Most important aspects for 60% of the GP trainees are structured rotations during their VT followed by in hospital training (45%). From the contents of VT to learn management aspects and evidence-based medicine are both ranked by about 40% of the participants as very important followed by learning how to contribute to the local framework of care (35%). However learning how to participate in and contribute to research is ranked as very important by as much as 13% of the trainees. More detailed analyses regarding gender and countries will be presented.

**Conclusion:** Although there are significant differences in training schemes within the participating countries, GP trainees prioritise educational needs quite similar.

**Aim and background:** The Department of family medicine and community of Baylor College of Medicine offers an internship of six weeks for young fellows in family medicine in order to gain experience to develop educative programs around the world. Practitioners are trained in five basic areas: clinical, academic education, research, leadership and administration, and professional academic development.

**Methods:** The internship emphasizes the acquisition and improvement of knowledge, attitudes and skills in key areas to the academic family medicine. Through a diverse program that includes classes, workshops, seminars, individual activities and clinical, educational and administrative observations. The practical training includes a guided visit to two primary care clinics (Gulfgate and Northwest clinics) as well as the Ben Taub Hospital which serves various socio-economic and cultural groups in Houston including the population of low-income and ethnic minority. The internship has by goal give participants the tools to teach, reflect, develop, implement and evaluate educational programs in family medicine.

**Results:** At the end of our internship each practitioner was able to develop an individual research project which would be carried out in our country.

**Conclusions:** We had a wonderful experience which gave us the opportunity to get in touch with different cultures and other ways of practicing medicine as well as opening our mind. It also gave us the knowledge and skills to develop a research project.

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#### The appreciation of Dutch general practitioners of the Dutch College e-learning programs

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**Aims:** Since 2007 the Dutch College of General Practitioners (NHG) has produced 14 interactive online programs for the continuing medical education (CME) of general practitioners. The programs are designed to promote and implement NHG-Guidelines or to inform GPs about new developments concerning general practice. The aim of the study was to investigate the opinions and needs of Dutch general practitioners with respect to the e-learning programs of the NHG.

**Material and methods:** An exploratory study based on questionnaires. At the end of each program the GPs were

asked to fill out a short evaluation form. The answers were coded and used to develop themes for an online questionnaire. All 1926 GPs who completed at least one online program were invited to take part in the survey.

**Results:** 529 GPs (27,5%) filled out the online questionnaire. The respondents gave a high rating for the contents, level and design of the programs. 77% of the GPs stated that the competencies belonging to the Medical Expert Role of the CanMEDS Physician Competency Framework should always be included in online CME. As to including competencies belonging to the other six roles: the majority of the GPs felt that this should depend on the subject of the program. The GPs preferred case-based or problem-based learning as teaching techniques. The least favorite technique was: describing plans for personal practice improvement. Wishes for the program design were: use of the program as a reference book (42%), an online question or discussion facility (21%) and a help display (18%). 85% of the GPs used the online program at home, mainly in the evening or at weekends.

**Conclusions:** About 20% of all Dutch GPs have completed one or more of the e-learning programs of the NHG. They are satisfied with the content and design of the programs. GPs feel that online CME should address the Medical Expert Role first of all. Interactive teaching techniques with immediate feedback are most popular.

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#### Knowledge of and attitudes towards Family Medicine at end of the degree

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**Aim:** To determine knowledge of and attitudes towards family medicine at the end of the degree of medical students who completed a course in primary care in their second year.

**Design and method:** This is a "pretest-posttest" study, with 62 medical students (of 79 who took a course in primary care in academic years 2005-2006, in your second grade) who were in the sixth year of the degree in 2009-2010. After taking the course in primary care they were asked to respond to a self-administered, anonymous questionnaire, comprising 34 items with a 5 level Likert response scale. Four years after the students in the sixth grade were invited to respond the same questionnaire. The students knowledge and attitude were analysed and compared (Wilcoxon test for paired samples).

**Results:** 65.6% were women, with average age 23.6 years (SD 1.0); ranging from 23 to 29 years. Prior to starting the primary care course, 69.3% said they would like to become a family doctor in the future, this fell to 40.3% at the end of the degree ( $p < 0.0001$ ). Only 12.9% second year students compared with 6.4% sixth year students considered family medicine as their first career choice ( $p < 0.0001$ ). After completing the course, 59 students said they had a good knowledge of family doctor's tasks, and compared with sixth year students it doesn't changed very much ( $p=0.28$ ). 47 of the second year students disagreed with that family doctors manage health problems of little importance, while in the sixth year improved to 56 ( $p=0,001$ ). 47 on second year, versus 39 on sixth year, disagreed with that family medicine isn't a very intellectually stimulating speciality. There were no significant differences. After the second year there was a good opinion about the competence of the family doctor and decreased

after: 37.7% of them were in complete agreement compared with 14.7% on sixth year course.

**Conclusions:** After completing a course in primary care the students showed a very good opinion towards family medicine. However it worsened at the end of the degree.

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#### The Triple C Competency Based Curriculum: a new direction for family medicine education in Canada

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**Aims:** The College of Family Physicians of Canada (CFPC) established the Working Group on Postgraduate Curriculum Review to reassess the postgraduate family medicine curriculum in Canada. Aims for the review were to ensure the curriculum is designed to meet societal need, captures advances in medical education, and is producing family physicians with the required competencies.

**Methods:** Family physician experts and trainees formed the working group, supported by CFPC staff. Trends in medical education were identified through literature reviews, interviews and meetings. Recommendations for change were reached through an iterative process involving national and local meetings of stakeholders.

**Results:** Major themes identified for emphasis in family medicine education were: the importance of comprehensive care; continuity of care and education; the centrality of family medicine to the educational program; and competency based education. Implementation began even as the new curriculum was being developed.

**Conclusion:** Canada has developed and is implementing a new competency based curriculum for family medicine education

#### GRIN – GRACE II

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#### Undetected chronic obstructive lung disorders in patients presenting with acute cough in primary care: results from the European GRACE study

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**Aims:** Cough is among the most frequently presented complaints, and a suitable opportunity to consider the presence of underlying asthma or COPD. The aim of this study is to determine the prevalence of undetected chronic obstructive lung disorders in patients consulting their general practitioner (GP) with acute cough.

**Materials and methods:** For this cross sectional diagnostic study, 2532 adult patients without known asthma or chronic obstructive pulmonary disease (COPD), attending their GP with complaints of cough during 28 days or shorter, were recruited from 12 European countries. All subjects underwent spirometry at day 28 after inclusion. Asthma was defined present if there were recurrent complaints of wheezing, cough or dyspnoea, AND an increase of the forced expiratory volume in one second (FEV1) of 12% or > 200 ml after bronchodilation. COPD was defined present according to two cut off values for the (post bronchodilator) ratio of the FEV1 to the forced expiratory volume (FEV1/FVC ratio): 1. below 0.7 (fixed ratio); 2. below the lower limit of normal (LLN) according to age, gender and height.

**Results:** 336 subjects had asthma (13%), and according to the used definitions of COPD 1 and 2, respectively 246 (10%) and 168 (7%) subjects had COPD. Spearman's Correlation between the fixed ratio and the LLN was 0.71. There was discrepancy between the fixed ratio and the LLN definition for COPD in especially the elderly and the very young.

**Conclusions:** In patients presenting acute cough, undiagnosed asthma was more frequent than undiagnosed COPD. Different definitions for obstructive spirometry results led to large differences in the proportion of patients classified with COPD.

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#### Changing GP's antibiotic prescribing behaviour in five European countries: a qualitative study within the grace project.

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**Aims:** In the last stage of the GRACE project a pragmatic trial was done to assess the effects of communication training and the use of a CRP test on antibiotic treatment of lower respiratory tract infections. The current study assessed the feasibility and acceptability of the intervention in this trial across 5 European countries (Belgium, Netherlands, Poland, Spain, UK). The aim was to elicit GP and patient attitudes before the intervention, in order to adapt the interventions as necessary.

**Method:** 30 GPs and 13 patients from the 5 countries were interviewed before the intervention using a "think aloud" approach. Data were coded following techniques taken from framework analysis.

**Results:** GPs across all countries were supportive of the aims of the implementation trial, approved of the strong evidence base supporting the training and found the web-based format appealing. Country-specific differences often reflected differences in health systems, and highlighted where the intervention could be tailored. The patient data highlighted the importance of the When and How of using the booklet as very important in the success of the use of the booklet. Analyses of patient data gathered during the intervention will also be presented if available.

**Conclusions:** The findings provide valuable insights informing future development of behavioural interventions across Europe regarding antibiotic use.

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#### The effect of amoxicillin in lower respiratory tract infection (LRTI): a placebo controlled RCT in 16 primary care GRACE Networks from 12 countries in Europe

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**Aim:** to determine the effectiveness of amoxicillin for lower respiratory tract infection.

**Methods.** 2054 patients presenting with uncomplicated acute cough (<4 weeks) as the main symptom were randomised to amoxicillin 1g three times a day or placebo for 7 days. Patients completed validated symptom diaries for symptom severity (7 point scale) and duration. Notes were reviewed for repeat consultations

**Results.** 593 of trial population (28%) were aged 60+, and symptom severity documented and duration were documented in 87% of patients. There was no significant difference in symptoms severity in the first 4 days after seeing the doctor (placebo mean 1.69, antibiotic 1.62; difference -0.07 (-0.18 to 0.06)), and no significant difference in the proportion with moderately bad or worse symptoms at 7 days (47% vs 40% respectively, p=0.07 NNT 14). Among the subgroup of patients aged 60 or over there was no evidence of selective benefit. 5% more patients in the antibiotic group compared with the placebo group developed nausea, rash or diarrhoea (NNH 20).

**Conclusion:** Antibiotics are very unlikely to provide meaningful symptomatic benefit in LRTI for most patients, and any benefit is likely to be similar to the magnitude of harm.

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#### Adherence and recovery after immediate and delayed antibiotic prescription for LRTI: a prospective observational study from the GRACE Network of Excellence

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**Aims:** To describe adherence to delayed and immediate antibiotic prescribing, factors associated with non-adherence, and association with recovery in adults presenting with acute cough in primary care.

**Methods:** General practices in 13 European countries recruited patients with acute cough. Clinicians recorded clinical features and antibiotic prescribing. Patients recorded symptoms and medication use in a daily diary. Patient reported antibiotic consumption was compared with prescribed antibiotics. Factors associated with non-adherence were identified using logistic regression and time to recovery was compared using Cox proportional hazards

model.

**Results:** GPs recorded antibiotic prescribing decisions for 3,368 (99%) of recruited patients. 46.5%, 6.3%, and 47.6% received a prescription for immediate, delayed and no antibiotics respectively. Patient recorded follow up data was available for 2,690, and 71.5%, 54.7%, and 11.6% of each group reported taking an antibiotic during the follow-up period. Higher prescribing networks had a lower ratio of antibiotic consumption to prescribing. Of the 1290 patients who were prescribed immediate antibiotics and provided data on antibiotic use, 49.5% adhered. Having diabetes was associated with greater adherence, and being prescribed amoxicillin, tetracycline, or a longer treatment course, was associated with lower adherence. There was no difference in the rate of recovery between those who did and did not adhere to immediate antibiotic prescription (Hazard Ratio 1.07, 95%CI 0.93 to 1.23), or between those who adhered to an immediate prescription and those who were prescribed delayed antibiotics (Hazard Ratio 1.05, 95%CI 0.85 to 1.31).

**Conclusions:** Less than half of the patient's prescribed immediate antibiotics for acute cough in primary care adhered, with three out of ten taking no antibiotics at all. Delayed antibiotic prescribing was infrequent, with about half of these patients taking an antibiotic. Antibiotic prescribing at the network level was not a reliable predictor of consumption, with high prescribing networks having a lower ratio of consumption to prescribing. Adherence to treatment was not associated with recovery.

## Pulmonary diseases

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### Are anxiety and depression more common in our asthmatic patients?

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**Background:** The association between asthma and mental disorders is known, being anxiety and depression the most common ones.

**Objective:** To determine the proportion of mental disorders (anxiety and/or depression) in our asthmatic patients in comparison to non-asthmatic population. Secondary objectives: to assess the relation between the severity and control level of asthma and the presence of psychiatric comorbidity.

**Methods:** A transversal descriptive study was developed with 317 asthmatic and 307 non asthmatic patients, from 17 to 70 years old, in an urban primary care center. The Goldberg test, for screening of anxiety and depression, was performed by phone. Other analyzed items were: age, gender, previous anxiety and /or depression diagnosis, chronic prevalent diseases, type of asthma and level of control.

**Results:** 70 % of the asthmatic patients were women compared to 52% of the control group, the average age was 43 (SD 16.89) and 48 (SD 14.11) years old respectively. 57.4% had intermittent asthma, 15.5% mild persistent and 27% moderate persistent. 63% presented controlled asthma and 23.2% partially controlled. The Goldberg test score showed anxiety in 51.4% and depression in 57.4% of the asthmatic patients compared to the control group ( $p=0.0001$ ). Better asthma control was associated with lower anxiety ( $p=0.03$ ) and depression ( $p=0.051$ ). Minor severity of asthma was associated with lower anxiety ( $p=0.027$ ) and depression ( $p=0.032$ ).

**Conclusions:** The asthmatic group showed greater

proportion of anxiety and depression compared to the control group. Better asthma control was associated to lower anxiety and depression. Minor severity of asthma was associated with lower anxiety and/or depression.

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### Chest X-ray ordering for the evaluation of acute cough illness in primary care: a survey amongst Swiss GP's

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**Background/Aim:** Most acute cough illnesses are due to self-limited upper respiratory tract infection (URTI). Yet a critical minority (5%) will have community-acquired pneumonia (CAP). Ordering a chest X-ray might be a diagnostic step to differentiate between URTI and CAP. The aim of this study was to evaluate whether the degree of accuracy of GPs' assessments of pneumonia is related to actual requests for chest X-rays.

**Methods:** A questionnaire was administered to eleven GPs in Switzerland. GPs consecutively included patients presenting with acute cough (< 3 weeks) as their chief complaint. GPs were asked to specify the suspected diagnosis after clinical assessment (history taking and physical examination) and before ordering a chest X-ray.

**Results:** Overall, 212 patients (mean age 51.3 +/- 20 years, range 6 to 94, 52% male) presenting with acute cough for 7.3 +/- 5.4 days on average were analyzed. Chest X-ray was ordered in 84 (39.6%) patients and radiographic changes consistent with pneumonia were confirmed in 40 (47.6%) subjects. In almost all ( $n=47$ , 94%) patients in which GPs suspected pneumonia ( $n = 50$ , 23.6%) due to their clinical assessment chest X-rays were performed. There was a positive association between GP's clinical suspicion of CAP and evidence of pneumonia on chest X-ray (spearman's rho 0.54,  $p < 0.0001$ ). If GPs had no suspicion of CAP chest radiography showed no evidence of pneumonia in 83% [95% CI 0.68 to 0.92] of patients (negative predictive value), whereas the positive predictive value (GP suspected pneumonia) was moderate (71% [95% CI 0.57 to 0.82]). If GPs primarily suspected an infection of the upper respiratory tract chest X-rays were ordered significantly less frequent (Chi square = 72.3,  $p < 0.001$ ).

**Conclusion:** After history taking and physical examination GPs' decision to order a chest X-ray (or not) seems to be accurate to differentiate between URTI and CAP in patients presenting with acute cough.

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### Patients with sleep apnea-hypopnea syndrome (SAHS) with and without hypertension in primary care, which is the difference?

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**Aims:** To assess the prevalence and describe the features of patients with SAHS in primary care and the differences between patients with SAHS and hypertension and SAHS

without hypertension.

**Material and method:** Cross-sectional study. Urban center of primary care. Subjects: Patients with SAHS as active disease were selected from the computerized medical history of all the centers patients older than 30 years old (N=15.539), Variables: demographic and anthropometric variables, history of drugs, cardiovascular risk factors (obesity, dyslipidemia, diabetes mellitus, cardiovascular disease (Ischemic heart disease, stroke, atrial fibrillation, heart failure, arteriopathy), blood pressure, kind of treatment and time since diagnose.

**Results:** 119 patients with SAHS were enrolled, which means a prevalence of 0,77%. The average age was 59, 81% were men and the average time since diagnose was 5,1 years. 44% were smokers and 42% had a history of alcohol consumption, 55% had obesity and 29% were overweight. 55% were hypertensive patients, 36% dyslipemic and 19% had diabetes mellitus. The most frequent symptoms of SAHS were: snoring (29%), daytime sleepiness (20%), observed apneas (17%) and gastro-esophageal reflux (11%). 14% suffered from ischemic cardiopathy, 3% stroke, 5% heart failure and 7% atrial fibrillation. 88% of the patients were treated with CPAP, 4% had undergone surgery and only 5% did only dietary treatment. The variables that showed significant differences between SAHS and hypertension vs non hypertension were: obesity (38,7 vs. 16,0%;  $p < 0,001$ ), diabetes mellitus (15,1 vs. 3,4%;  $p < 0,05$ ), systolic blood pressure/ diastolic blood pressure at the diagnose (138,2 vs. 124,5 mmHg;  $p < 0,001$  and 80,1 vs. 75,3 mmHg;  $p < 0,05$ ) and weight (96 vs. 86 kg;  $p < 0,05$ ).

**Conclusions:** The obtained SAHS prevalence is lower than that reported in the literature. SAHS patients are mostly men, with obesity or overweight, high blood pressure, diabetic and had cardiovascular disease. Most of them were treated with CPAP. SAHS with hypertension had more obesity and diabetes than those SAHS without hypertension.

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### Sleep obstructive Apnea and Epworth Sleeping Scale

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**Introduction and aims:** In recent years sleep breathing disorders, such as Obstructive Sleep Apnea (OSA), have acquired increasing importance and are currently a major public health problem. OSA is characterized by upper airways obstruction which leads to episodes of apnea/hypopnea during sleep. Describing a population that underwent a cardio-respiratory polysomnography home study with posterior response to therapeutics, analyzing multiple parameters such as sex, BMI, neck diameter. The main aim was to relate Epworth Sleepiness Scale assessment (EES) before and after treatment as an instrument of diagnosis and treatment evaluation in Primary Care.

**Material and methods:** Sixty clinical files of patients that underwent a cardio-respiratory polysomnography home study were randomly selected for diagnosis of OSA, during the year 2008, at the Pneumology Department of the Coimbra University Hospital.

**Results:** Out of the 60 files included in the study, 9 were excluded. A statistical correlation between the apnea/hypopnea index (AHI) and EES ( $p = 0,434$ ; significant correlation  $p = 0,01$ ) was found in 46 patients who remained in the study. OSA was diagnosed in 46 patients, being mostly males (87%) with an average age of 56,7 years. The medium BMI was 31,2 kg/m<sup>2</sup>. In 32.6% of the patients, short and broad neck was an objective finding. Drinking and smoking

habits were found in 78.3% and 24.4% respectively. Most patients referred loud snoring (95.7%) and excessive daytime sleepiness (71,7%). This was subjectively measured by the EES before and after treatment, with a reduction of 5,46 points with statistical significance.

**Conclusions:** Most results in this study were consistent with what was expected and with other studies reported in the literature. As a subjective measure of daytime sleepiness, the ESS can be easily implemented and used in Primary Care as a tool to screen potential OSA patients in which a cardio-respiratory polysomnography can be justified. It was also very useful in gauging the response to treatment.

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### Recent evidence in the treatment of bronchiolitis

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**Aims:** Bronchiolitis is the most common low respiratory infection among children under the age of two, being therefore the main cause for hospitalization in under-one-year-old children. The great variation in acute bronchiolitis evaluation and treatment among pairs and in different realities, brought the need to an evidence based revision in order to create some clinical guiding rules.

**Material and methods:** revision research based in evidence, clinical guiding rules, meta analysis, systematic reviews, using the denomination MESH: Bronchiolitis. Research between January 1st 2000 and December 31st 2010, in Spanish, English and Portuguese, in Human beings aged between zero and eighteen. The Strength Recommendation Taxonomy (SORT) of the American Family Physician was used to evaluate the level of evidence.

**Results:** Most of the clinical interventions have no significant impact in the severity of the clinical evolution, recurrent wheezing episodes or subsequent asthma diagnosis. The existent comorbidities and the low age are still the biggest predictors of severe bronchiolitis. Pulse oxymetry plays an important role in evaluating the severity of the condition. Evidence based revisions suggest the limited role of radiological or diagnosis tests in typical bronchiolitis cases. Recent evidence suggests the low efficacy of the routine use of bronchodilators or corticosteroids.

**Conclusions:** Most of the clinical interventions have no significant impact in the severity of the clinical evolution; therefore, the Family Doctor has a very important role in prescribing in the best possible relationship between risk/benefit and cost /benefit.

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### Effectiveness of incorporating tai chi in pulmonary rehabilitation for COPD patients in primary health care

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**Aim:** Patients with Chronic obstructive pulmonary disease (COPD) may develop low self-efficacy due to lung function impairment leading to activity avoidance or restriction. Patient's self-efficacy can be increased through practical

experience and exercise reconditioning. As Tai Chi had been suggested to be a better adhered and tolerated form of exercise for COPD patients, it is hypothesized that pulmonary rehabilitation incorporating Tai chi to empower self-efficacy and exercise adherence should be able to improve their health outcomes.

**Method:** 170 subjects with mild to moderate COPD from two General Outpatient Clinics in Hong Kong will be randomized into Pulmonary Rehabilitation Program (PRP) group or Pulmonary Rehabilitation Program with Tai Chi (PRP + Tai Chi) group. 12 sessions of structured pulmonary rehabilitation programs will be conducted for both groups lasting about 1hr per session. For the PRP + Tai Chi group, the exercise content is totally identical to the PRP group except rest for the Tai Chi group is shortened and 15 minutes of 5 forms of Suen Style of Tai Chi exercises will be added. Baseline and regular assessment at 2 month and 6 month interval will be done by using spirometer, 6 Minutes Walking Distance Test (6MWD), COPD Self Efficacy Scale (CSES), Self-Efficacy for Managing Shortness of Breath (SEMSOB) and St. George Respiratory Questionnaire (SGRQ). The primary outcome measure is CSES and SGRQ while the secondary outcome measures are 6MWD and SEMSOB.

**Result:** Based on pilot study involving 11 subjects, the mean walking distance increases by 53 feet ( $P = 0.035$ ) and 68.8 feet ( $P = 0.048$ ) for PRP group and PRP + Tai Chi group respectively. Measurements of lung function, self-efficacy and quality of life have not shown significant findings yet.

**Conclusion:** Participants of this preliminary study have shown improvement in exercise capacity just after intervention. It is expecting to see other measurement outcomes after completion of whole study.

Friday, September 9<sup>th</sup> 13.45-15.15

## Quality of life and improvement of care

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### Bridging the communication gap between pain patients and healthcare providers using DoLoTest

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**Aim:** Demonstrate a holistic and patient centered approach to pain management in primary care using DoloTest.

**Material and methods:** Information, involvement and understanding are crucial in patient centered pain management but often difficult to achieve. Healthcare professionals look for evidence of disease, but patients experience pain and reduced Health Related Quality of Life (HRQoL) with or without objective findings present. Between these understandings is a communication gap. DoloTest is a validated pain assessment and pain management tool, proved useful to bridge this communication gap by providing a visual presentation called a DoloTest-Profile of the pain intensity and the pain's impact on the patient's HRQoL, immediately understandable by both the pain patient and the healthcare professional. According to the validation study the average patient use less than 2 minutes to complete DoloTest. Based on cases and results from research it will be demonstrated how to use DoloTest in the clinic with value for both patients and healthcare professionals as well as when referring a patient.

**Results/objectives:** The audience will be able to use DoloTest immediately in contact with pain patients to share understanding, goal setting, and evaluation of therapy and identify interaction of items in pain management.

**Conclusions:** DoloTest is easy to use in the clinic to obtain a holistic understanding of the pain patient's situation and quality of life. This can be shared with the patient to get a patient-centered consultation.

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### The chronic care model in the health authority of Empoli (Florence) Italy

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**Aims:** The aim is to demonstrate the usefulness of chronic care model (CCM) to care chronic diseases, particularly with inpatients hospital admission and pharmaceutical expenditure for diabetes and heart failure.

**Materials and methods:** In the Local Health Authority of Empoli (Florence - Italy) we have 180 General Practitioners (GP). Many of them work in group. We have 42 of them who experiencing the CCM for diabetes and heart failure since 2008. These GP gave the list of their patients to nurses for active follow up, then nurses asked patients by prefixed protocol and in case of new events in disease, nurses sent

patients to visit by their own GP. The prevalence of diabetes was 6.3 % and of heart failure was of 1.16 %. We have called these GP as CCM-GP and the other remaining 138 GP as NO-CCM-GP, because they didn't apply the CCM.

**Results:** we compared inpatients hospital admission rate and pharmaceutical per capita expenditure for these two diseases between the CCM-GP and NO-CCM-GP. We used t-student test for comparison. We had for diabetes an inpatients hospital admission rate (20 - 74 age) of 0.24 X 1,000 inhabitants in NO-CCM-GP and a value of 0.18 for CCM-GP ( $p<0.01$ ), and a per capita pharmaceutical expenditure of 619.83 EUR / year for NO-CCM-GP and a value of 609.05 EUR/year for CCM-GP ( $p<0.05$ ). We had for heart failure an inpatients hospital admission rate (20 -74 age) of 1,8 X 1,000 inhabitants in NO-CCM-GP and a value of 1,1 for CCM-GP ( $p<0.01$ ), and a per capita pharmaceutical expenditure of 217,81 EUR / year for NO-CCM-GP and a value of 215.09 EUR/year for CCM-GP ( $p>0.05$ , not significant).

**Conclusions:** the CCM in primary healthcare for diabetes and heart failure decreases in a statistically significant the inpatients hospital admission rate and reduces the per capita pharmaceutical expenditure. In the future all our GP will apply the CCM to all chronic diseases.

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#### Life's quality in patients whit overweight and obesity initial results: study IMOAP ABS Florida South, L'hospitalet (Barcelona)

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The global mortality and cardiovascular, it increases with the weight. The obesity is an independent factor from the other factors or cardiovascular risk (FRCV). The quality of life related to the health (CVRS) is important in these patients.

**Aims:** 1. Determine the CVRS in patients with overweight and obesity. 2. Determine the association of the CVRS with the different degrees of obesity and Prochaska's phases.

**Material and methods:** Clinical randomized multicentre study in patients with overweight and obesity. A group received motivation (Group intervention) and other one received habitual treatment (group control). Analytical information: Blood sugar and lipid profile. The CVRS was estimated by the questionnaire SF-36 (2nd edition), that it contains 36 articles that explore 8 dimensions of the CVRS in 2 areas: The component summary physical (CSF), it valued the physical function, the social function, the limitations for physical problems and for emotional problems. The component summary mental (CSM), it valued the mental health, the vitality and the perception of the pain. They are valued for a scale of 0 (worse CVRS) to 100 (better CVRS).

**Results:** Studied population: 489 patients, 275 controls and 214 interventions. The average CSF was 42.6 points (43.3 group control and 42.0 group intervention). The CSM was 35.9 points (35.4 group control and 36.3 group intervention). Significant differences were not detected in the CSF and CSM, according to the phase Prochaska where they were. Increase the classification of obesity diminished the CVRS, being more significant in the CSF. The CVRS of the group control was lower than the intervention.

**Conclusions:** The overweight and obesity reduce the CVRS in patients of Primary Care. Multidisciplinary strategies of intervention in the reduction of weight are necessary.

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#### Criteria of multimorbidity for GPs - family practice depression and multimorbidity study

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**Introduction and aim:** Multimorbidity is a new concept close to co-morbidity with a global vision in addition. This concept is deeply in touch with the GPs core competencies as described by WONCA, and especially with the holistic modelling core competency. It could also help to detect frail patients in primary care before decompensation. However, as often for new concepts, its definition and subsequent operationalization are still unclear. The aim of this study is to find the definition criteria of multimorbidity in literature.

**Material and method:** systematic qualitative review of literature with ten national teams from EGPRN (European general practitioner research network). The only keyword is multimorbidity. Searched databases are PubMed, Embase and Cochrane. For inclusion multimorbidity should be in the research question, and some criteria or definition should be at least in the results. Articles are dispatched between the national teams. All articles are double screened for inclusion. Coding is performed in a phenomenological way. First an open coding for multimorbidity criteria is done by two independent researchers in each team, then an axial coding will be done.

**Results:** preliminary results will be available for October 2011.

**Conclusions:** with this systematic review, we will find and group criteria for definition of multimorbidity. Those criteria will be used further in the FPDM study for comparison with the qualitative research's results about definition of multimorbidity by GPs.

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#### The wound box-concept : a method to implement wound care in general practice

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**Introduction and aim:** Transparency in wound care requires uniformity of treatment, prescription and use of wound dressing materials. To prevent unnecessary delay in wound healing, spill of materials and increase of costs, the idea of the Wound box-concept arose. An expert group introduced the Wound box-concept: a plastic box, containing wound dressing materials, a common protocol and a training in wound care. This study evaluated the factors affecting successful implementation of the Wound box-concept in general practice.

**Material and methods:** A quantitative analysis of

questionnaires, filled in by general practitioners (GP) having a wound box after being trained and a qualitative analysis of interviews with GP's selected through purposive sampling from the surveys.

**Results:** Surveys (n=19): 75% of the respondents used the box more than twice a month. Overall satisfaction of the Wound box-concept was good for all respondents. Interviews (n=11) : the Wound box-concept provides structure and consistency in wound care. Increased knowledge about wound care leads to an increased number of patients treated in general practice. The most added value of the wound box is the incentive to use modern wound dressing materials. Main concerns were the size of the box and cooperation with pharmacy.

**Conclusion:** The Wound box-concept is a valuable method to implement the guidelines and recommendations of the Dutch Society of General Practitioners.

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### Quality of life and burden on family caregivers of outpatients with major mental disorders in Crete, Greece

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**Background and aims:** Mental disorders are an important public health problem that leaves enormous burden on health care services on modern societies. This study reports the quality of life of caregivers of outpatients with mental disorders that attend an open Mental Health and Research Center in Crete, Greece.

**Materials and methods:** The study sample comprised all caregivers (N=50) of outpatients with major mental disorders (ICD-10: F20 Schizophrenia, F31 Bipolar affective disorder, F32 Depressive episode) who were registered in the Mental Health Center and Research located in Heraklion, Crete in 2009. The Nottingham Health Profile (NHP) was used to assess quality of life and the burden on the family caregiver was measured by the Involvement Evaluation Questionnaire (IEQ). Both questionnaires have been translated and validated into Greek.

**Results:** The majority of caregivers were female (37, 74%), mainly mothers, with a mean age of 57.4 (SD=10.9 year). Most of them (39, 78%) lived with the mentally ill person in the same household. Of the four domains of IEQ, worrying (mean 22.86, S.D 5.27) was a consequence that we found to be more intense, while the main concerns were reported included the patient's safety (36, 72%), general health (42, 84%), future (38, 76%) and financial situation (34, 68%). Of the six dimensions of NHP, the female-caregivers reported more problems in comparison with men in energy (P=0.006), in pain (P=0.006), emotional reactions (P=0.012) and physical mobility (P=0.004) in regards to the daily living problems. The majority of Cretans caregivers answered that despite the difficulties and problems of care; they feel able to cope with the mental health of the patient.

**Conclusions:** The quality of life on informal careers as expected, it is negatively affected and seems to be strongly associated with the burden of taking care of relatives of outpatients with mental disorders. The study results may have an impact on local health policy.

## Health promotion and disease prevention I

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### The effect of stress on readiness-to-change among at-risk male drinkers

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**Aims:** This study examined the effect of stress on readiness-to-change among at-risk male drinkers.

**Material and methods:** We surveyed 218 male, heavy and binge drinkers. The subjects were divided into low- and high-stress groups by the Brief Encounter Psychosocial Instrument. We compared the drinking behavior and readiness-to-change according to stress group. The readiness-to-change was evaluated using the Readiness-to-Change Questionnaire. We investigated the relationship between stress and the amount drunk per week using linear regression. Multinomial logistic regression analysis was performed to show the effect of stress on readiness-to-change.

**Results:** The low-stress group included 196 (89.9%) men and the high-stress group contained 22 (10.1%) men. The amount drunk per week and the number of drinks per week were greater in the high-stress group (P<0.05). In the high-stress group, the rate of contemplation was high, while in the low-stress group the rate of action was high (P<0.05). Stress had a significant positive correlation with the amount drunk per week ( $y=2.514x+6.271$ ,  $r=0.17$ , P<0.05). Based on the precontemplation stage, multinomial logistic regression analysis to control differences in patient characteristics for each stage of readiness-to-change showed that the probability of the contemplation and action stages increased 3.484 (P<0.05) and 2.141 (P<0.05) times with the stress score.

**Conclusions:** Relative to the precontemplation stage, the probabilities of the contemplation and action stages increased with the amount of stress.

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### Factors associated with Abdominal Aortic Calcification

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**Aims:** Abdominal aortic calcification (AAC) is a marker of subclinical atherosclerotic disease and an independent predictor of subsequent vascular morbidity and mortality. This study examined factors associated with AAC.

**Material and methods:** We reviewed the abdominal computed tomography of 380 patients who visited Chungnam National University Hospital for a health check-up from 1 January 2008 to 30 December 2009. The overall severity of calcification was graded using a 6-point scale: 0, no



calcifications; 1, minimal non-circumferential non-contiguous scattered calcifications without 50% circumference involvement of any segments; 2, mild non-circumferential non-contiguous calcifications involving numerous segments with <50% involvement of most individual segments. Isolated non-contiguous images with >50% calcification may be present, but no areas of completely concentric vascular calcification; 3, moderate non-circumferential non-contiguous calcifications of multiple arterial segments with >50% calcification of multiple segments, but without any completely concentric calcification; 4, moderate calcifications involving multiple segments with most areas having >50% involvement with calcification. Isolated completely concentric calcifications may be present; and 5, diffuse calcifications with multiple levels of completely concentric calcifications. The association between AAC severity and age, lifestyle factors, and cardiovascular disease was analyzed.

**Results:** Multiple stepwise regressions was used to test for associations between AAC and age, lifestyle factors, and cardiovascular disease. In men, age ( $R^2=0.392$ ,  $P<0.01$ ), dyslipidemia ( $R^2=0.101$ ,  $P<0.01$ ), and smoking ( $R^2=0.019$ ,  $P<0.01$ ) were positively related to AAC, while time spent exercising ( $R^2=0.051$ ,  $P<0.01$ ) was negatively related to AAC. The total  $R^2$  was 56.3%. In women, age ( $R^2=0.461$ ,  $P<0.01$ ), diabetes mellitus ( $R^2=0.019$ ,  $P<0.01$ ), hypertension ( $R^2=0.021$ ,  $P<0.01$ ), and dyslipidemia ( $R^2=0.012$ ,  $P=0.02$ ) were positively related to AAC, while time spent exercising ( $R^2=0.020$ ,  $P<0.01$ ) was negatively related to AAC. The total  $R^2$  was 53.3%.

**Conclusions:** AAC was related to age, dyslipidemia, and time spent exercising in both sexes. In addition, AAC was related to smoking in men and to diabetes mellitus and hypertension in women.

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#### Changes in the drinking behavior of at-risk drinkers after brief advice

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**Aims:** This study examined changes in the behavior of at-risk drinkers 6 and 12 months after participants had received brief advice and identified the factors associated with the outcomes.

**Material and methods:** The sample consisted of 64 males who visited Chungnam National University Hospital for general health examinations from June to September 2009. All participants drank heavily (>14 drinks per week) or engaged in binge drinking (>4 drinks per day) and were given brief advice by family physicians. One drink was defined as containing 14 g of alcohol. Brief advice consisted of a simple statement that the patient's drinking exceeded recommended limits and could lead to alcohol-related problems. Drinking behavior (number of drinking episodes per week, number of drinks per day, maximum number of drinks per day) was reassessed at 6 and 12 months after the brief advice.

**Results:** The mean drinking frequency significantly ( $P < 0.001$ ) decreased from 3.5 at baseline to 2.7 at 6 months and to 2.8 at 12 months after the brief advice. The number of drinks per day significantly ( $P < 0.001$ ) decreased from 6.6 at baseline to 4.9 at 6 months and to 5.2 at 12 months after the brief advice. Weekly drinking amounts significantly ( $P < 0.001$ ) decreased from 23.0 at baseline to 13.9 at 6 months and to 15.9 at 12 months after the brief advice. Maximum drinking amounts significantly ( $P < 0.001$ ) decreased from

12.4 at baseline to 7.7 at 6 months and to 8.5 at 12 months after the brief advice. The factors most strongly associated with improvement in heavy drinking were older age (odds ratio: 1.197) and higher income (odds ratio: 9.658) at 6 months and higher motivational state (odds ratio: 9.658) at 12 months after brief advice

**Conclusions:** The behavior of at-risk drinkers was significantly improved 12 months following their receipt of brief advice. Factors associated with improvement were age, income, and motivation.

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#### Relationship between alcohol intake and impaired fasting glucose according to facial flushing

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**Aims:** Facial flushing associated with alcohol intake is frequently found in Oriental people. This study examined the relationship between alcohol intake and impaired fasting glucose according to facial flushing associated with alcohol intake.

**Material and methods:** This cross-sectional study enrolled 1,081 Korean adult males who were found not to have diabetes or high blood pressure in health screening at the General Health Promotion Center in Chungnam National University Hospital in Daejeon from 2007 to 2009. Following the standard of the American Diabetes Association, an impaired fasting glucose level was set as a fasting blood sugar > 100 mg/dL. Compared to the non-drinking group, the risk of an impaired fasting glucose in the subject groups with and without facial flushing was analyzed according to the alcohol intake.

**Results:** Logistic regression analysis adjusted for age, exercise habits, smoking history, and waist circumference found that the group of subjects without facial flushing who drank more than 20 glasses of alcohol per week (one glass = 14 g of alcohol) was significantly more likely to have an impaired fasting glucose than non-drinkers (OR = 2.82; 95% CI 1.39-5.71). The facial flushing groups consuming more than 8 to 20 (OR = 2.31; 95% CI 1.19-4.52) and more than 20 (OR = 5.05; 95% CI 1.64%-15.57) glasses per week were at significantly higher risk of an impaired fasting glucose compared to the non-drinking group.

**Conclusions:** The results suggest that even a small alcohol intake increased the risk of an impaired fasting glucose significantly in the group with facial flushing, as compared to the group without facial flushing.

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#### An idiot's guide to systematic cardiometabolic prevention in general practice: lessons learnt from a primary prevention programme

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**Aims:** A stepwise screening approach for the detection and management of cardiometabolic disease is proposed in various national guidelines. In the current study we evaluate

the practical lessons learnt during the implementation of a programme for cardiometabolic health checks in five general practices in the Netherlands.

**Material and methods:** Mixed methods research in Eindhoven, the Netherlands. During 3 focus group sessions we collected experiences of general practitioners, practice nurses and practice assistants that were involved in the implementation of the health check. We collected experiences of participating patients with a questionnaire containing both open-ended (qualitative) as well as closed-ended (quantitative) items. We analyzed the qualitative data using a grounded theory approach, in which the different data sources were used for triangulation. The quantitative questionnaire data was analyzed using descriptive statistics.

**Results:** GP's were enthusiastic about offering a health check and preferred systematic screening over case-finding, both in terms of yield and workload. The level of patient participation was high and most participants were enthusiastic about the health check being offered by their GP. Despite their enthusiasm, the GP's realized that they did not have a sufficient body of knowledge and experience required to design and implement a structured, large-scale, service-oriented prevention programme. This resulted in suboptimal instruction of the involved practice nurses and practice assistants, a provocative patient approach and serious shortcomings in communicating the outcomes of the health check as well as in the provided follow-up programme.

**Conclusions:** The service-oriented approach of offering of health checks is very different from the demand-driven care that GPs usually provide. This new approach leads to several practical and ethical concerns that do need to be addressed. Once the cesspool of risk-factors has been opened there is no way back. Future research will have to determine whether and how the encountered obstacles can be overcome.

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#### Effectiveness of regular reporting of spirometric results on smoking quit rate.

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**Aim:** Evaluate in a population of adult smokers, the effectiveness for stopping smoking of the smoking cessation advice combined with a regular reporting of spirometry results by primary care physician.

**Material and methods:** Field: 6 primary care centers in two health districts. Design: randomized controlled study. Sample: 317 smokers over 18 years. Exclusion criteria: inability to perform spirometry. During follow-up, half received smoking cessation advice associated with the discussion of the results of the spirometry performed at baseline visit (intervention group) and the other half only received smoking cessation advice (control group).

**Results:** Control group n=174 (55%), intervention group n=143 (45%). Male n=209 (66%). Average age: 51 years. On visit 0 the average age of smoking initiation was 17, the median number of cigarettes smoked per day was 20, 50% had been smoking for over 31 years and 42.3% had previous attempts to quit. 49.8% was in the contemplation stage and 30.6% in the precontemplation stage. 50% have had a motivation test score of  $\geq 5$  points and an dependence test

score of  $\geq 5$  points. 15% have a mixed-obstructive spirometric pattern. 57.7% of them have a mild obstruction, 30.6% moderate and 5.1% severe. There were no statistically significant differences between groups. After a year follow-up 20.5% had given up the habit (control group 16.5%, intervention group 24.4%,  $p=0.107$ ). 12.1% were former smokers ( $\geq 1$  year without smoking), with the result that former smokers were 7.9% in the control group and 16.7% in the intervention group ( $p = 0.027$ ).

**Conclusion:** A regular reporting of spirometry results by primary care physician combined with the anti-smoking advice increases the giving up rate compared with the anti-smoking advice alone.

## Diabetes mellitus I

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### Clinical characteristics of patients with type 2 diabetes at the time of insulin initiation, a retrospective study; primary care prospective.

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Diabetes presents a huge challenge for whole world. Ministry of Health, NZ, data shows about 200,00 people in NZ are thought to be affected with diabetes. Only half of which are believed to be diagnosed. It is a risk factor on its own right for end-organ damage leading to death in majority of patients. A retrospective study was conducted to assess clinical characteristics of patients with type 2 diabetes at the time of initiating insulin therapy. Demographic data, data on macro- and microvascular complications of diabetes and comorbidities, PMHx of diabetes and oral treatment administered, the clinical severity of diabetes (HbA1c concentration) and dates of insulin treatment initiated were collected. A total of 492 patients were registered as type 2 diabetes. 376 out of 492, were followed up regularly and are included in this study. At the time of this data collection, 36 out of 376 patients were on insulin. There were 20 males and 16 females, mean age being 56.9 and 64.3 respectively. Prior to insulin initiation, mean HbA1c was 9.7. 33.3% had Cardiovascular events. 86.1% of patients were diagnosed of having Metabolic syndrome. The reason for initiating insulin therapy in patients with type 2 diabetes observed in this study was due to elevated mean HbA1c, body mass index levels, and the presence of co morbidities and complications related to diabetes. Post insulin mean HbA1c was 7.6. This is an observation study carried out in retrospect in a primary care settings in New Zealand. It was found that insulin therapy was initiated only after a prolonged, sustained high HbA1c level, high BMI and presence of associated co-morbidities for many years. This group of patients appeared to have higher prevalence of macro- and micro-vascular complications. It appears that early initiation with insulin for more tight control of glucose need to be encouraged to prevent or to delay the development of complications associated with diabetes and a prospective study planned.

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**Bone mineral density and risk of bone fracture in type 2 diabetes mellitus***Dantas A, Baptista Coelho P, Lourenço O, Magalhães A, Oliveira M*

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**Aim and background:** The prevalence of type 2 Diabetes Mellitus (T2DM) in the European Union is about 3,4-10,2% and is expected to increase in coming years. There seems to be an association between T2DM and risk of bone fracture (BF), whose morbimortality can't be ignored. Our aim is to review the association between T2DM, bone mineral density (BMD) and BF risk.

**Material and methods:** Non-systematic search in UpToDate (version 18.2) and Medline via Pubmed with the MeSH terms "Diabetes Mellitus, Type 2", "Fractures, Bone" and "Bone Density" (limits: published in the last 5 years; in English, Spanish or Portuguese). Found 46 articles and used 10 due to relevance.

**Results:** Patients with T2DM are at increased risk of BF (all fractures: RR=1,2; hip fractures: RR=1,4-1,8; vertebral fractures: RR=1,1), increasing with the duration of T2DM (all fractures after 10 years of T2DM: RR=3,3), with its complications (all fractures if retinopathy is present: RR=5,4) and its treatment (all fractures if on insulin: RR=5,9; all fractures if on rosiglitazone/pioglitazone: RR=1,6/1,9). However, BMD is normal/high. Bone fragility (due to low bone turnover, high collagen glycosylation and antidiabetics) and increased fall risk (influenced by the duration of T2DM and its complications: visual impairment, cerebrovascular disease and peripheral neuropathy) are independent risk factors for BF in T2DM. Dual-emission X-ray absorptiometry measures BMD, but doesn't access bone quality. Therefore it's neither sensitive nor specific for determining the risk of BF in patients with T2DM. There are currently no studies concerning the best method to determine BF risk in T2DM or the best way to prevent it.

**Conclusions:** Considering the high risk of BF and its morbimortality, we consider that it's fundamental to prevent falls (controlling T2DM and its complications) and fractures (preventing osteoporosis) and to conduct studies to determine how to access BF risk and how to prevent BF in T2DM.

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**Effect of lifestyle intervention for (pre)diabetics in real-world primary care: propensity score analyses.***Linmans J, Spigt M, Deneer L, Lucas A, Bakker de M, Gidding L, Linssen R, Knottnerus A*

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**Aims:** Many lifestyle intervention programmes for patients with prediabetes or type 2 diabetes have been investigated in randomised clinical trial settings, frequently with positive results. However, the translation of these programmes into

primary care seems problematic and the prevalence of type 2 diabetes is increasing steadily. Therefore, there is an urgent need for lifestyle programmes which have been developed and shown to be effective in real-world primary care. We evaluated a lifestyle programme, commissioned by the Dutch government, for patients with prediabetes or type 2 diabetes in primary care.

**Material and methods:** We selected patients with prediabetes or type 2 diabetes from ten primary healthcare centres who received the lifestyle intervention (n=186) and compared them with a matched group of patients who received usual care (n=2632). Data was extracted from the electronic primary care records. Propensity score matching was used to control for confounding by indication. The follow-up period was one year. Outcome measures were exercise level, BMI, HbA1c, fasting glucose, systolic and diastolic blood pressure, total cholesterol, HDL and LDL cholesterol and triglycerides.

**Results:** No significant differences between both groups were found on all outcome measures. HbA1c and fasting glucose decreased nearly significant (-0,12%, P=0.07 and -0,17 mmol/l, P=0.08 respectively).

**Conclusions:** The effects of the lifestyle programme in real-world primary care for patients with prediabetes or type 2 diabetes were small and not statistically significant. Lifestyle initiatives in primary care are important to intervene in the diabetes epidemic and the attention of governments for the burden of diabetes is promising. Considering the currently available literature and the results of this study, improving lifestyle in real life primary care is still challenging.

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**Effects of a multifaceted intervention on the cardiovascular risk factors of high risk hypertensive with type 2 diabetes patients in primary prevention***Pouchain D, Huas D, Lebeau J*

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**Background:** Many observational studies have shown that a majority of hypertensive patients with type 2 diabetes (T2D) do not reach blood pressure and HbA1c targets advocated in guidelines. Aim To show that a multifaceted intervention on GPs improve hypertensive T2D patient's healthcare outcomes without affecting their quality of life.

**Method:** Pragmatic cluster randomized trial. The intervention consisted in: one day of medical education on the therapeutic targets and strategies featured in guidelines, supply of an electronic BP measurement device and of a leaflet summarizing guidelines, 4 prevention-dedicated consultations in 2 years, and a feedback on interventional group (IG) patients results at baseline and at 1 year follow-up. Inclusion criteria: hypertensive patients with T2D, treated for at least 6 months, with at least 1 other cardiovascular risk factor in primary prevention. Primary endpoint: number of patients achieving the 5 targets featured in the guidelines. Secondary endpoints: number of patients achieving each target, variation of the mean values of the 5 measured items, and quality of life (SF8).

**Results:** 128 GPs were randomized as clusters in the IG, and 131 in the usual care group (UCG). They have included 1047 hypertensive patients with T2D. The number of patients reaching the 5 targets increased by 1% in the UCG, and 3.3% in the IG; (OR=2.36; 95%CI=0.68-8.18). Number of patients reaching BP targets increased by 2.2% (ns) in the UCG and

by 9.3% in the IG (OR=1.94; 95%CI=1.19-3.17, P=0.008). Systolic BP decreased by 1.6 mmHg in the UCG (P=0.09) and 6.3 mmHg in the IG (P<0.0001 between groups). Aspirin prescription significantly increased in the IG. HbA1c levels and quality of life did not vary differently in and between both groups.

**Conclusion:** A multifaceted intervention aimed at GPs did not increase significantly the number of hypertensive with T2D patients reaching the 5 targets recommended in the guidelines. It significantly increased the number of patients reaching the systolic and diastolic BP target values and aspirin prescription.

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### Analysis of glycated hemoglobin (HbA1c) levels in patients originating from single West Pomeranian Family Physician Practice.

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**Aims:** Type 2 diabetes has become one of the main lifestyle diseases and is one of the most common problems in Family Physician practice. Worldwide, in every 10 seconds it is diagnosed in two individuals and one person dies because of its complications. It is estimated that in 2030 there will be recorded 366 million patients suffering from diabetes. Glycated hemoglobin testing is recommended for monitoring long-term level of blood sugar in patients with diabetes mellitus. American Diabetes Association recommends that the HbA1c ought to be below 7.0% for most patients. Polish Diabetes Association recommendations are similar to American ones and it is a standard to perform this test in Family Physician practice. The aim of our study was to analyze average HbA1c levels to individualize diabetes mellitus treatment among studied group of patients.

**Material and methods:** Our study enrolled 115 Caucasian patients (72 females, 43 males, mean age 70.9 years) diagnosed with diabetes mellitus type 2. Whole analyzed population originated from one Family Physician population. We took under consideration levels of HbA1c measured in 2009 and 2010. Patients were treated with standard hypoglycemic combined pharmacotherapy - metformin and sulfonylureas. Measurement of HbA1c was performed using whole blood samples via venipuncture and evaluated once a year according to the Polish Diabetes Association recommendations. All measurements were rated in laboratory of Clinical Department of Diabetology and Internal Medicine, Pomeranian Medical University with use of high-performance liquid chromatography (HPLC) reference method.

**Results:** The average level of HbA1c in women was 6.89%, while in men 7.21%. These differences were not statistically significant. In 2009 average HbA1c concentration among women was lower (6.8%) than among men (7.07%). Similarly in 2010 it was 6.9% and 7.45%, however these results were not statistically significant. Measured in 2010 average HbA1c level in patients younger than 70 years old was 7.7% and in patients aged 70 years or older 6.8%. These differences were statistically significant (p<0,05).

**Conclusions:** Patients with diabetes mellitus need systematic Family Physicians care. Non-compliance is the most probable cause of higher HbA1c levels among men. Average HbA1c concentration among younger population is higher, therefore this group of patients needs a bigger effort from Family Physician because of longer life expectancy and diabetes complications risk.

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### Is the family doctor's care for diabetics better than that of a diabetologist?

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**Introduction:** Diabetic patients are an important problem in general practice. The lack of transparent criteria of competence between the general practitioner "GP" and diabetologist "D" in the Polish health system results in double care by the GP and the D in the same group of patients. Can the family doctor's care and management of diabetics be better than that of a diabetologist's?

**Materials and methods:** The survey encompassed patients over 18 year old with diabetes type II registered in one general practice and being under the care of a GP in the first group and a D in the second. The control parameter used HbA1 and compares the average score of HbA1 in both groups (GP and D) before intervention in March and afterwards in September 2006. Patients were invited by phone or by post. The final analysis contains only data of patients participating in two laboratory tests (HbA1) in March and September 2006. Additionally, the patients of the GP group had to come for two visits between these laboratory tests. (on the first visit, pharmacological treatment was adjusted and patients received information on how to manage diabetes in the form of vocal explanation, leaflets and brochures). The second visit concerned control of patient compliance. Patients from D group received a copy of the March HbA1 results from their diabetologist. The pharmaceutical firm Bayer sponsored the lab tests (in 2006 HbA1 was not available for GP in Poland).

**Results:** Registered diabetics in general practice: 59 Patients that fulfilled conditions of survey 25 : D 7; GP 18 Average HbA1 GP group in March 2006: 7,62 Average HbA1 GP group in September 2006: 6,79 Average HbA1 D group in March 2006: 9,0 Average HbA1 D group in September 2006 8,6 Difference in GP group 0,83 Difference in D group 0,4 Comparison of GP/D - 0,83/0,4

**Conclusions:** The survey was carried out in a small group, but the results in the GP score show that family doctor care for diabetic patients type II might be doubly more efficient than that of a diabetologist.

### Musculoskeletal problems

462

#### The evaluation of the prediction accuracy of the FRAX™ algorithm for hip fracture in European countries

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**Aims:** This is known that a wide international variety exists in the probability of hip fracture. Since 2008 the WHO promotes

the FRAXTM tool to determine the 10-year absolute risk of osteoporotic fractures. The FRAXTM tool has not been validated in Spain. The aim is to analyze the Hip incident fractures (HipFx) among Spanish women in a 10 years follow-up period, and their correlation with fractures predicted by FRAXTM for Spain (FRAX-S), and to compare these data with the expected using FRAXTM for France (FRAX-F) and UK (FRAX-UK).

**Material and methods:** We recruited 661 Spanish women greater than 40 years without taking "bone active drugs" at baseline from the region of Barcelona-Spain, who were included within the FRIDEX cohort by being referred to DXA-scan to know their Bone Mass Density (BMD). We recorded the number of incident HipFx in 10 years. Furthermore, the absolute risk of HipFx expected was calculated using the FRAX-S, FRAX-F and FRAX-UK.

**Results:** After 10 years 18 HipFx in 17 women have been reported. For HipFx, the FRAX-S without BMD expected 5.8 ( $p < 0.0001$ ), with BMD expected 7 ( $p < 0.0001$ ). The FRAX-F without BMD expected 8.2 ( $p = 0.002$ ), with BMD expected 9.6 ( $p = 0.015$ ). The FRAX-UK without BMD expected 9.3 ( $p = 0.010$ ), with BMD expected 10.7 ( $p = 0.053$ ). The results obtained from the FRAX-F were 41.2% higher than with FRAX-S without BMD and 37% with BMD. The results obtained from the FRAX-UK were 59.5% and 53.1% higher than in FRAX-S without and with BMD, respectively. According to previous publications about HipFx, it was expectable 5.1% higher with the FRAX-F and 53.8% with the FRAX-UK.

**Conclusions:** The HipFx incidence was greater than HipFx expected in Spanish population and also higher than expected when compared with HipFx expected in the population of France and UK. The observed incidence of hip fracture in a 10 years period for Spanish women has a stronger correlation with the results obtained from using the FRAX-UK due to the higher weight of these in FRAXTM algorithm.

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#### Chest wall syndrome is not only a diagnosis of exclusion: a clinical prediction rule for primary care

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**Background:** Chest wall syndrome (CWS) is the leading cause of chest pain in primary care practice. We developed and evaluated a clinical prediction rule (CPR) for CWS.

**Methods:** Data from a multicenter clinical cohort of primary care patients with chest pain were used: 672 patients consulted 59 family practitioners, a final diagnosis was made after 12 months of follow-up. Multivariate logistic regression was used to develop a CPR for CWS. We used data from another similar cohort ( $n = 1212$ ) for external validation.

**Results:** From bivariate analyses, we identified 6 variables to develop the CWS score: thoracic pain (neither retrosternal nor oppressive), stabbing, well localized, no history of coronary heart disease, absence of general practitioner's concern, pain reproducible by palpation. The latter variable accounted for 2 points, the others for 1. The score ranged from 0 to 7 points. Using a cut-off of 6 points, the area under the receiver operating characteristic curve was 0.80 (CI 95% 0.76-0.83). Among all patients presenting a CWS, 45% were diagnosed. False positives ( $n = 41$ ) included 3 patients with

stable angina (1.8% of all positives). External validation showed an area under receiver operating characteristic curve of 0.76 (CI 95% 0.73-0.79) with a sensibility of 22% and a specificity of 93%.

**Conclusions:** This score offers an alternative to the usual process of elimination diagnosing CWS. Opposite to common beliefs, the reproduction of chest pain by palpation, although necessary, is not pathognomonic of CWS.

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#### Primary Care Management of Osteoarthritis in the Bolton Region, United Kingdom

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**Aims:** To investigate management of Osteoarthritis in Primary Care with regards to the NICE (National Institute for Clinical Excellence) guidelines in the Bolton region, United Kingdom.

**Materials and methods:** A questionnaire was devised regarding Core and Adjunctive treatment of Osteoarthritis as well as Pharmacological management as stipulated by the NICE guidelines. Patients who were attending the Orthopedic Outpatients at the Royal Bolton Hospital and who were new referrals for Lower Limb Osteoarthritis were asked to fill out the questionnaire.

**Results:** In total 50 questionnaires were obtained from patients. 54% of patients had received Core Treatment as advised by NICE, 57% of patients had received Adjunctive Treatment and 50% of patients had received the Pharmacological Treatment as advised.

**Conclusions:** The results from the questionnaire show that there is some improvement to be made in the management of Osteoarthritis in Primary Care in the Bolton region. Only about half of patients in this study are receiving the Core Treatment which is advised as essential by NICE. The results for Adjunctive and Pharmacological treatment are also similar. Better promotion of health guidelines for Family Doctors in the Bolton region is required. This could improve referrals to the Orthopedic department by ensuring patients have already received the necessary treatment before a surgical opinion is needed.

50

#### Comparison of isokinetic muscle strength relation between hypogonad individuals and the healthy recreational athletes

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**Introduction/Aim:** Hypogonadism in men is defined as a complex of signs and symptoms due to testosterone deficiency or inappropriate production, which occurs in about

1-2%. Testosterone deficiency causes decreased bone mineral density, lack of libido, anxiety, depression, muscle strength weakness. Muscle strength weakness is occurred with the lack of testosterone via reducing the body muscle mass. The purpose of this study is to compare the muscle strength performance of hypogonad individuals and healthy recreational athletes.

**Methods** : Nineteen volunteered recreational hypogonad individuals (20,6 $\pm$ 2.3 years, height 163 $\pm$ 4.7 cm, weight 60,5 $\pm$ 10.1, percent body fat 10, $\pm$ 9.57) and twenty healthy recreational athletes aged 20,1 $\pm$ 2.5 years, height 173,4 $\pm$ 5.4, weight 66,1 $\pm$ 4.1 kg, percent body fat 14,4  $\pm$ 1.3 participated in this study. Isokinetic peak torque of the knee flexor and extensor muscles were assessed concentrically at test speeds of 60<sup>o</sup> /s and 180<sup>o</sup>/s in both groups.

**Conclusion:** This study has shown that isokinetic muscle strength of hypogonad individuals were lower than the healthy recreational athletes.

827

### Muscle injuries investigation with ultrasonography (U/S) and magnetic resonance imaging (MRI)

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**Objectives:** The goal of this study is to examine the contribution of ultrasonography (U/S) and magnetic resonance imaging (MRI) in the investigation of the injuries of muscles in the Imaging Department and in the Department of General Medicine of 'Laiko' General Hospital of Athens.

**Materials and methods:** Ninety seven patients (31 women and 66 men) from 12 to 79 years of age (mean age: 44) were examined by U/S and MRI during years 2008 and 2009. Seventy five patients were examined by both methods, while 11 of them only by U/S and another 11 only by MRI. Electronic linear probes with a variable frequency 5-15 were used for the u/s examination, as well as color Doppler, while a dynamic comparative examination in two images was applied. The MRI examination included T1, T2, T2 (f-5)+ GD (F-5) followings.

**Results:** We are describing the semiology of injuries concerning muscle injuries, muscle ruptures, fluid collections and hematomas, in the u/s and MRI examinations. For muscle ruptures we used the Rodneau classification in five stages. Stage 0: Reversible damage to the muscle fibers, without damage of the supportive connective tissue 31.29% Stage 1: Non reversible damage to the muscle fibers, without damage of the supportive connective tissue 25.17% Stage 2: Non reversible damage to a number of muscle fibers, with damage to the supportive connective tissue 12,24% Stage 3: Non reversible damage to many muscle fibers, with damage to the supportive connective tissue and formation of intramuscular hematoma 17,68%. Stage 4: Complete or partial rapture of the muscle 13,60%.

**Conclusion:** The u/s and MRI examinations are promising tools in the investigation of muscle injuries and they may contribute to planning the proper therapy. It is important that general practitioners have to become familiar with these conditions and that they approach them diagnostically, so that the symptoms are treated efficiently.

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### The FRAX<sup>tm</sup> tool in Spanish women. Observed fracture incidence over ten years versus predicted fracture probabilities in the FRIDEX cohort

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**Introduction and aim:** FRA<sup>xTM</sup> tool has been validated in several cohorts, from various countries but not in Spain where the tool is being developed. The aim of the study was to compare the predicted probabilities and the observed fracture (Fx) incidence in female Spanish population after a 10 years follow-up period.

**Material and methods:** 771 untreated women aged > 40 yrs. from a multicenter cohort (FRIDEX) and without receiving any bone active drugs were included. All patients had a baseline questionnaire on osteoporosis risk factors, anthropometrics measurements and DXA-scan. Furthermore, a telephone interview collecting incidental fractures and risk factors after 10 years.

**Results:** We did not find significant differences in weight, height, smoking, alcohol intake, parental hip fracture or falls in the previous years between fractured (n=78) and not fractured (n = 693) patients. However, we found differences in age (61.3 vs 56.3 yrs.) p>0.001, previous fractures (39.7 vs 18.5%) p>0.001, rheumatoid arthritis prevalence (3.8 vs 0.7%) p=0.038 and osteoporosis in femoral neck (FN) at baseline (25.6 vs 7.6%) p>0.001 between fractured and not fractured. The women with hip, forearm, shoulder or clinical vertebral fracture, standardized per 100,000 people and year, were 220, 272, 298 and 230 respectively, that were similar results to those of other cohorts in Spain or France. For Major Fx the AUC ROC curve for FRAX without and with BMD was 0.683 (95% CI 0.619-0.748) and 0.696 (0.631-0.762) respectively. For Hip Fx the AUC was 0.886 (0.823-0.949) and 0.850 (0.738-0.963) respectively. The Hosmer-Lemeshow regression test showed a good relationship between the different quintiles of risk, but clearly tilted to the observed fractures. Overall FRAX expected to find only a 42% of the observed fractures.

**Conclusions:** FRAX<sup>TM</sup> underestimates the rate of incident fragility Fx over 10 years in a Spanish cohort. However, the AUC ROC curve shows a good probability for Hip Fracture.

### LINNEAUS EURO-PC I

926

#### Patient safety in Primary Care in Europe

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**Aims:** The LINNEAUS Euro-PC (Learning from InterNational Networks About Errors And Understanding Safety in Primary Care) collaboration seeks to address the deficit in activity and coordination related to patient safety in primary care in the

European Union. Following the Science and Art motto of the conference, the symposium will report on workstreams from LINNEAEUS Euro-PC that deal with understanding, assessing and improving patient safety in primary care across Europe via a range of processes. These include identifying indicators of patient safety, assessing available, methods of assessing safety culture and developing a system for the classification of adverse events. Ways of including patients themselves in patient safety will also be considered.

**Material and methods:** There will be three presentations as follows: 1. The results from a Delphi survey of patients, general practitioners and experts, leading to the development of a system for classifying patient safety incidents for use across Europe 2. The results of field tests in several European states of two methods for assessing patient safety culture in primary care. 3. The results of a survey of how patients and general practitioners currently communicate and act, with regards to patient safety. The fourth presentation will consider the barriers to implementing each of these processes from the perspective of Poland, a European country that is nascent with respect to the development of systems to ensure patient safety.

**Conclusions:** The symposium will enable the participants to identify current state of the art in relation to several key processes in understanding, assessing and improving patient safety on primary care.

927

#### Patient safety incident classification in primary care

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**Aims:** An important step towards understanding and avoidance of (future) patient safety incidents is the analysis of patient safety data using a classification system. By now there is no system established in general, that is designed for and successfully tested in primary care. To fill this gap is one of the objectives of the international project LINNEAEUS EURO-PC. We report here on work package two of the project, the development of a classification system for patient safety incidents in primary care.

**Materials and methods:** A two-stage web-based Delphi survey of expert opinion will be conducted. International multidisciplinary experts in classification systems, primary care and patient safety will participate in the panel. The panel will be mainly asked for its opinion regarding general recommendations on classification, and on classes of a classification system and their definitions.

**Results:** The analysis of the two rounds will be presented at the conference. Results will lead to a framework of a patient safety incident classification for primary care aiming to promote patient safety research and to improve comparison of classificatory results.

**Conclusion:** This study will combine empirical evidence with expert opinion to develop an instrument to compare patient safety data from several countries. The Delphi approach is useful to unite stakeholders with differing professional backgrounds from several countries.

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#### The issues of patient safety in Primary Care in Poland

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**Aims:** The LINNEAEUS Euro-PC (Learning from InterNational Networks About Errors And Understanding Safety in Primary Care) collaboration seeks to address the deficit in activity and coordination related to patient safety in primary care in the European Union. In Poland, an European country that is nascent with respect to the development of systems to ensure patient safety there are real barriers to implement indicators and methods for assessing of patient safety in primary care, as well as developing a system for classifying patient safety incidents.

**Material and methods:** Identified barriers will be discussed in relation to the results presented by more mature patient safety developments Linneaus Euro-PC partners.

**Results:** Barriers will be identified and discussed.

**Conclusions:** Presentation and discussion will enable the participants to identify current state of the art in relation to patient safety on primary care in nascent and mature primary care environments.

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#### Involving patients in patient safety. How do you communicate patient safety with your patients?

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**Aims:** Who is the 1st victim of an adverse event? Who is the only one who is going throughout the course of treatment? Who is the first to recognize differences in pains, side effects from medicine? The patient! Health care is all about the patients. And so is patient safety. Health care providers are responsible for patient safety. Therefore you built up systems and procedures that are designed to prevent errors from occurring. However, patients can support health care and health care providers to be even stronger by staying informed, keeping track of developments and by speaking up if they notice something is about to go wrong. And you can support your patients by listen to them and involve them in their treatment and include them as safeguards in their treatment. In other words, by talking with your patients about patient safety in a concrete way related to the patient, hers/his illness and treatment.

**Material and methods:** We performed a questionnaire survey to gain an impression of how patients and general practitioners currently communicate and act, with regards to patient safety. The results of the questionnaire will be presented and discussed.

**Results:** The results of the questionnaire will be presented and discussed.

**Conclusions:** The presentations will enable the participants to identify ways and methods on how to communicate and involve patients in patient safety.

Friday, September 9<sup>th</sup> 15:45-17:15

## Quality improvement I

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### Electronic Health Records' design mistakes. Direct and indirect costs. whose responsibility?

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Computerized Databases are supposed to improve medical practice, but a non-properly planned process computerization can even worsen it, wasting the invested resources. After informal workers' complaints about a new X-Ray database's (XRd) performance, a quality improvement intervention was designed.

**Aim:** Optimize the clinical performance of a Health Area XRd.

**Methods:** All the image procedures performed during three weeks were reviewed in the XRd. Number of patients, codification criteria, procedures coded under each criterion, duplicated codes, and incomplete names were collected. The medical staff (Primary Care and Hospital) answered an opinion poll. The management received a report.

**Results:** 2576 procedures were performed, 42.36% coded under the patient identification code (CIP), 50.9% under the Clinical History Number (NHC) and 6.96% under a miscellany of criteria. Daily a 1.38% of codes were duplicated, and 68.79% of the names were incomplete. The workers (answer rate of 68.18 %) reported different degrees of difficulty in finding the images (76.67%), need to ask the patient to come back (80%), procedure repetition (63.33%), and delay in diagnosis or treatment (73.33%), blaming mainly the uncertain codification (90%), lack of code's copy (66.33%) and incomplete name (60%). 66.67% reported the problem, but got no solution.

**Conclusion:** Workers experience revealed easily avoidable waste of time and money, as well as patients' harm, delaying therapeutic measures and exposing them to unneeded radiation. That is coherent with found XRd design and codification mistakes. XRd must allow an easy and reliable search. Software should provide mechanisms to avoid duplicated, irregular or incomplete codification. Managers should seek advice from users, as well as pay attention to formal and informal messages when installing medical software, so as to foreseeing and correcting errors during the design or early running stage.

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### The perception of Patient Safety among primary care professionals (GP's, pharmacists and nurses) in France, according to the results of an on-line survey of 500 health professionals in 2011

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**Introduction and aim:** Patient Safety culture is a new concept in the field of primary care. In order to understand

how safety is perceived in this field, the Haute Autorité de santé (HAS, French National Authority for Health) established a national survey of some primary care actors (GPs, pharmacists and nurses). The survey is based on the Manchester Patient Safety Framework (MaPSaF), produced for use in primary care but adapted to the French context. It measures ten dimensions of patient safety and combines attitudes, values and behaviours.

**Material and method:** The survey is self-administered on-line from a representative sample of 300 GPs, 100 pharmacists and 100 nurses (quota method). It was preceded by a pilot survey with qualitative, semi-structured interviews conducted by a psychologist with five GPs, five nurses and five pharmacists to ensure good understanding and usability of the questionnaire.

**Preliminary results:** Analysis of the 15 interviews of the pilot survey showed that the issue of Patient Safety is considered interesting but primary care practitioners are unfamiliar with the concepts. The notion of Patient Safety seems unfamiliar - especially for pharmacists, with frequent confusion between "adverse event" in professional practice and "adverse" in relation to specific treatments.

**Conclusions:** The final results of the national survey will be announced at the congress. In the future, HAS will use this survey as a tool to assess the progress of these professionals.

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### Treatment of osteoarthritis in our Family Health Unit - Cycle (s) of quality

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**Aims:** Osteoarthritis (OA) is the most common disease of joints, it is estimated that one third of adults aged between 25 and 74 years shows evidence of radiological OA in at least one joint. It is a chronic, multifactorial disease that leads to progressive functional disability and has ethical and economic importance. Treatment should be multidisciplinary and seek to improve functional and clinical mechanics but overall increase the quality of life. So, our aim is to evaluate and improve the quality of pain management in osteoarthritis in this Family Unit.

**Material and methods:** Dimension studied: scientific-technical adequacy. Unit of study: All the patients diagnosed with OA that attended the USF, during January and February 2011. Data: medical electronic records Evaluation: internal Criteria: Indicators recommended for the treatment of osteoarthritis of the book "Measuring General Practice - University of Manchester, 2003 Standards and Compliance criteria :> 60% sufficient,> 80% good.

**Results:** Clinical information of osteoarthritis patients who attended the USF during the first month of the year, were analyzed to assess the need to propose corrective measures. Of the four parameters considered, only one had good quality. The remaining had insufficient quality, especially the prescription of paracetamol, ibuprofen as a first-line anti-inflammatory drug, and the proposal of orthopedic surgery for patients with resistance or intolerance to medical therapy.

**Conclusions:** The standard of quality of the parameters evaluated was overall unsatisfactory. A review of this topic based on evidence was prepared and presented in a service meeting dated 01/27/2011. A reassessment of quality for the patients who attend the USF in February is scheduled, with



further communication and interpretation of results in the service meeting in March, with a possible proposal of eventual corrective measures if the aims are not achieved.

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### Avoidable cost due to inappropriate indication of antiplatelet therapy with clopidogrel: study in a primary health center

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**Aims:** 1) To analyze the adequacy of treatment with clopidogrel according to guidelines recommendations in a Primary Health Center (PHC) 2) To estimate the avoidable cost due to an inappropriate prescription of this agent.

**Material and methods:** Cross-sectional study of all patients under clopidogrel therapy during last year in a PHC of an urban area. According to our country's national guidelines, appropriate clopidogrel indication was considered when: 1) allergy or intolerance to acetyl salicylic acid (ASA), 2) peripheral vascular disease, 3) requirement of double antiaggregant therapy due to stent implantation or acute coronary syndrome (ACS). Estimate cost saving was calculated for one year, considering the number of patients with an inadequate indication and the average price of clopidogrel in our country

**Results:** A total number of 165 patients with available information out of 168 patients taking clopidogrel, were included in the study. Mean age was 72.6 years and 65.4% of them were male. Mean duration of treatment was 4,1 years. In 94 (57.0%) cases, the prescription was considered appropriate: 25 presented allergy or intolerance to ASA, 15 were diagnosed of peripheral vascular disease and 54 patients required double antiaggregation because of stent implantation or ACS. In the other 71 cases, treatment with clopidogrel was not considered appropriate. The estimated avoidable cost resulting from the inadequate prescription of clopidogrel was 46646 euro/year.

**Conclusions:** In more than forty percent of patients from our study, the prescription of clopidogrel can be considered inadequate according to guidelines. Adherence to widely accepted guidelines would result in significant economic saving, which could potentially be invested in other needs of PHC. Systematic evaluation of the adequacy of prescription of drugs with a high economic impact seems to be strongly recommendable.

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### Calibration as an important factor effecting primary care health services

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**Aim:** The role of medical equipment's in daily practice have increased both qualitatively and quantitatively. Each device has a correct measuring interval. These intervals are defined

using some standards which can only be done using calibration devices. Equipment's needed and procedures to run a calibration center will be given in this presentation. One of the most frequently used devices in primary care is the sphygmomanometer, which is inevitable in the diagnosis and follow up of hypertension. It is estimated that just because of calibration errors in the sphygmomanometer devices, one fifth of hypertensive cases are missed while one third of the patients receives a false positive label of hypertension. Taken into account the large adverse effects of calibration problems to the health services given by primary care physicians as well as the unnecessary economic burden, calibration in primary care becomes an utmost important issue.

**Conclusion:** Medical devices used in primary care should be regularly checked for proper calibration. Family physicians should be actively involved in the establishment and operation of calibration centers in order to assure high quality health services.

### Health promotion and disease prevention II

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#### Measuring sun protection using a global sun protection score

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**Introduction and aim:** Increasing skin cancer incidence in western societies during recent decades has raised the interest for preventive measures related to sun exposure. In the process of prevention and interventions aiming at affecting people's sun habits and sun protection behaviour, there is a need for usable and reliable tools to evaluate the effect of the performed measures. Despite numerous studies within the field, few attempts to present global scoring instrument for sun protection have been performed. This study aims to describe a possible set of questions suitable for such an instrument, comprising the most important aspects of sun exposure/protection.

**Material and methods:** The material from a previously performed intervention study, using a questionnaire based on Likert scales and on the Transtheoretical Model of Behaviour Change (TTM), was utilised. 213 primary healthcare patients having filled in the questionnaire were randomized into two groups receiving sun protection advice, in Group 1 in letter-form, and in Group 2 orally during a personal GP's consultation. In the original study, increased sun protection/readiness to increase sun protection was demonstrated for several items, in Group 2, at half-year. To compose a global scoring instrument, five questions concerning sun exposure/protection (intentional tanning, sunscreen use, choice of SPF, number of occasions with sunburn, and time spent in the sun during midday), were selected to give a 20 point global behavioural score. Similarly, four TTM-based questions (giving up sunbathing, using clothes for sun protection, using sunscreens, and staying in the shade) gave a 16 point TTM-score.

**Results:** At follow-up, increased sun protection reflected in the behavioural score occurred only in Group 2 ( $p < 0,001$ ). For the TTM-score, increased readiness to increase sun protection occurred in both groups, but significantly higher in Group 2 ( $p < 0,05$ ). In a second step, categorization of the 20 point behavioural score, into three risk levels, revealed a significantly higher shift of subjects having moved to a lower

risk level in Group 2 compared to Group 1 ( $p < 0.05$ ).

**Conclusions:** Combining summarised Likert scale scorings with a TTM-score seems promising for the creation of a questionnaire-based, global sun protection scoring instrument usable in primary healthcare and for public health related measures.

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### Smoking among health care workers

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**Aim:** Addiction of smoking is recognized as a disease in the WHO International Classification of Diseases. Smoking is the most common, widespread and deadliest disease of addiction (a drug addiction). Determine the frequency of smoking addicts, i.e. the smoking status of medical staff employed at the Health Center, Podgorica, Montenegro.

**Method:** We surveyed 77 medical workers in the Health Centre Podgorica. **RESULTS** Of the total number of surveyed persons, 34 (44.16%) are smokers and 43 (55.84%) nonsmokers. As for the age structure of smokers, 14 smokers (41.17%) are > 50 years old, 12 (35.29%) are 40 - 50 years old, 6 (17.64%) are 30- 40 years old and 2 (5.90%) < 30 years old. Among the surveyed medical staff, there are 61 (79.22%) females and 16 males (20.78%). Out of the total number of surveyed women, 23 (37.70%) are smokers, while among men that number is 11 (68.75%).

**Conclusion:** The total number of smokers was 34 (44.16%), out of the surveyed 77, among medical staff and it is extremely high. The frequency of male smokers is higher (68.75%) out of the total number of surveyed men, while with women it is 37.70% of the total surveyed women. According to the age structure, there is a higher percentage of smokers with older medical staff, which indicates that the number of smokers among medical staff is decreasing. A medical worker who is a smoker cannot be motivated to implement a program of prevention and quitting smoking among patients, so we have to work on implementing the smoking quitting first of all among medical staff.

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### Impact of a workshop on the influenza knowledge and the vaccination adherence

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**Aims:** To know the changes about the knowledge on influenza and the vaccination adherence in people who attended a workshop about it.

**Method:** This is a 'pretest-posttest' study, in a community setting. Before and after a workshop about influenza, 52 people were asked to respond to an anonymous questionnaire. Previously they signed an informed consent.

The people knowledge was analyzed and compared (pretest-posttest), using Fisher's Exact Test. Also we compared the vaccination rate in years 2006-2010, based on the medical records' data. We performed a logistic regression analysis to know the variables associated with vaccination compliance.

**Results:** 61.5% of subjects were women, with a mean age of 71.7 years (SD: 7.9; ranging from 55 to 88 years). Half of them were illiterate. 66% admitted having a good or very good health. 36.7% considered they doesn't know about the general symptoms of influenza before the workshop, and after this answer was given by 10 % ( $p=0.015$ ). Before the workshop 54.8% said they knew prevention of influenza, and after this percentage raised to 77.4%, nevertheless the differences were not significant. In 2010 79.1% were vaccinated against influenza versus less than 70% who had been vaccinated other years. Compared to 2009 there was an increase of 10% ( $p < 0.0001$ ). In a logistic regression analysis the only one independent variable associated with the vaccination in 2010 was the age: OR: 1.18 (95% CI: 1.03-1.36).

**Conclusions:** After a workshop, people showed a remarkable improvement in their knowledge of influenza and vaccination adherence.

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### Prevalence and predictors of seasonal influenza and pneumococcal vaccine uptake among patients with diabetes

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**Aims:** to gather data on seasonal influenza vaccine uptake over the previous twelve months in patients with diabetes; to determine pneumococcal vaccine uptake over a lifetime in the same patient group; and to identify predictors that may influence likelihood of vaccine uptake. This study was conducted with a view to increasing vaccination rates among low uptake groups in future.

**Materials and methods:** A combination of retrospective medical record review and patient questionnaire was undertaken over a 3-month period in the diabetes outpatient clinic at Cork University Hospital, after the influenza season. Collected data included demographics, type and duration of diabetes, insulin status, comorbidities, vaccination status and vaccination advisors.

**Results:** Two hundred patients, 28.5% ( $n=57$ ) with type 1 and 70.5% ( $n=141$ ) with type 2 diabetes were questioned. Uptake of seasonal influenza vaccine in the previous year was 64.5%. Reported lifetime uptake rate of pneumococcal vaccine was 22%. 13% had declined the influenza vaccine in the past; fear of side effects was the commonest reason. Increasing age, increasing duration of diabetes and a history of recent GP visits significantly increased frequency of influenza vaccination over a five-year period. Significant predictors of influenza vaccination over the previous 12 months included those receiving GP advice [OR 10.6 (95% CI 4.3-26.4)], those with knowledge of influenza vaccination recommendation [OR 4.3 (1.6-12)] and those aged over 65 [OR 2.8 (1.008-7.8)]. Significant predictors of pneumococcal vaccine uptake were GP advice [OR=63 (10-388)] and chronic kidney disease [OR=22 (1.5-312)].

**Conclusions:** Increased uptake of vaccines, particularly pneumococcal, is desirable. Uptake may be improved by targeting subsets of the population e.g. under 65s, those who

have refused the vaccine in the past, and those who have not visited their GP in the previous two weeks. GP advice is very effective at maximising uptake.

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### Can aspirin help on colorectal cancer prevention?

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**Aims:** Colorectal cancer is an important problem worldwide, because of its high incidence and associated morbidity. Efforts have been done concerning the prevention of colorectal neoplasms and there is increasing evidence that aspirin may have a role in decreasing its risk. Aspirin is thought to influence cancer development primarily by blocking cyclooxygenase 2 activity, which is linked to inflammation and tumor growth. This study aims to review the evidence of using Aspirin in the prevention of Colorectal Neoplasms.

**Methods:** Research in PubMed and Evidence Based Medicine sites of articles published between 2003 and 2010, written in English, with the keywords "Aspirin", "Primary Prevention", "Secondary Prevention" and "Colorectal Neoplasms". The evidence level was applied by SORT (Strength of Recommendation Taxonomy) Scale of the American Academy of Family Physicians.

**Results:** Several clinical trials have shown that regular use of aspirin reduces the incidence and recurrence of colon adenomas, colorectal cancer and its associated mortality. Large-scale and long-term studies demonstrate that the protective effect increases with longer treatment duration and higher doses (>325mg), which raises the problem of potential hemorrhagic effects. Aspirin also appears to act quickly, more effectively in advanced lesions and to add more benefit to patients with proximal colon cancer, who are more difficult to screen by standard endoscopy.

**Conclusion:** Chemoprophylaxis with aspirin alone or in combination with the screening program, is an attractive strategy to reduce the incidence of colorectal neoplasms. With the selected data, we conclude that aspirin has a protective effect for colorectal neoplasms when used in high doses and for long periods (SORT A). However, studies are needed to clarify aspirin protective mechanisms and to further evaluate the risk-benefit of using high-dose aspirin, concerning its potential adverse effects.

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### Homeopathy for the prevention of heatstroke in infants and childhood, a randomized placebo control trial.

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**Aim:** This study investigates the effect of ultra molecular homeopathic medicines for the prevention of pediatric heatstroke.

**Background:** Heatstroke is the most severe form of the heat-related illnesses, medical emergency associated with

neurological dysfunction. Heatstroke and deaths from excessive heat exposure are more common during summers with prolonged heat waves in Rajasthan, India.

**Material and methods:** A double-blind randomized parallel group placebo controlled trial was carried out in 1031 children below the age of 10 years, recruited from primary schools, local centers and parents visiting health care centers in rural Jaipur. The children were randomly assigned to receive either placebo or ultra molecular homeopathic medicines in C-30 potency administered twice a day for 2 weeks. The main outcome measure relates to the prevention of new episodes of heatstroke measured with total symptom score over 6 weeks.

**Results:** The result showed that heatstroke onset was significantly different in both groups. Significantly fewer incidences were detected in homeopathy group compared to placebo (6.99% homeopathy vs. 25 % placebo). In children having heatstroke there was statistical difference between the two groups in median number of days with heatstroke symptoms and in the requirement of conventional medication/care.

**Conclusions:** In this study there was effect over placebo for self ultra molecular homeopathic medicines in preventing childhood heatstroke.

### Rural medicine/Social problems

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#### Traveling to access rural maternity services; qualitative dimensions of economic costs

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**Aims and background:** Canada has recently seen the closure of many rural and remote maternity services due to the cumulative results of health care restructuring. This trend, mirroring the situation internationally, has created the opportunity for a 'natural experiment' to examine the costs associated with closing maternity services in small rural and remote communities. Beyond system costs, previous qualitative research has demonstrated that often-prohibitive expenses are incurred by birthing women and their families. The aim of this qualitative research was to document the costs of relocation prior to the onset of labor and the attendant impact this had on their experience of birth.

**Materials and methods:** In-depth qualitative interviews were undertaken with 24 rural parturient women from 4 communities in British Columbia, Canada. Transcripts were thematically analyzed to determine categories of costs with an effort to uncover those costs not usually reported.

**Results:** Participant in this study experienced significant financial stress when leaving their communities to give birth due to costs incurred due to travel, food, lodging and lost wages. Secondary expenses incurred included communication with their home community and travel for family members between the communities. The strain of the financial burden was significant for many respondents and devising mitigating strategies occupied much of the prenatal period. The burden was most acutely felt by those respondents with the least financial and social resources to address the situation.

**Conclusion:** Rural parturient residents and their families

would benefit from a travel assistance plan to subsidize costs incurred due to travel to referral communities for care. As there is emerging evidence to suggest a relationship between distance-to-care and prenatal stress (Grzybowski, Kornelsen et al.), it is anticipated that such subsidies may, in the long run, reduce overall system costs.

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#### Achieving something every day: resilience among doctors who work in challenging areas

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**Aim:** Although physician burn-out has received considerable attention, there is little work on those doctors who thrive while working in challenging conditions. We aim to describe attitudes to work and job satisfaction among Australian primary care practitioners who have worked for more than five years in areas of social disadvantage.

**Methods:** Semi-structured interviews exploring attitudes towards work and professional satisfaction, and strategies to promote resilience. Participants: 15 primary care doctors who worked in Aboriginal health, prisons, drug and alcohol medicine, youth and refugee health.

**Results:** All doctors were driven by an internalized notion that helping a disadvantaged population was the right thing to do. They were sustained by a deep appreciation and respect for the population they served, an intellectual engagement with the work itself, and the ability to control their own working hours (often by working part-time in the field of interest). In their clinical work, they recognized and celebrated small gains and were not overwhelmed by the larger context of social disadvantage.

**Conclusion:** If organizations want to increase the numbers of medical staff or increase the work commitment of staff in areas of social disadvantage they should consider supporting doctors to work part-time, allowing experienced doctors to mentor them to model these patient-appreciative approaches, and reinforcing for novice doctors the personal and intellectual pleasures of working in these fields.

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#### Comparative study of diabetes control from institutionalized and non-institutionalized elderly diabetic patients

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**Aim:** To compare the diabetes control in elderly patients from two groups: institutionalized and non-institutionalized using the HbA1C test.

**Material and methods:** 224 diabetes patients elder than 65 years old diagnosed of diabetes have been studied from may to december 2010 in a rural zone. 110 diabetes patients were institutionalized in older people residence and 114 lived in

their houses into the same rural zone. Age, sex, hypertension, dislipemia, obesity, cardiological diseases, Cronical Obstructive Pulmonary Disease (COPD), Immobilization (bed/chair life), walked life or independent life and the last one HbA1C test have been registered.

**Results:** Non-institutionalized patients: Middle age, 77,58 years old, men 34,6%, female 65,4%, hypertension diagnosed 88,5%, dislipemia 55,8%, COPD 25%, venous pathology 69,2%, obesity 53,8%, cardiological diseases 53,8%, immobilized (bed/chair life) 15,4%, walked life 86,5% and HbA1C test 6,85% Institutionalized patients: Middle age, 81.90 years old, men 34,54%, female 65,45%, hypertension diagnosed 86,36%, dislipemia 38,18%, COPD 20%, venous pathology 18,18%, obesity 30%, cardiological diseases 50%, immobilized (bed/chair life) 60%, independent life 40%% and HbA1C test 6,4%

**Conclusions:** 1. There is not significant differences between the diabetes controls in both groups, have a similar results. 2. The age, associated pathology and sex are similar in the institutionalized and no institutionalized groups 3. Institutionalized diabetes patients are more immobilized, doing bed/chair life.

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#### Evaluation of social tendencies among adults: a pilot study of 270 subjects

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**Aim:** We aimed to develop a scale for measuring social tendencies among adults in the holistic approach spectrum.

**Material and method:** We applied a pilot questionnaire to 270 subjects. We tested 49 negative and positive sentences under relative factors. We measured sentences by 5 fold Likert scale. Initially, we evaluated general structure and harmony of questionnaire. Then we asked adults to answer appropriate sentences. Negative sentences were scored by subtraction of point from 6. We analyzed data by factor and reliability methods in SPSS for windows and evaluated for validity.

**Results:** We obtained a scale with 6 factors and 22 attitude sentences. Cronbach-alpha value was 0.786 (Corrected 0.806) of scale. We named it as Fatih-Scale of Social Tendencies-Adult version. Factors were; Social adaptation and status, avoiding of substance, avoiding of violence, economic status, family status, aims and ideas. Some correlations between factors were observed; positive correlations between social adaptation and status and avoiding of substance, family status, aims and ideas, between avoiding of substance and avoiding of violence, family status, aims and ideas, between avoiding of violence and family status, economic status, aims and ideas, between family status and aims and ideas.

**Conclusion:** As a result, our scale may measure different social tendencies of adults and may be used some guidance serves, psychosocial applications, and scientific researches in the future.

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### A comprehensive approach to measuring the cost effectiveness of maternity care service options for a rural community

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**Aims and background:** In Canada the erosion of rural health services has accelerated in the past 10 years. In the province of British Columbia, seventeen small communities in rural British Columbia have lost local maternity care services during this time period. Women and families from these rural communities, many of them aboriginal, now face significant challenges in accessing maternity care services. These issues contribute to the vulnerability of rural populations in need of health care services. Health administrators have an important interest in knowing whether local maternity services would be cost effective. The goal of this research project is to conduct a comprehensive economic analysis of population-based rural obstetrical care comparing three types of communities: those without local services, those with local maternity care services (LMCS) but not caesarean section services, and those with LMCS and general practitioner (GP) caesarean section capability and link cost with neonatal outcomes within a cost effectiveness framework.

**Methods:** Study communities have been selected to reflect a range of service levels, population sizes, and degrees of isolation. In each community direct and indirect costs will be measured based on existing services. Comparison will be made between the costs of different service models relative to each other to identify which strategy is more costly and, independently, result in more favorable outcomes. In the second step, the developed model will be used to calculate the threshold value of each of the above mentioned variables to reach a predetermined cost effectiveness ratio. Previous work has already been done defining maternal and newborn outcomes by level of service and these results will be linked to costs. Decision analytic modeling will be used to characterize and evaluate costs and different outcomes.

**Results:** Data collection is ongoing. To date we have visited 5 of 9 communities and costing data is being compiled from interviews and survey forms.

**Conclusions:** will be presented at the conference.

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### How to live with death –primary care consultation on a grieving patient

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**Aims:** The experience of mourning and its clinical consequences can take a profound impact on people and their systems. The Family Physician (FPh) role includes being present and accessible while monitoring the process. The

FPh profile of action is scarcely characterized in published studies. This study aims to characterize in 2009, the follow-up with all users of an Health Centre (HC) diagnosed with: "loss of family/partner/child" by encoding ICPC2. Characterize through clinical files (SOAP method), the treatment plan set (P) compared with the diagnosis (A) and the number of consultations per user.

**Material and methods:** Clinical files of one HC, statistical computerized program. Sample: n = 24 with active problem on Z23, Z15 and Z19. 5 cases excluded by encoding refer to separation/divorce/IT bias. Evaluation on the registered data until 1 year after the 1st consultation for this reason. Descriptive statistical analysis.

**Results:** For n = 19 (21.1% men, 78.9% women, mean 56.4 years, min 17 and max 91 yrs.), made an appointment with (A) or (S) for loss of: family member (n = 10), partner (n = 6), children (n = 3). In the sample, two came before the death of the relative. For 52.6% of patients there is only one consultation, 50% of which for other reasons (S). Of users with > 1 visit (average of 3.3 visits per user), the follow-up lasted on average 4.9 months, with only one diagnosis of pathological grief. Comparing these two sub-samples in terms of registration of medical plan (P): a) group with > 1 consultation (47.4% of the sample): 55.5% prescribed drug, 33.3% therapeutic listening, 33.3% administrative procedure and 11.1% without any coding in a first consultation, b) group with just one query: 60% no plan referred on clinical records, 40% under medication, 0% encoded in therapeutic listening.

**Conclusions:** On patients diagnosed mourning loss in 2009, 47.4% were required >1consultation. Patients who had a defined and registered treatment plan in the first consultation addressed for this diagnosis, had more often follow-up consultations. For the same evaluation in (A), a more detailed registration was found in the sub group with >1 consultation.

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### Evaluation of the usefulness of social skills workshops in primary care

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**Objective:** To evaluate the usefulness of social skills workshops in reducing psychological distress due to inadequately coping with the problems of daily life in women with no diagnosed mental illness and who attended a health center.

**Material and methods:** Descriptive longitudinal, pre-post intervention evaluation. Setting: Urban Health Centre with two rural clinics. Selection criteria: Women with psychological distress, somatization, hyperfrequency and/or deficiencies in family and/or social support, from medical consultation, nursing, social work, or mental health. Subjects: Patients who conducted workshops between March 2009 and December 2010 (80% effective coverage assistance sessions), (N = 46) Interventions: Workshop intervention group (10-12 people) with weekly sessions (8 sessions, lasting 2 months), led by the center's social worker, including the following topics: communication, problem solving, thought control, and improved self-esteem, self-awareness and assertiveness, stress management, need to set goals and objectives, integration in sociocultural activities in the area. Measurements: Age, reason for participation, psychotropic drugs, social and employment situation, social relations, number of doctor visits in 6 months pre and post workshop.

We compare the Goldbeg Anxiety and Depression Scale (GADS) scores, pre and post-intervention using paired Student T, alpha 0.05. Findings Total of 46 patients, 100% women, mean age 53.16 years (SD 12.8); reasons for referral: anxiety 39.1%, 95% Confidence Interval (25.03-53.23), depression 23.9% (11.59-36.24), upset with her situation, living focused on others and poor relationship with their families 4.3% each. 56.5% takes psychotropic drugs prior to the workshop and 47.8% had previously been treated in mental health. 23.9 (11.59-36.24) have completed high school and 2.2% have college degrees. 10.9% (1.87-19.86) has never worked and 13% (3.31-22.78) left work when they got married. There is an average decrease of 1.31 consultations after taking the workshop. The average decrease of anxiety pre-post intervention in GADS is 2.51 points (1.90-3.12) ( $p < 0.001$ ) and 2 points (1.32-2.67) ( $p < 0.001$ ) in the depression subscale.

**Conclusion:** The social skills workshops can be useful in reducing psychological distress (anxiety and depression) in primary care.

## Patient relationship

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### Impact of experiences with patient aggression and violence on the quality of working life in general practice: a multiple case study in Melbourne, Victoria

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**Aims:** Patient aggression and violence toward people working in general practice is not a rare occurrence. There is a lack of research into the impact of experiences with aggressive patients. The aim was to gather individual accounts of GPs, nurses and receptionists in different general practice settings, and to draw them together into a multiple case study that identifies personal, interpersonal and organizational factors which may reduce the impact of patient aggression on the safety and wellbeing of general practice workers.

**Material and methods:** The research design was a multiple case study of four general practice settings analyzing data within and across cases. Study sites were chosen on the basis of differences in organizational structure and socio-economic characteristics of the area. Data collection included semi-structured interviews, waiting room observation, document review and demographic staff surveys. Grounded theorising is used to analyse interview data.

**Results:** We present current information based on three completed studies (42 interviews, 40 hours of observations and document analysis). Cases were a small private practice and a community health centre, both in gentrified inner-city suburbs, and a larger mixed-billing practice in an upper middle-class suburb. Initial analysis of interview data shows that receptionists' accounts of experiences with angry, demanding, frustrated or aggressive patients are distinctively different from doctors' and nurses' experiences. Results vary noticeably between cases. Preliminary analysis suggests factors that reduce the impact of patient aggression are separation of work and home life, skills to defuse anger, a capacity to not take it personally, and a sense of belonging to a team.

**Conclusions:** Results of four case studies will be presented at the conference. Early findings indicate that further investigation may need to focus on the efficiency and

effectiveness of educational and managerial interventions.

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### Evaluation at the end of GP's consultation in Finland

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**Introduction:** According to scientific studies concerning consultation, evaluation of the consultation is an important and crucial element of a successful meeting between the patient and doctor. At the end of the consultation, doctor should ask a general question if patient's expectations were fulfilled and repeat the basic information drawn within the meeting, examinations performed, and joint decisions with the patient. This way the patient would be fully aware of what has been decided and that all the problems and expectations of the patient had been taken into account.

**Material and methods:** Altogether, twenty consultations of four GPs in a primary health care centre in Turku, Finland were videotaped. The doctors were both men and women, less and more competent. The videotapes were analyzed by three researchers, one of them was a medical student; and two others were more experienced GPs. The method used was MAAS-Global Rating List, in which the characteristics of consultation are assessed on a scale 1-6. The reliability of the assessment was guaranteed by parallel and also by consecutive evaluation.

**Results:** The main result was that the evaluation part of consultation was quite often missing or having many shortages. Two thirds of the consultations did not have evaluation part that had been assessed to have more than three (3) points of six (6). It was surprising how similar was the assessment done by experienced GPs and a medical student.

**Conclusion:** Doctors should put more attention to perform a patient centred and careful evaluation of each consultation to guarantee the best outcome of consultation.

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### Self-diagnosis and self-treatment before consulting the doctor. What is happening in primary care?

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**Aims and Introduction:** There is little research addressing patient self-diagnosis in primary care. It is known that in recurrent and previously diagnosed conditions like urinary tract infection, patients can be highly accurate at self-diagnosis. However they usually get it wrong when it comes to conditions like vaginal candidiasis, gout and chest infections. Even in recognition of pregnancy patients perform relatively poorly. This study measures the frequency of patient self-diagnosis, how openly declared it is, or how aware of it the doctor is, and also how well it correlates with the doctors diagnosis. This information identifies areas where patient self-diagnosis and self-treatment works well or not.

**Materials and methods:** The study is a prospective observational cross-sectional study in general practice. The patient enrolment is of consecutively attending consenting patients. Paired surveys are filled out independently by patients and doctors in primary care. Patient's questions ask about self diagnosis and treatment, intent to inform the doctor, advice and information sources used, plus basic demographics. Doctor's are asked about patient self-diagnosis, self-treatment and the doctor's diagnosis. The paired answers are analyzed and compared.

**Results:** It is very common for patients to self-diagnose and self-treat before seeing the doctor. Family and friends are equally common advisors, but most information is sourced from the internet. The doctor's and patient's perception on this are different, particularly about one third of the time. Doctors are often unaware of patient's activities in this regard. When the doctor knows about the self-diagnosis, it is often credible. Some patients self-treat without self-diagnosing.

**Conclusions:** Knowing more about these patients' behaviours and their appropriateness should strengthen our doctor patient relationship. Using this knowledge will assist us to improve communication levels, and the quality of our care.

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#### Using health promoting communication strategies to enhance chronic illness management among patients in family practice

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**Aim:** Quality of care from the patient perspective includes having the family physician engage in responsive and effective communications. This includes attending to patients' emotional and psychosocial needs, not just the physical symptoms of illness. Health promoting communications in chronic illness include strategies that respect the patient's inherent expertise in matters pertaining to his/her own bodily experiences and contextual conditions. Our study will examine whether chronic disease management and patient satisfaction are improved by engaging in various forms of health promoting communications.

**Methods:** Our analysis is comprised of information obtained from published research and 52 illustrative vignettes collected from patient weblogs during 2008. We used a general inductive approach to categorize the vignettes into the following physician/patient relationship models obtained from the literature: collaborative, paternalistic, consumerist or empowerment. We then examined how the use of emotional expression, sharing decision-making, consideration of alternative treatment options, patient education, and office management tools contribute to increased quality of care.

**Results:** Vignettes that were categorized as consumerist or paternalist used less forms of health promoting communications covering both physicians and patients. The collaborative and empowerment models resulted in greater shared decision-making and greater usage of positive emotions by both patients and physicians. Good clinical management practices facilitate effective communications and resulted in higher levels of shared decision-making. Providing access to information increased patient's self-efficacy and chronic illness management.

**Conclusion:** Health promoting communications, management tools, and access to information lead to greater adherence to treatment, more accurate diagnosis, better

outcomes, greater exchange of treatment options, and better patient self-management.

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#### Challenges in patient encounters in primary care in Turkey

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**Aim:** We aimed to evaluate the most frequent challenges in patient encounters in primary care to design an educational program on challenges.

**Methods:** We delivered an open-ended questionnaire before symposium sessions on challenges in primary care encounters in Trabzon and Samsun in October 2009 and 2010. The question was "What are the first three challenges in patient encounters for you?" The year of experience in medicine and gender were noted. We categorized the open-ended answers. Total 93 family physicians responded and 279 answers were evaluated.

**Results:** Total 55 (59.1%) were male, 38 (40.9%) were female. Experience in medicine was 16.05 ± 4.06 (7-24) years. The most frequent answers were communication barriers (language, cultural, disability) (65) (23%), irrational test, treatment referral demands of the patients (52) (18.64%), lack of trust (27) (9.68%), inadequate time for the encounter (22) (7.88%), elderly patient (16) (5.73%), noncompliance (11) (3.94%). The other answers were addict (9), aggressive (12), rambling (10) patients, inadequate physical conditions (6), guest (unknown medical history) (6), psychotic patients (6), greater healthcare use (5), hurried (5) patients. Breaking bad news, small children with serious problems, phone consultancy, health insurance problems, medical uncertainty, reticent, resistant, insisting patient, multiple diseases, legal problems, family violence, sexual and communicable diseases, health professional as patient, VIP patient, homeless patient, internet diagnosis of patient's own, lab delays, patient with a gun, exaggerating patients were the other problems mentioned. Communication problems found to be decreased with the year of experience in medicine.

**Conclusion:** The most common challenges in patient encounters were about communication skills. We organized a new course for medical students and primary care doctors according to the results of this study and recommend such courses.

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#### Medication adherence as the precondition for continuity of care: in-depth insight into patients' perspective on the grounds of European survey.

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**Aims:** Approximately 50% of patients are non-adherent with their treatments for both chronic and acute conditions. Thus,

non-adherence is a major barrier for realizing the benefits of evidence-based therapies. This phenomenon has a number of reasons, of which some are related to patients, whereas the others are related to the conditions, therapies, practitioners and healthcare system, and social factors. In order to assess the patient perception of barriers to adherence, a multi-national European survey was designed.

**Material and methods:** This was a web-enabled survey in European countries. A battery of validated questionnaires assessing adherence and its determinants was provided to the patients, with the aim to achieve at least 322 respondents in each country. Patients were invited to participate in this survey with web-based invitations, and information provided at their general practitioner's practices, and community pharmacies.

**Results:** Survey data analysis point at some behavioral, cognitive, and ecological factors as important predictors of adherence variation. Some drug properties, as well as patients' beliefs are important triggers of adherence-related behavior, as well.

**Conclusions:** In-depth analysis of patients' perspective of drug taking behavior provides useful background for informed policy recommendations on reduction of the burden of medication non-adherence. Further analysis of the results of the survey conducted within European project on non-adherence (ABC Project, [www.ABCproject.eu](http://www.ABCproject.eu)) will provide useful information for all relevant stakeholders. (Winding: 7th Framework Program of European Union)

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#### Prevalence of patient aggression and violence in Family Medicine / General Practice: an international literature review

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**Aims:** Patient aggression and violence is a recognized problem amongst people working in healthcare settings. This literature review aimed to explore general practice specific prevalence findings in the light of definitional and methodological issues. The purpose was to synthesize and analyses previous research findings to inform an Australian PhD study.

**Material and methods:** Relevant databases were searched systematically from 1989 onwards. Further references and websites were searched manually. Eligible studies investigated the prevalence of patient aggression and violence in general practice settings utilizing appropriate methodology. A methodological scoring tool was developed to systematically compare studies, and critically appraise study design and findings along the criteria study population, definition, methodological issues and prevalence findings. The information was described, analyzed and ranked for research quality.

**Results:** Depending upon the definition used for patient aggression and violence and the role held within the practice, prevalence rates are widespread. Receptionists are generally more likely than GPs to deal with angry, demanding, frustrated, verbally aggressive or threatening patients. Methodological limitations were identified in a number of studies, mainly regarding sample size, selection process and retrospective cross-sectional nature of the study. Whilst there was no consensus between authors regarding prevalence, it was found that low-level violence is far more common than

high-level violence.

**Conclusions:** The literature review offers insights into available evidence on patient aggression and violence in general practice. There is a need for sophisticated longitudinal research employing larger samples and control groups to capture prevalence trends over time. Future research will need to deliver stronger evidence to inform researchers and policy makers; and to make general practice a safer place for both staff and patients.

#### DIMEVAL PROJECT

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#### Developing and validating disease management evaluation methods for European healthcare systems (DISMEVAL): exploring approaches to cost-effectiveness of disease management in Austria

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**Background:** Disease Management Programs (DMPs) are proposed to enhance the quality of chronic care and thereby improve health outcomes and curtail costs. Yet, the objectives and services provided by DMPs vary widely, and the evidence on the benefit of such structured approaches is a matter of ongoing debate. DISMEVAL aims to contribute to the quality improvement of chronic care by (1) reviewing approaches to chronic care and disease management in Europe; (2) testing and validating methods and metrics for evaluation utilizing data from existing chronic DMPs, or their equivalent, in six countries; and (3) developing recommendations for scientifically sound yet feasible evaluation approaches in European healthcare contexts.

**Methods:** To assess the impact of a randomized control group we stepwise analyzed the data of a randomized controlled trial on the DMP "Therapy Active", for diabetes type 2 in Austria. First only data of the intervention group (n=649) were used, representing an uncontrolled pretest-posttest analysis. In a second step all data (n=1489) of the randomized controlled analysis were included. Primary outcome measure was the HbA1c reduction after one year of DMP. Based on each scenario, we subsequently extrapolated relative and absolute risk reduction regarding clinically relevant endpoints (according to the findings from the UK Prospective Diabetes Study) and estimated costs.

**Results:** The HbA1c reduction, attributed to the DMP, was 0.41 in the uncontrolled analysis vs. 0.13 in the controlled evaluation. Relative risk reduction for cardiovascular disease was 4.6 vs. 1.4 percent. The estimated numbers needed to treat (NNTs) to avoid one myocardial infarction within 10 years ranged from 125 (uncontrolled pretest-posttest analysis) to 417 patients (randomized controlled comparison), which led to a substantial scenario-dependent difference in cost estimations.

**Conclusion:** Uncontrolled evaluations of DMPs might lead to crucial overestimation of effectiveness. We therefore recommend randomised controlled evaluations prior to long-term implementation. The Dimeval-Project is funded by the European Commission, Framework 7, Grant Agreement no.: 223277



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**Developing and validating disease management evaluation methods for European healthcare systems: issues in the evaluation of Disease Management In France**

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**Aims:** Disease Management (DM) is proposed to enhance the quality of chronic care, improve health outcomes and curtail costs. Yet, the objectives and services provided by DM vary widely by country and by disease, and the evidence on the benefit of such structured approaches is still debated. DISMEVAL aims to contribute to the quality improvement of chronic care by (1) reviewing approaches to chronic care and DM in Europe; (2) testing and validating methods and metrics for evaluation using data from existing DM programs in six countries; and (3) developing recommendations for scientifically sound yet feasible evaluation. In France, provider networks are the dominant variant of DM. Inclusion of patients in a provider network is voluntary for patients and doctors. Hence, selection bias is likely to affect comparative evaluation. This study measures this bias and its effect on evaluation results.

**Material and Methods:** Medical and socio-demographic characteristics were compared for patients included in one of three diabetes provider networks (Diabaix, Paris Diabete, Revesdiab; n=2626) at baseline and for patients that were eligible but receiving regular care outside of a diabetes provider network (n=7054). Standard statistical tests (t-test) were applied, similar to the current field practice of comparative program evaluation.

**Results:** Preliminary results using standard statistical tests (t-test) suggest that patients included in a diabetes provider network are (at baseline) younger (62 years vs. 65 years;  $p<0,001$ ) and have a body mass index ( $30,4 \text{ kg/m}^2$  vs.  $29,5 \text{ kg/m}^2$ ;  $p<0,001$ ) as well as levels of glycated haemoglobin (HbA1c) (8,3% vs. 7,9%;  $p=0,0129$ ) that are higher than the reference population.

**Conclusions:** These results suggest that a simple comparative methodology is not appropriate for the evaluation of health provider networks. It is more appropriate to use advanced matching techniques that allow controlling for selection bias (we are currently applying these techniques to our dataset). Finally, in the context of feasibility and external validity, other evaluation methods (such as non-comparative evaluation) should be taken into consideration. The DISMEVAL-Project (Developing and validating disease management evaluation methods for European healthcare systems) is funded by the European Commission, FP 7; Grant Agreement no. 223277.

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**Developing and validating disease management evaluation methods for European healthcare systems: evaluating interventions in non-controlled conditions: methods for obtaining an unbiased control group in a Disease Management Program In Spain.**

*Saz-Parkinson Z, Sarria-Santamera A, Carmona-Alferez R, Prado-Galbarro F, Calvo-Bonacho E, Fernández-Meseguer A*

Spain

**Aims:** Disease Management Programs (DMPs) are proposed to enhance quality of chronic care and thereby improve health outcomes and curtail costs. Yet, the objectives and services provided by DMPs vary widely by country and by disease, and the evidence on the benefit of such structured approaches is a matter of ongoing debate. DISMEVAL (Developing and validating disease management evaluation methods for European healthcare systems) aims to contribute to the quality improvement of chronic care by (1) reviewing approaches to chronic care and disease management in Europe; (2) testing and validating methods and metrics for evaluation utilising data from existing chronic disease management programmes, or their equivalent, in six countries; and (3) developing recommendations for scientifically sound yet feasible evaluation approaches in European healthcare contexts.

**Materials and methods:** Observational study of large working age population who have yearly medical check-ups in a Spanish mutual insurance fund (Ibermutuamur). Individuals in moderate-high risk for cardiovascular events (SCORE>4) undergo an intervention (specialised nurse gives structured telephone interview).

**Results:** Description of methodological alternatives to overcome challenge of evaluating interventions carried out in clinical practice without the controlled conditions of clinical trials. In this case, an intervention aimed at identifying and treating people at risk for cardiovascular disease, utilizing routinely collected data, is evaluated. Using regression discontinuity, a control group was chosen, a posteriori, to compare intervention carried out in individuals whose SCORE>4. Control group includes individuals with SCORE 3,70-3,99. Next, individual in control group is matched to 'equivalent' in intervention group. Thus, bias is reduced by eliminating confounder covariates.

**Conclusions:** Different statistical methods (regression discontinuity and propensity score-weighted regression models) can be used to obtain an appropriate and unbiased control group so results can be evaluated and real effect of intervention carried out can be adequately assessed.

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**Developing and validating disease management evaluation methods for European healthcare systems: selection bias and the use of different matching methods in the evaluation of the German type II Diabetes DMP**

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**Aims:** Disease Management Programs (DMPs) are proposed to enhance the quality of chronic care and thereby improve health outcomes and curtail costs. Yet, the objectives and services provided by DMPs vary widely by country and by disease, and the evidence on the benefit of such structured approaches is a matter of ongoing debate. DISMEVAL (Developing and validating disease management evaluation methods for European healthcare systems) aims to contribute to the quality improvement of chronic care by (1) reviewing approaches to chronic care and disease management in Europe; (2) testing and validating methods and metrics for evaluation utilising data from existing chronic disease management programmes, or their equivalent, in six

countries; and (3) developing recommendations for scientifically sound yet feasible evaluation approaches in European healthcare contexts. This presentation will discuss the methodological challenges caused by selection bias in the evaluation of disease management programs in Germany, in which participation of patients is voluntary and no baseline data are available.

**Materials and methods:** Utilizing routine data from a large German sickness fund, we will compare the impact of different matching methods to adjust for imbalances in baseline parameters between participants and non-participants of the DMP for type II diabetes. The amount of imbalance between the two groups is assessed by calculating standardized differences for all baseline parameters.

**Results:** Before matching, the groups showed clear baseline imbalances regarding sociodemographic, clinical and utilization variables. A number of matching procedures were able to reduce these differences to varying degrees.

**Conclusion:** Selection bias plays an important role in relation to the interpretation and value of evaluation findings on disease management. Insight will be provided in the issues of designing and conducting realistic evaluations alongside the DMP and recognize pitfalls in the interpretation of DMP effects.

Saturday, September 10<sup>TH</sup> 8.30-10.00

### Health promotion and disease prevention III

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#### Prenatal screening: cost-effectiveness

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**Introduction and aim:** Prenatal screening (PNS) is intended to identify women at greater risk of fetal abnormalities. The Portuguese guidelines advocate PNS for women who are 35 years or older. Our aim is to review PNS indications and to determine the cost-effectiveness of its implementation in primary health care (PHC).

**Material and methods:** Non-systematic search in Up-to-date (version 18.2) and Medline via PubMed for reviews published in the past 3 years with the Mesh terms "Nuchal Translucency Measurement", "Chorionic Gonadotropin", "Pregnancy-Associated Plasma Protein-A" and "Mass screening".

**Results:** According to the American College of Obstetrician and Gynecologists and the Society for Maternal-Fetal Medicine recommendations, PNS should be available to all women starting their prenatal care before 20 weeks of gestation, regardless of age. The National Collaborating Centre for Women's and Children's Health recommends PNS to all women as a method that has a detection rate above 60% and a false positive rate below 5%. Studies show that 1st trimester combined screening (FTCS), simple integrated screening and full integrated screening respectively have detection rates of 80-90,4%, 87-88% and 94-96%. In the same order, false negative rates are around 2, 4-5%, 5% and 5%. Concerning cost-effectiveness, we highlight a study comparing FTCS with invasive tests (IT). It demonstrated that the cost for each Down detected is about 98000% for the FTCS and 191000% for the IT. Similarly, iatrogenic abortions are about 13:100000 for the FTCS and 914:100000 for the IT.

**Conclusions:** Several PNS methods are available in Portugal (1st and 2nd trimester, integrated). The best method is that with high detection rate and few false negatives, reflecting greater efficiency and safety, as it avoids unnecessary amniocentesis and iatrogenic abortions. Our results raised several questions about PNS indications, cost-effectiveness and possible free implementation in PHC in Portugal.

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#### Are the non – attendant middle aged patients in urban primary care really in good health

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**Aims:** Preventive medicine implementation is a key goal for middle aged patients, as trivial intervention that follows may

change disease outcome beneficially. Nevertheless, considerable portion of those patients fail to attend frequently enough due to life preferences and conceptions. Some share past negative communication and service failure with the insurance medical system. It's crucial to evaluate morbidity parameters in non-attendees in order to formulate a unique approach if necessary.

**Material and methods:** 3354 file screen of 41-60 year old patients revealed 248 that did not visit our practice for at least 2 years. Self-tailored phone and/or mail invitations allocated 132 people (59% males, 41% females) that consented and visited the clinic for checkup: BP, BMI, fecal occult blood test, lipid profile, FPG, TSH, vitamin B12 and folic acid.

**Results:** Obesity (BMI>30) was more prevalent 31.8% versus 23% for adjusted Israeli population. Hypertension (>140/90) appeared less (10%) than reported for European middle aged (33.4-38.8%). High LDL (45%) and low HDL (47.5%) ranked highly than for reference population 21.2% and 37.4 % respectively. Hypertriglyceridemia (>150 mg %) 24.2% was similar to 24.3-33.1% found in western communities. Elevated fasting plasma glucose (15.1%) resembled data published in Mediterranean literature. TSH abnormalities (3%) and Vitamin B12 deficiency seemed less common (4.5%) in our target population with regard to folic acid deficiency (7.5%). 88 persons performed fecal occult blood test that was negative.

**Conclusions:** It seems that our non-compliant middle aged population was not as healthy as supposed from their "health consumer behavior" not visiting their provider for at least 2 years. They were more obese and suffered various undiagnosed metabolic derangements. Middle aged non attendees constitute a "living practice obstacle" for the primary care physician. Special efforts should be allocated to target those problematic persons with refined communication methods in order to gain their compliance and cooperation, by this, gaining their participation in preventive medicine activities suitable for their age.

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#### Workload and job satisfaction among nearly 1000 General Practitioners: Questionnaire Survey at the Wonca Europe Congress 2009

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**Aim:** To evaluate the workload and job satisfaction of general practitioners (GPs) who attended the WONCA Europe congress 2009 in Basel, Switzerland. Potential gender-specific differences were of particular interest.

**Design/methods:** Cross-sectional survey using a 5-items questionnaire. The questionnaires were administered while GPs were registering at the congress' welcome desk.

**Results:** In total, 931 questionnaires were available for analysis. Mean age of subjects was 48 +/- 10 years (range 23 -69), 57% were male, and participants have been working in general practice for 17 +/- 9 years. Nine out of ten GPs make home visits and one third of GPs visits nursing homes. Overall, the average weekly workload of GPs was 48.4 hours, subdivided into consultations (34.9 hours), administrative work (8.4 hours), visits at patient's home (3.3 hours), and visits in nursing homes (1.8 hours). On average GPs' teaching and research activities were 6.4 and 6.2 hours per month, respectively. Compared to their male colleagues female GPs provided less net consultation time per week (38.5 vs. 30.6 hours, p<0.001). No gender specific differences

were found regarding patient home or nursing home visits, administrative work, or teaching and research activities per month. In terms of job satisfaction 70% GP were content with their job and no sex-specific differences were documented. Overall, more than 10 hours administrative work per week was associated with lower job satisfaction (p=0.002), whereas age, gender and longer net consultation time had no influence on GPs' work-life balance.

**Conclusion:** A majority of GPs who have participated at the WONCA Europe congress 2009 are satisfied with their job. No gender-specific differences were found in terms of administrative work per week, visits outside the practice or research and teaching activities. Female GPs provide significantly less net consultation time per week, probably due to more part-time work.

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#### Oral versus PARENTERAL vitamin B12: looking for answers to a practical old question. New project proposal

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**Background:** The parenteral vitamin B12 administration is currently used in our country. In Spain, parenteral administration of vitamin B12 therapy is regular practice; nevertheless, little is known about the effectiveness and safety of oral administration in patients with vitamin B12 deficiency. Main Objective: To assess the efficacy of Oral vitamin B12 compared to intramuscular administration. Secondary objective: To determine the financial impact of moving patients from intramuscular to high doses of oral vitamin B12 in primary care without compromising their wellbeing.

**Methods:** We are designing a randomized crossover clinical trial, targeted to the population covered in our Primary Health Care Area, with a 6-month follow-up. Patient aged 30 to 80 years with vitamin B12 deficiency who accept to participate in the study will be included. Exclusion criteria will apply to patients with cardiovascular diseases, folic deficiency, terminal renal diseases or hemodialysis. To test the null hypothesis that the two population means of vitamin B12 levels are equal in both patients treated with oral or patients treated with parenteral vitamin B12, sample size has been computed at a 0.05 significance level and 80% power. Assuming that the mean difference after two months of treatment is 337,0 - as reported by Kuzminski et al. (1998)- corresponding to means of 643,0 versus 306,0, and the common within-group standard deviation is 246,5 (based on SD estimates of 328,0 and 118,0) , at least 10 patients per group would be required. I

**Interpretation:** The study is aimed to find out whether primary care physicians should prescribe oral as well as parenteral vitamin B12 to patients with deficiency and to quantify the associated savings in time and other direct or indirect costs for Primary Health care organization and patients.

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### Use of statins for dyslipidemia in the pediatric population- an evidence based review

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**Aims:** Childhood dyslipidemia prevalence is on the rise and growing evidence suggests it is an important risk factor for adult cardiovascular disease. Statins are the drug of choice among adults with elevated LDL levels, but in the pediatric population their use remains controversial. The purpose of this review is to evaluate the evidence of statins use in the pediatric age, regarding their efficacy, safety, effect in cardiovascular morbi-mortality and proper time to initiate therapy.

**Material and methods:** We conducted a search for articles in PubMed and other evidence based medicine databases using MeSH terms: dyslipidemia and hydroxymethylglutaryl-CoA reductase inhibitors, published from January 2000 to December 2010 in English, French and Portuguese. Studies were classified using the scale Strength of Recommendation Taxonomy.

**Results:** We found 169 articles, 14 of which meet the inclusion criteria. All studies considered statins to be effective reducing total cholesterol and LDL levels and increasing HDL levels in the pediatric population (recommendation C). According to the studies, treatment with statins should begin from 8-10 years or even sooner in severe dyslipidemias. As with adult's treatment begins with lifestyle interventions, pharmacologic treatment should be considered if after 6-12 months LDL levels remain high and according to other cardiovascular risk factors associated. Evidence available points to statins safety, in the short term for children eight years or older (recommendation C). There is no evidence regarding statins safety in the long term as well as their effect reducing cardiovascular morbi-mortality.

**Conclusions:** Statins can be an appropriate choice for use in childhood dyslipidemias after lifestyle interventions. However more studies are needed, with longer follow-up time and in children with non familial hypercholesterolemia in which the outcomes are oriented to the patient. So close monitoring during statins use in is advised.

## Mental health I

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### Dealing with family violence by Flemish general practitioners

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**Aims:** This study aims standardized measurement of approaches for family violence (FV) by Flemish general practice as baseline measurement for a randomized controlled trial on case management. General practitioners (GP) received randomly a leaflet offering links to recommendations and flow charts to deal with FV; group training and individualized web based support are offered.

**Material and methods:** A structured postal enquiry on psychosocial problems was sent with the leaflet. GP accessing the website can answer a limited set of questions to access support. Randomizing is performed after answering the postal enquiry or first accessing the web. Anova, factoranalysis and reliability of scales are studied with SPSS 17.0.

**Results:** At date 136 GP replied. One third of respondents is female and work in solo practices. Most identified family violence last 6 months: 85% met partner violence, 27% child abuse or elderly abuse. However, 75% never received any specific training. Associated are relational problems (65%), certification of battering (46%), vague complaints (33%), abdominal pain (19%) and repeated trauma (17%). All indicate dealing with FV is an important task, but feel very little prepared. Confidence in dealing with certification and recognizing signs is higher than for questioning, exploring problems and referral. Defining a safety plan and informing patients about their rights is scored lowest. While half deal with FV themselves, only 33% take advice from other services; on third refer to police and to mental health; 5% indicate no action at all. Patient folders were used in 18%.

**Conclusions:** Respondents show a selection bias for gender and group practices. Although they mostly identify FV, they are inadequately trained and do not take advice. Our RCT aims to increase confidence and collaborative care through training and individualized support.

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### The ProCEED Trial: a randomised controlled trial of structured pro-active practice nurse led care for patients with chronic or recurrent depression in primary care

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**Aims:** Care for people with chronic depression is often inconsistent, with significant psychological, physical and social morbidity and high financial costs. Our aim was to establish if structured, pro-active care of primary care patients with chronic depression leads to cost-effective improvement in medical and social outcomes compared with usual general practitioner (GP) care.

**Methods:** Recruitment was from 42 UK general practices. Eligible participants had chronic major or recurrent major depression or chronic dysthymia confirmed by Composite International Diagnostic Interview (CIDI) and scored 14 or above on the Beck Depression Inventory (BDI-II). Consented participants were randomized to GP treatment as usual (controls) or practice nurse intervention. This involved a comprehensive baseline assessment and regular 3 monthly reviews over the 2 year study. Where indicated nurses suggested appropriate pharmacological, psychological or social interventions according to evidence based guidelines. Primary outcome was the BDI-II, measured at baseline and 6 monthly. Secondary outcomes at baseline and 2 years included social functioning (Work and Social Activity Scale), quality of life (EQ-5D) and economic analysis data (modified Client Service Receipt Inventory). GP health service data was collected for 24 months before baseline and the two years of the study.

**Results:** 558 participants were recruited with a 77% response rate to the final assessment. Preliminary data analysis indicates positive outcomes for the intervention arm compared with controls for the BDI-II, WASAS and EQ-5D.

We are conducting further analyses to investigate the relationship between length of treatment and outcome and analyzing the economic data. Full results will be available by the conference.

**Conclusions:** The trial results will have significant implications for the management of depression in primary care and are likely to indicate a potential role for practice nurses.

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#### Interesting case of differential diagnosis on male adult with psychosis

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**Aim and background:** Several cases of psychosis can be manifested in primary health care in patients presenting with a non typical clinical picture consisting of physical and mental disturbances without evident psychiatric semiology. Aim of the present study is to review the criteria for differential diagnosis of psychotic disorders according to DSM-IV and the assessment of the clinical picture's diversity emphasizing on the initial approach of the patient.

**Material and methods:** The study of a newly diagnosed psychotic disorder in a 48 year old male adult, presenting with perceptual distortions (mainly auditory hallucinations) and a medical history of a recent head trauma 20 days prior to the examination. Psychiatric symptomatology was evaluated during clinical examination and an effort of differential diagnosis of the newly appeared disorder was conducted according to the methodology and criteria described in DSM-IV.

**Results:** The patient was referred to a hospital neurosurgery department where he was additionally evaluated by auditory and neurology specialist and had a thorough laboratory evaluation, computer tomography of the brain and magnetic resonance imaging without any pathological finding. During his follow-up examination (after three months) in primary health care he was eventually diagnosed with psychotic disorder. The patients progressed clinical findings comprised of visual and auditory hallucinations, impaired concentration and pathological thoughts (of pursuit and observation). Reduced self care was also evident with progressing social withdrawal. Psychiatric referral of the patient confirmed the diagnosis of psychotic disorder.

**Conclusions:** Semiology of the prior clinical status of a patient with a newly manifested psychotic disorder can mimic diseases of different etiology. Proper understanding and adequate knowledge of the perspective diagnostic criteria is of critical importance for early diagnosis and therapeutic approach.

#### Child depression and drawing

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Depressive illness beginning early in life can have serious developmental and functional consequences. About five percent of children and adolescents in the general population suffer from depression. In this review the authors present some clinical cases of child depression. It's not easy to describe the typical presentation of child depression because it can be presented in many different ways. There can be an outsourcing or internalization of the symptoms. Drawings emerge as the direct reflex of the mental status of the child, one way of contain and explore the feelings of sadness, anger, anxiety and frustration. This review has also the goal to describe and illustrate some of the marks in the artistic expression observed in this pathology. The drawing can be used by the children's family doctor as a help in the diagnosis and also as an instrument that allows the children to express their feelings and perceptions, work some events, memories and emotions that can worry them, in a way that is appropriate to their age.

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#### Training doctors in the management of medically unexplained symptoms: a qualitative study of the views of hospital specialists

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**Introduction:** Medically unexplained symptoms (MUS) are common and a cause of significant morbidity and high levels of service use in both primary and secondary care. The importance of the GP role has regularly been described as central to managing these patients, but they are also frequently referred to secondary care. Little is known about the attitudes of hospital specialists towards such patients, the strategies they may use in their management, or what training if any they may have received in this topic. This information is crucial if there is to be a joined up approach to such cases across both primary and secondary care.

**Method:** In-depth interviews are being conducted with hospital consultants and doctors in training, purposively selected from physicians working at two hospitals in north London. Physicians working in cardiology, gastroenterology, neurology and rheumatology are being approached, as there is evidence that many patients they see may not receive a clear organic diagnosis. Interviews will be conducted until data saturation is reached, estimated to be approximately 25 interviews. Analysis will be via the framework approach to identify key issues, concepts and themes.

**Results:** Emerging themes will be presented, focussing on two main areas: 1) Views of hospital specialists about patients presenting with MUS, their attitudes towards and experience of managing such patients, and their thoughts

about working across the primary-secondary care interface in such cases. 2) Ways in which hospital specialists may influence medical students and postgraduate doctors in training as regards patients presenting with MUS, and their attitudes towards having further training themselves in this topic.

**Conclusions:** We aim to increase the understanding of ways in which doctors working in secondary care approach patients with MUS and how their attitudes may impact on such patients referred from primary care. We will also discuss ways of improving communication about such patients across the primary-secondary care interface and the importance of appropriate training at all levels.

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#### Acquiring essential skills for communicating with Alzheimer patients

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**Background and aims:** Diagnosing Alzheimer Disease (AD) is a long-lasting challenge, given the flamboyant variability of initial symptoms and the fact that patients are most likely either unaware of their difficulties or attempting to conceal them.

**Material and methods:** We performed a systematic overview of medical literature selecting papers focused on doctor/patient and doctor/caregiver communication issues. We further summarized the recommendations and gold-practices identified by various authors, contracting them into key messages (i.e. "frontal, eye-contact").

**Results:** A minimum set of communication skills were identified for effective collaboration between (1) physician and patient, (2) physician and patient's caregivers/family and (3) caregivers/family and patient.

**Conclusions:** Although communicating with AD patients is difficult, quite often the communication barriers are mainly due to an inaccurate perception of the disease and of patient limitations and disabilities. Understanding the mechanisms involved and acquiring certain interpersonal skills may significantly improve communication and should hence overcome at least some communication barriers.

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#### Neuropsychological rehabilitation in mild cognitive impairment and dementia

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**Background and aims:** Neuropsychological rehabilitation involves many complex processes aimed at enabling disabled people (due to brain injury or disease) to achieve their optimum level of physical, psychological, social and vocational well-being. Patients with mild cognitive impairment (MCI) are an important clinical group at high risk for Alzheimer's disease (AD); the early detection of MCI is

important since current pharmacologic options may delay or even prevent AD conversion. There is a growing awareness of the benefit of behavioral and psychological symptoms management in MCI and AD, so that neuropsychological interventions must be carefully judged and designed. Our observational study aimed to enlighten the benefits of neuropsychological rehabilitation in dementia patients.

**Methods:** We followed 80 patients aged over 60 years referred to our Center divided into 4 equal groups based on similar degrees of cognitive impairment: MCI, mild AD, moderate AD and respectively severe AD. A battery of interventions aiming to enhance/adjust cognitive skills, as well as psychotherapy, counseling and coping with stress and depression procedures were performed throughout 20 weekly individual sessions. The patients and the caregivers were investigated before and after completing the neuropsychological rehabilitation procedures.

**Results:** Cognitive training interventions proved beneficial for the subjective memory complaints and emotional states in our patients. Enhancement of cognitive functioning was registered in 85% of MCI and mild AD patients. In 70% of moderate AD patients cognitive stimulation resulted in the maintenance of practical skills and communication, while in 30% of severe AD patients mobility maintenance, pain reduction, well-being and dignity preservation- were observed. Zarit scores plead for neuropsychological rehabilitation as one of the best treatment choices

**Conclusion:** A well designed, personalized cognitive stimulation, neuropsychological rehabilitation and stress and depression management may add a crucial support to drug-based therapy, depending on the stage of dementia.

### Cardiovascular diseases III

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#### Evaluate the usefulness of a screening program of atrial fibrillation (AF) in an urban primary health care (PHC5)

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**Aims:** Evaluate the usefulness of a screening program of atrial fibrillation (AF) in an urban primary health care (PHC).

**Material and methods:** Randomized, open and parallel clinical trial. 928 patients were recruited from a random sample of patients not diagnosed with and who had one or more risk factors (RF) to develop AF: age greater than 65 years, ischemic heart disease, valvular heart disease, heart failure, hypertension, diabetes. Patients were randomly assigned with a 1:1 ratio to the intervention group (IG), which was an early detection program of the AF, or the control group (CG), without active intervention. The operation performed at IG was to a) complete medical record; b) ECG every 6 months for 2 years, and c) the patient was instructed on how to take the pulse. After 2 years, analyzed the number of cases detected in each group, time to detection, and complications associated with AF. Also compared the data with the clinical features of patients and the presence or absence of RF. We used descriptive tests.

**Results:** It included a total of 928 patients (463 patients in the EG and 465 in the CG). In the intervention group the average age was 71 years (SD 9.4), 50.3% female, mean follow-up 728 days (SD 201). In the CG the average age was 68 years (SD 10.5), 50.7% female; mean follow-up 725 days

(SD 50). The proportion and number of risk factors was similar in both groups. Diagnosed a total of 16 AF, 11 AF patients and IG 5 AF in the CG (2.4% cumulative probability vs. 1.1%,  $p = 0.098$ ), the difference were statistically significant only in the subgroup of male patients (4% vs. 1.3%,  $p = 0.026$ ) and the subgroup of patients with 2 or more RF ( $p = 0.048$ ). None of EG patients developed complications at diagnosis of AF, and another one from CG (heart failure, no significant difference).

**Conclusions:** The early detection program of AF in PHC is useful for male patients and in patients with 2 or more factors for developing AF.

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415

### Profile of the patient with high normal blood pressure

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According to hypertension guides high normal blood pressure (systolic blood pressure 130-139mmHg and diastolic blood pressure 80-89mmHg) is associated with high risk of cerebrovascular events and heart failure.

**Objective:** To identify a profile for patients with high normal blood pressure in order to correct risk factors and avoid hypertension.

**Methods and design:** -Prospective study -Primary care patients seeking medical attention for checkup in 2010 in a private medical centre -We selected two groups of patients: one of them with high normal blood pressure and the other ,the control group ,with normal blood pressure; each groups had 50patients(40men and 10 women)with the same distribution by age. -We registered : age, sex,smoker status,BMI,total cholesterol,LDL-cholesterol,HDL-cholesterol,triglyceride,fasting blood sugar,serum urea and creatinine,ECG,family history of cerebrovascular diseases and diabetes mellitus.

**Results:** For men in patients group versus(vs) control group our analyze showed :smokers 42.5%vs 25% ; high LDL-cholesterol 75%vs60% ; high triglyceride 45%vs17,5%; low HDL-cholesterol 22,5% vs 25%; high blood sugar 30% vs 15%; family history of cerebrovascular disease 42,5% vs 20%; normal BMI 22,5% vs 47.5% and 12.5% of the patients had BMI > 40kg/m<sup>2</sup> vs 2,5% in control group. Serum creatinine and urea,ECG were normal in both two groups.

**Conclusions:** 1.High normal blood pressure was four times more frequent in men than women. 2.The profile of patients with high normal blood pressure is:men,young and mature adult abnormal BMI,smoker status,high LDL-cholesterol,high level of triglyceride,high blood sugar and family history of cerebrovascular diseases. 3.We should increase the number of female patients for accuracy of results. Men patients with high normal blood pressure needs recommendation for physical exercises,keeping weight under control,avoid fatty intake,monitoring sugar blood,monitoring blood pressure.

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### Boston Criteria and pharmacotherapy for the early diagnosis and management of heart failure performed by general practitioners

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**Aims and background:** The prevalence of symptomatic heart failure (HF) is 1-2% in the Italian general population. The average annual mortality rate in patients (pts) with HF is approximately 10%. This study evaluated if the application of Boston Criteria (BC) in pts with cardiovascular (CV) risk could help diagnosing HF and therefore allow earlier HF treatment according to guidelines (GL).

**Materials and methods:** We used for analysis the ambulatory database of 10 general practitioners (GPs) which included a dynamic cohort of 17935 subjects in the care of their GPs. Pts with diagnosis of HF were selected each year from 2004 to 2009. During years 2004 to 2006, HF was diagnosed through a computerized tool called 'Problem Oriented Medical Record'. During years 2007 to 2009 GPs used the BC for HF diagnosis in their population of patients with known CV risk factors. Information on hypertension (HY), diabetes mellitus (DM), hypercholesterolemia (HC), smoking, and obesity was extracted from the database, too. We assessed prevalence of major CV disease, co-morbidity, and pharmacotherapy.

**Results:** Overall, 388 pts with HF have been selected. From 2004 to 2006 we found an average prevalence of 138 (0.86%) pts per year affected by HF. In the following 3 years we used the BC for HF diagnosis, and we found an average prevalence of 300 (1.83%) pts per year affected by HF, with a doubled prevalence of HF using the BC for diagnosis. HY was strictly and constantly associated with HF. When we used BC for HF, prevalence of patients with DM (from 34% to 46%), HC (from 40% to 54%), chronic renal failure (from 14% to 17.2%) and TIA (from 2.4% to 3.9%) increased significantly. Similarly, drug prescription increased in the same time period, particularly prescription of antidiabetic and antithrombotic drugs and proton pump inhibitors.

**Conclusions:** The use of BC improved diagnosis of HF, diagnosed more often HF at early stage (NYHA I-II) and could improve a GL-based therapeutic approach.

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### Audit on the use of Ezetimibe

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**Aims:** To audit the population of Parbold General Practice to see whether ezetimibe is being correctly prescribed as per NICE guidelines. The following standard was set: 90% of patients on ezetimibe should have valid grounds for having been initiated on this therapy.

**Materials and methods:** The general practice's local patient list software was used to search for all patients from the start of the electronic system to August 2007 currently on Ezetimibe. The record of each patient found was then searched to find out why Ezetimibe had been started and whether the patient was also on a statin.

**Results:** From a total of 6746 patients, 26 (0.39%) patients were found to be on Ezetimibe. The male (61.5%) to female (38.5%) ratio was about 1.5 to 1. The above data shows that Ezetimibe is used in patients with ages ranging from 45 to 89 years, and that there is a male preponderance. This male preponderance correlates with the fact that male risk ratio is

higher compared to females and therefore treated more aggressively. Fifteen patients were found to be on both Ezetimibe and statin therapy for optimization of hypercholesterolemia treatment. Nine patients were only on Ezetimibe due to noncompliance or side-effects of statin therapy. The remaining 2 patients consisted of 1 patient who was only on Ezetimibe as statin therapy was contraindicated and 1 patient who was only on Ezetimibe as statin therapy had been refused by the patient.

**Conclusion:** In conclusion, this audit shows that Ezetimibe is being prescribed correctly in patients at the general practice in accordance with NICE guidelines. The correct use in 25 out of a possible 26 patients works out at 96% success rate. A re-audit is recommended in 12 months' time. There was only one case in which the NICE guideline was not followed. In that case, the patient refused to take statin therapy due to side-effects and problems with statins experienced in friends rather than by the patient personally.

541

### Can waist circumference identify children with the cardiovascular risk factors?

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**Aim and background:** Abdominal obesity examined by waist circumference (WC) is a valuable predictor of cardiovascular (CVD) risk factors in adults. The objective of the study was to determine the utility of simple screening tool- WC for cardiovascular risk evaluation in children.

**Methods:** The group of 325 children (179 females, 146 males) aged 7-16, visiting family practice for different reasons was examined. Anthropometry, fasting lipid profile and glucose were done. Overweight and obesity were estimated according to IOTF aged- and gender- specific child BMI cut off points. Abdominal obesity was recognized by waist circumference (WC)  $\geq$  90th percentile or WC higher than half of body height. Multiple risk factors for cardiovascular diseases were defined as having: LDL-c  $\geq$  110mg/dl, HDL-c  $<$  40mg/dl, TG  $\leq$  150mg/dl, fasting glucose  $\geq$  100mg/dl, BMI  $\geq$  90(th) percentile, systolic and/or diastolic blood pressure  $\geq$  90(th) percentile.

**Results:** Among children with WC  $\geq$  90th percentile- 61% had at least 2 CVD risk factors, 29% had 3 risk factors, 15% had 4 risk factors and 5% had 5 risk factors. Those children presented 3,7 times higher triglycerides level; 2,14 times lower HDL level; 1,8 times higher fasting glucose; 1,3 times higher LDL and 6,9 times higher diastolic and systolic blood pressure than those with a normal WC. Children with WC  $\geq$  90th percentile were 11,1 times more often obese than the others with normal WC. In the examined group abdominal obesity was found in 23% of children, high LDL in 31%, high TG in 7%, high fasting glucose in 7,6%, low HDL in 8,6%, high diastolic/systolic blood pressure in 16% and 18,7% of the children were obese.

**Conclusions:** Children with abdominal obesity are at higher risk of hypertension, diabetes and dyslipidemia. The measure of WC can identify children with increased CVD risk and could be used in clinical practice as a simple screening tool.

## Information and technology I

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### Benefits and problems of electronic information exchange as perceived by health care professionals

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**Aim:** Various countries are implementing a national electronic patient record (n-EPR). Despite the assumed positive effects, the adoption of n-EPRs remains low and meets resistance from health care providers. This study aims to increase our understanding of health care providers' attitude towards the n-EPR by investigating their perceptions of the benefits and problems of electronic information exchange in health care and the n-EPR in particular.

**Material and methods:** The study was conducted in three Dutch health care settings: acute care, diabetes care and ambulatory mental health care. Two health care organisations were included per setting. Interviews were conducted with 17 stakeholders from the organizations. Relevant themes were deduced by qualitative content analysis.

**Results:** Health care providers expected electronic information exchange to promote the efficiency and quality of care. The perceived problems of electronic information exchange mainly concerned the confidentiality and safety of information exchange and the reliability and quality of patient data.

**Conclusions:** The implementation of the Dutch n-EPR has mainly followed a top-down approach, thereby neglecting the fact that health care providers' perceptions need to be addressed in order to achieve successful implementation. This study provides suggestions about how to promote health care providers' willingness to adopt the n-EPR. Apart from providing information about the benefits of electronic information exchange, efforts should be focused on minimizing the problems perceived by health care providers. The safety and confidentiality of electronic information exchange can be improved by developing tools to evaluate the legitimacy of access to electronic records and by increasing health care providers' awareness of the need to be careful when using patient data. Improving health care providers' recording behavior is important to improve the reliability and quality of exchanged patient data.

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### Clinical study of the influence of the anti-hypertensive drugs on the intraocular pressure level with Non-Corneal Through-The-Eyelid Diatom Tonometer

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**Aim:** To analyze the influence of the anti-hypertensive medicines on the intraocular pressure (IOP) level in patients.

**Material and methods:** 82 patients with arterial hypertension



of the 1-st and 2-nd degree with high cardiovascular risk, 10 patients from this group had the Primary open-angle glaucoma. We used diuretics (Hydrochlorothiazide 12,5-25 mg/day), calcium channel-blocking agents (Amlodipine 2,5-5 mg/day), beta-adrenergic blocking agents (Bisoprolol 2,5-5 mg/day), inhibitors of angiotensin converting enzyme (iACE) (Enalaprilum 5-10 mg/day), nitrates (Isosorbide mononitrate 40-50 mg/day and Isosorbide dinitrate (1,25 mg/day). All the patients were measured IOP with transpalpebral Diaton tonometer before taking the medications, 3 and 24 h after taking the drugs and after 7-14 days. The IOP was measured initially during the use of Isosorbide dinitrate as the spray (ISOKET) 30, 60 and 90 min after taking it.

**Results:** The reliable change of IOP wasn't detected in patients who were taking diuretics, calcium channel inhibitors, iACE and B1-adrenergic blocking agents neither during the acute pharmacological testing, nor during the intake of the anti-hypertensive drugs. The IOP reduction was found during the intake of the B2-adrenergic blocking agents (mean initial IOP 19,2±1,3 mmHg, mean IOP after 7-14 days 16,3±1,4 mmHg). The increase of IOP was observed during the intake of the nitrates (mean initial IOP 18,8±1,2 mmHg, mean IOP after 7-14 days 23,8±1,3 mmHg). According to the results of the acute pharmacological testing the IOP increase was observed 40 min after the intake of one dose (1,25 mg) of Isosorbide dinitrate and remained increased up to 1,5 hours on patients with POAG (mean initial IOP 22,7±1,8 mmHg, IOP after 40 min 26,1±1,9 mmHg, IOP after 90 min 25,8±1,9 mmHg).

**Conclusions:** Portable, ergonomic ophthalmometer diaton suits perfectly in general medical practice for IOP monitoring to make anti-hypertensive drugs treatment safe.

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#### The creation and the use of online tools in the surgeries of a health care centre

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**Aims and background:** describing the development process and the content of a website of a health care centre, highlighting the most important acquired advantages.

**Materials and methods:** During a meeting we considered the possibility of developing a webpage of the centre, aimed basically to our health care professionals. We decide to do it. This process involves the whole team. We first define the web design and each member, according to its responsibility - function, elaborates the required documents to include in the future website. During periodical meetings the team checks the structure and the usefulness of the website. After its elaboration, we had been testing it for three months, before hosting it on a server. The access to the Internet server enables the webmaster, a person from our centre, to keep the website updated.

**Results:** The website enables access to medical and administrative documents for all health care professionals of the centre. Its elaboration stimulates the production and the organization of this documentation. It motivates the work team through the enthusiasm that generates this kind of project, which makes their work more visible and more efficient, offering at the same time a new online identity. It makes possible the creation of an online community of the centre users. It offers the possibility to provide services of information, prevention and administrative interaction between the health care centre and its users. This way they

can get closer to the centre using a new and modern communication channel.

**Conclusions:** The health care centre webpage became a new tool in our surgeries, very useful for both permanent and temporary personnel (students, trainees, specialist registrars, covering doctors, etc...) as it contains valuable and updated information for the daily work routine. We are in process of developing more web 2.0 tools addressed to health care professionals as well as to health users.

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#### Use and abuse of new information and Communication Technologies among young people attending High School. New project proposal.

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**Introduction and aim:** The advent of Information and Communication Technologies (ICT)-the Internet, mobile phones, chats, videogames, social networks- is leading us to new ways of communication, leisure and human relationships. Their misuse may cause addictive and/or maladaptive behaviours with dramatic consequences at all levels: work, school and family, either individually or socially speaking. According to the available literature, the prevalence of ICT abuse ranges between 9 and 40%, depending on the selected population and the study design. Preventive measures taken at school could prove effective in promoting a healthier use of ICT. We are a multidisciplinary study group including physicians, nurses, teachers and methodologists. Our aim is to estimate the prevalence of ICT use and abuse among the teenagers currently studying at the public and semi-private High Schools in our area.

**Material and method:** It is a cross-sectional study, being its population the students of about 30 centres, which are the sampling unit. All the participants will be tested, approximately 5,000 teenagers. The parents/tutors and students must accept to participate. An Ethic Committee has approved the design of the study. Primary healthcare nurses of the Health and School Programme are already in contact with the schools. Data will be gathered from a self-administered questionnaire including socio-demographic information and the validated questionnaires on our target population for assessing risky behaviours towards the use of the Internet, mobile phones and videogames.0

**Expected results:** Estimating the prevalence of ICT use and abuse among the participant teenagers.

**Conclusions:** This study is the first part of a larger project: a series of educative interventions through the Health and School Programme to improve the relationship of our youth with ICT. It will allow us to adequately gauge the problem, find strategies to develop solutions and evaluate their effectiveness in the future.

Saturday, September 10<sup>th</sup> 10.20-11.50

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**Data analytics: the challenges of using data in a variety of healthcare settings, and how these can be overcome to build an innovative programme to support value-based patient decision making**

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**Aims and background:** The aim of this oral presentation is to present the challenges in data availability and integration in the use of clinical analytics to design healthcare programmes. Each country has a unique healthcare system with a different set of challenges when it comes to data availability and quality. In this presentation we discuss our experiences in Spain and the UK where we have developed successful health coaching initiatives by modelling data from a variety of sources. The data resources in these two countries greatly differ; e.g. in Spain we only have access to claims data without diagnosis information, whilst in the UK we have access to both secondary care and primary care activity data. It is of utmost importance that we understand the nuances of the data, and how it translates into the clinical decision making process. The art of data modelling therefore can form the foundation of a programme that enables individuals to participate in their own healthcare decisions and have a more productive relationship with their doctor.

**Materials and methods:** We describe the types of data sources from which clinically useful information can be gained on population health utilisation. From these we developed a set of clinical descriptors that identify the patients who can benefit from health coaching. The success of the health coaching programme was then evaluated using patient experience surveys.

**Results:** The presentation summarises the challenges faced and the process followed in the development of the clinical descriptors. We will present results on patients' experience and satisfaction after one year of active coaching.

**Conclusions:** Our results show that despite the challenges of data limitations, it is still possible through clinical analytics to work with fragmented data and build disease management programmes that take a whole person approach. Patients value this coaching positively, as they receive tailored information and continuous support, which enables them to improve their quality of life.

## Health promotion and disease prevention IV

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**Active case finding is highly effective in a campaign aimed at the identification of hepatitis C infection**

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**Aims:** Among hard drug users (HDUs), hepatitis C virus (HCV) infection is an increasingly recognized problem, because of its high prevalence and serious long term complications. Unfortunately, due the lack of clinical symptoms, identification and treatment rarely take place. Because treatment possibilities have improved substantially in the past decade, the need for improving early identification strategies has become even more pressing. With this study we evaluated the optimal strategy for case finding among HDUs.

**Material and methods:** In a structured, non-randomized intervention study, we compared the effectiveness of implementing an 'active case finding strategy', in which HDUs are pro-actively approached for counselling and testing, to a passive information approach in which counselling and testing are only provided on an on demand basis. In the addiction care institutions of two regions, which are comparable in composition of HDU population, brochures and posters were spread addressing the need for HCV testing. The health care staff was trained in HCV and counselling skills. In the active case finding region HDUs were actively approached for counselling and HCV-testing. In the passive information region counselling and testing was exclusively initiated on request. The resulting number of counsellings and (positive) HCV-tests were compared between regions and contrasted to the pre-intervention situation.

**Results:** The active case finding strategy, lead to 213 registered counsellings of which 191 (89.7%) concerned HDUs. 168 anti-HCV tests were performed among HDU, of which 56 (33.3%) were positive. The passive information approach resulted in three applications for HCV counselling by HDUs, but none took place. Pre-intervention assessments did not demonstrate any registered counselling or testing.

**Conclusions:** In a hepatitis C campaign aimed at hard drug users an active case finding strategy is far more effective than a passive information approach and should therefore be appointed a key role in the implementation of future campaigns.

557

**Do the adults know adult immunization in primary care?**

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**Aim and background:** Vaccine-preventable infections of adults represent a continuing cause of morbidity and mortality. Immunization against the infectious disease is a

lifelong process. Several reasons account for low adult immunization levels, including inadequate awareness about the importance and benefits of vaccination by health care providers and patients. The goal of this study was to evaluate the knowledge of the adult population about the immunization of adults in primary care settings.

**Material and methods:** We interviewed with total 408 patients and/or patient's relatives at age of 18 or older and a questionnaire was completed in a face-to-face interview in May 2010 and January 2011 at two different primary care centers in Samsun and at Ondokuzmayis University Hospital Family Medicine Clinic (referral hospital of northern region of Turkey). Data obtained were analyzed by a statistics program.

**Results:** Mean age of the participants was 43.54 and 15.26 (18-86). 273 participants were women (66.9 %) and 135 were men (33.1 %). Participants who did not know anything about adult immunization were 283 (69.4 %). Participants who have knowledge about adult immunization get information from their doctors 38 (9.3 %), television 35 (8.6 %), people they know 24 (5.9 %), press 17 (4.2 %), health care providers 12 (2.9 %), respectively. Participants who had been vaccinated in adulthood had tetanus and diphtheria 236 (57.8 %), influenza 120 (29.4 %), hepatitis B 81 (19.9 %), pneumococcal polysaccharide 12 (2.9 %) vaccines once respectively.

**Conclusions:** Our results showed that the knowledge of the adult population about adult immunization in primary care settings is insufficient. Many people do not realize the important role vaccines can play in keeping healthy. As a result, most adults are not vaccinated as recommended. For this purpose, the knowledge of the adult population about the immunization of adults should be increased and family physicians must pay more attention on adult immunization.

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#### Identification of cardiometabolic risk factors in primary care: development, implementation and yield of a Dutch health check

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**Aims:** Development and implementation of a health check for cardiometabolic disorders in a medium-sized primary health care centre. Description of the participation rate and the numbers of disorders requiring treatment that are identified.

**Material and methods:** Observational research in Eindhoven, the Netherlands. All registered patients aged 40 to 75 years without known cardiometabolic disease (i.e. cardiovascular diseases, diabetes and chronic kidney disease) (n = 1704) were sent a written invitation to participate in a health check. A three-step procedure was used to determine whether a participant was at increased risk of developing cardiometabolic disease. Treatment was started if necessary, according to current guidelines. We recorded the numbers of patients proceeding through each step and the numbers of disorders identified.

**Results:** A total of 1270 patients (75%) returned the first screening questionnaire. Based on the information from this questionnaire, 952 were invited to visit the health care centre for further assessment. A total of 145 patients (11% of the 1270) were found to have at least one disorder for which treatment was indicated (e.g. increased cardiovascular risk, isolated systolic hypertension, diabetes mellitus, suspected

familial hypercholesterolemia or kidney disease).

**Conclusions:** The response rate and the number of cases identified demonstrate that cardiometabolic disorders can be effectively detected at a primary health care centre. Further research is needed to assess the long-term effects and efficacy of health checks in general practice.

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#### Low adherence of Czech population to screening of colorectal cancer

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**Aims:** The mortality of colorectal cancer (CRCA) is worldwide significant. There is good evidence for benefits of the CRCA screening in mortality reduction. Since 2009 the population of the Czech Republic has two possibilities of choosing the method of the CRCA screening. The programme is based on periodic faecal occult blood test (FOBT) at the age of 50 and the new alternative Primary screening colonoscopy (PSC) at the age of 55. The adherence of Czech population to screening is still low (about 15-20% in the past). We would like to know why the population doesn't undergo the screening programme in the Czech Republic.

**Material and methods:** What is their view of the screening and their reasons for not undergoing the screening programme? That is why we undertook the survey among 13000 employees in one Czech company during the year 2010. The questionnaires were sent by electronic mail or were completed by the employees physically present in the workplace.

**Results:** The response rate of questionnaires was 31, 8%. Among the participants were 2804 (68, 9%) women and 1268 (31, 1%) men. At the age over 50 years 32, 8% of the respondents didn't undertake the FOBT and 10% of them haven't heard of FOBT. The main reason for not undergoing FOBT was "I don't have any problem." (44, 5%), the second reason was: "My general practitioner (GP) hasn't offered FOBT to me." (31, 5%), the other reasons were: "another reason", "I'm afraid of the result", "it will be uncomfortable", "I don't have any time" and "I don't know what FOBT is". 8, 37% of the participants between 15-39 years and 20, 7% of the participants between 40-49 years have already undertaken the FOBT.

**Conclusions:** One the basis of the result there seems to be a significant number of people who don't understand the real sense of the FOBT. There is a relevant reserve in promotion of CRCA screening. There is also a relevant fact of a significant group of active people who are participating in the screening before the age 50.

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#### The use of Post Exposure Prophylaxis (PEP) procedure, following needlestick injuries among doctors working in government hospitals in Gauteng- South Africa.

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**Aims:** Prevention of blood exposure is the best way to avoid infection with HIV and other blood borne pathogens. In a case

of percutaneous injury, the compliance with the PEP, play an important role in the proper reduction of potential threat of passing of the pathogen to the injured person. Aims: Establish the prevalence of needlestick injury (NSI) among doctors in government hospitals in Gauteng. Assess prevalence of reporting after NSI among doctors in government hospitals. Assess the practice of doctors following NSI in government health settings.

**Material and method:** It was a Cross-Sectional Descriptive study. For capturing data, an anonymous, self-administered questionnaire was used. The study population group were 203 doctors working in government hospitals in Gauteng in South Africa. Independent variables were: gender, years in practice, department where the doctor is employed, and if a NSI occurred. Dependent variables: reactions to the injury: wound management, blood investigations and prophylaxis.

**Results:** Among the 203 responders, 76 (prevalence 37,44%) sustained NSI in the preceding 12 months period. The injury reported 49 (64,47%) doctors. The group of 22 doctors out of 76, went for NSI prophylaxis, but didn't go for counselling (prevalence 28,9%, confidence interval 18,1%-39,8%). Next group, of 7 doctors went for prophylaxis and counselling in compliance with hospital protocol (prevalence 9,2%, confidence interval 2,1%-16,4%) and fully followed the PEP protocol.

**Conclusions:** Doctors employed in government hospital do not follow a recognized regimen for needle stick injuries. Only 7 out of 76 doctors (9,2% - 95% confidence interval 2,1%- 16,4%) went for counselling and fully followed PEP protocol. Others did not take any prophylaxis or modified recommended PEP by taking different doses, shorter treatment, or avoiding counselling. To raise adherence to the PEP regimens, educational activities discussing proper use of PEP may be helpful.

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#### Factors that influence smoking cessation in smokers

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**Aim:** Assess factors that influence smoking cessation in smokers.

**Material and methods:** Field: 6 primary care centers in two health areas in Catalonia. Design: Longitudinal descriptive study. Sample: 317 smokers over 18 years. Visits: initial and follow-up year. Variables: smoking, respiratory symptoms, change stage, motivational and dependence test, and spirometry with bronchodilator test.

**Results:** With increasing abandonment phase at the initial visit, an increase in smoking cessation was shown after one year (7% patients in the precontemplation phase, 19.2% in the contemplation phase, 48.7% in the preparation phase and 100% in action phase). ( $p < 0.001$ ). Patients who after one year have not stopped smoking, at the initial visit had a motivational test score of  $>5$  points, and those that have quit after a year, had a score of  $>7$  points ( $p = 0.008$ ). Patients who after one year have not stopped smoking, at the initial visit had a dependence test score of  $>6$  points, and those that have quit after a year, had a score of  $>5$  points ( $p = 0.285$ ). According to the spirometric results, the patients who quit smoking for over a year are 30% of the patients with a mixed-

obstructive spirometric pattern, 11.5% restrictive pattern, 11.4% changes 25-75 and 9.3% normal pattern ( $p = 0.030$ ). In terms of quit smoking for over a year, elderly people quit smoking more (9.1%  $<40$  years quit smoking, 12.4% between 40 and 60, and 14.3%  $>60$  years,  $p = 0.497$ ). In the same issue men quit smoking more than women (13.7% of men and 8.1% of women,  $p = 0.187$ ). There was no association between smoking cessation and respiratory symptoms.

**Conclusions:** Smokers with spirometric changes quit smoking more than those with normal spirometry. Spirometric changes, a higher score on the test of motivation and being at a more advanced abandonment phase are factors that have been associated with higher cessation.

#### Financing and organization I

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##### Are there any differences in the practice management among the general practitioners of a health care centre?

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**Aims and background:** To assess if there are any differences in the practice management among general practitioners in a health care centre.

**Materials and methods:** There are seven general practitioners working in our health care centre. Evaluation period: year 2009. Analyzed variables for each practice (P): attendance rate (number of visits/patient/year) (AR), standardized expenditure per patient (Euro) (SEP); percentages: specialist referrals (number of referrals/patient/year) (SR), screening (HBPScr) and control of high blood pressure ( $<140/90$ mmHg) (HBPCon), screening (DMScr) and control of diabetes mellitus ( $HbA1c \leq 7\%$ ) (DMCon), use of evidence C medicines (ECM), use of omeprazole with regard to total use of proton pump inhibitors (O/PPI). All data were extracted from the electronic clinical reports and the pharmaceutical information system.

**Results:** We ordered the seven practices ranging from the best to the worst outcomes, by the respective variable, as it follows. AR: P1 (4.75 visits/patient/year), P2, P3, P4, P5, P6, P7 (7.68 visits/patient/year). SEP: P1 (239.7 euros), P4, P2, P6, P5, P3, P7 (436.58 euros). SR: P1 (0.329 referrals/patient/year), P3, P4, P2, P6, P7, P5 (0.74 referrals/patient/year). HBPScr: P3 (69.47%), P4, P6, P7, P1, P2, P5 (33.79%), HBPCon: P1 (32.2%), P6, P4, P7, P3, P2, P5 (17.08%). DMScr: P4 (92.28%), P6, P1, P7, P2, P3, P5 (58.36%), DMCon: P1 (40.25%), P4, P7, P6, P5, P3, P2 (30.4%). ECM: P4 (2.78%), P3, P1, P2, P6, P7, P5 (5.68%). O/PPI: P1 (90.8%), P4, P2, P3, P6, P5, P7 (69.8%).

**Conclusions:** On an overall view, P1 and P4 are the practices with the best outcomes and the lowest expenditure too, while P5 is one of the practices with the worst outcomes and the highest expenditure. There are big differences in the practice management in our health care centre, which depend on the responsible health care professional.

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### The use of after-hours primary health care services. New project proposal

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**Aims:** "Health care treatment during the nights and Bank Holiday periods" is a form of health care operating in after-hours primary care facilities. Treatment provided in this fashion is both outpatient and outpatient based and is available for all patients with sudden onset of symptoms or worsening of health as well as those needing continuous care. This form of care, however, is not applicable in the case of an imminent threat to life, such as, in particular, the loss of consciousness, injury, sudden alteration in consciousness, etc., and childbirth, or pregnancy-related ailments. This study aimed to assess the incidence and factors that influence the patient's decision to choose this form of medical aid as well as his or her familiarity with rules relating to the use of night and holiday care health system.

**Material and methods:** The quantitative method will be used in the study. Patients will be recruited from the general practices in the city of Bydgoszcz from January, 2011 to December, 2011. Adult patients who visit the family doctor for various reasons and agree to participate in the study will be enrolled. A custom-made, anonymous questionnaire will be used as a research instrument. Patients will fill in the questionnaire while waiting for an appointment and then throw it into the designated container. The planned sample size is 400 patients.

**Results and Conclusions** will be known in the future.

652

### Primary health care in the developing part of Europe. Changes and development in the former Eastern block countries

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**Background and Aim:** Primary care as an important tool to improve global health was recognized in many countries a few decades ago. It was a main topic of a WHO promoted conference resulted in the Declaration of Alma Ata, in 1978 where its importance was emphasized. We aimed to present an overview how the targets of this Declaration regarding primary care were realized in ten countries of the former Soviet block that joined the European Union since 2004.

**Methods:** Some demographic, socio-economic, mortality based statistical dates were presented and scientific publications from respective countries were analyzed, personal experiences of family physicians of these countries were compared.

**Results:** After the collapse of communist regimes democratic political changes and health reforms started in these

countries. There was an economic recession and decline in the first decade. Life expectancies improved and total health expenditures increased, in different extent by countries, although governments spent barely more for health care. Primary care providers are the main private sector contributors. Hospital based structure has changed, while number of outpatients contact is nearly the same. The ratio between secondary care specialists and family physicians remained too high and there is a shortage of educated nurses. Although new funding systems for primary care services were introduced, budgets were mostly redistributed without substantial increase and improve of outcome. The achievements of reform have rarely been evaluated systematically. There is no teamwork, praxis communities do not exist. Old style of polyclinics still predominates in some countries. The gate keeping system is more often symbolic or dysfunctional. Health promotion and preventive services are rarely supported by governments.

**Conclusion:** Implementation of family medicine is not an absolute priority for decision makers. Political situation is often unstable. Despite the non-negligible achievements, the health systems in this part of Europe are still in the midst of transition.

667

### Are ultrasound used in family practice?

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**Aim:** ultrasounds are used in primary care in northern Europe, Germany and north America. In France its use in primary care (PC) remains confidential. The French national ultrasound diploma has no module of general practice. French GPs wishing to train must achieve the same training as radiologists. The aim of the study was to found ultrasound indications in the literature for PC in order to propose a PC module for the French ultrasound diploma?

**Method:** systematic literature review in PubMed and Cochrane library databases. Key words were ultrasonography, ultrasound, solography, family practice, family physician, primary health care and primary care. Inclusion criterias were: Ultrasound was performed by PC physicians, article language (English, French, German, Spanish). Exclusion criteria's were : Ultrasound performed in a secondary or tertiary care setting even if they were performed by GPs (for example emergency wards)

**Results:** 41 articles were found. All were found in PubMed as the Cochrane Library has remained silent. On these 41 items only 29 described indications in PC. Those indications were in obstetrics at 58 %, vascular medicine at 14 %, emergency medicine at 14 %, cardiology 7 % and abdominal at 7 %. 10 of these articles reported a validation test against a gold standard. These validations were positive in abdominal and obstetrics and negative in cardiology.

**Conclusion:** Poverty of the literature did not provide an exhaustive list of ultrasound indications in PC. However it did provide a validated list of detectable pathology for obstetrics and abdominal diseases. It gave a list of indications in emergency and vascular medicine without validation. Finally it showed that cardiac US should be performed by a cardiologist. The validated list of indications will be the basis of the ultrasound degree for French GPs. further research remains essential to validate other indications as ultrasound

seems to be poorly used in family practice regarding to literature

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### Renal risk factor management in general practice

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**Aims:** One of the main tasks of a general practitioner (GP) is to monitor and treat risk patients and refer them to respective outpatient specialists in time. The GP is in a difficult situation and usually has incomplete information with which to decide whether his/her patient should be consulted with specialists or whether his/her patient should be monitored and treated at another clinic. MDRD Index is a relatively new option for a general practitioner, I have attempted to verify if this parameter can help to clarify and/or improve the prognosis in my patients.

**Methods:** According to the recommended guidelines issued by the Society of General Practice renal function tests in such patients should be performed at least once a year. According to the new recommendations, every patient with an MDRD Index below 1.5 should be referred to a nephrologist.

**Results:** I have a total of 1250 registered patients in my general practice of which 363 patients are closely monitored and treated for diseases associated with renal risks (hypertension, diabetes mellitus, IHD, dyslipidemia). 271 (3/4 indicated) out of 365 candidates for the renal function test were examined. 97 patients showed higher creatinine levels as compared to the reference range of a particular laboratory. However, the MDRD Index from the laboratory was below 1.5 in only 57 of them (= 1/6 monitored and treated patients, 1/5 examined patients). 15 out of 57 patients were referred to the clinic of nephrology; a change in therapy was recommended for 12 of them; follow-up after some time showed that a decline in renal functions ceased. 35 patients have remained in medical care by the GP.

**Conclusions:** A great challenge for the future is to improve patient adherence to medical therapy and examination. A further task will be to specify both remarkable and critical limits of MDRD values in risk patients and to develop closer cooperation with nephrologists.

### Cardiovascular diseases IV

588

#### Reasons for discontinuing drugs for secondary prevention after myocardial infarction in primary care

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**Introduction and aim:** After myocardial infarction regular administration of medication for secondary prevention critically influences morbidity and mortality. However, these drugs are discontinued already in the first year after myocardial infarction for various reasons. A survey, examining how often drugs were discontinued in the first year

after myocardial infarction, was conducted in primary care practices. In addition the reasons for discontinuation as well as the patients and the GPs roles in discontinuation were analyzed.

**Material and method:** This multicenter observational study included all in-patients treated in 2008 at the Basel University Hospital for acute myocardial infarction. Their general practitioners responded on a questionnaire, which medication used for secondary prevention 6 and 12 months after hospital discharge was no longer taken, as well as whether doctor or patient had decided to discontinue and what the reasons were.

**Results:** 298 of all in-patients treated in 2008 at the Basel University Hospital for acute myocardial infarction agreed that their records were analyzed for study purposes. Data was submitted in a first phase by the general practitioners of 171 (57%) of these 298 patients. Medical secondary prevention, usually consisting of acetylsalicylic acid, clopidogrel, statin, beta blocker and ACE inhibitor or sartan was continued for at least one year in 119 (70%) of cases. In 52 (30%) of cases one or more drugs were discontinued prematurely. In 36 (70%) of cases the GP decided to discontinue the medication, in 6 (11%) the patient decided to discontinue the medication and in 10 (19%) the decision was shared. ACE inhibitors (23 cases) were discontinued most often due to cough (10 patients), beta blockers due to hypotension/bradycardia (6 cases) and statin due to myopathy with or without creatine kinase increase (4 cases).

**Conclusions:** Medical secondary prevention after myocardial infarction is rigidly enforced in primary care medicine. When one or more drugs are discontinued the GP mostly is responsible. The reasons are usually well known common side effects.

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#### Prevalence of CVD risk factors in the young adults Lodz universities' students

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**Aims:** Early identification of people at CVD risk is crucial for the effective management. The aim of the study was to assess the prevalence of metabolic syndrome components - CVD risk factors in the young adults.

**Material and methods:** The study was provided (2006-2007) in the group of 1019 students (709 women(W), 310 men(M), aged 18-38 years (mean 24,6) attending the primary care practice. A clinical interview concerned: age, social & economic factors, lifestyle, health state, family history including occurrence of CVD. Anthropometric measurements and laboratory investigation were done. Body mass index (BMI), waist-hip ratio (WHR) and insulin-resistance (IR) were calculated. The prevalence of MS was qualified according to the WHO, NCEP ATP III and IDF criteria.

**Results:** Mean BMI was 21,29 in women(W) and 24,4 men(M). Overweight according to (acc.) BMI was diagnosed in 17,66% (W:M respectively: 11%: 32,9%); acc. IDF in 11,87% (11,70%: 12,26%); Obesity acc. BMI in 3,02% (1,12%: 7,4%); acc. IDF- 4,32% (2,96%: 7,42%). Hypertension acc. ATP III/IDF in 4,61% men only (M15,16%); acc. WHO in 2,06% - men only (M6,77%). Hyperglycaemia in 0,78% (0,84%: 0,64%). Abnormal lipids: total cholesterol concentration (CH)-

12,56%; LDL-2,06%; HDL-6,64 %; TG-7,69%. Hyperinsulinemia in 1,28 %. Metabolic syndrome acc. WHO criteria was diagnosed in 2,65% ( 1,13%:6,13%); acc. ATP III -0,59% (0,56%:0,65%); acc. IDF-0,98% (0,56%:1,93%)

**Conclusions:** The results confirm the higher incidence of MS/CVD risk factors in men. Our study shows the relatively high incidence of overweight, obesity and lipid disturbances, whereas other CVD risk factors are of relatively lower percentage in young adults in Poland. Young men are of a greater risk than women. Revealing individuals at risk on the earliest stages allows to cope with the incorrect metabolic processes, optimizing prevention activities. Overweight and obesity seem the greatest challenge for public health.

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### Secular trends in cardiovascular disease and associated risk factors from 1995 to 2008 – comparison of two major Norwegian population studies (HUNT 2 and HUNT 3)

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### Income inequalities in cardiovascular disease lethality among migrants and Dutch in the Netherlands: a national record-linked prospective cohort study

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**Background:** It is suggested that differential utilization and quality of health services for people with different social position might partly explain their differential mortality. The knowledge on potential differences in quality of care is still limited. This paper aims to study income inequalities in short (28 days) and long term (1 year) lethality after first hospitalization with a cardiovascular disease. We additionally investigate inequalities in access to cardiovascular surgical procedures between different income groups.

**Methods Design:** A nationwide prospective cohort of CVD patients Data: Record-linked at individual level national hospital discharge registry, cause-of-death registry, population registry and income registry. Patients: 117 397 patients admitted to a hospital with a cardiovascular disease for the first time in the period 2003-2005. Main outcome measures: Differences in short-term (28 days) and long term (1 year) risk of death after first hospitalization with a cardiovascular disease. Cox proportional hazard models were used to estimate the lethality hazard ratios .

**Results:** Large income differences in mortality only partly may be explained by income differences in incidence. People with lower income admitted for the first time to a hospital with a CV condition had a higher chance to die within 28 days (HR=1.45 CI:1.38-1.54) and within 1 year (HR=1.52 CI:1.48-1.59) compared to people with higher income. Increased chance to die within short and long time after hospitalization for people with the lowest income was present for all cardiovascular conditions separate and combined. Patients admitted to the hospital with myocardial infarction had less chance to get a PTCA procedure if they belonged to a lower income group (OR=0.79 CI:0.71-0.89).

**Conclusions:** Causes for higher mortality from CV diseases among lower income people are complex. Large inequalities in short term lethality indicates possible shortcomings within the health care system that might contribute to increased mortality from CV diseases of people with lower SE position.

**Introduction and aim:** Among participants in the large and renowned Norwegian population study HUNT 2 (Nord-Trøndelag Health Study 1995-7), we have previously documented an overwhelmingly large 'population in need of clinical attention due to increased risk of cardiovascular disease (CVD)' as defined by authoritative clinical guidelines. It has since been argued that our concern linked to this finding is no longer valid, due to favourable secular trends regarding several of the risk factors. The aim of the present study was to document secular trends in the prevalence of risk factors of CVD as defined by authoritative clinical guidelines between the HUNT 2 study and HUNT 3, i.e. from 1995 to 2008.

**Material and methods:** The prevalence of defined risk factors of CVD was compared between the HUNT 2 study (1995-7), comprising 62 104 adults aged 20-79 years, and the HUNT 3 study (2005-8), comprising 48 184 adults. The HUNT studies are regarded as representative for the total Norwegian population. Total, age- and gender-specific point prevalences of five traditional risk factors for CVD were estimated, as well as the prevalence of established disease. The prevalence of having none, one, two, or more than two risk factors, was calculated and age standardised (European standard).

**Results:** Absence of all defined CVD risk factors and diseases studied was exhibited by 3.9% and 6.6% in the HUNT 2 and HUNT 3 populations, respectively. One single CVD risk factor was exhibited by 12.4% and 16.9%, respectively; two factors by 21.5% and 24.9%; and three or more by 49.7% and 36.5%. The combined prevalence of established CVD and diabetes mellitus increased from 12.5% in HUNT 2 to 15.1% in HUNT 3.

**Conclusions:** The secular trends from 1995 to 2008 showed only minor changes. The population in need of clinical attention as defined by guidelines is still so large that clinical implementation of guidelines appears unrealistic. More work is needed on the foundation of international, clinical guidelines to make them more adequate for use in clinical practice.

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### Cardiovascular risk in overweight/obese and lean hypertensive patients

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**Aims:** Obesity and hypertension have been identified as independent risk factors for cardiovascular disease. Nevertheless, the role of obesity in the development and progression of target-organ disease in hypertensive patients

is still controversial. The aim of this study is to compare the prevalence of cardiovascular risk factors, target-organ disease and global cardiovascular risk, in lean and overweight/obese (OW/Ob) hypertensive patients, in a primary care setting.

**Methods:** Observational, transversal, descriptive and analytical study. A simple randomized sample of 150 subjects was selected among the hypertensive individuals enrolled in a Primary Care Unit. A detailed medical history was obtained, and physical examination performed. A sample of fasting blood was taken to measure glucose, creatinine and lipid concentrations, and 24-hour urine was collected for urinary albumin excretion assessment. An electrocardiogram was performed and the cardiovascular risk assessed using the Framingham CV score. Statistical analysis was performed using SPSSv12.0, and a  $p$ -value  $< 0.05$  considered statistically significant. The study was approved by the Ethical Committee of the Primary Care Center Sao Joao.

**Results:** The average age of the sample was 74,3 years (71,8% female), and the prevalence of obesity was 29,5%. OW/Ob hypertensive patients were compared to lean counterparts. Average HDL-cholesterol was lower (51,2+/-13,9 versus 65,4+/-35,2 mg/dl,  $p < 0,005$ ), and average triglycerides and fasting glucose levels were higher (137,8+/-70,4 versus 111,5+/-68,8 mg/dl,  $p=0,0397$ ; 111,9+/-32,8 mg/dl versus 98,4+/-13,1 mg/dl,  $p<0,0107$ , respectively), in the OW/Ob group. LVH was more prevalent in the OW/Ob group (9,8% versus 0,0%,  $p<0,0101$ ) and the Framingham score was higher when compared to the lean counterparts (10,9+/-7,7 versus 6,5+/-5,7 ( $p<0,0012$ )).

**Conclusions:** According to our findings, it is not surprising that the global CV risk of OW/Ob patients is significantly higher compared to their counterparts. According to our findings we suggest strict metabolic control and improved health education on weight reduction and control at primary health care clinics.

the internet several times a day, mostly for general purposes like weather or traffic jams, 13% for medical reasons and 13 % for email. GP's felt the highest need for guidelines on emergency problems of pharmacotherapy (68%), somewhat less for general guidelines (62%), and just about 20% wanted patient education materials, e-learning or webcasts via mobile internet. With regard to social networks 46% of the GPs had opened an account on one of the social networks, LinkedIn being the most popular (63%) followed by Facebook (52%). Only 25% of them were actually active users of the social network. Current users of social media expressed their need to exchange information and documents (48%), wanted to comment on draft guidelines (33%) and some need to join discussions on major medical issues (28%). Use and need of mobile internet and social media was significantly higher in younger GPs compared to older GPs. There were no differences between the sexes.

**Conclusion:** Use and need for medical smartphone applications is high, followed by social media, especially in younger doctors. The Dutch College of General Practitioners will invest in a social media platform and mobile internet facilities.

690

#### Can podcasts revolutionise General Practice education?

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**Background and aim:** Podcasts are media broadcasts distributed over the Internet. They consist of a series of audio or video files released episodically, which can be stored on a computer or transferred to other media devices for offline use. Users can subscribe to podcast feeds of their choice and new episodes are pushed automatically when available. The value of podcasting is its content, which is targeted at people that decide what to listen and choose when and how to do so. As an educational tool, podcasts can be generated and published extremely quickly, disseminating information in a relatively inexpensive and appealing way.

**Material and method:** The United General Practitioners 2.0 podcast (UGP 2.0) is the first European podcast on GP training. We have worked in association with the Vasco da Gama Movement and have invited trainees and senior GPs to discuss on different topics, such as euthanasia, research and PhD programmes in GP, the Hippocrates, LOVAH and RCGP exchange programmes etc.

**Results:** The first reactions and feedback of the audience have been very encouraging. Many have replied commenting positively on the initiative and lots of users have signed up to the companion Facebook group. Thanks to the feedback received, new topics have been suggested for future episodes. Barriers that have emerged are the continuous urge for more active participation of the audience, the need of implementation of a community that will drive audience expansion and the episode length.

**Conclusion:** The true significance of the UGP 2.0 podcast is the rapid and low-cost dissemination of information and the potentiality of becoming a true social and educational platform. Podcasts may enable doctors to stay current with published research and literature updates. However, there are challenges that should be considered, such as the penetration of the medium in groups of people who may feel overwhelmed by informational technology. We also suggest that the feasibility and cost-effectiveness of podcast education in GPs are studied.

## Information and technology II

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### Professional use and need for mobile internet and social media by general practitioners

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**Aims:** Social media and internet on mobile phone have become part of normal life. This may influence the way that general practitioners (GPs) perform their work. There are no statistics on the number of GPs that have access to internet by phone or have an account on social media networks such as Facebook. We also do not know what the needs of GPs are regarding the use of these media in daily practice.

**Materials and methods:** Of the approximately 8000 Dutch GPs 1050 have agreed to regularly answer a digital questionnaire sent by the Dutch College of General Practitioners. In February 2011 they received one about the current use and need for mobile internet and social media as a professional.

**Results:** 646 GPs responded (62%). 59% of them had access to mobile internet through I-pad (14%), laptop (12%), or smartphone (50%). Of the GPs with smartphones, 45% visited



870

### Correlation between technological literacy and real time use of electronic health records in primary health care in Romania

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**Aims:** The primary objective is to evaluate the patterns of electronic health record usage in the primary health care in Romania. Secondary objectives involve examining the influence of technological literacy on real time usage.

**Materials and methods:** Anonymous usage statistics were extracted from the ICMed clinical database. The ICMed system serves 1200 health care providers and covers 3 million Romanian patients. A snapshot from 28th of February 2011 was used in the analysis. The database snapshot identified 808 primary physicians working during 2010, with a median of 705 visits and 439 drug prescriptions per month during the last quarter of 2010. Real time work was defined as documenting the medical activity on the same day. A 10 questions questionnaire focusing on usage of modern technologies was developed and posted to ICMed users. Answers received from 238 practitioners were decomposed using factor analysis. Three factors were identified, corresponding to general computer usage, desire to acquire new equipment and mobile phone usage. Statistical analysis was performed using the R Statistical Environment.

**Results:** The median number of real time visits was 481 per physician per month. Physicians recorded data an average of 4.4 days after seeing a patient (median of physician averages: 3 days, range 0- 17 days), with a median of 84% of visits recorded in real time. This was a significant improvement over the 63% measured during an equivalent study in 2008. There was a significant correlation between age group and the first and third questionnaire factors ( $p < 0.001$ ). However, neither factor reached statistical significance in predicting real time EHR usage. Age group was the sole variable that remained statistically significant in a multivariate model ( $p=0.01$ ), while gender and working place (urban or rural) did not reach statistical significance.

**Conclusions:** Real time electronic documentation of medical activity correlates with age. There was a significant improvement between documentation habits relative to a previous study conducted during 2008. Limitations related to the custom technological literacy questionnaire need to be addressed in the future.

930

### Is there a place for art in Family Practice? Sitematic review

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**Background:** Art can be defined, among others, as the expression or application of human skill and imagination, typically in a visual form as painting or sculpture, producing works to be appreciated primarily for their beauty or

emotional power, or as a skill at doing a specified thing, typically one acquired with practice. Many studies described utility of using art as a therapeutic or educational resource and the medicine practice is frequently described as an art. AIM Review current literature published about art, mainly within the two concepts mentioned, in Primary Health Care, General Practice or Family Practice context.

**METHODS:** A search was performed in MEDLINE, SciELO, BIREME and Cochrane Library databases with the MeSH terms Art AND Primary Health Care, Art AND Family Practice and Art AND General Practice. Exclusion criteria were articles not concerning to Primary Health Care, Family Practice or General Practice, use of a meaning of art not corresponding to those cited and articles not related to the proposed subject at all. The articles considered eligible were summarized in a table.

**Results:** Seventy-one articles were found, twenty-eight with open access. Twenty articles with full text were excluded for not meeting inclusion criteria. Eight studies were considered eligible. No quantitative study was found, only essays, lectures or case reports. Half of articles were related to using arts in medical education, the other four were reflections over the daily practice of medical profession.

**Discussion:** Although there may be important publications not included in used databases, and despite of including only articles with free access to full text (an important bias) is remarkable the small number of studies relating Art and Family Practice or Primary Health Care published until now.

**Conclusion:** The author conclude that art has a modest rule in Primary Health Care or Family Practice or General Practice research.

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### Qualitative evaluation of the UK Health Research Support Service Primary Care Pilot project: facilitators and barriers to successful implementation

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**Aims:** In the UK, primary care database research is now well established and highly productive. This is however restricted to psuedo-anonymised data and accounts for only 20% of practices. There is considerable interest in more widespread coverage so research may achieve its full potential as a score activity of the NHSe. The Health Research Support Service (HRSS) is a major National Institute of Health Research initiative to process patient-identifiable information from medical records independently of both the data source and the researcher that requires the data (honest brokers function). A HRSS Pilot Programme has been set up to test the viability and benefits of the proposed service. We have conducted an independent evaluation of this in primary care. The findings are likely to have significant implications for any future roll-out of the planned national programme.

**Materials and methods:** We used participant observation in practices and meetings about the project alongside focus groups and interviews with key stakeholders (General Practitioners, practice staff, patients). We explored participants understandings of the processes involved, their views of the acceptability of the HRSS and what they think happens to data from medical records. We were particularly interested in discussions around trust and guardianship of medical records. All data were transcribed verbatim and subject to thematic analysis.

**Results:** Preliminary analysis suggested there have been problems relating to communication between the HRSS project team and practices. Concerns were also raised about the documentation used to explain that it was necessary to opt out as opposed to opt in to the HRSS pilot and it was not clear if patients understood this.

**Conclusions:** Lessons learnt will have significant implications for the routine use of general practice records for research and add to the debate around patient opt in / opt out of research. The findings add important insights about the potential impact of initiatives such as the HRSS from the perspective of patients, clinicians and researchers.

Saturday, September 10<sup>th</sup> 13.45-15.15

## Health promotion and disease prevention V

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### Parental perception of their child

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**Background:** Parental perception of their child's weight status is the first essential step in initiating the families' active role in the management of childhood obesity. **Objectives:** This study was conducted with the following aims: (a) to test the hypothesis that parents of obese and overweight children underestimate their child's weight status; and (b) to identify the epidemiological factors that may be associated with parental perceptions

**Methodology:** A cross sectional study design enrolling a convenient sample of 200 primary school age children from two randomly selected primary schools. Children height and weight were measured. Children were provided with packets containing a study flyer and a parent survey to take home. The parents classified their child on Likert scales ranging from "extremely overweight" (obese) to "underweight". Parental perceptions were compared with their child's weight status according to body mass index (BMI) age-gender Z score.

**Results:** The study showed that the prevalence of overweight (BMI >1 to less than 2 on Z score) and obesity (BMI > 2 on Z score) was (15.1%, 12.1%) respectively. The majority (83.3%) of parents were underestimating the overweight status of their children and only 16.7% were accurately considered overweight. The study also revealed that 70.8% of parents were underestimating the obesity status of their children, as 25% of the obese children were perceived as normal and 45.8% of them were thought to be overweight and only 29.2% were accurately considered obese.

**Conclusions:** Overweight and obesity are among the major health problems facing children but unfortunately this problem was poorly perceived by their Parents.

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### Influenza and pneumococcal polysaccharide vaccination rates of type 2 diabetic patients in Samsun/Turkey

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**Aim and background:** Diabetic patients are six times more likely to be hospitalized with a diagnosis of influenza compared with the controls and there is a three-fold increase in hospital admissions during influenza epidemics. Patients with diabetes may carry a higher case fatality of invasive pneumococcal disease than non-diabetic patients. Diabetes

is one of the three most common risk factors for pneumococcal bacteremia. It is for these reasons that diabetes is included as an indication for influenza and pneumococcal vaccination in Turkey. We aimed to present the results of an audit of influenza and pneumococcal.

**Material and methods:** We interviewed with total 49 type 2 diabetic patients at age of 18 or older and a questionnaire was completed in a face-to-face interview in May 2010 and January 2011 at two different primary care centers in Samsun and at Ondokuzmayis University Hospital Family Medicine Clinic. Data obtained were analyzed by a statistics program.

**Results:** Mean age of the diabetic patients was 59.86 ± 8.20 (40-74). Of the patients, 30 were women (61.2%) and 19 were men (38.8%). Patients who had been vaccinated with influenza were 22 (44.9%) and pneumococcal polysaccharide 6 (12.2%) vaccines once, respectively. Patients who did not know anything about adult immunization were 35 (71.4%). Of the 14 (28.6%) patients who have knowledge about adult immunization, 4 (8.2%) get information from the people they know, 4 (8.2%) television, 3 (6.1%) from their doctors, 1 (2.0%) health care providers, respectively.

**Conclusions:** Diabetes is a strong indication for influenza and pneumococcal vaccination, but uptake is suboptimal, especially in pneumococcal vaccination. Although the influenza and pneumococcal vaccines are provided free of charge, no incentive is provided for primary care health professionals to achieve a high vaccination uptake. This is in contrast to childhood vaccinations, and the only way to change this would be for the Government to lead the way. Few patients had been provided information by the doctors. Family physicians must pay more attention on immunization of diabetic patients.

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#### Smoking or not for IBD

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**Aims:** Inflammatory bowel disease (IBD) refers to two related but different diseases: ulcerative colitis and Crohn's disease. These diseases cause chronic inflammation of the intestinal tract. Smoking is one of the evident risk factor in IBD. The mechanism by which cigarette smoking affects CD and UC is not known. Smoking has negative effect on course of CD, but on contrary, some results shows that never smoking and formerly smoking status even increases the risk of UC. Speculating with this opinion we want to assess whether the IBD patients are aware of concerns about smoking. The aim of the study is to assess the smoking prevalence and smoking history among the members of IBD association in Slovenia.

**Material and methods:** Members of IBD patient national organization were asked to answer internet based 14-item questionnaire. We send out 310 invitations. The questionnaire had 3 parts: general, about disease and therapy and about smoking.

**Results:** 113 patients answered the questionnaire; the response rate was 36%. Regards to sex 58% were females and 42% were males, regards to IBD 61% was patients with CD and 39% with UC. 55% of respondents never smoked, 31% of them are former smokers, 6% smoke occasionally and 8% smoke regularly. Most of regular and occasional smokers (75%) want to quit smoking or are already trying to quit. Between patients with CD who take biologic drugs,

immunosuppressive, corticosteroids or any combination of this, there are 61% of regular and occasional smokers, but only 42% between nonsmokers.

**Conclusions:** The range of smoking among patients who are members of national IBD association is lower than in other population. Most of them want to quit so the organization should follow them with some support program. Our results confirm the general state that smokers with CD need more medications to control their disease.

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#### Should we immunize immigrants from southern countries against Varicella Zoster?

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**Aims :** To verify the immunisation status against Varicella Zoster virus in new refugees arriving in Quebec city

**Method:** The literature and the pharmaceutical companies documentation mentioned that Varicella Zoster virus is more prevalent in northern countries. According to that they recommend that all new immigrants to northern countries be immunized against Varicella Zoster. New refugees arriving in Quebec city are seen close to their arrival for a check-up at the Refugees clinic. The status of immunization against Varicella Zoster virus of all refugees seen at the Refugees clinic was checked since June 3rd 2007 by I G blood tests. The statistics were compiled and reviewed.

**Results:** The refugees seen at the clinic during that period were from many different countries all in tropical or subtropical areas over the world. They were from different age, gender and countries. 91% of them had antibodies against Varicella Zoster virus.

**Conclusions:** Research projects should be conducted on these topics. Varicella Zoster infection could be surinfected and in these cases will cause major infectious diseases with life threatening risk. To give the Varicella Zoster vaccine to all new arrivants from southern countries is expensive. More studies could help decision organisms and health professionals working in Immunisation.

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#### Educational intervention versus standard practice to reduce bleeding events in patients taking acenocumarol

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**Aims:** Compare degree of INR control in patients treated with acenocumarol after the educational intervention versus usual practice

**Material and methods:** Randomized open trial in an urban health center. Population: patients treated with acenocumarol poorly controlled (less than 60% of determinations within the range). Inclusion criteria: patients over 18 who signed the informed consent. Exclusion criteria: Patients who have been

admitted in the last 6 months of treatment side effects, poor language skills, cognitive impairment or major psychiatric disorder without a caregiver. Patients were randomized to intervention (2 health education sessions) or usual practice. Was conducted the monitoring of these patients since the beginning of the intervention to 4 months after completion. Continuous variables are described by its mean and standard deviation and categorical variables as frequencies and percentages. The hypothesis tests were performed using nonparametric tests.

**Results:** We select 71 patients who withdrew from the study 19 (26.8%) patients (10 control and 9 of treatment): 52.6% (n = 10) for death not associated with the treatment, 5.3% (n = 1) by institutionalization, 31.6% (n = 6) were lost to follow up and 10.5% (n = 2) for withdrawal of treatment not associated with adverse effects. 52 patients completed the study (31 men and 21 women, mean age 72.3 +/- 6.8 years), 27 (51.9%) in the treatment group, 25 (48.1%) in the control group. The treatment group had a median of 5 measurements in range (0-7) and the control group 4 (p = 0.144). 17 (63%) patients in the treatment group and 18 (72%) control subjects met the criteria for quality but statistically significant differences were found (p=0.488).

**Conclusions:** During the study period, there has been a significant improvement in the control of these patients in both groups but we weren't able to demonstrate that improvement is produced by the intervention. This may be due to the large number of losses to follow-up period as well as by pollution between groups. Therefore, further studies would be necessary with a larger number of centers to determine the effectiveness of this intervention.

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#### Brief interventions in Primary Health Care: attitudes and effectiveness in clinical practice after a training program.

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**Introduction:** Portugal has one of the highest levels of alcohol consumption and alcohol related problems (ARP) worldwide. An assessment of the general practitioners (GP) needs followed by Early Identification and Brief Intervention implemented in PHC patients after a training program and support in the implementation.

**Objectives:** - Assess SAAPPQ questionnaire on Family Physicians/General Practitioners in a group of Primary Health Care Centers; - Check if the Physicians training on Brief Interventions to approach alcohol consumption related problems with support contributes to change their attitudes and behaviors towards hazardous and harmful alcohol consumers; - Check if Brief Interventions are effective to reduce alcohol consumption of patients detected as risky consumers.

**Methodology:** Phase 1- SAAPPQ questionnaire applied in a randomized sample of physicians -a cross-sectional descriptive study. Phase 2- with two components: 1. To examine the perceived attitudes of Family Physicians/General Practitioners towards alcohol consumption of their patients before training and again nine months after training, when they were already using EIBI in their clinical practice. 2. To determine effectiveness of EIBI measured by the AUDIT questionnaire, nine months after the first time- analytical prospective and longitudinal study.

**Conclusion:** There was a positive attitude of physicians from

the first stage to the second stage in the physicians of the experimental group. From 2.010 patients 60% were female, 18% were smokers and the average age was 54 years. 34% was risky drinking while 15% - binge drinking. The risky drinkers has a higher association with certain health problems such as lipid metabolism, smoking habits, diabetes and more family with history of alcoholism and a lower age of initiation. The decrease in consumption was observed on patients followed by physicians of the experimental group. a better attitude of physicians in relation to patients with alcohol related problems (ARP) was related to the decrease in alcohol consumption of those patients.

#### Cancer and palliative care I

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##### Symptoms in the last week of life – a descriptive study

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**Aims:** Symptoms in the last week of life of oncological patients are extremely changeable and require a thorough assessment. It is not possible to ascend in Maslow's Hierarchy of Needs without controlling these more primitive ones. This study intends to identify and quantify the symptoms present in the last week of life of oncological patients in order to suggest strategies to improve the quality of care.

**Material and methods:** Descriptive quantitative study of the symptoms experimented in the last week of life by terminal oncological patients who died at home between 04/01/2008 and 24/04/2010 and who were assisted by the Community Support Palliative Care Team from Algarve (Portugal). Data were obtained from patients' clinical files and were treated informatically using Microsoft Excel.

**Results:** The 76 studied patients (61% males and 39% females) were, in average 72,9 years old and were assisted in average during 30 days. The most frequent primary cancers were located in the lungs (15%), bladder (11%) or stomach (10%). 59 different symptoms were registered, the most common ones being generalized pain, restlessness, somnolence and prostration, each of them mentioned by 6% of patients. Each patient showed between 1 and 13 symptoms (6,25 symptoms in average).

**Conclusions:** Although the studied sample can be considered as representative of the general population, there are some differences in individual symptom prevalence between ours and other studies, emphasizing the need to study each population. The high number of symptoms per patient asks for both an adequate preparation of family doctors to make a good evaluation and intervention in each case and a referral to the Palliative Team on the right moment, meaning, at the beginning of the terminal phase. Subsequent studies should focus on the assessment of the succession of symptoms, its control, the priority each patient gives to them and the relationship between each of them and the location of primary cancer.

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**General practitioners as single medical staff in the first hospice in Luxembourg**Leners J

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In September 2010 a first hospice was inaugurated in Luxembourg. The nursing staff is fully employed by a semi-private organization, but the doctors work on their own as private family doctors. By chance 4 General Practitioners, 3 of them in medical practice since some decades and a fourth new colleague were all in training sessions for palliative care as the legal framework had completely changed in 2009. The background is two laws issued a year ago in our country: the first concerns the obligation to offer to every possible patient palliative care at home or in institutions or in hospitals/hospice. The second law, voted against a strong medical opposition, includes the right for terminal ill patients to ask for assisted suicide or euthanasia. The aim was to study the population admitted in our hospice and to compare it to the palliative care in other settings where the family doctors are working: nursing homes and in home care. Mean dosage of analgesics (level 3) are compared in the 3 settings as the general practitioner are the front line "workers". We will discuss the possible reasons in different prescriptions for similar diseases in several settings. The interdisciplinary aspect of our work with other health professionals will be evaluated, but also the differences in communication (added value) with relatives and most of all with the patients themselves. In conclusion we might say that the newly created hospice offers a real chance for general practitioners to accompany their patients up to the end in a trustful atmosphere and in cooperation with other well trained health workers. We will describe the possibility to implement the same model in our nursing homes or during our home visits, as palliative care is taken in charge through our care insurance system and might give us opportunities for a more intense relation patient-doctor.

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**Ganglioneuroma and other perirenal space neoplasms identified by first-line sonography in primary care**Cabistañ C, Perez Lucena M, Sagarra-Tio M, Argiles J, Vives J, Felez J

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**Aims:** Sonography has been implemented in a primary care setting and it has been used in emergency rooms as an additional diagnostic tool. We described the identification of 4 perirenal neoplasms by using first-line ultrasonography. Some of their major characteristics are discussed.

**Methods:** Since 2010 we performed 146 urgent abdominal and uro-renal sonographic explorations that were carried out by two trained medical doctors. Sonographic studies were carried out with JazzVison (Toshiba) device. Sonograms and clinical data of patients explored have been retrospectively

reviewed.

**Results:** Normal explorations were found in 40 % of studies whereas cholelithiasis and urolithiasis were detected in 11 % and 10 % of sonograms, respectively. Incidentalomas localized in perirenal space were found in three patients, corresponding to a large angiomyolipoma, adrenal cortical carcinoma and an ectopic pheochromocytoma in a patient with refractory hypertension. A large ganglioneuroma was detected in a young and athletic woman suffering a long history of abdominal pain in left flank. The mass was also identified by subsequent computed tomography and magnetic resonance imaging. Macroscopically, the tumor represented a 14.5 x 8 x 4.5 cm well-encapsulated and nonlobulated mass. The pathological evaluation showed a tumor composed of interwoven bundles of nerve fibers with a loose and edematous background. It was identified as ganglioneuroma with no evidence of malignancy (Ki-67 negative).

**Conclusions:** Some of perirenal neoplasms are detected by incidentalomas or by symptoms related to their mass or functional effect. In general, they are considered as rare tumors. In our series of consecutive sonograms this type of neoplasms represents a 2.7 % of all abdominal ultrasonographic studies performed and a 4% of the sonograms where a pathological abnormality was identified. First-line sonography can help to early detect these tumors and to improve their treatment.

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**Carer experiences of palliative care for dementia: a review**Raymond M, Warner A, Iliffe S

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**Aims:** Palliative care in dementia is both labour intensive and complex, however, shared knowledge on managing end-stage dementia is sparse. The experience of being a carer for someone with dementia at the end of life has been captured in diverse ways. This review will synthesise their experiences to help better understand the needs of patients and carers of people dying with dementia.

**Material and methods:** A search of electronic databases of papers in peer-reviewed journals using broad terms related to palliative care and dementia since 2000. 7630 papers were identified. Papers were included if they focused on any aspect of palliative care in dementia in all settings, all ages, in any languages. For this study, comments, letters and other narratives about the caregiver's experience were selected. 24 papers were identified using a title and abstract search and read by two reviewers.

**Results:** Carer experiences are insightful and provide an alternative view of the experience of patients with dementia at the end-of-life. The main themes of the papers were around the carer experience of looking after a person with dementia, being a family member and a carer, decisions about place of care, respecting patients wishes, cultural differences, the role of the family, the roles and relationship between carer, patient and professional, experiences of grief and bereavement.

**Conclusions:** We will provide an overview of experiences and opinions on caring for people with dementia at the end of life, which may help better understand the palliative care needs of patients with dementia and their carers.

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**Extramedullary-intradural spinal metastasis of small cell lung cancer causing cauda equina syndrome***Huan-Chu L, Chin-Lung L*

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**Aims:** To report a rare manifestation of small cell lung cancer (SCLC) developed cauda equina syndrome (CES). SCLC is clinically characterized as aggressive, evolving rapidly, and spreading to remote sites in early stage. Metastasis at intradural-extramedullary cauda equine caused by lung cancer was very rare. Once the neoplasm metastasize to cauda equina, symptoms such as low back pain, bilateral sciatica, motor weakness of the lower extremities, and rectal and bladder sphincter's dysfunction may occur therefore clinically diagnosed as CES.

**Materials and methods:** A 79-year-old male with SCLC treated with concurrent chemoradiotherapy. One month later after finishing the scheduled treatment, the patient was admitted to the hospital again with symptoms of low back pain that radiating to bilateral lower legs with painful paresthesias, urinary incontinence, and constipation. After series of examinations, including bone scan and MRI, the patient received a L2-L3 laminectomy. The concluded diagnosis through histopathological examination.

**Results:** Extramedullary-intradural spinal metastasis of SCLC causing CES was confirmed by histopathological examination with immunohistochemistry.

**Conclusions:** To our knowledge, this is the first reported case of SCLC metastasized to the cauda equina causing CES. The routes and mechanism of metastatic intradural spinal tumor from outside the central nervous system will be discussed.

**Elderly care I**

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**What do nursing home residents perceive as barriers to sleeping well?***Herrmann W, Flick U*

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**Introduction and aim:** Care for nursing home residents is a challenge for their primary care physicians. Sleep in the nursing home is a relevant problem for the residents and their primary care physicians. Because of the residents' polypharmacy and multimorbidity, sleep disorders of nursing home residents are difficult to treat. To know what nursing home residents regard as main barriers to good sleep could help to adapt interventions and individual treatment to the residents' needs.

**Material and methods:** We conducted a qualitative interview study with 30 nursing home residents in five nursing homes. The interviews were episodic interviews, containing narrative and argumentative-theoretical parts. The interviewed

residents had to be at least 64 years old and oriented to person and place. The analysis of the data was done by thematic coding, which is based on theoretical coding, but considering also the individual cases. The study is approved by the local ethics committee.

**Results:** The interviewed nursing home residents report internal psychological and body-related barriers to sleeping well and external environmental barriers. Regarding psychological barriers, most of the residents can be classed into three types: 1) Perceiving no psychological barriers 2) Suffering from the actual situation 3) Being distressed by memories from the past and in succession easily by everyday life. Body-related barriers are mainly pain and micturition at night. Environmental factors are light and noise due to other residents, nursing staff or from outside.

**Conclusions:** Primary care physicians treating nursing home residents with sleep problems should pay attention to the residents' psychological situation. Especially residents belonging to type 2 and 3 of our typology should be considered as potentially having an adjustment disorder, depression or post-traumatic stress disorder. Additionally, pain medication could be optimized and diuretic medication reviewed.

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**How can we reduce avoidable hospitalizations of multimorbid elderly patients? Chances and limitations of primary care based care management***Freund T, Mahler C, Szecsenyi J, Peters-Klimm F*

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**Aims:** Hospitalizations due to ambulatory care sensitive conditions (ACSCs) are stated to be avoidable through optimal (primary) care. Multimorbid elderly patients are likely to be hospitalized for a potentially avoidable cause. Literature suggests that care management can reduce these hospitalizations. However, general practitioners (GPs) experience a variety of causes for hospitalizations in this patient population. It is unclear how care management can address them. This study aims to explore causes of potentially avoidable hospitalizations of multimorbid elderly patients and how primary care-based care management may reduce the number of hospitalizations.

**Material and methods:** Based on insurance claims data of 536 multimorbid patients from 10 general practices in Baden-Württemberg (Germany), we determined all hospitalizations due to ACSCs in 2008. In a second step, every hospitalization was discussed with the treating GP. Therefore, we performed semi-structured interviews with 12 GPs in the participating practices. All interviews were transcribed verbatim. Content analysis was performed with the software atlas.ti.

**Results:** In total, 151 potentially avoidable hospitalizations of 109 patients were discussed. Of these, GPs rated about one third as actually avoidable. Main causes for these hospitalizations were patient-related (e.g. non-adherence), physician-related (e.g. lack of communication between care providers, delayed awareness of symptom deterioration) and organizational (e.g. lack of ambulatory services). GPs perceived monitoring of patients' adherence and symptom deterioration as well as improved communication between different care providers as key measures for care management.

**Conclusions:** Primary care based care management for multimorbid elderly patients could address significant causes of potentially avoidable hospitalizations. However, a high

proportion of these hospitalizations appear to be unavoidable.

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### Are Elderly Females At Particular Risk For Drug Related Harm? A National Pharmacoepidemiological Study on Potentially Inappropriate Prescribing for the Elderly Home-Dwelling Population in Norway

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**Aims:** Elderly often use several drugs on a regular basis, although there is limited evidence on both medications effects and side-effects in this age group, especially under circumstances of comorbidities and polypharmacy. Using a recently developed list of explicit criteria for pharmacological inappropriateness, we wanted to explore the prevalence of potentially inappropriate medication use among Norwegian elderly out-patients.

**Material and methods:** A pharmacoepidemiological retrospective cross-sectional survey based on data from the Norwegian Prescription Database (NorPD) on all prescriptions dispensed by Norwegian pharmacies to home-dwelling elderly > 70 years in Norway in 2008, a total of 11,491,065 prescriptions from 24,540 prescribers to 445,900 individuals (58.9% females), with patient-, prescriber-, and substance/amount-information. We applied the NORGEPI criteria in a computerized program to assess the level of potentially inappropriate prescriptions (PIP).

**Results:** According to our criteria, 34.8 % were exposed to at least one PIP, among them 66.4 % female. 59.9 % of PIP represented psychoactive substances. Median number of different drugs to each individual was 7 (Interquartile range 4 to 10, max 45). Among the one fifth using >10 different drugs, two thirds had at least one PIP. Adjusted for differences in age distribution, number of prescribers involved, and the number of substances dispensed for each individual, women were still more frequently exposed to PIP than men, with an odds ratio=1.6. OR for PIP for psychoactive substances was 1.9 for women vs. men, but increased with age for men and decreased for women.

**Conclusions:** About one third of the elderly Norwegian population is exposed to PIP, and elderly women seem to be at particular risk. Further research is needed to explore the clinical significance of this considerable amount of PIP, including the gender differences revealed here.

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### The relationship between nutritional status and function in community dwelling older adults

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**Aim:** The aims of the study were to assess the relationships between nutritional status and motor and cognitive function among community-dwelling older adults aged 65 years and

above, and the relationship between socio-demographic variables and the nutrition status.

**Material and method:** 86 community-dwelling adults, 48 females and 38 males, aged 65 and above were chosen by a systematic sampling method. The participants belong to six outpatient clinics. Their mean age was 75.5 years (range 65-94). Socio-demographic data were collected by a questionnaire; the nutritional status was assessed from the BMI (Body Mass Index) and the MNA (Mini Nutritional Assessment) score (range 0-30). Participants were divided according to their BMI into five groups (a) <21; (b) 21-25.9; (c) 26-27.9; (d) 28-30; and (e) 30.1 and over. Cognitive and motor function was assessed by the FIM (Functional Independence Measurement) scale; consisting of 13 motor items (range 13-91) and five cognitive items (range 5-35).

**Results:** Statistically significant positive correlations were found between: (a) Motor FIM score and BMI ( $r=0.242$ ,  $p=0.026$ ); (b) Motor FIM score and MNA score ( $r=0.506$ ,  $p<0.001$ ); (c) Cognitive FIM score and BMI ( $r=0.219$ ,  $p=0.044$ ); (d) cognitive FIM score and MNA score ( $r=0.318$ ,  $p=0.003$ ). Mean motor FIM scores for the five BMI groups were: (a) 73.9; (b) 83.7; (c) 87.8; (d) 81.4; (e) 86.3 ( $p=0.029$ ). Mean motor FIM score among those with MNA score  $\leq 23.5$  and  $>23.5$  were 75 and 86.5, respectively ( $p<0.001$ ). A positive relationship was found between MNA score and self health assessment, economic situation and number of years of education ( $p<0.001$ ,  $p<0.001$ ,  $p=0.007$  respectively).

**Conclusions:** A positive correlation was found between nutritional status and motor and cognitive function among older adults. As opposed to other studies, a decline in functional status among those with BMI  $>30$  was not observed. Identifying elderly who are at risk of poor nutritional status or who already suffer from poor nutritional status, and proper interventions may improve their motor and cognitive function.

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### Patient in nursing home (NH). Is it beneficial to perform oral anticoagulation treatment (OAT)?

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**Aims:** The clinical practice guidelines have defined the indications of OAT, recommending its use in patients with atrial fibrillation (AF) in elderly (aged 75 years old or aged 65 and 75 years old and thrombotic risk factors) and patients with a thrombosis record: deep vein thrombosis (DVT) or pulmonary embolism (PE). Increasingly institutionalized patients have increased susceptibility to continue OAT (elderly people, high prevalence of indications for initiating OAT) but also greater risk of adverse events (advanced age, polypharmacy, comorbidity, difficulty in dosing, increased risk of complications). The objective is to determine if it is beneficial to use the OAT in NH patients based on the register indicators, results and adverse OAT effects (criteria established by the British Committee for Standards in Haematology)

**Material and methods:** Descriptive cross-sectional study, for one year, of patients joined in NH, who realize OAT and follow INR controls by primary health care. Data analysis using SPSS

**Results:** The total number of patients was 27 with a mean age of 84 (SD 5'13), 29'6% men, 70'4% women. OAT indications: AF 70'4%, valvular prostheses 3.7%, DVT / PE

14.8%, other 11%. Outcome indicators: INR percentage in range of 0.5 units above / below optimum INR: 78% (standard > 50%) INR percentage in the range of 0.75 units above / below optimum INR: 91% (standard > 80%) Indicators of complication: thromboembolic event 3.7% (1 case) treatment drop-out: 18.5% (5 cases), other complications (major and minor bleeding, death): 0 cases.

**Conclusions:** Despite the difficulties of patients admitted to NH (mean age 84 years, comorbidity and polypharmacy), we conclude that the OAT is beneficial because optimal levels of INR control are achieved and very few adverse effects are objectified. Being admitted to a NH should not interfere with OAT treatment when indicated.

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### Medical student experiences in Family Medicine: developing the IFMSA checklist

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**Aims:** 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. This will be one step in enabling student exchanges in primary care, jointly promoted by IFMSA and Wonca.

**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.

**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.

**Conclusion:** The WWPE has developed a checklist for medical student experiences in family medicine. More work is needed to develop a complete handbook for student exchanges.

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### How to teach clinical reasoning in medical school?

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Clinical reasoning is not an art a medical student can learn in the auditorium or from the books. Books and lecturers teach them all the diseases in a rather encyclopaedic way. Teaching the complicated process how to integrate this knowledge in the daily process of diagnosing and treating patients is another thing. We think that in order to learn clinical reasoning two ways of teaching should be used. First of all, teach the students how to perform the process of clinical reasoning in a transparent and systematic way. Use real patients or realistic paper cases for this process. Let that be the main focus in the first two years of the curriculum. Second, make the student familiar with as many realistic illness scripts as possible. At our medical school the third- and fourth-year students know how to solve the 80 most important clinical problems. We think this is only possible in a small interactive groups, where free and informal thinking is possible. The groups should be supervised by an experienced clinician to give feedback. In Amsterdam the department of general practice started teaching clinical reasoning to all the 1200 students in the first four years of our medical school. They are supervised by 140 well trained clinicians. A supervisor is the "tutor" of 12 students for one year. They come together in 11 afternoon sessions and discuss 20 clinical problems per year. Before every session the student has to solve a comparable clinical problem on the computer, in order to make the session as effective as

## Education in FM/GP III

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### Teaching humanistic home visits in Family Medicine Residency Training

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**Background:** Before World War II home visits were common in the US. By the 1970's, < 1 % of care occurred in the home. Now there is a shift from hospital based care. Our 9-9-9 FM residency program, applied for and received a grant to incorporate team based home visits with the application of humanism in the teaching. We started in March 2010.

**Aims:** -Teach residents the value of home visits (patient's health, physician-patient dynamics, cultural competencies) - Teach necessary skills, use faculty role models -Allow residents to learn from their peers, develop team building skills -Provide improved health care to patients.

**Methods:** 3 teams (9 Residents each) and their shared panel of patients. Each home visit had 2-3 team members working each day. 1 patient per team, maximum 3 visits per day. A briefing was held in the morning and after the visits, patients filled out a survey and the residents and faculty went to a debriefing held at a local eatery (in a private section to protect PHI) where they shared their experience.

**Results:** Home visits conducted over 5 months; reasons: 34% Geriatric Assessment, 20% Post-op check, 33% missed clinic visit and 13% home bound. The patient satisfaction surveys were overwhelmingly positive with many feeling that this service should be offered to more patients. Some residents felt initially uncomfortable but by the end felt it was a great experience. They were able to learn about the community and the resources available to their patients, to better understand the culture and socioeconomic factors that play a role in their patient's health. Many said they would change their practice by doing home visits in their future practice and/or asking more questions related to home life and socioeconomic issues during the clinic visits. Many felt that it was helpful and complementary working as a team.

**Conclusions:** By implementing this curriculum, our residents have learned about the value of home visits,



possible. At the end of every year there is a three days exam, in which 150 clinical problems have to be solved. In our presentation we will show you how things work, and what kind of problems we encountered building this course. The solutions we found will be discussed.

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### Competency Of The Month - Incorporating ACGME Competencies In Residency Programs

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**Background:** Our Family Medicine Residency Program developed a method to further incorporate the ACGME competencies into graduate medical education. Both faculty and residents participate in a 'Competency of the Month' at the same time. Aim Incorporation of the ACGME competency learning into the residency program for both residents and faculty on a routine basis hence ensuring better understanding of the skills, knowledge and attitudes required to become proficient, independent practitioners.

**Method:** Every 4 week block a competency is chosen from the 6 ACGME competencies: 1. Interpersonal and Communication Skills, 2. Medical Knowledge, 3. Professionalism, 4. Patient Care, 5. Practice Based Learning and Improvement, and 6. Systems Based Practice. For the first 6 months they have a portfolio form which they fill out detailing the following: Learning plan, Revised learning plan, Final Assessment. For the last 6 months of the academic year, they are given a project to work on that is related to the competency. They now have to apply what they have learned over the first half of the year. During each block, the faculty are given a tool to teach the competency. At the end of the block, the documents (from both faculty and residents) are uploaded into a web-based system (portfolio) for the residency program.

**Results:** 100 random reports were pulled (21% Medical Knowledge, 19% Communication, 17% Professionalism, 16% Patient Care, 12% PBLI and 15% SBP). The residents would change their future practice 79% of the time based on their project, and wait for further information 18% of the time. The residents and faculty are more conversant with the 6 ACGME competencies than in prior years, and are able to utilize the competencies in varied rotations. Having a 'Competency of the Month' is a viable method of incorporating competency education for both residents and faculty in a graduate medical education program.

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### Perceptions of medical students about the family medicine and primary health care services

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**Aims:** It is extremely important to develop an undergraduate medical curriculum in order to improve student's primary care

perception and their wishes to work at primary healthcare services. In this study, we aimed to determine the final year student's knowledge and perceptions related to family practice discipline and to evaluate the importance of family practice clerkship in the undergraduate medical curriculum.

**Material and method:** From July 2009 to June 2010, 269 last year students who were studying at four different medical faculties of Turkey and who accepted to participate in the study completed a structured questionnaire.

**Results:** The total number of students who participated in the study was 269 and their ages varied between 22-28 years. The average of age was 24,10  $\pm$  1,7 and 186 students (69,1%) were male while 83 (30,9%) were female. 162 (60,4%) of the students thought that physicians working in primary healthcare had to specialize, while 106 (39,6%) thought that it wasn't necessary to specialize to work in primary healthcare. 65 (24,8%) of the students answered the question Would you like to specialize in family practice? as positively, 197 (75,2%) answered as negative. For the item I don't have enough information about family practice specialty 142 (53%) of the students responded positively, while 53 (19,8) of them stated that they had no ideas. 219 (81,7%) of the participants responded positively to the item family practice specialty is not sufficiently known by the public, while 185 (69,3%) of the participants responded positively to the item family practice specialty is not sufficiently known by the medical staff.

**Conclusion:** In order to increase students interest in family medicine, medical schools should update their curriculum and create opportunities for training in primary healthcare settings and also should provide early and accurate information on family medicine training and career opportunities.

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### A quantitative analysis of a novel methodology on case discussions: an attempt to evaluate impact on the medical learning process

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**Aims:** Exposure of medical students to large amounts of scientific knowledge in a fragmented way during undergraduation can have negative impacts on later clinical reasoning. Our aim to evaluate the impacts of a novel methodology on clinical case discussions held by medical students.

**Material and methods:** The Brazilian Society of Family Medicine (SOBRAMFA) promotes monthly scientific meetings in Sao Paulo State Medical Association that bring together students of several medical schools, residents and family physicians. There, interactive clinical case presentations are held. Cases are selected from presenter personal experience. Sessions are performed by 2 undergraduate medical students and coordinated by 2 or 3 professors of family medicine. Dynamics consist of case presentation by students and coordinators making interruptions and questioning the audience about possible diagnoses and management. Discussions are held on basic knowledge, clinical syndromes, differential diagnoses and so on. Based on the results of a previous qualitative research on good and bad aspects of the discussions, a questionnaire was designed, and offered to participants after the sessions. All answers were presented in a Likert scale from 1 to 5 (very bad to excellent). Questions included, for example, Do you agree that these case discussions help managing and organizing ideas logically? Do

you agree that these discussions offer a stimulus to study and improve your medical knowledge?

**Results:** 85%(100) of the students strongly agree that novel methodology on case discussions help managing and organizing ideas logically and 90%(105) strongly agree that this method is a stimullus to study and improve their medical knowledge.

**Conclusion:** Novel methodology on clinical case discussions held by medical students is powerfull tull to improve logical and integrative medical knowledge.

Saturday, September 10<sup>th</sup> 15.45-17.15

### Quality improvement III

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#### Comprehensive project to improve polymedicated patient safety

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**Objectives:** To improve polypharmacy patient safety and increase the effectiveness of their treatments.

**Methodology:** 5 lines were established for action: 1) We performed two clinical-care programs, the Patient Advocacy polymedicated Program and Safety Program in polymedicated patients. 2) In the socialcommunity field we established various strategies to build community participation (training home-care workers, informing to stakeholders, creating of expert patients, etc), and we started a community social process. 3) On Education and Research line we organized specific training, like as the annual celebration of the Workshops on Proper Use of Medicines. We also developed several research projects on adequate treatment of patients with polypharmacy. 4) In the Communications and Information line, we created a web database and we are awaiting the inclusion of programs within the electronic Clinical station, designed to disseminate various communication campaigns, and create discussion forum called "polymedicated and security." 5) In Management line, we promoted all previous initiatives through management contracts.

**Results:** The project, through the action lines, has managed to act directly on more than 30% of the susceptible population and over 90% of health professionals involved. The results show an increased awareness in professionals and patients. The level of coverage is important, but improvement. In the recruited patients, the drugs related problems reduction and the number of prescribed drugs decreased may result in increased drug-related safety and better use of them.

**Conclusions:** A comprehensive and holistic approach to a complex problem as polypharmacy is effective at getting results in our patients.

800

#### Guidelines in travel medicine: a step forward best practices

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**Aims:** To sensitize the health professionnals working in Travel Medicine in Quebec and the licensing bodies in Medicine, Nursing and Pharmacy about the core content of this field of practice and the best practices in this domain

**Material and method:** More and more health professionals are working in Travel Medicine in Quebec consequence of

changes in the law about professional fields of practices in the province and yellow fever vaccination centers accreditation in Canada. Some of the professionals are working in public establishments others in private practice. In the past, only public establishments were accredited to deliver services in Travel Medicine and under the public health departments in each administrative area of the province. They were submitted to agreement of public health establishments laws. Pharmaceuticals companies are also very active at dispensing professional development activities and documentation on this topic. The practice in Travel Medicine in Quebec is changing very rapidly and new ways to assure the quality of services are needed. A group of experts of the National Institute of Public Health of Quebec has made a review of the literature on this topic.

**Results:** It appeared that a part of the solution was to write Guidelines, inform the licensing bodies and develop a continuing education activities in this field. These Guidelines complete other Guides on practice in Travel Medicine and Immunization largely used in Quebec. These new Guidelines have been sent for free to health professionals working in this field and significative organisms in link with the quality of practice.

**Conclusions:** These Guidelines should be useful for the Licensing bodies. Some continuing education activities are under development: conference, on-line module. All these should help to improve the competence of the health professionals. Working in interdisciplinarity and lack of physicians appeal changes. The quality of services and the patient wellness should be at the center of all changes and new ways to insure it should be developed when needed.

906

#### Patients satisfaction in Primary Care-Health Center Obrenovac

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**Aims:** To evaluate the degree of patient satisfaction with health services in HC Obrenovac. The integral part of the program for monitoring and improving the quality of work in health institutions in Serbia is investigation of patient satisfaction

**Method:** Patient satisfaction survey of the Ministry of Health was conducted in December 2010.

**Results:** The distribution by sex: 59% women, 41% male. High School has 64% subjects, university 23%, primary 12%, without school 1%. The financial situation: average 39%, well 41%, 10% bad, very bad 3%; very good 7%. Own doctor had 96% patients. The procedure for changing doctor didn't know 35% subjects; at any time 14%; once per year 48%; think isn't possible 3%. Till now didn't change doctor 75% of patients. The reason of changing: doctor left the surgery 7%; the patient moved 7%; misunderstanding 4%; other reasons 7%. The patients were treated by chosen doctor: less than 1 year 11%; 1-3 years 22%; more than 3 years 63%. Number of visits per year: 0-9 times 71%; 10-19 times 20%; 20-29 times 2%; over 30 times 7%. Number of visits in private surgery: 0-3 times 79%; 4-7 times 8%; 8-11 times 1%; over 12 times 12%. Patients waiting for schedule appointment: 1-3 days 37%; over 3 days 38%; the same day 12%; no waiting 10%. Doctor talking with patients about nutrition: during regular visits 36%; at prevention center 30%; not talking 9%; no reasons for that 19%. Doctor talking about physical activity: at regular visits 32%; prevention center 29%; not talking 10%; no reasons for

that 23%. Doctor talking about alcoholism: at the regular visits 24%; prevention center 4%; not talking 11%; no reasons for that 54%. Doctor talking about quit smoking: at regular visits 25%; prevention center 3%; not talking 13%; no reasons for that 52%. Doctor talking about defense against stress: at the regular visits 25%; prevention center 2%; not talking 13%; no reasons for that 52%. Patients think that doctors and nurses have a good cooperation: yes 67%; no 2%; partially 18%; don't know 9%.

**Conclusion:** Patients satisfaction is an integral part of the program for monitoring and improving the quality of work in health care facilities.

450

#### Ethnic and cultural diversity in practice guidelines and continuing medical education: strategy of the Dutch college of general practitioners NHG

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**Background:** The NHG is a scientific organisation of GPs. Among others it is known for the development and implementation of evidence-based practice guidelines and continuing medical education (CME). Over the years, the Dutch population has become increasingly diverse, 20% has a foreign background of which half non-western. Dutch GPs have been insufficiently prepared to deal with the multicultural society. Vocational training and postgraduate education pay little attention to intercultural skills and knowledge. From 2007 to 2010 the NHG ran a project "Ethnic and cultural diversity in the NHG-products" to ensure that available and relevant information on migrant care would be incorporated in the NHG-products.

**Aim:** of the project The NHG-project "Ethnic and cultural diversity in the NHG-products" aimed to give GPs tools to be well prepared for the increasing diversity in the population by incorporating relevant information on migrant care in NHG-products. Design and method Literature searches Development of a checklist on the relation between ethnicity and health, used for the production of practice guidelines and medical education. Training of staff members of the NHG Collaboration with other organisations and universities.

**Results:** Literature searches for practice guidelines include ethnic and cultural aspects - Staff members were trained on how to incorporate ethnic and cultural differences in NHG-products - A 4-day course for GPs working in lower-class districts (with many patients from different ethnic backgrounds) has been prepared in collaboration with other organisations - Attention for migrant care in CME-programmes, based on patient case descriptions - In collaboration with other organizations a website for GPs with information on migrant health has been developed

**Conclusions:** - A strategy has been developed to ensure that relevant ethnic and cultural differences are imbedded in the practice guidelines and in the CME-programmes of the NHG.

923

### Redesign of quality improvement work methods in primary care centers in Israel without additional resources - "Initiative" program

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**Context and aims:** Clalit Health Services insures 53% of Israeli population. Health care is based on 1150 multi-professional primary care health centers in the method of "Medical Home". We monitor the quality of health care in the community through 72 indicators of care. To continue quality improvement, we have redesigned the quality improvement actions in the clinic, using the unique features of each profession to improve clinical quality and performance, with emphasis on team work and active detection of patients requiring medical treatment.

**Material and methods:** The first part of the study was a control trial to prove the efficacy of the planned intervention. We chose 10 primary care health centers from 5 districts for intervention, and a control in terms of population size and type, location, the compound quality score of the clinic, and the self-management score. The second part is a descriptive study that outlines the general implementation of the process in the organization. The pilot study success was measured rate of mammography performance in the clinic's target population, waiting times for appointments and patient satisfaction. The nation-wide implementation was measured by biannual reports from the districts concerning the clinics that joined the program, and general compound quality score of the organization.

**Results:** Within half a year the pilot clinics showed improvement of 17.7% in mammography performance versus control clinics with 9.6% improvement. There was no negative effect on waiting times or patient satisfaction. The program was adopted gradually: 33% of all Clalit's primary care clinics in the first year, 78% of the clinics after 2 years, and 100% of the primary care health centers adopted the program in 2009. The general compound quality score of the organization rose 5% each year since 2007

**Conclusions:** Redesign of work process to promote quality depends on the choice of appropriate intervention according to the organization's management culture

497

### Strategies for diagnosis and therapeutic approaches of iron overload and liver iron concentration in primary care

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**Aims:** We want to avoid in healthy patients with biochemical iron overload (BIO) the practice of liver biopsy versus the measurement of liver iron concentration (LIC) using magnetic resonance (MR) and control necessary indents directly from Primary Care (PC). **OBJECTIVES:** 1. Prospectively analyze the relationship between BIO and LIC in a group of individuals with BIO phenotypic and genotypic

characterization by MR. 2. MR findings correlate indicators of liver iron accumulation and liver biopsy. 3) Study LIC decreased by performing MR in PC controlled bloodletting.

**Material and methods:** Design, venue and framework or level of care, selection criteria, sampling, statistical analysis, measurement and interventions, limitations of the study Descriptive multicenter study. Study subjects: Patients included in the FIS PI080956 (134) with high BIO (10) (ferritin > 1000 ng / mL and / or IST > 50%) and patients genetically diagnosed hereditary hemochromatosis (HH) (6), data Clinical, biological, molecular, and ultrasound of which are computerized. Sample size: 16 patients. FIS PI080956 This study includes all subjects without mutations SBH C282Y/C282Y or C292Y/H63D HH gene, > 18 years, who participated in the FIS PI030459 (78/2739) for screening of HH as well as all new cases of BIO identified from then until now (56).

**Data collection and variable:** 1. Quantification of LIC by MR in patients with high BIO and HH 2. Liver biopsy in patients with BIO and high LIC, determined by MR, 3. Performing controlled bloodletting in patients with pathological MR and liver biopsy 4. Analytical control of bloodletting, 5. MR to evaluate changes after reaching figures of Fe below 50 ng / mL.

**Applicability of the expected results:** The results will determine the indications for MR quantification of LIC in patients with high BIO. The diagnostic algorithm will facilitate the management of patients with BIO in different clinical settings discussed in the work, all of high prevalence. Will rationalize the use of various tests, including MR and allow a rational therapeutic approach on the cases of healthy patients with primary and secondary BIO directly controlled in PC.

911

### Survey of the problems of residents at Atatürk University Medical Faculty

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**Introduction:** The aim of this research was to collect a pool of perceived problems among residents at Atatürk University Medical Faculty, Turkey.

**Methods:** This study was performed in October 2010. During this period, 315 residents were studying at the Faculty of Medicine, Ataturk University. A pool of perceived problems was collected by addressing the following question to all residents: "Please mention problems you perceive during your daily work regarding areas such as social and physical conditions, education, environment, curriculum, human relations, health, and relationships". Results were collected by the researchers and categorized, which revealed a pool of 51 questions. Problems raised by less than five residents were removed from the pool.

**Results:** 150 residents from 34 different departments joined the study. The final problem pool consisted of 27 problems. First three problems raised by the highest number of residents were "Salary not sufficient for the work done", "Insufficient number of residents at the department", and "More emphasis needed in residency training". Problem pool is given at Table 1.

**Conclusion:** These data may be used in improving the conditions for the residents and make an important contribution to the faculty management in determining

priorities. This study may also contribute to the democratic participation of residents in highlighting of own problems to the management. A second phase of the study should be conducted, distributing the final problem pool to all residents in the format of a Likert scale and asking to grade each problem. Table 1: Problem pool of residents (most common 10). 1 Work load too much for the given salary 64 2 Number of residents at the department not enough 42 3 More attention should be given to residency training 36 4 Physical conditions need to be improved 36 5 Food quality need to be improved 29 6 Personal rooms of residents need to be improved 28 7 Technological facilities need to be enhanced 28 8 Too many night shifts 26 9 Too much work load 24 10 Conditions of cafeteria need to be improved 22

## Disease management strategies

256

### Homeopathic and conventional treatment for iron Deficiency Anaemia: a comparative study on outcome in the primary care setting.

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**Aim:** To assess the efficacy and acceptability of homeopathy compared to conventional treatment in Iron Deficiency Anemia (IDA) in primary care setting.

**Background:** Iron deficiency is the most common micro nutrient deficiency and affects > 2 billion persons worldwide, leading to Anemia in > 40% of women of reproductive age in the developing world. Oral iron supplements are effective at reducing the prevalence of Anemia, but run the risk of side effects and discomfort.

**Material and methods:** The study was designed as a community-based, randomized, comparative trial. The initial sample consisted of 468 female school students from the five major urban slums of Jaipur, India aged 13-16 years old, of whom 412 students concluded the study. They were randomly selected and assigned into either iron-supplemented group (ISG) or Homeopathy group. The ISG received 100 mg ferrous sulfate daily for 12 weeks, whereas the homeopathy group received individually chosen homeopathic remedy. Weight, height, and hematological parameters were measured and compared between the two groups before, 6 weeks and 12 weeks. There was no significant difference between the initial measures of the two groups before the intervention.

**Results:** At 6 weeks of intervention, hemoglobin (Hb), serum ferritin (SF) and Serum Iron were improved in the homeopathy group compared with ISG ( $p < 0.01$ ). Post-intervention values of the above-mentioned parameters had a significant improvement in both groups. There were side effects reported in ISG. Thus, both iron supplementation and homeopathy schedules were efficacious in preventing iron deficiency in adolescent girls even though the homeopathy was more effective and acceptable than the Iron Supplementation. Moreover, homeopathy is cost effective and has no or fewer side-effects.

**Conclusion:** There may be significant health benefits from homeopathy that enhances the iron level in poor urban young women in primary care setting.

369

### A proactive approach towards migraine patients in general practice: a pragmatic randomized controlled trial

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**Aim:** Optimizing treatment of frequent migraine in general practice (GP) by a proactive approach, ensuring adequate management of attacks, increased use of prophylaxis, and treatment of medication overuse headache.

**Methods:** Cluster randomized trial, randomization by GP (31 intervention, 33 control). Participants were using  $\geq 2$  triptans per month. GPs in the intervention group received training on migraine treatment according to the GP headache guideline. They invited participants for an evaluation of their therapy. Control group continued usual care. Primary outcome measure was Headache Impact Test (HIT-6) at 6 months with 2.3 points as clinically relevant. Possible effect modification by psychic distress (K10).

**Results:** We included 490 patients (233 intervention, 257 control). The consultation was attended by 192 (82%) of the intervention patients. 41 (21%) started prophylaxis, 24 (13%) changed prophylaxis, and 27 (14%) continued current prophylaxis. The difference in change on the HIT-6 was 0.81 ( $p=0.07$ ). For patients with low psychic distress (baseline  $K10 \leq 20$ ) this was -1.51 ( $p=0.008$ ), compared to 0.16 ( $p=0.494$ ) for patients with increased psychic distress. In patients not using prophylaxis at baseline and  $\geq 2$  attacks per month HIT-6 improved 1.37 compared to the controls ( $p=0.04$ ).

**Conclusions:** An educational intervention for GPs and a proactive approach of migraine patients didn't result in a reduction of headache complaints. For patients with no prophylaxis at baseline and with  $\geq 2$  attacks per month a significant, but not clinically relevant, difference was found. New interventions should aim at this group of patients. This intervention has less effect in patients with high psychic distress.

625

### Extending the chronic care model of project Leonardo in the whole Puglia region

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**Aim and background:** Health Authorities of Puglia Region, in Southern Italy, derived some recommendations for the future of Primary Care from the care model experimented in Project Leonardo (PL). There is clear evidence, according to the Chronic Care Model, that the integrated approach of the PL, aimed to patients empowerment and self-management education, increases adherence to therapeutic and behavioral recommendations of patients with chronic conditions. In 2011 18 small hospitals will be closed down in the Puglia Region and primary care is being strengthened implementing a care model based on experiences of the Project Leonardo.

**Material and methods:** As in the PL, Care Managers (CMs), nurses trained to coach and support patients in facing their chronic conditions, are included in general practices, fostering a team-based approach involving CMs, General Practitioners and Specialists as integrated "partners" of the patient. Shared guidelines and clinical pathways are adopted for diabetes, cardio-vascular diseases and high CVD risk, heart failure and COPD. An individualized Care Plan is written down for each patient, based on guidelines and needs, expectations, social situation of patients. Some communication tools and a shared computerized case file have been adopted to promote integration among health professionals.

**Results:** We expect the same results of PL: increasing adherence to guidelines and to treatment, improving patients and health professional's satisfaction, better clinical outcome.

**Conclusions:** PL demonstrated the feasibility of a patient-centred, team-based model of care in facing chronic conditions, indicating: - relevance of multi professional integration - the strategic role of CMs in supporting patient and doctors - the central role of general practice as appropriate setting to gain patient empowerment. Health Authorities of Puglia are implementing the care model in the whole region starting from Health Districts where some small hospitals are closing down.

824

#### Headache as a common presenting complaint to the Emergency Department Of Laiko University Hospital (Athens)

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**Aim:** To explore headache as a presenting complaint to the Emergency Department of the Laikon University Hospital in Athens.

**Methods:** We studied 769 patients who presented with headache to our Emergency Department during years 2008 and 2009. Subjects with symptoms in keeping with a concurrent upper respiratory tract infection were excluded. In 23% of the patients there was a past medical history of recurrent headache.

**Results:** From a demographic standpoint, 37% of the patients were males and 63% were females; their ages ranged from 14 to 87 years. The precise etiology of their complaint in descending frequency was found to be as follows: Migraine (13%), episodic headache (41%), cervical spondylopathy related headache (16%), subarachnoid haemorrhage (2.5%), tumour (2.5%), sinusitis (15%), headache of dental cause (4%), trigeminal neuralgia (6%). Systemic symptoms commonly associated with headache were: scalp hypersensitivity (11%), cervical and shoulder girdle ache (17%), insomnia (9%), malaise (39%), anxiety (67%), suppressed appetite (23%), impaired alertness and ability to concentrate (51%), visual impairment (4%), nausea (9%), vomiting (9%), abdominal pain (3%), hemisensory loss or unilateral weakness (7%) and confused speech (6%). Laboratory investigations in delineating diagnosis comprised: imaging studies including head computed tomography (50%), peripheral blood testing (44%), magnetic resonance imaging (6%). 11.5% of the studied patients were admitted to hospital and 24% were followed up in the outpatient clinic.

**Conclusions:** Headache is a common cause of presentation to the Emergency Department of our Hospital. General

Practitioner can easily manage a vast proportion of such cases by applying a set of basic investigations.

825

#### The management of burns at Emergency Room (ER) Of 'Laiko' Hospital. The Role Of General Practitioner (GP).

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**Aim:** The recording and management of burns at ER of 'LAIKO' General Hospital and the role of GP.

**Sample and methods:** We studied all the cases visiting the ER of the Hospital with burns; we classified cases according to the severity and seriousness of the lesions. The burns were classified according to the standard 3-degrees-system (A,B,C). We also studied the physical examination and the therapeutic approaches.

**Results:** A total of 367 burn patients visited the ER of 'LAIKO' hospital during the period 2008-2009. Of them, 56% were males (age 14-77 yrs.) and 44% were females (age 14-79 yrs.). The classification of the burns was: A degree 69%, B degree 25%, and C degree 6%. The 33% were work related incidents, 44% were domestic incidents, 21% were radiation burns, pharmaceuticals etc. 2% of the cases were connected with criminal actions (criminal incidents or attempted suicide). The type of the burns was thermal (94%) or electrical (40%) whereas chemical burns were 2%. The burn surface area in the majority of the cases in the category of minor burns (1-15% of total body surface area burnt) percentage 69%, moderate burns (16-59% of TBSA) 26% while the major burns result in only 5% (60-100% of TBSA). The 85% of the cases were treated at the ER with washes of normal saliva, cleaning of the lesions and topical use of antibiotics. Some 12% of the patients were referred to special burn units, after the reassessment of their airway and the placing of an intravenous catheter. Some 69% of the cases were re-examined after 3 days while 9% required assessment (examination) from a plastic surgeon.

**Conclusion:** Cases who need a special medical care can be managed from the skilled GP who must also have the ability to offer the first aids. This fact that is very essential for the maintenance of vital signs. Many burns can be managed in principle by the ER General Practitioner.

826

#### Differential diagnostic of fainting episodes at emergency room of "Laiko" Hospital

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**Aim:** of this retrospective study is to determine the causes of fainting episodes that they were admitted at ER and their management from general practitioner's (GP) point of view.

**Materials and methods:** Diagnosis and treatment from the

general practitioner's point can only be based in physical examination and medical history of the patient. We examined a total of 545 cases, 243 males (aged 16-89) and 302 females (aged 16-85). In seventeen per cent of them, there was a history of fainting episodes in the past.

**Results:** The recorded in the ER cases during period 2008-2009 were as follows: 1)Common fainting episode 29%, 2)Cardiology 17%, 3)Postural hypotension 16%, 4)Stroke 10% , 5) Epileptic seizures 6% , 6) Other causes 12% and 7)Without an evident diagnosis 10%. The signs and the symptoms the patient could present before passing out are :Pale skin 68%,Weakness 97%,Dizziness 65%, Feeling of decreased hearing 45%, Blurred vision 38%, Nausea 23%, Transpiration 45%, Fast heart rate(tachycardia)or abnormal heart rhythm 21%,Loss of memory(consciousness) during the episode. 11%.Twenty one per cent of them required a short hospital stay for 3 to 6 hours. Seventeen per cent needed hospitalization.

**Conclusions:** The information obtained from the medical history and the clinical examination of the patient contributes essentially to the detection of the causes of fainting episodes. A properly trained GP can diagnose and properly, manage the fainting episodes cases.

828

#### Haemorrhoidopathy as a presenting symptom in the Emergency Department of Laikon University Hospital (Athens)

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**Aim:** The present study examines haemorrhoidopathy as a presenting complaint to the Emergency Department of the 1st Chirurgical Clinic of the Laikon University Hospital.

**Methods:** The study population comprises 6679 patients that presented to Emergency Department of the 1st Chirurgical Clinic of the Laikon University Hospital during 2008. Of them, 5232 visited the Emergency Department and 1447 the Regular Clinic thereof. An already known hemorrhoidopathy was reported in 279 of them. Those patients were divided in 4 categories based on their clinical image, the grade of hemorrhoids, risk factors and the management applied.

**Results:** Ninety one per cent of all subjects complained only of simple bleeding, 5% of severe bleeding together with a local thrombosis and 4% of the cases were involved with thrombosis. In terms of disease severity, 66% of cases were grade 1, 19% were grade 2, 10% were grade 3 and 5% were grade 4. With regards to risk factor profile, 29% of patients had positive family history, 59% were sedentary workers, 61% suffered from chronic constipation, 43% had inappropriate alimentary habits and 22% were manual-workers. In all cases, colonoscopy was instigated and lifestyle changes were advocated; local treatment (comprising an ointment with local anaesthetic) was also prescribed. Some 48% of the cases were followed up by the Outpatient Surgical Clinic. Despite the above measures, 2% of cases eventually had emergency surgery due to thrombosis.

**Results:** Haemorrhoidopathy is potentially managed by a General Practitioner. Whether such a management is safe, remains to be further explored.

## Elderly care II

737

### The effect of functional status on the number and length of hospitalizations of older adults

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**Introduction and aim:** The elderly population is characterized by a high prevalence of functional deterioration, chronic disease and hospitalization. The aim of this study was to evaluate the effect of the functional status and chronic disease on the number and length of hospital stays among community-dwelling adults aged 65 years and above and to evaluate the effect of socio-demographic factors on the number and length of hospitalizations.

**Material and method:** The sample included 93 community-dwelling older adults, 36 males and 57 females, aged 65 years and above, insured by Clalit Health Services. The participants were chosen using a systematic random sampling from computerized databases of outpatient clinics. Motor and cognitive function was assessed by the FIM (Functional Independence Measure) scale (range 18-126); consisting of 13 motor items (range 13-91) and 5 cognitive items (range 5-35). Socio-demographic data were collected by a questionnaire. Data regarding chronic diseases and the number and length of hospitalizations in the previous year were retrieved from computerized databases.

**Results:** Mean age of participants was 81 years (range 65-97). Mean total FIM score was 76.5 (range 35-123), mean motor score 49.0 (range 13-91), and mean cognitive score 27.5 (range 12-35). The mean number of hospitalizations in the previous year was 1.39 (median 1, range 0-6) and the mean length of hospitalizations was 15.2 days (median 5, range 0-116). No statistically significant effect was found of the functional status on the number and length of hospitalizations. The mean number of hospitalizations of those with and without diabetes was 1.70 vs. 1.12, respectively ( $p=0.03$ ). No statistically significant effect was found among the socio-demographic factors tested on the number and length of hospitalizations.

**Conclusion:** Contrary to what was expected, we did not observe an increase in the number of hospitalizations and length of hospital stays among those with poorer functional status. Community health services for the frail elderly, including home visits of physicians and other health professionals, may have prevented hospitalization in this population.

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### Early recognition of dementia in general practice – problem of communication skills?

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**Background and aim:** Dementia is slowly progressive brain dysfunction with cognitive and behaviour disorders, lost of

memory and judgement. About 5 % of people above age of 65 suffer from dementia and the number of patients increases with advancing age. Early recognition and its treatment can slow down the illness and make better quality of life for the whole family. In general practice we meet the patients with cognitive disorder probably every day. In spite of frequency of disorder in society the early recognition is missed also due to irrecognizable appearance of the illness in its mild stage. It is important that professionals of first contact have a knowledge about the personal, social and behavioural changes of the patients in early stage of disease so they can detect some changes in behaviour of older people through the process of care which might be the initial signs of dementia. A systematic approach to further steps of care should be discussed in the team when the light "might be dementia" flashes across someone's mind. The aim of contribution is to enhance the awareness of professionals to communication with older people.

**Methods:** Through the demonstration of few different conversations from every day practice will be highlighted the particularities of those patients and their behaviour in such situations, which could be easily overlooked and unrecognized by the staff. Consultation cases: 1. Usual visit of the patient in the practice (Dr-Pt conversation) 2. Dealing with drugs (Dr-Caregiver conversation) 3. After being lost through the night (Dr-Pt-Relatives conversation) 4. Depression vs. mild dementia (Dr-Pt conversation)

**Conclusions:** Knowing the specialities of communication with older people in general practice could bring us the first thought on dementia which is usually the first step in early detection and successful long term care of those who suffer from dementia.

841

#### The ageing face of primary health care.

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**Aims:** The rapid ageing of the modern day population creates big challenges to the provision of primary health care and social services. As the number of elderly people continues to grow demands on such services may well intensify. Since the elderly prefer to live in their own homes, communities and familiar environments, the proximity, accessibility, cost effectiveness and user-friendliness of community-based primary health care services are therefore of vital significance to the health and well-being of both the elderly and their families. However, very often community-based primary health care services are fragmented and not enough sensitive to the needs of elderly people. They often have inadequate resources and there is not enough emphasis on health promotion, prevention, systematic screening and referrals - all of which are essential for maintaining the health of ageing populations.

**Methodology:** The paper is based on a questionnaire about training in Geriatrics which was elaborated by some Portuguese GPs/family doctors.

**Results:** Most of GPs/family doctors did not have any training in Geriatrics.

**Conclusion:** It is indispensable to prepare and train family doctors/GPs to deal better with the elderly and their necessities and promote the responsiveness of community-based primary health care to the needs of the population in particular to the growing numbers of the elderly. The

organization and delivery of community-based primary health care services depend on national health care systems and their individual settings. However, it is still not a widespread practice to train GPs/family doctors in core competences of elder care as well as age, gender and culturally sensitive practices, which address knowledge, attitude and skills. Only this way we can make it easier for the elderly to live this stage of their lives as well and long as possible and prepare young practitioners to deal effectively with all problems of the elderly.

938

#### Elderly patients with cognitive impairment in daily GP practice

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**Introduction:** Up to 75% of elderly patients observe problems with cognitive function and decline in comparison with their cognitive capabilities during youth. We do not pay enough attention to this problem in GP practice and even if we suspect it, usually patient is being directed to neurologist for the complete work-up. Aim: Evaluate the possibility to detect persons with cognitive decline already in GP practice.

**Methods:** This cross-sectional study has been performed between July 1st and September 30th 2010. in three different GP practices in Zagreb region. During this period the total of 112 people older than 65 years (71 women and 41 men) came to physician for consultation. Total population in those three practices is 5400 patients and 1285 patients over 65. Patients with already diagnosed dementia, psychosis and depression during the last six months and those with impaired hearing and vision were excluded. None of persons involved in this study cited the problem with cognition as the reason for visiting the physician. GP in charge for the practice completed the regular visit and immediately after that tested all the involved patients with Mini Mental State Exam (MMSE) as a golden standard for the evaluation of cognitive functioning.

**Results:** 41 out of 112 patients scored on MMSE worse than expected based on the age and education (21 women and 20 men). Consequently, they can be diagnosed as cognitively impaired. 6 patients out of those scored below 19 out 30 max points and could be diagnosed as seriously impaired and further work-up should be undertaken for evaluation of dementia.

**Conclusion:** Over one third of patients older than 65 in this selected sample of patients in GP practices were diagnosed as cognitively declined. It is possible to recognize patients with different levels of cognitive impairment already in GP practice with MMSE - short test for evaluation of cognitive functioning. It is important to pay attention to cognitive functions among elderly since they do not report it even when problem is present and perhaps even very serious.

731

#### Profile of patient admitted to a geriatric residence (GR) treated with oral anticoagulation treatment (OAT)



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**Aims:** There are an increasing number of institutionalized patients who meet criterion for OAT, mainly due to the high prevalence of atrial fibrillation (AF) within this population. The aim is to describe the patient profile in GR with OAT.

**Material and methods:** Descriptive cross-sectional study for a year, patients in GR, who are medically monitored and INR controlled by primary health care. Data analysis using SPSS.

**Results:** 27 patients with a mean age of 84 (SD 5'13) were analyzed: 29'6% was men and 70'4% women. From their medical history it was highlighted that 7.4% were smokers, 92'6% hypertensive, 40'7% dyslipidemic and 29'6% diabetic. The main indication to start the OAT was the AF (70'4%) followed by deep vein thrombosis or pulmonary embolism 14'8%. The INR range of 2-3 was established in 96'3%. The oral anticoagulant used was acenocumarol (100% cases). The majority of patients met criterion for polypharmacy (92'6%). 87.6% of INR measurements were within the range of 0.5 units above and below the desired INR. The mean number of complication during the study period was 0'03 (SD 0'19). 5 patients discontinued treatment due to: change of address (2), death (2), switched to anti-platelet therapy (ASA 300). No case showed treatment-related death.

**Conclusions:** The profile of the patient admitted in GR who follows an OAT has an average age of 84, is a woman in 70'4% of cases and presents a record of hypertension, hyperlipidemia, diabetes, and polypharmacy. The main indication for OAT is the AF, establishing a range of INR between 2 and 3. The drug most commonly used is the acenocumarol of 4 mg. Most INR controls are within the range, which demonstrates good control without any appearance of such complications.

## Education in FM/GP IV

374

**Enhancing the art and craft of basic education in family medicine through patient and public engagement: a multilevel action research project to enhance users participation in a medical school curriculum**

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**Aims:** Family medicine has a vital role in basic medical education providing a locus for learning both the art and craft of clinical practice. Public and Patient Involvement (PPI) in the design and evaluation of community services is well established - where the voice of the user endorses and shapes provision. PPI in undergraduate education is gradually gaining currency internationally and the UK GMC Standards, Tomorrow's Doctors, include the involvement of patients in teaching, assessment, quality, curriculum design and governance. This action research project, Public Engagement in the Education of Tomorrow's Doctors, aimed to involve users and students actively in establishing mechanisms for a coherent and sustainable approach to

public engagement in the medical programme. A particular focus was involvement of users from mainstream GP teaching practices and community services for hard-to-reach groups. The main project outcome was to produce practical proposals for ongoing PPI in the programme.

**Methods:** A series of interviews and focus groups involving users, PPI organizers, representatives from patient groups, students and faculty and an email survey of student representatives.

**Results:** With regard to public involvement in GP-based education we identified overlapping sets of advantages (chiefly endorsement of students placements, better safety and communication) and barriers (selecting and briefing, complexity of the programme, tokenism, and reaching the marginalized). We describe a range of ways to overcome these of which an inclusive organizational culture is key.

**Discussion:** Through the relationships established and data it has been possible to generate a set of recommendations for the further implementation of the project and focus discussions with PPI groups in community setting as well as make proposal for the new curriculum.

377

**What drugs do medical students choose to learn about in family medicine?**

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**Background:** The initial stimulus for the research was marking student assignments. It was unclear what the influences to their choice of medications were, or how appropriate they were.

**Methodology:** The assignments were used for quantitative data collection of all the generic drugs chosen, and by how many students. A comparison was made between successive cohorts in the second year, in 2009 and 2010 as well as between second and fourth medical students. The data was adjusted for different numbers of drug choices as well as the number of students in each cohort. Excel was used for charting and statistical analysis.

**Results:** 300 assignments were analyzed which included 1688 drug choices. The first cohort of second year students chose a total of 78 different individual drugs. This increased to 102 drugs for senior students and 109 drugs by the second year's students in the following year. Commonly prescribed drugs dominated their choices with cardiovascular drugs particularly statins at the top, and amoxicillin topped the antibiotics. These correlate with prescribers known habits. Gastro-intestinal, respiratory and psychiatric drugs were less well represented in student choices

**Discussion:** Pharmacotherapy teaching has increasingly recognized the need for emphasis on developing the skills to treat patients. Part of this includes the student selection of standard treatments of first choice, using representative drugs from a class of drug eg ACE inhibitors. The teaching of pharmacology integrated with clinical teaching assists this. It is known that Medical students prescribing choices are influenced by what their placement clinicians prescribe. Therapeutic choices made from these learning experiences should reinforce and embed evidence based use of medicines to guide their future behaviour in rational prescribing. It is important to understand what therapeutics students are learning in order to make changes to compensate for any deficiencies.

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### A core-training program for certified GPs with special interest in the elderly.

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**Aims:** In order to address the needs of an aging society, general practice has to change and reorganize: from reactive to proactive care and from working solo to teamwork. Selected general practitioners in the Netherlands follow a two-year core-training program and become a registered GP with expertise in geriatrics. Our objective is to enhance the quality of the provided care for the elderly and to prevent institutionalization of the elderly by offering proactive collaborative care.

**Material and methods:** This training program is build in collaboration with the Dutch College of General Practitioners (NHG), which also participates in core-training programs on diabetes, asthma/COPD, vascular disease and others. It started in 2007. GPs from all over the Netherlands come to Leiden to learn about many aspects of health care for the elderly. They obtain skills and knowledge of geriatrics, learn how to adapt their own practice organization and get insight into how to build up a local cooperative geriatric network. They also learn how to involve their regional colleagues in general practice to provide proactive collaborative care, by learning how to teach and perform local and regional projects on improvement of geriatric care.

**Results:** Up to now the training program is successful. 46 GPs have graduated so far. They have all improved their skills and knowledge, and have performed local projects, e.g. on prevention of falls, prevention of errors in medication and polypharmacy, dementia care, the organization of care in homes for the elderly and many other subjects. We founded a national advisory group of GPs with expertise in geriatrics: Laego. In this network the graduated GPs keep contact, inform each other about regional and national developments, and share their knowledge and products.

**Conclusions:** In our training program, GPs learn to adapt their practices towards the needs of an aging society and learn to stimulate colleagues to do the same.

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### Motivation and job satisfaction in General Practice – results of the Vasco da Gama (VdGM) survey among Trainees and Newly-Qualified-GPs in seven European countries

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**Aims:** Across Europe, recruitment for general (family) practice is a major concern. Since European borders are more open than ever, training schemes and job satisfaction within Europe are an issue in recruitment and retention. Moreover, there is substantial variation regarding the organisation and content of vocational training and health

care systems. The aims of this study are to identify motivational aspects on career choice and to explore current job-satisfaction of trainees and newly-qualified-GPs (NQGP) (groups) across Europe.

**Material and methods:** VdGM Education and Training theme group surveyed General Practice trainees and NQGP in Czech Republic, Denmark, Germany, Italy, Norway, Portugal and the United Kingdom during 2009. Where the targeted population was defined and accessible (e.g. in the UK), representative sampling was applied, however in most countries, convenience sampling was used. Descriptive analyses across countries accounting for gender and group relation are currently underway.

**Results:** From the participants, 2533 were trainees and 1189 were NQGP. Participants were on average 33 years old (63% female). In the overall analysis, the most important motivational aspects for career choice were "compatibility with family life" (60%), "challenging medically broad discipline" (59%) and "individual approach to patients" (40%). In general, participants were satisfied with "daily time spent on work and training" (84%) as well as "with time left for private life" (71%). Preliminary results indicate substantial variations between countries regarding payment and workload, with correlations in between workload, payment and job satisfaction.

**Conclusions:** Apart from a possible (positive) response bias, this analysis gives insights in what the next generation of young future GPs might prioritise in career choice. At the time of the conference, more in depth-analyses regarding the differences in gender, countries and group relation may inform the discussion around successful specific national recruitment strategies and determinants of job satisfaction.

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### The Dutch college and it's patient website: beneficial for patients and GPs

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**Aim:** In the Netherlands over 50% of patients with new complaints search the internet before consulting their GP. Many patients also search the internet for additional information after visiting the GP. The previous website of the College contained over 300 patient leaflets and information letters. This information was difficult to find for patients, as the website was designed for GPs. Nonetheless, the information was accessed more than 100,000 times per month. The plan was to build an independent patient website for: -patients searching for health information and self-care, prior to consulting their GP; -patients visiting the practice; information on diagnosis and treatment options can be printed and given during consultation; - patients searching for diseases, treatments and decision aids, after consulting their GP. The main goal is to increase the possibilities to inform the patient, to improve health literacy and to make patients more aware of their own choices (empowerment in self-care and treatment options), with the intention to provide a better alternative for other (commercial) websites. In the Netherlands, there is no general health information website that meets our criteria. Design and methods We used all existing written information and reduced and simplified it to logical elements of information. The information was rewritten to make it more suitable for internet. We invested in a database and a user-friendly search engine for the new website. Our intention was to tailor the information to different levels. The (basic)

information should be easy to read and to comprehend for over 80% of the population. All information is based on and consistent with the evidence based guidelines developed by the Dutch College of GPs.

**Results:** In this presentation we will show the preliminary results of the patient website as designed. Also, we will present some reactions from GPs and patients.

**Conclusions:** A patient website can empower patients, before and after consulting their GP. This benefits the daily work of GPs as patients are better informed and are provided with more possibilities for self-care.

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#### Medical students organizing a family medicine congress: brief report and insights

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**Aims:** Medical students often participate in clinical discussions and many practical activities. There are the so-called academic congresses in Brazil, which are held by medical students and also, meant specifically to involve other medical students. We aimed to evaluate the experience of medical students on the process of developing and managing an academic congress on family medicine, specifically the 14th SOBRAMFA (Brazilian Society of Family Medicine) Congress, held in 2010.

**Methods:** A post-congress meeting was held, which included all the students that helped into organizing the congress and SOBRAMFA professors. One of the professors worked as a passive observer that did not participate into the discussions, and wrote down the topics discussed, including positive and negative aspects and also quotes that summarized participants opinion. The observers notes were them pooled and analyzed in a qualitative way, and the quotes were matched to specific topics of discussion and synthesized.

**Results:** Many positive and negative aspects were discussed, and students opinions

**Conclusion:** Working as part of the staff of a medical congress provides students an unique experience to develop communication skills and also an insight on the difficulties of holding such an event. Thus, it provides a valuable experience on the complex process of medical teaching.

Sunday, September 11<sup>th</sup> 8.30-10.00

#### Mental health II

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#### Psychlops in polish primary care: how do clients conceptualise their most troubling problems on this patient-generated scale?

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**Introduction and aims:** The PSYCHLOPS scale was utilised in Polish primary care before, during and after therapy in the context of a brief CBT-based intervention for patients with mild to moderate mental health problems. PSYCHLOPS invites clients to write down in one sentence the problem that troubles them most, along with its consequences. The aim of the study was to explore how Polish patients conceptualize their problems and their consequences with the aid of PSYCHLOPS.

**Material and methods:** PSYCHLOPS responses of 244 patients recruited by 35 GPs in the Torun region were blind translated into English and independently analyzed by two researchers, using thematic analysis.

**Results:** Coding consensus was substantial (average kappa 0.77). Seven thematic categories were created to encapsulate participants' problems and their consequences: somatic, state of mind, self-evaluation, competence/performance, interpersonal internal, interpersonal external and external circumstances. The majority (72.4%) of initial complaints were coded as somatic. However, of those 'somatic' patients subsequently declaring a new problem during therapy, a substantial minority (34%) revealed an interpersonal problem not previously mentioned.

**Conclusions:** Despite the brevity of clients' responses, PSYCHLOPS allows an insight into patients' most troubling problems and their consequences and sets a focus for therapy from the outset for both the clinician and client. Further work is needed to explore the relationship between changes in PSYCHLOPS reported problems and the process of talking therapy itself, especially the degree to which therapy might expose the emotional issues beneath the surface of somatic symptoms.

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#### Measuring psychological change during brief CBT in primary care: the validation of a new 'during-therapy' version of PSYCHLOPS ('Psychological Outcome Profiles')

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**Aims:** Although outcome measures are commonly used in primary care mental health, none are patient-generated, allowing patients to describe and score their own problems.

We have devised and validated a patient generated measure, PSYCHLOPS ('Psychological Outcome Profiles'), which is administered before and after talking therapy. Change scores can only be calculated for patients completing therapy but a large proportion of patients fail to complete. To overcome this limitation, we have designed a 'during-therapy' version of PSYCHLOPS. Our aim therefore was to validate PSYCHLOPS as a measure of change during and after therapy.

**Methods:** Patients were recruited from primary care in Poland where brief CBT is routinely offered by GPs trained in this technique. Responses to PSYCHLOPS pre-, during- and post-therapy were compared using Effect Sizes.

**Results:** Pre-, during- and post-therapy questionnaires were completed by 238, 194 (82%) and 135 (57%) patients respectively. Effect size of change pre- to post-therapy: 3.06; of pre- to during-therapy: 3.11. Replacing missing values using multiple imputation produced a similar value of 3.19; using 'last value carried forward' the effect size was significantly lower at 2.26 ( $p < 0.01$ ). Although the majority of patients reported new problems arising during therapy, ( $n = 100$ ; 74.1%), their mean change scores were similar to those not reporting new problems: 9.62 vs 8.69;  $t = -1.09$ ,  $P = 0.23$ .

**Conclusion:** Use of a during-therapy measure reduced data attrition, enabling change scores to be calculated for 82% of patients. Missing data still produce difficulties in interpreting overall effect sizes for change. The appearance of new problems during therapy did not hamper overall reported recovery.

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#### A proof of usage of a strengths and difficulties questionnaire within systematic evaluation of family medicine in a community sample (elementary school)

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**Aims:** To screen for psychological difficulties using of SDQ in a community sample (school) being aware for level and possible links of these items in overall health; and to see readiness of children's at school to accept one psychological measurement within systematic medical evaluation.

**Material and methods:** We used self-report SDQ questionnaire. All pupils in Prizren region of 5th-9th grade fill the SDQ during systematic visit of medical teams in their schools. All data has been analyzed by SPSS 17.0.

**Results:** All pupils present at school filled out SDQ ( $n=5944$ ). About 24,2 % did this wrong, and we find statistically significant difference based on grades (more 5th grades), residence (more rural) and success (more with low grades). Problems levels are 8,3 % (emotional), 7,8% (conduct), 2,3% (hyperactivity), 6,3 % (peers), 2,3 % (prosocial), 6,2 % (total). Pupils at 5th grades had statistically significant difference with high scores at emotionality, conduct, hyperactivity and prosocial behaviours; Females: emotionality, hyperactivity, total score and prosocial behaviours; Rural pupils: emotionality, conduct, peers problems, prosocial behaviours and total score. With Kruskal Wallis Test we found statistically significant difference between success and scores at all scales (low grades with high scores). With multivariate analysis, gender and residency showed statistically significant difference for hyperactivity, peers problems and prosocial behaviours.

**Conclusions:** Using of psychological screenings within

systematic evaluations of family medicine is tolerable, useful and easy way to get information about presence of these difficulties. It can be helpful for tailoring of comprehensive approaches with other parties interested to address preventive programs for children in community.

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#### Waist measures and metabolic indices in psychotic patient using antipsychotic drugs

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**Aim:** The aim of this study is to investigate metabolic indices associated with use of the antipsychotics and C-Reactive Protein (CRP) levels in patients diagnosed psychotic disorder.

**Material and method:** In this cross sectional case control study, healthy age and gender matched individuals ( $n=50$ ) have been enrolled as control group and their obtained data were compared to patients with schizophrenia or other psychotic disorders, composed of twenty five males and twenty five females whose ages ranged between 26 and 54. Datas are tabulated by SPSS 15.0 software program.

**Results:** Fasting glucose, triglycerides, prolactine and CRP levels of patient group were found to be statistically higher than the control group ( $p < 0.001$ ). No significant difference was obtained according to the Body Mass Index (BMI). According to the waist measures; the measures of patients were statistically significantly higher than the measures of control group ( $p < 0.05$ ). After patients have been classified to two groups according to the type of the antipsychotic drug they have used, it has been documented that HDL level was statistically lower ( $p < 0.05$ ). On the other hand, fasting glucose levels of the group treated with typical antipsychotics statistically were not different than the control group.

**Conclusions:** It has been documented that CRP could be a marker of cardiovascular diseases which may occur in the future. The results of this study generally indicate that psychotic disorder patients treated with antipsychotics have risk of tendency to diabetes mellitus and cardiovascular diseases because of increasing fasting glucose, triglycerides, CRP levels and decreasing HDL level. Therefore, patients who have chronic psychiatric diseases must be evaluated with multidisciplinary approaches and the risk should be considered in patients while selecting drug and determining the life quality.

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#### Does uncertainty exist in depression diagnosis among general practitioners?

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**Aims:** The role of general practice in the management of depression is much debated, with a focus on "problem of"

under or over-diagnosis and under or over-treatment. Scarce attention is given however to document and explore the level of uncertainty of the General Practitioner (GP) in formulating a diagnosis and a management plan. This study aims to assess this issue in a sample of 309 Italian GPs.

**Material and methods:** Multicenter observational prospective, outcome oriented, study on patients (aged 18-65) who present to their GPs with psychological and/or somatic complaints already diagnosed as depression or possible related to a depressive syndrome.

**Results:** Out of 2413 patients included in the overall cohort study, 777 (32.2%) were new cases, for whom a diagnostic decision had to be made. A clear-cut diagnosis was formulated for 321 (41.3%) pts, a probable judgment for 388 (49.9%) pts while for only a small minority (68 pts, 8.8%, distributed across 52/309 GPs) the diagnostic process was qualified as uncertain, despite the fact that 73.5% of them were positive for  $\geq 5$  symptoms. The general need for a more in depth investigation was expressed for 43/68 pts, in particular to clarify the depression, 37/68pts were examined also with the psychometric scale and 38/68 were sent to a psychiatrist. Despite the uncertainty, approximately 1 out of 4 patients was assigned to a pharmacological and one half to a non-pharmacological treatment.

**Conclusions:** A declared uncertainty in formulating a diagnosis is a rather infrequent event in a spectrum of GPs who adopt a simple structured scheme to examine new patients. The variety of strategies adopted to manage this minority appears an appropriate most likely personalized answer to take care of a difficult clinical condition.

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#### Healthcare limitations and Alzheimer's diagnostic challenges in Romania

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**Background:** Based on an estimated increase of the overall number of people diagnosed with Alzheimer Disease (AD) from 35mn to 116mn within the next 30 years, it becomes obvious that improving early detection of AD should become a priority. We tried to identify the main limitations of making an early AD diagnostic.

**Method:** We performed a literature analysis based on Romanian medical publications, correlated with worldwide reported results.

**Results:** Healthcare system limitations to general practitioners (GPs) may further impede access to specialized care for initial stages of AD and various forms of mild cognitive impairment (MCI). In Romania, for instance, the social health insurance system does not cover brain imaging studies recommended by GPs. The market value for CT and MRI brain scans as well as AD medication costs are prohibitive, especially for patients from disadvantaged (mainly rural) regions in accessing this medication, since the counter value of medication reaches about half of the average old-age pension.

**Conclusions:** Given the reluctance of decision makers in quick-solving these aspects and the scarcity of time and financial resources, Romanian GPs can at best just screen for possible cognitive impairment, in an attempt to refer patients to in-hospital settings specialized in diagnostic workup and treatment as early as possible. Such practices are, however, more costly system-wide and can only

aggravate the ongoing financial crisis of the Romanian healthcare system.

#### Health promotion and disease prevention VI

839

##### Vaccination against influenza in patients' GP in Poland.

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**Introduction:** In Poland in the autumn-winter season, the National Institute of Hygiene gives rapory of influenza every week. Only between 23 and 31 January 2011 - 69,512 people had suffered from flu, from 1 to 7 February 69,839 people fell ill, and from 8 to 15 February 67,827 people fell ill. These figures show only these people who have reported on the visit to the doctor. Vaccination against influenza is widely recommended in the media, the press, in medical centers every year. Many institutions (eg banks, supermarkets) have introduced free vaccinations for their employees. People over 65 years of age are vaccinated for free at many cities in Poland. Although it is still too many Poles do not want to be vaccinated against influenza.

**Aim:** What factors are there that Poles do not want to vaccinate against the flu?

**Material and method:** In the period from June to August 2011 survey will be conducted among outpatient clinics. The questionnaire consists of two parts. The first part of the questionnaire is addressed to the patients who had or had not vaccinated against influenza in the season 2010/2011. The second part is to promote influenza vaccination among these patients.

**Results:** We expect that research will show what kind barriers are that so many patients avoid influenza vaccination. What can a GP do to encourage vaccination?

**Conclusions:** We hope that this study will contribute to greater promotion of vaccination against influenza and thus to fewer cases of our patients in the next season's autumn-winter 2011/2012.

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##### Patients' attitudes towards influenza vaccination - a year after swine flu pandemic.

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**Aim(s) and background:** Influenza is a highly infectious disease, potentially leading to severe complications and death. Vaccination is safe and effective way of prevention and all persons from high risk groups should be vaccinated annually. However, influenza vaccination rate is very low in Poland and declined by 20% in the season 2010/2011 in comparison to the previous year. The aim of the study was to identify main constraints and barriers in taking the vaccine

from patients perspective.

**Material and method:** Self administered anonymous questionnaire based on Health Belief Model. Patients attending family doctors in four practices in Krakow were examined.

**Results:** Overall 400 patients were examined. Preliminary results show that most patients agree with the opinion that influenza is a dangerous infection. Main concerns related to the vaccination is disbelief in the effectiveness of the vaccine and fear of possible side effects.

**Conclusions:** In order to increase vaccination rate family doctors should emphasize complications of influenza and discuss potential benefits from its prevention. Vaccine's safety should be outlined and mechanism of flu like symptoms should also be explained.

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#### Reasons and views for not attending breast and cervical cancer screening: a qualitative study in rural Greece

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**Aims:** Effective screening programs need to be tailored to the needs of the community. Low uptake of preventive services is known to be connected with personal views and attitudes and service quality and availability. The aim of the study was to identify reasons that prohibit women from attending screening procedures.

**Material and methods:** The study is part of a cross-sectional one conducted in a rural community of 3000 inhabitants in Northern Greece. 163 women, aged 20-69, took part in the study. Exclusion criteria were medical history of breast or cervical cancer, mastectomy, hysterectomy, and present breast or cervical cancer. Women were invited to participate by phone call from June to December 2008. After informed consent was obtained, a semi-structured interview was conducted, investigating the reasons of non-attendance to breast and cervical cancer screening programs. Study participants were asked the same questions, answers were transcribed and the data were analyzed by thematic content analysis.

**Results:** Women acknowledged personal reasons for not attending both breast and cervical cancer screening (low prioritization, lack of motivation and time, fear of cancer). Reasons related with health services were lack of health promotion advice, poor accessibility and low quality, impersonal attitude of health professionals. The withdrawal of a local charity screening program was also identified as an obstacle.

**Conclusions:** Women tend to blame themselves for not attending preventive programs but are well aware of the lack of organized and accessible services. They need more information, advice and motivation from health professionals that work in the community and have a strong commitment.

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#### Factors associated with attendance of breast and cervical cancer screening in a rural general practice in Greece.

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**Aims:** The aim of the study was to investigate the factors associated with demographic conditions, availability and accessibility of services that make women attend breast and cervical cancer screening programs regularly.

**Material and method:** This study is cross-sectional, conducted among 962 women, 20-69 years old living in a rural community in Northern Greece. The study sample was 163 females, stratified by age. Exclusion criteria were medical history of breast or cervical cancer, mastectomy, hysterectomy, and present breast or cervical cancer. Data were collected during a structured interview, from June to December 2008, using a questionnaire investigating demographic and socioeconomic status, medical history and data on previous screening attendance. All variables were described by their means and standard deviations. Categorical variables were analyzed by Pearson's chi square. Multiple logistic regressions was performed to investigate factors associated to screening attendance.

**Results:** Regular breast screening attendance was very low in ages 40-49 (28.9%) and higher in ages 50-69 (49.1%). Regular Pap smear tests had 65.1% of the women of all ages. In the Logistic regression model, the only factor associated with breast screening attendance was a Pap test the previous three years (OR=24.64, 95% CI 2.93-207.28). Cervical screening attendance was positively associated with age (OR=1.13, 95% CI 1.05-1.22), marriage (OR=4.16, 95% CI 1.34-12.96), previous advice on screening (OR=7.38, 95% CI 1.64-33.22) and a mammography in the previous two years (OR=5.19, 95% CI 1.19-22.58).

**Conclusions:** Cervical and breast cancer screening were associated to each other. Higher cervical screening participation is associated with married, well informed women, and improves with age, a finding not constant with the literature. Uptake of both preventive services is low but combined implementation of breast and cervical cancer screening can improve attendance.

907

#### Preventing disease through opportunistic, Rapid EngagEMent by Primary Care Teams using Behaviour Change Counselling (PRE-EMPT): Practice-Based Cluster Randomised Efficacy Trial.

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**Background:** Smoking, excessive drinking, lack of exercise and an unhealthy diet are key factors contributing to premature morbidity and mortality in the developed world. We developed a training intervention for GPs and nurses, which aimed to promote routine use of Behaviour Change Counselling (based on Motivational Interviewing) during consultations for these four behaviours. The training intervention is a 'blended' learning programme using a practice-based seminar, online self-directed learning, and reflecting on video and simulated consultations.

**Aims:** To evaluate the effect of this training on the proportion of patients showing self-reported change in one or more risk behaviour at 3 months.

**Methods:** A cluster randomized trial incorporating a cost effectiveness component. Twenty nine practices were recruited and randomized (two dropped out before recruitment began). One GP and one nurse in each of the 13 intervention practices received the training; all practices recruited patients. We consented 2128 patients. The primary outcome was the proportion of patients making changes in one or more risk behaviour at three months. Secondary outcomes included: patient satisfaction, enablement and intention to change immediately post-consultation; the four risk behaviours reassessed at twelve months by self-report; various physiological measures at twelve months, and resource cost-effectiveness analysis measured at 12 months. Results were compared for patients from intervention practices against control.

**Results:** This study integrated an existing intervention method with an innovative training model to enable routine use of BCC, providing new tools to encourage and support people to make healthier choices. The main results will be available in time for the conference.

934

#### Alcohol related problems in Primary Health Care: How to translate into practice.

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**Introduction:** Alcohol related problems are often under diagnosed in PHC settings, and risky drinking is usually forgotten. General Practitioners (GPs)/Family physicians / tend to concentrate on the most severe and visible alcohol related problems, but most of the patients who are hazardous and harmful drinkers should also be considered. Based on this assumption, this workshop presents alcohol problems as a continuum ranging from hazardous drinking to severe dependence. Even though alcohol dependence is also addressed, this workshop gives priority to the identification and brief intervention techniques that have proven cost-effective in PHC settings. The European PHEPA Project (Primary health care European Project on alcohol) and now the ODHIN Project (Optimizing Delivery of Health Care Interventions) prepared materials and tools facilitating the integration of health promotion interventions for hazardous and harmful alcohol consumption into primary health care professional's daily clinical work.

**Objectives:** The Objectives and Aims of the Workshop is to define the main goals to be reached during the detection and brief intervention of alcohol consumption in PHC settings and prepare the health professional to develop knowledge and skills related to alcohol intervention and the materials to be used.

**Material and methodology:** Some Work documents and overheads will be useful for the dissemination and practice Roll playing will allow practicing specific clinical situations with specific outcomes and referral criteria. At the end of the workshop a consensus should be reached on the following issues: Level of implementation of EIBI techniques that can

be adopted in the PHC Centre, Referral criteria, including clear guidelines on when, how and to whom to refer difficult patients, Level of training and support needed to continue EIBI activities, Detailed agreement on which patients should receive shared care treatment and how to coordinate it.

874

#### Modifiable risk factors in conversion of Mild Cognitive Impairment to Alzheimer disease

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**Background and aims:** The 4 'Hyper-s' (i.e., Hypertension, hyperglycemia, hyperlipemia and hyperhomocysteinemia) represent the main risk factors implicated in the conversion of mild cognitive impairment (MCI) to Alzheimer's disease (AD). Part of 'Development of Screening guidelines and Clinical Criteria for Predementia Alzheimer's Disease (DESCRIPA)', our study assessed risk factors and comorbidities in MCI patients and if it is possible to modify, as part of primary care intervention, their involvement in MCI-to-AD conversion.

**Methods:** 60 subjects with MCI (75% aged 60-75 years, 77% women, 37% university graduates, 90% from urban area) were included (based on internationally recognized diagnostic criteria) and followed-up. Data collection was performed at baseline, as well as yearly during the 3 years of follow-up.

**Results:** A 23.3% MCI-to-AD conversion rate was noted after the first year of follow-up. In the next two years, another 6.6% patients developed AD. The vascular factors hypertension and dyslipidemia exhibit a shape similar to the documented in AD patients. Diabetes type II, senile osteoporosis, transient attack, hypothyroidism and carotid stenosis were the most comorbidities in our study.

**Conclusion:** Vascular risk factors (hypertension, angor pectoris and dyslipidemia, transient ischemic attack and carotid artery stenosis) were the most prevalent comorbidities in MCI patients, followed by diabetes type II, senile osteoporosis and hypothyroidism. Depression remains a challenge especially in women, as an independent risk factor. The primary prevention for hypertension, diabetes and hyperlipemia is manageable in the near future and can reduce the MCI-to-AD conversion rate.

#### Diabetes mellitus II

601

#### The team approach to the art of chronic disease management: the patient as team member in treating diabetic hypertension

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**Aims:** Hypertension in diabetes is common and results in significant morbidity and mortality. Intervention can make a significant difference: even modest improvements in blood pressure control results in significantly lower morbidity and mortality. A team of physicians, advanced nurse practitioners,

nurses, clinical assistants, and patients focused on improving blood pressure control as evidenced by publicly reported benchmarks and improved clinical outcomes.

**Materials and methods:** A large multi-site group practice developed an innovative pilot project for a model of care using team-based protocols guided by best practice data, patient self-management, and process improvement. The team developed standardized treatment tools including a standardized blood pressure measurement and treatment protocols that promoted teamwork and patient self-management strategies. Pre- and post surveys of patients and providers were performed.

**Results:** Team compliance improved over the six month course of the pilot, reaching 89 percent. Overall outcomes improved, with all providers reporting the process improved patient care. Project deliverables were met at three of the four sites for blood pressure control and at the fourth site a review of patient data indicated an improvement from baseline to pilot. Physician variability in complying with treatment protocols was decreased, with a movement of all physicians to accepted guidelines. Transparency of clinical outcomes with patients was an effective tool for promoting accountability.

**Conclusions:** The team concept is successful in treating patients with diabetic hypertension. Elements in the care process that had the greatest impact in improving care were: patient engagement in care, the team approach, continuity of care, ability for nurses to implement medication changes, process efficiency and effectiveness, and data availability over time.

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#### Nutritional counseling for diabetic patients. Individual versus group counseling. Gender differences

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**Background and aim:** Nutritional counseling is an important part of diabetes care. In recent structure of the Hungarian health care system it is available only on the secondary (specialist) and never on the primary care (PC) level. Health Insurance Fund does not cover PC consultations. Authors aimed to implement nutritional counseling in PC setting and evaluate experiences.

**Materials and methods:** For 67 of 108 diagnosed diabetic patients of the practice a free of charge educational service was offered. The 47 patients who accepted the invitation were educated in consecutive group sessions. Only 24 of them were ready to take part on three other individual consultations. Fasting blood glucose and glycosylated hemoglobin were measured before and after the sessions and 1 year later. Comparison was made between genders (31 men, 16 women) and patients who took part on the grouped and individually organized form of counseling.

**Results:** Consultation was preferred better by patients with higher educational level and shorter duration of diabetes. All glycaemic parameters improved after counseling in all groups but this was significant only by men and by the grouped form of consultation. After one year a further improvement was registered by women and by patients of the individual counseled group. Data of men and grouped consulted patients increased again, reaching almost the level before consultations. Educational level and compliance of patients had a strong impact on the clinical and laboratory outcome.

**Conclusion:** Nutritional counseling in primary care offers more conform and help for diabetic patients but requires changes in insurance regulation, and resources. Funding: self financed

738

#### Patterns of diabetes related primary care utilization and predicting factors

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**Aim and background:** Disease management programs aim to improve the coordination and quality of care and to reduce healthcare costs for chronic diseases like diabetes. In the Netherlands, groups of GPs negotiate a lump sum with health insurers for each diabetes patient to provide diabetes related care. Some diabetes patient, however, need more care than others. The aim of this study is to identify patterns of diabetes related primary healthcare utilization, determine which patient and disease characteristics determine the 'membership' of each pattern, and how these patterns relate to total primary healthcare utilization.

**Material and method:** Data were derived from electronic medical records of practices that participated in the Netherlands Information Network of General Practice in 2008. Data of 6721 type II diabetes patients were included. To analyze the different patterns, Latent Class Analyses were performed to identify distinct classes of patients with specific combinations of diabetes related primary healthcare utilization. Multilevel multinomial logistic analyses were used to investigate which patient and disease characteristics determine the 'membership' of each pattern of healthcare.

**Results:** Preliminary results show four patterns of diabetes related primary healthcare utilization: a 'low utilization'-pattern, 'primary care nurse treatment with high number telephone consultation'-pattern, a '-home visits'-pattern and a 'primary care nurse treatment'-pattern. Multinomial logistic regression analyses with the 'low utilization' pattern as reference show that especially the main medication form, existence of cardiovascular disease, age and gender predicted the 'membership' of the patterns.

**Conclusion:** Four distinct patterns could be distinguished. Main medication form, existence of cardiovascular disease, age and gender predicted the 'membership' of the patterns. These characteristic could be used to differentiate between diabetes patients and the height of the lump sum.

778

#### Prevailing obstacles in coping with daily life for people with type-2 diabetes.

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**Background:** Type 2 diabetes (T2DM) is a chronic progressive disease with serious micro- and macro-vascular



complications. The person affected by type 2 diabetes should learn to accept his/her restrictions in everyday-life and accustom to a new lifestyle. AIMS: The aim of the study was to identify and quantify the obstacles in coping with daily life for people with T2DM, and to analyze the magnitude of associations of obstacles with categorical variables.

**Methods:** Participants were recruited from a pragmatic sample of general practices in Estonia. Responders completed the Estonian version of the Diabetes Obstacles Questionnaire (DOQ) to assess obstacles in living with T2DM. DOQ is based on the results of EUROBSTACLE. It enables a quantitative approach to different obstacles, like the course of diabetes, information, person and context, body awareness, and the relationship with the health-care provider. The statements which expressed barriers and obstacles were assessed by 5-point scale score. Biomedical and clinical variables were measured. Relative proportions of scores of statements, and correlations between scores and age, sex, BMI, use of tablets and/or insulin, HbA1c were computed. Statistical significance was analyzed using t-tests and ANOVA.

**Results:** There were 138 diabetic patients enrolled in the study. Of the patients, 45% were male; patients mean age was 66.7 and the mean duration of T2DM was 8.6 years. Most of the responders rated 11 statements from 78 as obstacles in their everyday life. Utmost often they agreed with statements: "I feel that I would like to take a holiday from my diabetes" and "I am able to change my lifestyle in accordance with advice from health care professional(s)". Correlations between scores of statements and categorical variables were mostly weak.

**Conclusions:** Knowing the patients main difficulties and obstacles regarding their diseases, the family doctors can help patients to find their resources to cope with everyday-life and overcome obstacles.

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#### Development of an on-line CVD risk engine in diabetes: tailored to specific populations

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**Aims:** Existing cardiovascular (CVD) risk engines do not suit all populations and ethnicities. Risk is significantly underestimated in some disadvantaged groups, which may worsen outcomes by delaying intervention. We aimed to derive a 5-year CVD risk equation from every-day primary care data that was valid for different local ethnic groups and for patients with different levels of glycaemic control, renal function and current medication use; and to convert this equation into an open-access web-based tool.

**Materials and methods:** Routinely-collected primary care data on patients with type 2 diabetes without previous CVD were amalgamated from around New Zealand (2000-2006), and linked to national hospitalization and mortality data (1988-2009) by encrypted unique identifier. Cox proportional hazards regression analyses were used to derive the CVD risk engine, which was converted into a web-based tool for open access.

**Results:** Data on 36,127 people were used (median age 59 years, 51% female, 55% non-European ethnicity and 33% with albuminuria at baseline). Significant predictive variables

in the CVD risk engine included age, sex, duration of diabetes, systolic BP, smoking status, total cholesterol/HDL ratio, ethnicity, HbA1c, urine albumin: creatinine ratio and anti-hypertensive medication. 5-year CVD risk was similar to that predicted by the Framingham and UKPDS equations for European patients with few additional risk factors. However, the new risk engine predicted much higher CVD risk for many people of non-European ethnicity, particularly the indigenous Maori population, Indian and Pacific peoples, especially if they had poorly controlled diabetes or albuminuria.

**Conclusions:** Locally relevant and valid risk engines can be derived from primary care data and made available for use through on-line web-based tools. Appropriate risk estimation may help address disparities in treatment and outcomes for groups where risk was previously underestimated.

#### Education in FM/GP V

585

#### Last year medical students' attitude toward the patient centered care

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**Aim:** The physician-patient relationship is central to the delivery of high-quality medical care and has been shown to affect patient satisfaction and a variety of other biological, psychological and social outcomes. We aimed to evaluate the last year medical student's attitude toward the patient centered care.

**Material and method:** From July 2009 to June 2010, we surveyed 269 students in the last year who were studying at four different medical faculties of Turkey and who accepted to participate in the study completed a structured questionnaire.

**Results:** The total number of students who participated in the study was 269 and their ages varied between 22-28 years. 186 students (69,1%) were male while 83 (30,9%) were female. Participants were faced with the typical 5 response choices in a Likert scale and they gave the following answers; 1. The doctor must decide what to speak; 62 (23%) not agree, 173 (64,3%) agree, 30 (11,2%) no idea 2. To know the details of the treatment is not good for patients; 117 (43,5%) not agree, 116 (43,1 %) agree, 34 (12,6 %) no idea 3. Doctor-patient relationship is not important; 208 (77,4%) not agree, 37 (13,7%) agree, 19 (7,1%) no idea 4. Patients would hear that they will be good; 60 (22,3%) not agree, 163 (60,6%) agree, 42 (15,6%) no idea 5. The doctor should plan the treatment with patient; 19 (7%) not agree, 236 (87,7%) agree, 8 (3 %) no idea.

**Conclusion:** Despite the undergraduate medical curriculum that encourage patient-centered attitudes among medical students, data suggest that students in later years of medical school have attitudes that are more doctor centered compared to students in earlier years. Medical school curricula should include special interventions designed at attitudes as well as skills.

607

**Teaching the GP consultation to medical students using video***Flegg K, Sleiman C*

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**Aims:** To describe the use of videotaped consultations as a tool in teaching medical students the GP consultation. To give results of a preliminary survey of medical student attitudes to the videotaped consultation

**Material and methods:** Medical students entering their general practice rotation at the Australian national university are naturally taught about consultation techniques. Video taping of consultations is used as a teaching tool, both at the beginning of the general practice semester and during the semester. Small group feedback sessions are used to discuss consultations. The process will be described. Students are surveyed as to their opinions of the video consultation as a learning experience. Quantitative and qualitative data is collated.

**Results:** Preliminary results will be available for presentation showing the level of anxiety of the students, the value of the feedback sessions and of the whole process as a learning tool. Comparisons are made between the initial video consultation and one done later in the semester.

**Conclusions:** The teachers feel video consultation is an excellent learning tool - but what do students think?

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**Motivation for general practice training amongst rural registrars in 2009***Harris N, Rawlin M, Piterman L*

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**Aims:** In determining the future practice intentions of the 2009 rural registrar cohort in Australia, motivation for undertaking general practice vocational training in this group was also investigated. This paper explores the findings from this section of the larger study.

**Methods:** Following an extensive literature search, a 20 question survey was developed and administered to 1007 rural registrars via GPET (General Practice Education & Training). There was a return rate of 34.25%. Following this survey, further data collection occurred with 4 individual interviews with consenting registrars. In total there were 3 questions looking at this, with 1 quantitative and 3 qualitative aspects.

**Results:** After analysis of the data collected, it has been possible to reveal whether general practice was the first choice for postgraduate training. 48% of participants strongly agreed that general practice was the first choice for postgraduate training, whilst 5% strongly disagreed. It is a concern that 24% of general practice registrars in Australia would like to be working in another field; be it medical or otherwise. Subjects were further asked to indicate 'if general practice was not your ideal career choice, what was' and 'what prevented you from undertaking your first choice in postgraduate training'. There was a wide cross section of

specialities indicated by participants, however family was a common theme for the final decision to study general practice.

**Conclusions:** Following analysis of 294 participant responses, 76% indicated that general practice was their first choice for postgraduate training. 5% of this cohort strongly disagree. Of those who had planned to undertake other training, the range of speciality indicated is significant. Further qualitative data collection shows that family has a large impact on career choice if general practice was not initially the first choice of postgraduate training.

620

**A course to teach empathy to the medical students in Samsun Turkey***Dikici M, Yaris F, Igde F*

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**Aim:** Empathy is important in professionalism. We organized a one day empathy course for medical students. We aimed to present the details of the course and assess the effect of this course to increase the empathy of the students qualitatively.

**Method:** Since 2008, first year students take this course in the communication section of the clinical skills education by the department of Family Medicine. The course is a one day training program composed of role-play sessions and presentation. In the beginning the students are asked to discuss on the meaning of empathy. Later all students are asked to experience as a patient and relative of a patient according to the scenario. They experience blindness with black painted sun glasses, using wheelchair for own and for the friend and deafness. We also put their limb and arm to the cast to create disability. Each student has each experience in this curriculum and discusses them in the round table. Anxiety scales were used before and after the course. At the end of the session, a presentation about the empathy has been provided. The students participate in a qualitative group interview after the intervention with the course.

**Results:** Empathy and attitudes toward the humanities improved after participation in the class. Student understanding of the patient's perspective became more detailed and complex after the intervention. Anxiety of the students increased after the experience. Some feedbacks: "I realized the value of health, sorry for the ones who don't have", "I realized what I had", "Disability is very difficult", "I feel lucky, because I am not disabled", "Blindness is the worst", "I will be careful about the disabled patients", "I will work for the disabled ones in social life", "Disability needs patience", "The program helped me to develop empathy".

**Conclusion:** A brief course can contribute to greater empathy. We have a responsibility to provide education that engenders empathic understanding as family medicine teachers.

681

**An audit of General Practitioners' communication skills against their patients' : continuity of care does matter***Lemire F, Brailovsky C*

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**Background:** A doctor-patient communication skills audit tool was created under the auspices of The Medical Council of Canada. Results of this audit tool completed by 219 practicing family physicians who obtained Certification in Family Medicine by the College of Family Physicians of Canada via the Alternate Route to Certification are presented.

**Materials and methods:** Both physician and patient completed a questionnaire pertaining to a visit; documentation of at least twenty encounters per participant was encouraged. The results relate to 207 participating family physicians, with a mean number of 29.75 patients per physician; 6159 dyads were examined and correlated.

**Results:** 1. Factor analysis shows that two factors (process and content) explained 50.24 % and 26.22 % and 55.76 and 18.86 % of the variance for patients and for physicians respectively; 2. Cronbach's alpha coefficient was 0.970 for patients and 0.943 for physicians, indicating excellent internal consistency; 3. Item/total correlations between questions and total scores were between 0,538 et 0,920, thus supporting construct validity of the test; 4. Males rated themselves similarly to females; they in turn ranked lower when rated by patients as shown by the patients means ( $p < .0001$ ); 5. Higher marks were obtained from patients that saw the same physician 3 or more times ( $p < .0001$ ); 6. Higher marks were obtained when patients were seen for a combination of problems or an ongoing problem as compared to form completion or other reason of consultation ( $p < .0001$ ) 7. Higher marks were obtained when patients were seen in the office as opposed to a walk in clinic ( $p < .0001$ ).

**Conclusion:** This tool is reliable for self-assessment of communication skills of practicing family physicians. Patients seen in a continuity of care context rate their physician's communication skills more highly. Consideration to be given to using this tool as part of the in training evaluation process of family medicine residents.

## Maternal and child health

689

**Public health implications of the new IADPSG criteria for Gestational Diabetes Mellitus. Results from the STORK Groruddalen cohort study in a multiethnic pregnant population from primary antenatal care in Oslo, Norway.**

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**Introduction:** The study was set up to identify predictors for gestational diabetes (GDM) to improve the identification of high risk pregnancies and the knowledge-base for culturally sensitive interventions to promote physical activity and a healthy diet in this population. Aim Compare GDM prevalence by the WHO criteria, developed to predict future diabetes in the mother, and the International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria, recently proposed based on risk of adverse outcomes for babies related to hyperglycemia.

**Material and methods:** Population-based cohort study, representative of healthy pregnant women in primary antenatal care. Demographics, anthropometrics and fasting

venous blood samples were collected at inclusion and an OGTT done in gestational week 28 (HemoCue, plasma calibrated). GDM WHO: fasting plasma glucose (FPG)  $>6.9$  or  $2\text{-h}>7.7$  mmol/l. GDM IADPSG:  $\text{FPG}>5.0$  or  $2\text{-h}>8.5$  mmol/l.

**Results:** 759 (92.2% of total cohort ( $n=823$ , 74% of invited)) completed OGTT, 59% were ethnic minorities. The WHO GDM prevalence was 13.0% and IADPSG GDM 31.5%, a 2.4 fold increase compared with the WHO criteria, as most IADPSG GDM ethnic minority women had  $\text{FPG}>5.0$  mmol/l. The increase was most prominent in South Asia women (42%, 2.8 fold increase), but marked in other ethnic minorities from non-European countries. 9.4% of the women fulfilled both criteria, 3.7% only the WHO criteria and 22.1% only the IADPSG criteria. After adjusting for age, BMI, parity, family history of diabetes, education and body height (a proxy marker of early life socioeconomic status), ethnicity (reference: Scandinavians) was no longer a significant predictor for WHO GDM, but was highly significant for IADPSG GDM ( $p=0.005$ ) in the fully adjusted model.

**Conclusion:** The GDM WHO prevalence from OGTT screening in GW 28 was 10-fold higher than reported from The Medical Birth Registry, but the total GDM prevalence including the IADPSG cases was 35.2%. The new IADPSG criteria reflect the obesity epidemic in young women. Instead of labelling  $>1/3$  women we propose resource allocation for primary prevention of obesity through a life cycle approach.

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**Evidence based medicine: the benefits and hazards of the pacifier's use**

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**Introduction and aim:** With the high prevalence of the pacifier's use in our society, it is essential for parents to keep themselves informed about its use and to make an informed decision whether or not to allow it to their children. Regarding this, a review was made of the hazards and benefits of the pacifier's use based on medical evidence.

**Material and method:** A bibliographic review was made in electronic databases as the National Guidelines Clearinghouse; Guidelines Finder from the National Electronic Library for Health of the British NHS; the Canadian Medical Association Practice Guidelines InfoBase; Cochrane Library; Clinical Evidence; DARE; and PubMed. The articles were classified according to their level of evidence and their degree of consistency with other articles who discussed the same affirmation. From these data the strength of recommendation SORT was obtained for each affirmation

**Results:** 31 articles were found and 8 affirmations were classified according to their strength of recommendation SORT.

**Discussion/Conclusion:** It can be said with a high evidence level that babies who use pacifiers have higher incidence on acute otitis media, higher incidence of teeth deformation and that when they are pre-term babies the pacifiers improves their breastfeeding habits. It can be affirmed with fair evidence that the pacifier lowers the gastroesophageal reflux, stops the sleep auto-regulation and prevents the Sudden Infant Death Syndrome. It can also be affirmed that there is fair evidence that the pacifiers do not interfere with the breastfeeding of term babies. At last it can be concluded with a low evidence level, that the pacifier can be an agent of latex allergies among babies.

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**The Red Clover – for a natural menopause...***Ribeiro AS, Faria R*

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**Introduction and aim:** European menopausal women report an incidence of hot flushes of 75%. Hormone therapy (HT) was considered the first line of treatment for vasomotor symptoms. However given the results of the Women Health Initiative, many women are reluctant to use exogenous hormones for symptomatic treatment and are turning to botanicals supplement products for relief. Diets in Mediterranean countries are high in many different varieties of legumes. One such group of plant compounds is the isoflavones. Red clover (RC; *Trifolium pratense*), also a legume, contain 4 isoflavones: genistein, daidzeinonly, formononetin and biochanin, which have been shown to produce estrogen-like effects. Supplements containing isoflavones derived from RC are promoted worldwide for the treatment of menopausal symptoms. The aim is to review the effectiveness of RC isoflavones supplement for treating menopausal hot flushes (HF).

**Method:** Research in Pubmed and Evidence Based Medicine sites, of articles published between 1999 and 2010, written in Portuguese and English. The evidence level was provided by SORT Scale of the American Academy of Family Physicians.

**Results:** Based on one Randomized Controlled Trial (RCT), treatment with RC isoflavones supplement resulted in a significant reduction in HF. One randomized, double-blind, prospective study tested RC isoflavones supplement with positive results. Two systematic reviews/meta-analysis concluded in a similar way. One showed a slight to modest reduction in the number of HT, and the other a marginally significant effect.

**Conclusions:** Results suggest that there is evidence of a marginally significant effect of RC isoflavones for treating HF in menopausal women (SORT A). Findings of safety reported in many studies, make RC isoflavones supplementation a useful alternative to HT. RCTs with larger samples that compare the effectiveness of RC isoflavones supplement with placebo and other sources of isoflavones are needed.

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**Iodine supplementation during pregnancy: evidence based systematic review***Azevedo P, Sousa H*

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**Introduction and aim:** It is estimated that around 31% of the world population has an insufficient iodine intake. The most affected areas are Europe and South-East Asia, representing around 2 billion of affected people. The iodine deficiency is responsible for mental retardation and even irreversible cerebral damage. The pregnancy is an organic state where the iodine requirements are even higher and the insufficiency is even more accentuated. Therefore, in this article we have the objective of determining the evidence-based strategies of iodine pregnancy supplements.

**Material and method:** A bibliographic review was made in electronic databases as the National Guidelines Clearinghouse; Guidelines Finder from the National Electronic Library for Health of the British NHS; the Canadian Medical Association Practice Guidelines InfoBase; Cochrane Library; Clinical Evidence; DARE; and PubMed. 16 articles were selected and classified according to the SORT taxonomy as a way to obtain the level of evidence and the recommendation's strength of each article.

**Results:** The 16 articles present different evidence levels to try answering questions like the pertinence of the iodine supplementation during pregnancy, the recommended dosage of it and the preferable timing to do it. There were identified 22 recommendations in which 6 were type A of the SORT taxonomy, 5 type B and 11 type C.

**Conclusions:** Based on the diferents recommendations we determined that Iodine supplementation should be given in all pregnant women living in areas of low iodine intake. The recommended posology supplementation is variable depending on the iodine needs of each country until the daily dose of 250ug/day. There is fair evidence that this supplementation should be done in the first pregnancy trimester.

703

**Complication rates of menstrual regulation services provided by physicians other than obstetricians in a Family Planning Clinic of Turkey***Sarihan E, Artiran Igde F, Dikici M, Yaris F*

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**Aim:** In Turkey, authorization to perform abortions and related procedures are restricted to obstetricians. Mid-level healthcare providers, family physicians, and GPs may also conduct the procedure but only under the supervision of an obstetrician, even though they have been trained and certificated by the Ministry of Health. In this study, we aimed to evaluate the success and complication rates of Menstrual Regulation (MR) services provided by physicians certified by the Ministry of Health excepting obstetrics and gynecology specialist in a family planning clinic of Maternity and Children Hospital.

**Material and methods:** Samsun Maternity and Children Hospital Family Planning Clinic's Menstrual Regulation (MR) services records were reviewed retrospectively between January 2003 and December 2008.

**Results:** 3307 women were included in the study, 51 of them were younger than 20 years, 1281 women (38.7%) were 20 to 29, 1632 women (49.3%) were 30 to 39 years-old and 341 women (10.3%) were 40 and over . While only 333 (10.1%) women used modern contraceptive methods, 2974 (89.9%) women did not used any contraception or used traditional method as withdrawal. After the MR procedure, 3087 (93.3%) women had any complication, only 220 women (6.7%) needed a repeat curettage due to incomplete abortion. Complications causing the death of women such as uterus perforation, collum laceration, severe bleeding and infections of the female genital tract following the procedure have not been observed.

**Conclusion:** These results show that physicians other than obstetricians who are trained and certificated by the Ministry of Health can offer safe and effective MR services. Governments should authorize all qualified healthcare personnel, regardless of their professional titles, to provide appropriate elements of abortion care services

Sunday, 11<sup>th</sup> September 10.20-11.50

## Gastrointestinal and pulmonary problems

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### Hazardous alcohol consumption in patients with gastrointestinal diseases in general practice

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**Aim:** To screen hazardous alcohol consumption among patients with gastrointestinal (GI) diseases seen in general practice. Patients and methods. A cohort was formed of 1094 general practice consecutive attendees aged 18-75 years across 23 general practices in Estonia (PREDICT-D study). Data about confirmed GI diseases were collected from the patients' medical records. GI diseases were classified by the International Classification of Diseases, tenth version (ICD-10). All patients completed an Alcohol Use Disorders Identification Test (AUDIT) questionnaire to assess alcohol misuse. Hazardous drinking was defined by an AUDIT score of > 8. The Statistical Package for the Social Sciences (SPSS) Rel 18.0.0 for Windows was used for data analysis. Differences in the variables between hazardous alcohol consumption and non-hazardous alcohol consumption were analysed with the Chi-Square Test.

**Results:** Based on the medical records, 185 (16.9%) of the general practice consecutive attendees had some GI disease. The most prevalent diagnoses were dyspepsia (5.6%), gastroesophageal reflux disease (4.5%), and peptic ulcer (3.1%). Among the whole study group 126 patients (11.6%) consumed alcohol hazardously (AUDIT score > 8). Among the group of GI diseases 19 (10%) patients used alcohol hazardously. Similarly, according to our analysis, general practice consecutive attendees with an AUDIT score >8 did not have more GI diseases than patients with an AUDIT score of <8 ( $p>0.05$ ). However, patients who are drinking alcohol hazardously, need more attention as alcohol is an important changeable risk factor for a number of GI diseases.

**Conclusions.** Hazardous alcohol consumption among consecutive general practice patients is not rare. General practitioners can prevent or diagnose serious GI diseases among patients seen in general practice through paying attention to those who are drinking alcohol hazardously.

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### Searching for the best way of colorectal cancer screening

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**Aims:** Many countries have national screening programme for colorectal cancer (CRCA) for a long time, but adherence of population to screening programme is low and the results

are not satisfying. In 2009 the Czech Republic took steps to improve the screening. The population start with the screening with faecal occult blood test (FOBT) based periodically from the age of 50. At the age of 55 they can choose between FOBT based periodically and Primary screening colonoscopy (PSC) in the interval of 10 years. Before the change of the screening the most popular test was guajac FOBT (gFOBT), now is it generally immunochemical FOBT (iFOBT). In order to know the sensitivity a specificity of iFOBT and the number of false negative results we prepared the survey.

**Material and methods:** We collected data about all iFOBT performed by selected GPs (20). Using a previously validated self completion questionnaire we undertook a postal survey of selected GPs.

**Results:** 20 GPs performed 1203 iFOBT. Among the participants there were 821 (67, 6%) women and 383 (31, 6%) men. The number of positive tests was 93, the number of negative tests was 1110. In the case of positive FOBT the screening colonoscopy follows. 47 (50, 5%) persons with positive iFOBT were without medical findings or they had haemorrhoids. 28 (30, 1%) persons with positive test had polyp or advanced adenoma. The CRCA was discovered in 6 cases (6, 5%). We didn't receive result of colonoscopy from 6 patients. Waiting time between positive test and follow up screening colonoscopy was 30 days.

**Conclusion:** The obtained data show that the sensitivity and specificity of iFOBTs are adequate. In comparison with the data from the national registry, which do not distinguish between the iFOBT and gFOBT, in our study iFOBT have approximately the same detection of polyps and advanced adenomas, but higher detection of CRCA.

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### "NEW PROJECT PROPOSAL" unlock: an IPCRG initiative for a common COPD database to enhance knowledge

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**Aims:** Primary care physicians all over the world use databases for COPD in order to compare patients lung function and symptoms through time and achieve better management in daily clinical practice. The aim of this research project will be the creation of a common database between different countries for COPD, in order to enhance knowledge on COPD.

**Materials and methods:** The IPCRG, recognizing the significant role of a common international database has proposed an initiative, the UNLOCK study-database, that will bring together primary care physicians internationally whose main goal is to establish a common database that will include diagnostic and follow-up variables. The reason this initiative is presented through this abstract in WONCA is because IPCRG is interested in creating a common database that will include data from more primary care physicians not only members of IPCRG. Each country will create and maintain its own database for use at country level.

**Results:** The IPCRG has recently published its research needsstatement [www.thepcrj.org/journ/view\\_article.php?article\\_id=715](http://www.thepcrj.org/journ/view_article.php?article_id=715).

The UNLOCK database, will answer several research questions raised from this publication. The primary purpose of the database will be the evaluation of symptoms,

exacerbations, the natural history of the disease, treatment and follow-up, and the co-morbidities in unselected primary care populations. Questions to be answered will be the evaluation of factors that affect outcomes of care; the correlation of different tools for assessing health status with the use of composite indices; the relationship of health status as assessed by different questionnaires with GOLD stages, medications, diagnostic reclassification, and the assessment of the natural course of COPD in a primary care population.

**Conclusions:** It is estimated that the creation of a common database will enhance knowledge in COPD in primary care.

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### Efficiency of esomeprazol in the treatment of functional dyspepsia

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**Introduction and aim:** Dyspepsia is a general term for pain or discomfort in the epigastria that are periodic or permanent. To show the efficiency of the Esomeprazol in the treatment of patients with symptoms of functional dyspepsia.

**Material and method:** The study lasted for two months, 78 patients of age between 22-50 years with no alarm symptoms were included (m 29; w 49). All patients were treated with the initial dose of Esomeprazol (40mg/daily). In patients who did not react positively to the initial therapy, serological testing for Helicobacter pylori infection was done.

**Results:** After two weeks 48 (61.5%) patients had no symptoms and the Esomeprazol dose given to them was reduced to 20 mg per day, but 30 (38.5%) patients still had initial symptoms and they were kept at the initial Esomeprazol dose of 40 mg. After four weeks 52 (66.7%) had no discomfort and their treatment was excluded, but 26 (33.3%) still had dyspeptic problems. In 11 (14.10%) patients who had occasional symptoms, the therapy was advised, when needed, and in 15 (19.23%) with persistent pains, serological testing was done on H. pylori infection after two weeks without Esomeprazol treatment. Out of total number of tested patients, 10 (66.7%) patients were positive and they were treated with triple eradication therapy for seven days, and the other 5 (33.3%) with 4 more patients with the symptoms still persisted even after eradication therapy, were sent to gastroenterologist.

**Conclusion:** Most patients reacted positively to the initial or triple eradication therapy which included Esomeprazol.

### Urinary tract and infectious diseases

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#### Beneficial effects of pharmacological doses of pyridoxine in nephrolithiasis: outcomes research in a Romanian clinical trial of idiopathic Hyperoxaluria

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**Aims:** It is postulated that pyridoxine (vitamin B6) decreases oxalate production by increasing the transaminase activity responsible for the conversion of glyoxalate to glycine. The purpose of this study was to assess whether pharmacological doses of pyridoxine induce antilithogenic actions, by lowering oxaluria in stone formers.

**Material and methods:** A longitudinal, randomized, 30 month retrospective and comparative survey was conducted in a primary care center, located in the city of Timisoara, Romania. Twenty-two patients with oxalo-calcic idiopathic hyperoxaluria type I, aged from 8 to 64 years, were followed-up; they were given orally pyridoxine, in doses of 100mg/day - in adults and respectively - 10mg/day in children. The dietary intake of food with oxalate content was carefully monitored. The urinary oxalate excretion was measured before the beginning of the treatment and at six month intervals using the method of Hodgkinson and Williams. Data were processed using Oneway Analysis of Variance (ANOVA) and significance was established at  $p < 0.005$ .

**Results:** The initially oxaluria ranged between 78.81 +/- 14.37 mg/day in adults and 57.167 +/- 5.742mg/day in children; pyridoxine administration induced a significant decrease of oxaluria at levels of 20 - 40mg/day, after the first six month of therapy: in adults (42.69 +/- 17.56mg/day) and children (37.333 +/- 8.165mg/day). Oxaluria remained normal after stopping the treatment, except 4 cases (18.18%), who developed complications involving pyridoxine metabolism. In comparison with previous clinical studies, we revealed that the significant decrease of oxaluria occurred when using smaller doses of pyridoxine but on a long-term follow-up therapy.

**Conclusions:** Pyridoxine induces a significant decrease of the urinary oxalate excretion in patients with idiopathic hyperoxaluria; this knowledge is very useful for general practitioners in order to monitor stone formers and prevent the worsening of the nephrolithiasic disease.

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#### Uncomplicated lower urinary tract infections in females in primary care- etiology and antimicrobial resistance. Results Of The Antimicrobial Resistance Epidemiological Survey on Cystitis in Poland

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**Aims:** Urinary tract infections (UTI) are among the most frequent infections in the community and a major reason to prescribe antimicrobials. The Polish results of the international ARES (ANTIMICROBIAL RESISTANCE EPIDEMIOLOGICAL SURVEY ON CYSTITIS) study concerning epidemiology, and antimicrobial susceptibility of uropathogens are reported.

**Material and methods:** Female patients between 18 and 65 years with symptoms of uncomplicated cystitis were consecutively enrolled in 6 Polish primary healthcare centres and were further investigated including urinalysis and urine culture. Uropathogens were identified by their biochemical reaction profile according to API system (BioMerieux, Rome, Italy) or similar diagnostic tools and then their susceptibility was tested for nine antimicrobials.

**Results:** In Poland a total of 212 patients were enrolled and

119 uropathogens from 118 patients were identified. *Escherichia coli* was the most frequent (90; 75,6%), followed by *Staphylococcus saprophyticus* (5; 4,2%), *Staphylococcus aureus* (4; 3,4%), *Proteus mirabilis* (4; 3,4%), *Klebsiella pneumoniae* (3; 2,5%). *E. coli* showed the highest rate of susceptibility to fosfo-mycin (98,9%) followed by mecillinam (97,8%), nitrofurantoin (92,2%), and ciprofloxacin (92,2%). The lowest rate was found for ampicillin (40,0%) followed by cotrimoxazole (80,0%). For the total spectrum the order was fosfomycin (97,1%), ciprofloxacin (93,1%), and nitrofurantoin (85,2%). The lowest rates were found again for ampicillin (43,2%) and cotrimoxazole (80,7%).

**Conclusions:** The results indicate that fosfomycin, ciprofloxacin, nitrofurantoin and amoxicillin/clavulanate have good in vitro activity (>80%) against both *E. coli* and the total spectrum of uropathogens. Referring specifically to the current Polish recommendations TMP-SMX included as the first choice treatment may not guarantee satisfactory coverage of typical pathogens. Of uncomplicated cystitis in women in Poland. Fluoroquinolons, while still effective, should be reserved for more complicated urinary infections.

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#### Effectiveness of involving a nurse specialist for patients with urinary incontinence in primary care: results of a pragmatic multicentre randomized controlled trial

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**Aims:** Urinary incontinence (UI) primary care management is substandard, offering care rather than cure despite the existence of guidelines that help to improve cure. Involving nurse specialists on incontinence in general practice could be a way to improve care for UI patients. We studied whether involving nurse specialists on UI in general practice reduced severity and impact of UI.

**Material and methods:** Between 2005 and 2008 a pragmatic multicentre randomised controlled trial was performed comparing a one-year intervention by trained nurse specialists with care-as-usual after initial diagnosis and assessment by general practitioners in adult patients with stress, urgency or mixed UI in four Dutch regions (Maastricht, Nijmegen, Helmond, The Hague). Simple randomisation was computer-generated with allocation concealment. Analysis was done by intention-to-treat principles. Main outcome measure was the International Consultation on Incontinence Questionnaire Short Form (ICIQ-UI SF) severity sum score.

**Results:** 186 patients followed the intervention and 198 received care-as-usual. Patients in both study groups improved significantly in UI severity and impact on health-related quality of life. After correction for effect modifiers (type of UI, Body Mass Index) we found significant differences between groups in favour of the intervention group at three months ( $p = 0.04$ ); no differences were found in the one-year linear trend ( $p = 0.15$ ). Patients in the intervention group without baseline anxiety/depression improved significantly better compared to care-as-usual after one year ( $p = 0.03$ ).

**Conclusions:** Involving nurse specialists in care for UI patients supplementary to general practitioners can improve severity and impact of UI, after correction for effect modifiers. This is also the case in specific situations such as anxiety/depression.

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#### Cranberry products in the prevention of urinary tract infections

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**Introduction and aim:** Urinary tract infections (UTI) are frequent reasons for consultation in women. Some of these women have recurrent infections and, until recently, empirical prescription of antibiotics could decrease the frequency of the acute episodes but with possible adverse effects and increasing risk of resistance. However, studies have emerged about the benefits of using cranberry products to prevent recurrent UTI. The objective of the present review is to assess the effectiveness of cranberry products in preventing UTI in susceptible women. Data sources: MEDLINE database and evidence-based medicine websites. Review methods: The authors searched evidence-based reviews (EBR), guidelines (G), meta-analysis (MA), systematic reviews (SR) and randomized controlled trials (RCT's), using the MeSH terms: Cranberry and urinary tract infections. The search was limited to articles published in English, French and Portuguese, restricted to non-pregnant adult women in ambulatory care. Recommendation Taxonomy (SORT) of the American Family Physician was used to assess the level of evidence.

**Results:** 43 articles were found, 11 of which met the inclusion criteria: 3 G, 3 SR and 5 RCT's.

**Conclusions:** Cranberry products are effective for recurrent UTI prevention (SORT A). However, there is no clear evidence about the type and dose of cranberry product that needs to be consumed or about the length of time needed for the treatment to be effective. New high quality, long-term, controlled and randomized studies are advisable.

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#### Local audit of the paediatric management of urinary tract infection (UTI) specifically in relation to imaging outlined in NICE Clinical Guidelines CG54

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**Aims:** To identify concordance with the National Institute for Health and Clinical Excellence (NICE) guideline (54) on the management of children with UTI. The goal is to identify whether our practice needs to be changed in any way to follow the national guidelines. The objective is to ensure that children are receiving the appropriate investigations, especially in terms of imaging for UTIs as per NICE guidance.

**Material and methods:** 124 patients aged one month to 16 years of age were identified by the local Microbiology Department as urine testing positive for a UTI between January-December 2008. Data was collected retrospectively using a pro-forma. These were samples sent from local general practices to Blackpool Victoria Hospital as well as within the hospital. Medics, medical students and microbiology staff were all enlisted to aid in the audit.

**Results:** 7/16 patients aged 0-6 months were identified as having an atypical UTI. Of these, 2 received an ultrasound (US). Of the 4 patients with recurrent UTI, 0 received an US within the acute period. No patients received either dimercaptosuccinic acid (DMSA) or Micturating Cystourethrogram (MCUG) within 4-6 months. Of the 43 patients aged 3 months to 6 years, 2/8 and 1/8 with an atypical UTI had a DMSA and MCUG scan respectively. 7/7 experiencing recurrent UTIs were correctly given an US. In those over 3 years, 2/20 unnecessarily received MCUG scans.

**Conclusions:** Clinicians must be educated regarding the correct usage of MCUG and DMSA. Recognition of risk factors predominantly constipation and conditions associated with urinary stasis are often forgotten. NICE does not define an 'acute infection' or a 'seriously ill' child; hence management varies. Introduction of a care pathway for children diagnosed with a UTI will prove useful. A care pathway to be established for all children diagnosed with a UTI including sub headings for risk factors. Education of clinicians - regarding scheduling DMSA even with normal ultrasound and risk factors for UTI. To increase awareness of the management of UTIs in children as outlined by the NICE guidelines.

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#### **EURICA: the epidemiology of urinary tract infections (UTI) in children with acute illness in primary care**

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**Aims:** The early diagnosis of Urinary Tract Infection (UTI) in children represents an important opportunity to alleviate acute morbidity and possibly prevent serious long-term complications. The diagnosis of UTI in young children is difficult, as they often present with non-specific features. One UK study found that 50% cases of UTI were missed in children. The reported rates of UTI among children vary greatly depending on setting and inclusion criteria. The prevalence of UTI in acutely ill children presenting in UK primary care is not known as no studies have systematically sampled urine from this population. Primary aim: Determine the prevalence of UTI in children under the age of five presenting in primary care with an acute illness. Secondary aims: Identify predictive values of symptoms, signs & urine dipsticks; explore the levels of a potential novel biomarker for UTI in urine; explore nature and resistance profile of uropathogenic organisms found.

**Material and methods:** Prospective cohort study of children under five years of age presenting with an acute illness (< 28 days duration) in primary care in Wales. Presenting symptoms, clinical findings and a urine sample were requested from all consenting eligible children. Urine samples were collected by clean catch or using urine nappy pads. The main outcome measure was positive urine culture and was defined as presence of >100,000 cfu/ml.

**Results:** Over 900 children were recruited from 13 practices across Wales and more than 600 urine samples obtained. The data is currently being cleaned and analysed. Results will be available for presentation for the conference.

**Conclusions:** The findings of this research will help to inform the management of acutely ill children and help to determine which children should have their urine sampled when presenting in primary care.

## **Cancer and palliative care II**

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### **How do family physicians approach nutrition and herbal use of their cancer patients?**

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**Aims:** The aim of this study was to investigate the knowledge and experience of family physicians about nutrition and herbal use during cancer treatment.

**Methods:** The study was performed in 98 family physicians and certified family doctors who participated national congresses in September and November 2010. A questionnaire investigating demographic data and nutritional approach was completed. Data were analyzed by a statistical program.

**Results:** Of the 98 physicians, 56 (56.6 %) were male and 42 (42.4 %) were female. Mean age was 40.88 +/- 0.7 years. Of the participants, 66 (66.7 %) were family doctors, 22 (22.2 %) were family medicine specialists, 7 (7.1 %) were residents, 3 (3.0 %) were system specialists. From 67 (67.7 %) responded question, 48 (71.6 %) were found to propose their cancer patients about nutrition and 19 (28.4 %) were not. Patients of 70 (70.7 %) physicians had asked about herbs to get information. Total 86 (86.9 %) physicians felt insufficient in counselling and 70 (81.3 %) of these participants wanted to provide information about herbal use. Total 27 (27.3 %) physicians were found to ask patient's herbal use during patient encounter, 59 (59.6 %) were found to learn when patients asked. 31 (31.3 %) were not well-informed about nutrition and lifestyle changes during cancer treatment, 87 (87.8%) participants thought that education about herbal use and oncologic nutrition was necessary.

**Conclusion:** The study confirms that primary care patients want to get information about herbal use; however family physicians do not give adequate counselling for oncologic nutrition and herbs. Physicians do not ask patients about using herbs during treatment. Certified family doctors and family physicians agree that education on this subject was necessary. Family physicians have to provide information for their cancer patients especially about most common herbs, their side effects and drug interactions by using evidence based medicine.

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### **Cancer-related gut feelings among general practitioners (GPs) in the Netherlands**

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**Aims:** Studies show that early recognition of symptoms can contribute to early detection of cancer and is an important factor for prognosis and survival. Gut feelings, the uncomfortable feeling that something is wrong without specific indications, are a common feature among GPs and often related to a suspicion of cancer. Although research on gut feelings is limited, it is known that such sense of alarm



can activate the GPs diagnostic behaviour. In this way, one might expect that gut feelings can help identify serious disease at an earlier stage. The objective of the study is to examine whether gut feelings among GPs can contribute to early recognition of cancer, to identify the reasons of cancer-related gut feelings and the therapeutic actions that were driven by these feelings, to investigate whether the complaints that caused these feelings have ultimately lead to a cancer diagnosis and if so to the anticipated diagnosis.

**Material and methods:** Data were collected via the Dutch Sentinel Network of General Practitioners; a network of 42 general practices, nationally representative by age, gender, regional distribution and population density. From January 2010, GPs were asked to fill in questionnaires for each patient causing a gut feeling that he/she may have cancer. After three months, the GPs were asked to evaluate the patient's final diagnosis.

**Results:** A total of 112 questionnaires were completed. The GPs indicated that gut feelings were mainly caused by: a palpable tumour (20%), unexplained weight loss (20%), the unhealthy appeal of a patient (11%), elevation of symptoms (10%), or consultation of a patient who rarely visits the GP (10%). Preliminary results show that gut feelings lead to a diagnosis of cancer in 32% of the cases. In the majority of the recorded diagnoses (59%), this was not the diagnosis anticipated initially.

**Conclusions:** This study reveals that gut feelings may be promising as a diagnostic instrument in daily practice and it might be worthwhile to include them in clinical judgement.

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#### A difficult inguinal pain

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**Introduction and aims:** Nerve pain is a common symptom in a wide variety of illnesses and conditions. Many nerves, including the inguinal nerve, have significant potential to cause pain due to their length and association with multiple organs. Thus the symptoms and treatment options vary considerably from case to case. This case report aims to clarify the true reason of an inguinal pain, studying all the possibilities.

**Material and methods:** Follow up of a 56 years old man with inguinal pain refractory to multiple treatments.

**Results:** In October 2010 the patient checked into the emergency room with dysuria, polaquiurua and testicular pain that had been ongoing for a month. Upon physical examination there were no significant alterations besides the pain in left inguinal regions upon being touched. The scrotal and kidney ecography showed some inflammatory alterations. The diagnosis was orquitis/epidendimitis and was treated with diclofenac and scrotal elevation. Since the symptoms persisted he recurred to his Family Doctor and to the hospital for several times always with the same kind of diagnosis and treatment. The last time that he was observed by the Urologist, an inguinal hernia was suspected and he asked for a new ecography to be made in ambulatory. The ecography showed a heterogeneous mass of a considerable size. When the Family Doctor saw the patient again a mass could be felt in the inguinal area therefore an Abdominal CT was performed. The result showed once again a mass measuring around 10 cm, invading the pelvis muscles and compatible with sarcomatous mass. At this moment the

patient is medicated with morphine and is waiting for biopsies from the Oncology Institute where he is being followed now.

**Conclusions:** A persistent pain can have multiple diagnoses, but potential oncological conditions must be always correctly excluded. Patients complain always have a cause and it's the Doctor's obligation to discover and treat it. Besides this, Family Doctor have an exceptional role in recognizing how each patient express their pain, which is an advantage in communicating with the patient allowing them to act in the most adequate way.

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#### Hospice at home. A pilot experiment in Algarve, Portugal

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**Context and aims:** Most seriously sick patients prefer to stay at home during their final days. They prefer their homes to stay to the unknown place like a health care institution. Palliative home care can provide this change. The objective of this work is to report a pilot experience of community palliative care in Southern of Portugal, Algarve. This service is provided by a group of professionals with advanced training and coming from the primary health care. The aim is to answer the following question: What resources are available? What is their mission? What kind of intervention models they have? What relationship they have with family doctors? What changes they brought in how the way people die?

**Material and methods:** An oral presentation in power point of the work of palliative care team at home, a two years pilot experience.

**Result:** The work demonstrated by the pilot experience of palliative home care team in the southern Portugal, have proved a successful experiment, which includes among others, the recognition of the population, the patients and their families and the increase in deaths at home since its implementation.

**Conclusion:** You can only dignifies death at home, if we are able to offer the necessary conditions for an adequate control of physical symptoms; if we have ability to respond the psychological, spiritual and social needs. So, training in the field of palliative care in the community, should take into account the added value of the family doctor as part of those teams.

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#### Using dermatoscopy for pigmented lesions in primary care

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**Objectives:** We evaluate the use of dermatoscopy as a diagnostic test for atypical pigmented lesions by General Practitioners (GP) previously trained in basic rules. DESIGN: Study setting: Primary Care (PC). 11 GP. Subjects: atypical

pigmented lesions studied with dermatoscope in patients of at least 14 years old who came our Health Centre during 2 months.

**Material and methods:** Descriptive study, case series. Consecutive sampling. Measurements and interventions: Basic training for GP (6 sessions of 40 minutes: basic concepts about dermatoscopy). Following variables were registered: age, gender, lesion location, clinical ABCDE, time evolution, 3 points rule. We take 2 photos of each lesion (normal and dermatoscopic zoom 2x). Analysis: descriptive statistics.

**Results:** 88 lesions were analyzed. Mostly located in the back (43.2%) and owned by women (76.1%). Of clinical ABCDE, the most repeated criterion was multiple color (30.7%) and 68.2% was less than 5 mm. Most of lesions (59.1%) did not suffered changes (size, color or appearance). 77.3% were clinically atypical; of these, 94.1% made monitoring in PC. The main frequent dermoscopic pattern was globular (43.2%) and the less registered: projections or radiating lines (6.6%). 83% were melanocytic lesions. 94.3% were benign: 12.5% seborrheic keratosis, acquired melanocytic nevus 45.5% and 28.4% congenital melanocytic nevus. 4 lesions were referred to dermatology because it has 2 dermoscopic criteria of atypia.

**Conclusions:** Dermoscopy is useful for differentiate melanocytic of non melanocytic lesions and non melanocytic lesions suspicious of melanoma in PC. High rates of clinically atypical lesions were followed by GP using dermatoscope.

## Education in FM/GP VI

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### Improving care of older people by family physicians in Poland

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**Aims and background:** Polish society has been aging rapidly during last years. The percentage of citizens aged  $\geq 65$  years was 10.2% in 1990 and is estimated to increase up to 17.2% in 2025. Medical education system is not prepared to deal with such situation. Under- and post-graduate training in geriatrics is not sufficient. A growing number of older people require adequate medical treatment. The project objectives were to provide GPs with necessary knowledge.

**Material and methods:** During one academic year course(2005/2006), 65 GPs were trained in important geriatric problems management; data concerning community-dwelling and institutionalized elderly in Poland, morbidity and mortality, the most important elements of the comprehensive geriatric assessment The principal intervention included 5lectures (general knowledge in geriatrics), 8seminars (an overview and a problem-based approach to the topic), 16workshops (designed to deal with case studies). Implementation of EBM standards of care has been especially stressed. All trainees performed a test verifying geriatric knowledge at the beginning and the end of the educational program.

**Results:** Evaluation of education modules (lectures, seminars, workshops) has been performed. Assessment included scientific value, practical value, presentation techniques and global evaluation. Scientific value was highest for seminars(4.98+/-0.15); lower for lectures(4.47+/-0.80) and workshops (4.62+/-0.72). Practical value was better for

seminars(4.87+/-0.33) and workshops (4.60+/-0.80) than for lectures (4.40+/-0.89). Presentation techniques were higher for seminars (4.84+/-0.57) and workshops (4.57+/-0.70) than lectures(4.25+/-0.98). Global evaluation was highest for seminars (4.92+/-0.26), lowest for lectures (4.42+/-0.78). Mean result of the geriatric knowledge test (12.5+/-3.7 correct answers) during follow-up was statistically significantly higher(P-value 0.015) in comparison with baseline test (11.0+/-3.2 correct answers).

**Conclusions:** Providing interactive methods is crucial for effective GPs education in geriatrics. The program was effective in improving the GPs knowledge on essential issues of geriatric medicine.

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### Portfolio as an assessment tool at the GP specialist exam: how to define criteria?

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**Background:** Vocational training in GP/FM in Croatia lasts 3 years and finished with exam consisting of: a) written test, MCQ and EMI; b) OSCE; c) oral in front of three examiner's jury, academics and practitioners. Work done: Portfolio is a part of oral exam and should be submitted in advance. It is reviewed independently by the examiners and graded according to the defined criteria. Consensus should be achieved among examiners and orally reviewed by candidates during the exam. Three groups of criteria were agreed. The first is related to the amount and the second to the content of submitted materials; if it is relevant for GP. The third is related to the process of learning: if it shows the acquisition of theoretical knowledge or professional performance and if it is theoretical or reflective - learning from experience.

**Conclusions:** We experienced several obstacles and would like to discuss them during the presentation. Because we experienced inter-examiners variations, the question is how to train the examiners? If we look at portfolio as qualitative assessment method, how high level of standardization do we need? Does portfolio contain something more important for the learning and assessment?

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### Implementation of mini cex as a tool for evaluation in an Emergency Department

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**Objectives:** Assessment of the implementation of Mini-CEX as an assessment tool, both formative and summative, of resident physicians (MIR) in the emergency department.

**Definition:** The Application of Mini-CEX to examine the skills, abilities, attitudes and skills acquired and developed by residents complete a rotation through the Emergency Department. The teacher aide observes the performance of the resident physician when caring for a patient, quantifying those variables that make up the mini-CEX.

**Methods:** Direct observational practice through a structured assessment by a form which then provides a bidirectional feedback (evaluator-resident).

**Results:** In the analysis of the different competencies, preliminary results show that only 20% of the residents have developed good skills in the competencies of professionalism and communication skills. The organization and efficiency skills are not appropriate for care in an emergency. With regard to resident satisfaction with the evaluation, 95% say it has been pleased with the feedback.

**Discussion:** The application of this assessment tool we provided the resident's self and the possibility to develop their capacity for reflection, since it can raise the lines of improvement in a constructive manner, based on real events, reinforcing positively, while aspects done correctly. It is also possible to describe a plan for improvement and be reassessed with the same instrument and compare the evolution.

**Conclusion:** Given the reliability and validity of this instrument, and also brings a wealth of information relevant to the assessment and monitoring of the resident, is emerging as a useful tool to examine the skills acquired by residents. Using the mini-CEX conducted a boarding of the most comprehensive resident assessment and contemplating a feedback that enables continuous improvement and the satisfaction of both parties involved.

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#### Continuous Medical Education in Primary Care: electrocardiography

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**Aim:** Electrocardiography (ECG) has an important place in the diagnosis and follow-up of cardiovascular diseases which are major causes of death. A training program has been implemented to advance the skills of primary care physicians on the issue.

**Material and method:** The study was conducted in the four cities of Turkey, between December 2006 and February 2007. A total of 172 primary care physicians participated in four separate trainings in the provinces of Elazig, Adiyaman, Gumushane and Samsun with 48, 41, 17 and 66 participants respectively. A half-day training program on basic ECG evaluation for primary health care physicians was designed. A test of ten questions was given to the participants before and after the training.

**Results:** The median age was 35. The participants were 39.2% female and 60.8% male. 35.2% stated that no formal training on ECG was included in their medical school curriculum. 73.4% of the participants found their ECG skills insufficient while 24.7% and 1.9% found them fair and good respectively. A comparison of post-training to pre-training test scores showed statistically significant improvements in all of the four groups. They were 84.3% and 31.3% ( $X^2=42.327$ ,  $p<0.001$ ), 82.9% and 36.5% ( $X^2=51.139$ ;  $p<0.001$ ), 81.1% and 40.0% ( $X^2=26.280$ ,  $p<0.001$ ), and 87.2% and 30.0% ( $X^2=44.064$ ,  $p<0.001$ ) in Elazig, Adiyaman, Gumushane and

Samsun groups respectively.

**Conclusion:** Since ECG is efficient, simple and inexpensive, it is a valuable diagnostic tool in the primary care settings. In this study ECG skills of the primary health care physicians were found insufficient. Trainings for primary health care physicians are needed on ECG and other similar subjects. Continuous medical education is important in the quality of health care.

#### Financing and organization II

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#### Does more General Practitioner consultations increase outpatient clinic use among people over 60? A Norwegian one-year population-based cross-sectional study.

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**Aim and background:** We explore the association between GP consultation rates and hospital out-patient clinics among people over 60 years in Norway. The hospital activity and GPs referral rates vary between Norwegian municipalities where GPs act as gatekeepers in a patient list system. Strengthening PHC is thought to curb the escalating future health care systems expenditures, especially among older people. But, early identification of need and detection of unknown diseases PHC may both decrease and increase the patient's need for specialized care and in some cases even contribute to medicalization. Hence, the PHC effects on hospital utilization are not easily predicted.

**Material and methods:** A population-based cross-sectional study consisting all Norwegians 60 years and older (54, 8 % women) (N= 992 434) in 2008. Unit of analysis was population stratum defined by municipality, age and sex. The association between total number of consultations of general practitioners pr 1000 inhabitants (GP-rate) and specialized care's outpatient clinic consultations pr 1000 inhabitants (OPC-rate) was analysed in a linear regression model.

**Results:** In total there were 4 251 302 GP consultations (56,3% women) and 1 910 622 consultations at outpatient clinics (53,4 % women). In crude analyses, there was a linear positive relationship between GP consultation rates and OPC rates. We found an interaction for age ( $p<0,0001$ ), with a stronger association in age groups 85+. Age adjusted analyses showed that one sextile increase of GP-rates caused the OPC rate to increase with 57 consultations and 131 consultations pr 1000 inhabitants under and over 85 years respectively ( $p<0,0001$ ). Analyses adjusted for socioeconomic, demographic and geographic variables will be presented.

**Conclusion:** Increased GP-consultation rate is associated with increased use of specialized health care outpatient clinics, and question the belief that increasing GP consultation rate by itself reduces specialist health care use.

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#### How case mix, using ICPCs, can improve the delivery of primary health care.

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**Aims and background:** This presentation provides an insight into how a better understanding of the morbidity profile of a population based on ICPC diagnosis codes can improve the delivery of primary health care.

**Material and methods:** Examples of case-mix applications will demonstrate the results of studies from several countries. The common challenges faced, including data quality, obtaining cost measures, and provider acceptance, will also be discussed. The presentation will conclude with a discussion of the potential impact on the delivery of primary care.

**Results:** Numerous international studies, show that populations do vary in their need for health care resources and can be successfully compared across regions, clinics, and practices, to assess the disease burden and their health care resource needs. As populations age, the burden of chronic illness increases. As Prof. Barbara Starfield has shown, most patients have multiple diseases which complicates a single disease approach. Identifying the patients most in need of care management and recognizing their morbidity profile will ensure more appropriate interventions. Similarly, assessing the performance of providers requires adjustment for the morbidity profile presented by their patients. Case-mix ensures that providers who are outliers are true outliers and helps explain the practice style of providers. Every health care system is faced with limited resources. Allocating those resources is a critical aspect of how a health care system functions. Case mix ensures that resources are allocated equitable which increases the sustainability of the entire system.

**Conclusion:** Case mix is critical to ensuring the equitable delivery of health care, promoting continuity and enabling the targeting of patients.

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#### Implementation of a first-line ultrasonographic examination in primary care

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**Aims:** Imaging diagnostic is a basic tool for medical examination. Among imaging techniques, sonography is one of the most versatile methods. It is easy to perform and without any risk for either patients or professionals. Sonograms can be performed without special requirements and thus they can be carried out at the first line of a primary care setting. We describe our first-year experience in using ultrasonographic examinations.

**Methods:** Our primary care center attends 34,289 inhabitants. Since 2010, two trained medical doctors performed sonographic studies using JazzVison (Toshiba) equipment. Sonographic examinations were classified likewise: 1) urgent, performing sonographic studies in a 24-hour period and 2) non-urgent studies that are scheduled in few days.

**Results:** During the accomplishment of this program we carried out 286 sonographic examinations: 146 (51 %) were abdominal and uro-renal studies; 85 (30 %) were thyroid

sonograms; 40 (14 %) were soft-parts analyses and 15 (5 %) miscellaneous ones. Among abdominal and uro-renal diagnostic studies, cholelithiasis and urolithiasis were the more frequent pathologies (21 %) whereas supraspinatus tendonitis (28 %) and nodular goiter (50 %) were the more common findings among soft-parts and thyroid examinations, respectively. It is worthy to mention that we identified several tumors of different localization: 5 retroperitoneal ones, 3 bladder malignant tumors, 3 hepatic carcinomas and the presence of hepatic metastasis in one patient.

**Conclusions:** Sonography is a fast, easy and reliable diagnostic support for a wide variety of pathologies. Our experience sustains the convenience of a progressive implementation of ultrasonography among the first-line diagnostic arsenal of primary care settings.

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#### General Practitioners in an emergency department of an academic city hospital

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**Aims:** The aim of the study was to compare the effects of two care methods in an emergency department of an academic city hospital for patients without a referral. In the new care method the application of a triage system (Nederlands Triage Systeem) was combined with the involvement of a general practitioner with the staff.

**Material and methods:** The study had a before and after intervention design and was conducted from 1 November 2006 to 30 April 2007, on weekdays from 10-17 o'clock. The new care method started on February 1st 2007. Participants were patients at the emergency department without a referral of their general practitioner. Outcome measures were patient satisfaction as measured by a questionnaire, numbers and type of additional examinations, quality of diagnosis, process- and treatment time.

**Results:** The study population counted 832 patients for the usual care method and 695 patients for the new care method. The baseline characteristics of both groups of patients were comparable. Patients treated with the new care method were more satisfied with the treatment, particularly by the doctor and nurse. Satisfaction with factors that were stable over the two methods was similar. Additional examinations were carried out in 47% of the patients in the usual care group and 34% of the patients in the new care group, the difference was 13% (95% confidence interval 8 - 18%). The distributions of diagnoses in both groups were comparable. The proportions of diagnoses that were discordant with the data of patients' own general practitioner were comparable. The mean process time was 93 minutes during the usual care period and 69 minutes during the new care period, the difference was 24 minutes (95% confidence interval 18 - 30 minutes). The mean treatment times were respectively 60 and 35 minutes, the difference was 25 minutes (95% confidence interval 20 - 31 minutes).

**Conclusions:** The new care method resulted in greater patient satisfaction and equal quality of diagnoses whereas the numbers of additional examinations were reduced. The new method also resulted in a reduction of process time and treatment time.

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### The study about drug prescription for six months period for patients in Republic Of Srpska

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**Background and aim:** During implementation of family medicine program in Republic of Srpska, standard for accreditation were established. According to them, every family doctor should have approximately 25 patient's visit per day, as well as the number of registered patients per team counted 2000. According to the same standards, patient should not wait longer than two days to get drug prescription. We wanted to explore how many patients come to primary care center only to get their prescription and whether they had the appointment. We also wanted to find a way to make ordinary work more effective to the mutual satisfaction, patients and doctors.

**Methods:** We included 46 family medicine teams in 6 towns in Republic of Srpska. The study was conducted from 01.03.2009 to 31.03.2009. We analyzed electronic medical records. We were interested of number visits that were scheduled and unscheduled, as well as the number of patients that visit us only to get drug prescription.

**Results:** The average number of patients registered for one doctor was 1916. The number of visits in a month period was from 554 to 721 (average 639). The number of scheduled patients was average 392, the number of unscheduled patients was 242. Out of 392 patients, 163 were visits for drug prescription only. Out of 242 patients 78 were for drug prescription. The average number of patients in every day work of family physician was 32. Out of that 13 patients (41%) came only to get a drug prescription.

**Conclusion:** The problem of too many patients with chronic disease that visit doctor only to get drug prescription every month could be solved by prescription for six month period. By this step, we will also solve the problem of waiting for appointment and crowded waiting rooms. The doctors will be able to spend more time examining patients instead of writing a prescription. This procedure can be used only for patients with well-control chronic disease that are assumed to take drugs properly.

health care research, projects management and improving the transfer of knowledge into daily practice

**Methods:** In 2009 a Strategic Plan was designed for 3 urban Primary Health Care Centers that give service to 110,000 people. The plan involved 59 family physicians, 8 pediatrician, 18 resident physician and 42 nurses. The project has been leaded by a family doctor and the board is completed with 2 family physicians and 3 nurses more. A model based on professional cooperation between colleagues and improving and consolidate collaboration with other leading biomedical institutions was developed.

**Results:** 18 articles have been published (2009-2010) that received an overall Impact Factor of 66.9 points (3.7points/publication). About 100 submissions on national meetings and 26 to international conferences were accepted. The RU has presented a new research grant for those family medicine residents on last year their training. A new internal quarterly newsletter has been released. The RU is participating in 29 projects, of which 8(28%) are own projects, 21(72%) are Cooperation Projects and 17(58%) are funded projects(3 multi-national European); this circumstance has allowed the hire a new research staff support. RU has been recognized as a Team of Primary Health Care Research, this allows housing PhD students coming from University Medicine School: 9 Professionals have started their doctoral projects.

**Conclusions:** The creation of a RU in primary care brings positive effects on scientific productivity and increases the overall professional knowledge. The need for research in primary health care remains as a strategic within the health policies

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### Research unit in primary care: results after two years of establishment (2009-2010)

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**Aim:** The consolidation of competitive research is an attribute when family and community medicine reaches its full development. A strategic analysis was performed with the existing resources and circumstances as main settings; as a result the development of a Research Unit (RU) in Primary Care was planned. This RU aims to give support to applied

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**Land without pain: observational studies on cancer pain management in palliative care patients and evaluation of quality of life***Errico G, La Sala R, Iannantuoni L, Costa N*

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**Objectives:** 1. Raise awareness among MMG to the systematic use of rating scales of pain and quality of life. 2. Check whether the measurement of pain and proper treatment, continually subject to revision and adjustment, allows better pain control and quality of life.

**Materials and methods:** The 11 MMG who have joined the observational study had in charge cancer patients in advanced stage who met the criteria: 1) home care, 2) prognosis less than 6 months, 3) IK <50%; ineffectiveness of specific treatments. The study duration was of two months. The patients underwent a weekly survey for one month and two questionnaires: 1. Edmonton Symptom Assessment scale (ESAS), 2. Assessment questionnaire of pain intensity.

**Results:** In the first evaluation conducted on 10 patients, 4 patients had mild pain, 2 patients had moderate pain and 4 patients show severe pain, the average VAS pain was 4.9 (SD +/- 2.77). In the second evaluation conducted on 10 patients, 6 patients had a slight pain and 4 had severe pain, the average VAS pain was 4.6 (SD +/- 3.03). In the third assessment conducted on 9 patients, 6 had a mild pain and 3 a severe one, the average VAS pain was 3.8 (SD +/- 2.86). At the last evaluation conducted on 9 patients, 6 patients had mild pain and 3 a severe one but with an average value of VAS pain 3.6 (SD +/- 2.96). The assessment of quality of life through ESAS scale was performed in 10 patients, none of them showed a symptom in addition to those proposed. The proportion of patients with good quality of life (SDS <20) and patients with worse quality of life (SDS > 20) remained constant throughout the study.

**Conclusions:** From the analysis of the average value of VAS pain in the different evaluations, it was observed a reduction of that value, between the first and last assessment ratings, which would explain an improvement in pain control. It was also observed how a continuous monitoring of pain and quality of life through the use of simple survey instruments such as the VAS pain and the ESAS scale can improve pain control and quality of life and restore dignity to the suffering patient.

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**Terminally ill patients home assistance: survey on the perception of the problems that meet the general practitioners working in the province of Foggia***Iannantuoni L, Diamantopoulou K, D Errico G, Costa N*

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**Introduction:** Recently, an increase number of the terminally ill patients (TIP) spend the last days of life at home.

**Aim:** To assess the attitudes of GPs working in the province of Foggia in the management of TIP, their relationship with the patient's family, the main difficulties in the management of TIP, the need for specific training and the degree of awareness about the possibilities offered by the Local Health Authority (LHA) of Foggia.

**Materials and methods:** A letter explaining the aims of the study was sent to 87 GPs of the province of Foggia. Of these, 44 GPs adhered to the study and asked anonymously to a 18 questions' questionnaire divided into 5 sections investigating on 1) characteristics of GPs; 2) experience and 3) difficulties in the management of TIP; 4) specific awareness and need of specific courses; 5) awareness about of the medical supports offered by the Local Health Authority of Foggia.

**Results:** A total of 85 TIP were followed-up at the time of the study (median 2.5 patients per physician). Loneliness was the feelings experienced by the GPs more frequently, followed by feeling of professional inadequacy and anxiety, but no doctor was indifferent to the problem. The relief of pain and other symptoms and psychological support to the patient is the priority for almost all doctors, while there is little interest in supporting the family relatives. The main difficulties were encountered by GPs in dealing with other professionals (nurses, psychologists, etc) involved in the management of TIP and in dealing with LHA of Foggia to obtain the necessary medical devices (bed, etc).

**Conclusions:** The data showed that GPs in the province of Foggia have a significant interest in the theme of "palliative care" and is a strong need for specific training. Hence the need for the HLA to enhance the service network by developing well-defined paths and shared with the GPs and other professionals involved in the management of TIP.

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**Levels of life quality among cancer caregivers***Doğaner Y, Aydoğan Ü, Komurcu S, Borazan E, Sarı O, Öztürk B, Öz A, Salam K*

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**Aim:** Although early diagnosis, screening and treatment developments prolong life-time; problems associated are the main impact on the quality of life among caregivers. Our purpose in this study was to investigate the levels of life quality among cancer caregivers.

**Material and method:** 46 caregivers responsible for caring all needs of cancer patients and applied to GMMMA Medical Oncology Department for the diagnose-treatment, between March 2009 and June 2010 were included in study. 46 participants without having chronic disease were accepted as a control group. The Medical Outcome Study Short-Form 36-item survey(SF-36) were used to assess perception of life quality.

**Results:** 46 caregivers enrolled to study were constituted by 22 women(%47,8) and 24 men(%52,2). Mean age was 44,65 +/-11,62 (min:25,max:72)years. 46 participants accepted as a control group were constituted by 21 women(%45,7) and 25 men(%54,3). Mean age was 40,26+/- 6,93(min:30,max:63). When the SF-36 survey scores of caregivers enrolled to study were examined, the subgroup scores were as follow: Physical Functioning 76.30+/-21.19, Role-Physical 53.80+/-42.15, Body Pain 64.26+/-25.52, General Health 59.78+/-21.69, Vitality

55.32+/-23.46, Social Functioning 64.40+/-27.38, Role-Emotional 46.37+/-38.15, Mental Health 55.82 +/-19.19. When the SF-36 survey scores of participants in control group were examined, the subgroup scores were as follow: Physical Functioning 86.95+/-15.50, Role-Physical 83.69+/-33.00, Body Pain 79.45+/-19.22, General Health 69.32+/-17.23, Vitality 69.56+/-20.70, Social Functioning 81.79+/-21.19, Role-Emotional 75.36+/-32.53, Mental Health 68.60+/-18.74. When we compared the caregiver and the control subgroup scores, there were statistically significant differences in all subgroups of SF-36 survey ( $p < 0.05$ ).

**Conclusions:** Especially in primary care settings, more holistic approach should be achieved in the process of disease and expectations of caregivers could be satisfied. Main subjects of this challenging chronic period such as cancer patients, caregivers and physicians can get a chance to find the least common denominator.

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#### Learning from the family. detection of resources that support for family use of

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**Introduction:** The WHO defines palliative care as an "approach that improves the quality of life of patients and their families". The ultimate goal, the real outcome of palliative care is to maintain an adequate quality of life and the preservation of human dignity.

**Aims:** Knowing the role that the family with a relative in palliative care would like the family doctor to have in the areas of interpersonal and psychological cohesion of the family system, in the preparation for the death of a family member and spirituality.

**Materials and methods:** The study is a qualitative research method that uses a semi-structured interview. It makes use of an interviewer trained in psychotherapy. The scheme has 14 open questions, whose arrangement has a common thread that binds them together according to the three issues to be analyzed: the preparation for the death of a family member, the family cohesion and spirituality. Results Interviews have been conducted with 10 family members of whom 9 are women and 1 man. It is apparent from the interviews, the urgent need to be assisted by the family doctor in the areas of relational cohesion of the family system, in the psychological preparation for the death of a family member and in spiritual needs. At the same time it highlights the need for the family doctor to be specifically trained in these areas, which are considered critical to the quality of assistance. In the area of family cohesion, the family doctor is required to contribute to a reduction of tensions.

**Conclusions:** The study has pointed out the need for more qualified assistance for families in the areas of interpersonal and psychological cohesion of the family system, the preparation for the death of a relative, and spirituality. It has shown the need for the family doctor to acquire specific training in the field of humanities during his or her degree course in medicine.

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#### Opioid-induced neurotoxicity: a case report of an adverse effect

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**Background:** Opioid-induced neurotoxicity (OIN) is a multifactorial syndrome that causes a spectrum of symptoms, from mild confusion or drowsiness to hallucinations, delirium, hyperalgesia and seizures. Its recognition is important to establish an appropriate treatment.

**Case report:** a 75-year-old man with a metastatic colangiocarcinoma to the liver, under palliative treatment and high blood pressure. Treatment: hydromorphone extended release 4 mg daily, morphine sulphate 10 mg/ 4h, oral transmucosal fentanyl as needed. Katz: C, Karnofsky 60%. The patient consulted a GP for 2 days of mechanical back pain then hydromorphone dose was increased to 8mg a day, two days later the relative went to the surgery because the patient was disorientated, the GP maintained same treatment and at the same time commented the case with the Palliative Care Unit (PCU) thinking that the current problem was a complication of the underlying disease; the PCU visited the patient who was agitated, disorientated and with visual hallucinations, no pain or fever were found and physical examination was the same as previous. They reduced up to 50% the opioids and introduced haloperidol. After 24 hours patient was recovered and the pain was controlled without side effects.

**Analysis:** Exacerbation of pain in cancer patients is normally treated with short action opioids instead of extended released medication. Hydromorphone is five times stronger than morphine and more expensive in our country. Confusion and delirium can be found as a presentation of OIN.

**Conclusions:** Opioid-induced neurotoxicity can be common in any patient treated with opioids. Dose reduction or opioids rotation is recommended. - Consider the opioid-induced neurotoxicity after starting or increasing the dose of opioids especially in patients with hepatic or renal failure. - It is important to consider cost-effectiveness of medication when prescribing.

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#### Prospective study on the cognitive "fatigue" in family caregivers of cancer terminal patients

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**Rational:** Few studies have looked for the presence of "fatigue" in family caregivers of cancer patients despite it has a negative effect in the processes of care and treatment and upset the family dynamics.

**Objectives:** Qualitative assessment and comparison of "fatigue" in the group of family caregivers in palliative care of cancer patients assisted at home than the group of family caregivers of cancer patients treated at the Hospice. -Relate

the "fatigue" with variables specific to the caregiver: age, sex, occupation and number of daily hours of service.

**Materials and methods:** Inclusion criteria: -Caregivers of patients in palliative care with Karnofski index <50 and cancer-related fatigue (previously assessed by Piper Fatigue Scale) -Caregivers with no history of chronic diseases potentially capable of inducing "fatigue" -Ability to communicate in Italian. On the basis of these criteria have formed three groups: Group-A: 20 family caregivers of patients in home care Group-B: 20 family caregivers of patients at the Hospice Group-C: control group of 20 subjects The Functional Assessment of Cancer Therapy Fatigue (FACT-F) was administered to family caregivers. At a higher score corresponded to a lower level of fatigue.

**Results:** In group A showed a direct correlation between increasing age and fatigue of caregivers. In both groups were detected a level of "fatigue" higher in older patients compared to spouses. The family working members of group B showed higher levels of fatigue. The level of fatigue of family caregivers of Groups A and B was significantly higher than the control group. In addition, the group A compared to group B showed the highest values of fatigue.

**Conclusions:** The initial hypothesis of our study was that family caregivers compared to a healthy population with no history of cancer had higher values of "fatigue". This hypothesis has been confirmed by the results: both the caregivers of patients at home, and caregivers of the patients at the hospice had "fatigue". This is very significant in our view because it makes manifest: -directly, a reduction in quality of life of caregivers at moment in which he is most needed, during the end of life of a spouse suffering; - Indirectly, the lack of welfare system, especially in the home and less in the residential support.

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#### Research of various biopsychosocial parameters among cancer caregivers

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**Aim:** Cancer process influence not only patients but also caregivers life quality from the moment of diagnose. During this challenging duration, caregivers could have emotional problems at least patients, even more. In this study, we aimed to determine some various biopsychosocial requirements among cancer caregivers.

**Material and method:** 46 caregivers responsible for caring all needs of cancer patients and applied to Gulhane Military Medical Faculty Medical Oncology outpatient and inpatient clinic between March 2009 and June 2010 were enrolled to study. A questionnaire including disease information's and sociodemographic properties filled by caregivers.

**Results:** 46 caregivers enrolled to study were constituted by 22 women(47.8%) and 24 men(52.2%). Mean age was 44.65+/-11.62(min: 25, max: 72) years. The caregivers degree of relationship were as follow: 54.3% (n=25) spouse, %13 (n=6) mother, 6.5% (n=3) father, 10.9% (n=5) son, 2.2% (n=1) daughter, 6.5% (n=3) sister, 4.3% (n=2) brother, 2.2% (n=1) others. While 78.3% (n=36) of caregivers could share patients responsibilities with another individual, 21.7% (n=10) could not. The expressions indicated by caregivers after diagnose were as described below: 19.6% (n=9) I lost joy of living, 13% (n=6) I thought that everything was pointless,

34.8% (n=16) I thought to change my life-style, 32.6% (n=15) no change in my life-style. Support for coping with disease taken from 52.2% (n=24) family, 26.1% (n=12) medical staff, 13% (n=6) friends, 8.7% (n=4) others. While 91.3% (n=42) of caregivers were not taken advantage of psychological services, 8.7% (n=4) were taken. This psychological support required medical treatment in 3 caregivers, psychotherapy and medical treatment were administered together in 1 person.

**Conclusions:** Adequate support of caregivers not only relieve their emotional distress, but also reflects to patients as positive influence. Therefore, psychological needs of caregivers should be considered at least patients.

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#### Degree and severity of depression among cancer patients

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**Aim:** Major depression (MD) is an important psychiatric disorder that should be observed among cancer patients. It effects the life quality, compliance of treatment, cancer severity and response to treatment negatively. Our aim in this study was to evaluate the degree and severity of depression among cancer patients.

**Material and method:** 74 patients who have attended to Gulhane Military Medical Faculty Medical Oncology outpatient and inpatient clinic between March 2009 and June 2010 were included in the study. 74 participants, whom that have no psychiatric disorders and any chronic illnesses, were chosen as the control group. We asked patients to submit a questionnaire, including info about illness and sociodemographic features, and Beck Depression Inventory(BDI) by face to face method under supervision of a physician.

**Results:** 35.1% (n=26) of participants with cancer were women and 64.9% (n=48) were men in the study. Control group of 74 persons consisted of 48.6% (n=36) women and 51.4% (n=38) men. Average age in patients group was 37.11+/-15.35(min:21,max:75), and 35.85+/-4,31(min:28,max:55) in control group. When we analyse the scores that patients and control groups get from BDIs; we determined the mean depression score of cancer patients group as 11.34+/-7.92, the mean depression score of control group as 6.96+/-6.30. Difference between both groups was statistically significant (p<0,001). In cancer patients group, there is no statistically significant difference between depression scores in terms of gender, marital status and educational level(p=0.196, p=0.069, p>0.05). When degree of depression was examined, 21.6% (n=16) of patients had moderate and severe levels.

**Conclusions:** Being aware of psychological conditions effecting physical severity of cancer, prognosis and response to treatment influence the life-quality, care, compliance to treatment directly. In addition to medical treatment, need of psychosocial support should not be forgotten.



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### The survival of terminal cancer patients by their disease and social demographic data after admission of hospice center in Korea

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**Purpose:** Recently, as the cancer patients are increasing, social interests are growing on the need for hospice care, patient's prognosis index in terminal cancer patients was developed by patient's clinical data. SO, we tried to investigate hospice patient's several nonclinical characteristics and kinds of primary tumors, and investigate their survival by these data.

**Methods:** On the basis of 200 dead patients among terminal-stage cancer patients in the university hospice center from May, 2008 to May, 2010. We analyzed out age, gender, religion, kinds of primary tumors, numbers of metastasis, whether or not treatment, and then compared these indexes with the survival period from the date of diagnosis and survival length after admission via analysis of kaplan-meier method and log rank test.

**Results:** The average survival of female were longer than male after diagnosis ( $P < 0.05$ ). The average survival of gynecological cancer, breast cancer is the longest but that of lung cancer is the shortest in female after diagnosis ( $P < 0.05$ ). The average survival of the patients undergone anti-cancer therapy is longer than that of only palliative therapy done after diagnosis ( $P < 0.05$ ). Younger male patients (less than fifties) lived shorter than elderly patients after admission. Female patients who had no metastasis site lived longer after diagnosis ( $P < 0.05$ ).

**Conclusion:** Female patients, undergone anticancer therapy, gynecological, breast cancer patients, and female who had no metastasis site lived longer after diagnosis. Young male patients lived shorter after hospice admission.

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### Various biopsychosocial parameters among randomized cancer patients

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**Aims:** Cancer is a chronic process inspiring complex emotions like uncertainty, helplessness, pain, fear of death and anxiety. Some psychosocial needs are occurred in this process. Our purpose in this study was to determine some various biopsychosocial parameters among randomized cancer patients.

**Material and methods:** 74 patients hospitalized and applied for outpatient clinic was enrolled to study between March 2009-June 2010 at Gulhane Military Medical Faculty, Department of Medical Oncology. A questionnaire including disease information and sociodemographic properties filled by

patients.

**Results:** 74 patients enrolled to study was constituted by 26 women (35.1%), 48 men (64.9%). Mean age was 37.11+/-15.35 (min:21, max:75) years, mean time exposed to the disease was 2.81+/-2.96 year. 51.4% (n=38) of patients was during the course of chemotherapy, 9.5% (n=7) radiotherapy, 23% (n=17) control, 6.8% (n=5) diagnose. When the patients were asked about their feelings after diagnose, answers were as follow: 12.2% (n=9) [I lost joy of living], 18.9% (n=14) [I thought that everything was pointless], 23% (n=17) [I thought to change my life-style], 45.9% (n=34) [no change in my life-style]. When the patients were asked about opinions on their treatments, expressions were as follow: 35.1% (n=26) [I should take treatment], 10.8% (n=8) [my treatment will be difficult], 54.1% (n=40) [I will revert back after treatment]. The ratio of patients who found [adequate] support for coping disease was 74.3% (n=55), [partial adequate] 20.3% (n=15), [inadequate] 5.4% (n=4). When the effect of cancer over family budget asked to patients answers were as follow: 44.6% (n=33) [quite effecting], 40.5% (n=30) [moderate effecting], 14.9% (n=11) [not effecting]

**Conclusions:** After the cancer diagnose, inevitable psychologic demolition period starts for patient. For providing proper support form and period, oncologic patients should be followed not only for medical treatment but also for psychosocial ways.

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### Degree and severity of anxiety among cancer patients

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**Aim:** Anxiety disorders are kind of mental disorders that could appear during the diagnosis and treatment period of cancer and frequently are not realized and treated well. Our aim was to determine the degree and severity of anxiety among our cancer patients.

**Material and method:** 74 patients who have attended to Gulhane Military Medical Faculty Medical Oncology outpatient and inpatient clinic between March 2009 and June 2010 were included in the study. 74 people, whom that have no psychiatric disorders and any chronic illness, were chosen as the control group. We asked patients to submit a questionnaire, including info about illness and sociodemographic features, and Beck Anxiety Inventory(BAI) by face to face method in supervision of a physician.

**Results:** 35,1% (n=26) of participants with cancer were women and 64,9% (n=48) were men in the study. Control group of 74 persons consisted of 48,6% (n=36) women and 51,4% (n=38) men. Average age in patients group was 37,11+/-15,35(min:21,max:75), and 35,85 +/-4,31(min:28,max:55) in control group. When we analyses the scores that patients and control groups get from BAIs; we determined the mean anxiety score of cancer patients group as 13,01 +/- 10,47, and the mean anxiety score of control group as 8,55+/-7,02. The difference between both groups was statistically significant (p=0,003). In cancer patients group, there is no statistically significant difference between anxiety and depression scores in terms of gender, marital status and educational level (p=0,132, p=0,060, p>0,05). When degree of anxiety was examined, 33,8% (n=25) of patients had intermediate and severe anxiety level.

**Conclusions:** The point attention must be paid in primary

care practice is that anxiety disorder should not be ignored in cancer patients at the mental examination stage. Anxiety disorder affects patient not only the status of momentary, but also treatment period too.

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#### The frequency of cancer diseases in educational center for family medicine

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According to statistics, yearly diagnosed of cancer is about 11,500 people and devastating forecasts for only a few years provide a far greater number in BiH. In males the most common is lung cancer and breast cancer is the most common malignancy of the female population. Leading causes of death in 2008. year are like as in previous years, the diseases of the circulatory system (53.9%).

**Aim:** To determine the incidence of cancer and the localization of the most common cancer in men and women in family medicine center.

**Material and methods:** The study was conducted in the educational center of family medicine DZ Tuzla in the period January-June 2009. A review of 8040 medical records of health service users who are being treated in 4 family medicine team singled out all the records of patients who have a confirmed diagnosis of cancer.

**Results:** Of a total of 8040 users of health services in 196 (2.43%) patients confirmed the diagnosis of cancer. The largest number of patients suffering from cancer was in the age group > 60 years (65.81%) and significantly statistically more frequent in relation to other age groups ( $P < 0.0001$ ). The women frequently suffer from cancer in relation to the men ( $P = 0,002$ ). The majority of patients are retired (63.77%) according to occupation. The larger number of patients have not positive family history for cancer and they are non-smokers ( $P < 0.0003$ ). The largest number of patients suffering from cancer is overweight and obesity (85.74%). The most common type of cancer were breast cancer (19.38%), significantly more frequent than other types of cancer ( $P=0.006$ ) and colorectal cancer (9.69%), and then lung cancer, and prostata cancer (5.6%) and cervix, rectum and stomach cancer (4.59%).

**Conclusion:** There is no real screening programs for cancer prevention in BiH. The worrying fact is that malignant illness continues to spread inexorably, and it reduces the age of patients. All the more need for prevention programs and the prompt establishment of national screening programs and raising awareness of population about going for regular screening programs. **Key Words:** cancer, frequency, family medicine team, prevention program

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#### Cancer incidence in a semi-rural town

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**Introduction and aims:** Cancer is the first cause of mortality in men and the second in women in our area, being

responsible for a considerable amount of premature deaths. We want to know the epidemiological facts about the patients with new diagnosis of malignancies in the adult population of our town.

**Material and methods:** This is a prospective population-based study. We registered the socio-economic variables (age, sex and profession), type and stage of tumor, date of diagnosis, survival and known risk factors for cancer (history of malignancy, smoking, alcohol) for all the people consulting the Primary Health Centre of our town (a 22,500 inhabitants semi-urban town) between January the 1st of 200 and December the 31st of 2005.

**Results:** 248 tumors were registered. Male 52,8%. Profession: 5,6% worked at the textile industry, 10,5% were housewives. The most frequent tumour was breast cancer (15,7%), followed by lung cancer (8,1%) and colorectal cancer (7,7%). 77% were alive on December 2005. At the time of diagnosis 40,7% underwent surgical treatment, while 22,2% got palliative management -8,9% had already metastasis.

**Conclusions:** We want to remark on the importance of a tumor database settled in the Primary Health Care to detect any increase in the incidence of cancer related to socio-economic factors (e.g. profession). Primary prevention of cancer includes effective interventions on known risk factors (mainly smoking). It is capital to reach an early diagnosis in order to be able to offer curative treatments and therefore better survival results

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#### Alcohol consumption and pain control in palliative care patients

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**Aim:** Estimating the prevalence of alcohol consumption disorders in a group of palliative care patients managed in our Primary Health Care area. Correlating the alcoholic consumption and the degree of pain control during the follow-up of these patients.

**Material and methods:** This is a descriptive prevalence study carried out in a semi-urban population, among the terminally ill patients of the Primary Health Care team. **Results:** We gathered data from 80 patients, 40% female/60%male, with a mean age of 66,7 years (SD 10,2). The average scoring in the first Visual Analog Pain Scale (VAPS) was 48,6mm (SD 29,8), and in the second VAPS was 22,3mm (SD 23,39). The average scoring at the Alcohol Use Disorders Identification Test (AUDIT, validated in our population) was 44 points (SD 5,2). The AUDIT scoring adjusting for sex was 1,1 (SD 1,7) in women and 6,6 (SD 5,6) in men ( $P < 0,001$ ). The prevalence of risky consumers was 28,8% and an additional 10% met dependence criteria. 28,8% suffered from pain that was difficult to control. In such patients the first VAPS scoring was 60,3mm (SD 26,2) while the other patients scored 44mm (SD 30,1) ( $p < 0,02$ ). When correlating hard-to-control pain and kind of pain, we found an statistically relevant difference for neuropathic pain.

**Conclusions:** The prevalence of alcohol consumption disorders among our palliative care patients was 28% (similar to the reported in our general population). We found as well a 10% of alcohol dependents, which is a bit higher but yet not significant proportion. Only 71,2% controlled their pain. We

could not find a correlation between alcohol intake and pain control. Being a man, a high VAPS score at the first consultation and neuropathic pain have shown to be predictive factors of hard-to-control pain.

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### What do primary care physicians know about cervical cancer and HPV vaccine?

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**Background and aims:** HPV vaccine enables primary prevention for cervical cancer. However, for its acceptance and usage by families, especially family physicians recommendation is an important factor due to the characteristics of the discipline. At this point physicians level of knowledge can effect extend of its recommendation. The aim of the study is to determine what primary care physicians know about cervical cancer and HPV vaccine, their attitudes towards HPV vaccine and what they think as barriers against it.

**Material and methods:** A descriptive cross-sectional designed study was carried out with physicians working in Family Healthcare Centers in Izmir. The questionnaire including participants' demographic characteristics, and 18 questions about cervical cancer and HPV vaccine (each correct answer was scored as 1) was applied. Data were analyzed by SPSS 15.0 software with chi-square, t-test, ANOVA,  $p < 0.05$  was considered statistically significant.

**Results:** Of the physicians 61.3% were male, their mean age and professional experience were 44.22 $\pm$ 6.56 and 19.37 $\pm$ 6.34 years, respectively. Best known issues by the physicians were cervical cancer prevention (88.7%), HPV vaccination practice (75.4%) and its efficacy (73.3%), while least known ones are cervical cancer screening (11.3%) and protection characteristics of HPV vaccines (11.3% and 13.4%), respectively. Physicians mean score of knowledge was 7.29-3.02 out of 18 points. Female physicians ( $p=0.000$ ), physicians who expressed their vaccine recommendation percentages as 10-20% and 30-40% of their patients ( $p=0,026$ ) have significantly higher scores. Of the physicians 33.0% thought their female population aged 15-49 years often had sexually transmitted diseases; however 30.7% did not recommend the vaccine to the target group. The most important barrier for the vaccine is believed as its cost by 72.0%.

**Conclusions:** There is an obvious gab of knowledge of physicians. Training of physicians about HPV vaccine can enable them to develop right attitudes and behaviors.

## Care in elderly

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### Malnutrition in bedridden elderly.

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**Introduction and Aims:** Malnutrition is the pathological condition resulting from the inadequate consumption of one

or several essential nutrients. It is manifested clinically in biochemical and anthropometric test and affects to the patient's response to his/her illness and to the established therapies. Lodging elderly is one of the main risk groups that may develop nutritional problems. The aims of this project are to ascertain the prevalence and the typology of malnutrition in the bedridden elderly, identify what factors influence in their malnutrition and identify what factors are predominant in their malnutrition. For this survey, it will be used the Mini Nutritional Assessment questionnaire (MNA), anthropometric measurements and blood test values.

**Material and methods:** Study design: Observational, cross-sectional descriptive. Study scope: Primary Care Health. Subject of the study: Spanish bedridden elderly, older than 65 years. Variables to measure: Malnutrition: MNA. Sociodemographics: Age, sex, associated pathology, ulcers developed, smoker, drinker, toxic consumer, marital status, caregivers. Sample size: It is calculated by accepting a significance level of 95%. A sample size of 210 patients is estimated, including losses

**Result:** We will do an univariate analysis of qualitative variables by frequency and quantity by the mean, median and standard deviation. We will do a bivariate analysis using chi-square for qualitative variables and t test and ANOVA for qualitative as quantitative. Logistic regression will assess the factors that are associated with malnutrition.

**Conclusions:** This project will be implemented in the area of influence of our Primary Healthcare Center to identify nutritional problems in our bedridden patients and to implement preventive and therapeutic measures aimed to minimizing this health problem.

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### Do immobilized patients receiving polypharmacy fulfill long-term treatments adherence prescribed by their doctor?

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**Objective:** To detect non-adherence to treatment regimes in immobilized patients receiving polypharmacy and the possibility of self-medication.

**Methods:** This is a transversal descriptive study to make an initial evaluation within a welfare quality improvement cycle. Subjects: immobilized patients receiving polypharmacy (>5 drugs of long-term use), with long-term care card (LTC). Sample: the entire population, a total of 120 subjects. Location: Urban health area (at patient's home). Study period: September 2009 - April 2010. Two home visits were conducted every 3 weeks in order to register variables related to patients characteristics, drugs and previously defined quality criteria: C1-Consistency of drugs taken by the patient and those indicated in LTC; C2-Consistency of dosage; C3-Degree of self-reported therapeutic adherence (Haynes-Sackett): >80%; C4-Degree of therapeutic adherence based on pill count: 90-100% and C5-Absence of non-prescription drugs stored in home medicine cabinets (self-medication). Statistical and descriptive univariate analysis.

**Results:** Thirty-one subjects are male (25.83%) and ninety subjects are female (74.17%); the average age of patients is 81.24 years; drugs use/subject: 5-9 in 85 cases (70.83%) and

grater than 10 in 36 cases (29.179%), given by a health care provider (70.25%), mainly tablets (82.50%), the average dose is 1.36 doses/drug 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%), C5-112 (92.56%).

**Conclusions:** More than 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 is carried out to increase adherence to treatment regimes.

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#### Rehabilitation in the sick person with Parkinson and depression

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#### The usage profile of long-term and frequently used drugs in immobilized patients receiving polypharmacy.

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**Objective:** To identify the usage profile of long-term and frequently used drugs in immobilized patients receiving polypharmacy.

**Methods:** This is a transversal descriptive study (initial evaluation within a welfare quality improvement cycle). Subjects: 120 immobilized patients receiving polypharmacy (>5 drugs), with computer registration of long-term care card (LTC) and registration of frequently used prescriptions (home medicine cabinets). Location: Urban health area (at patient's home). Study period: September 2009- April 2010. Statistical and descriptive bivariate analysis.

**Results:** We analyzed 1 005 drugs for long-term use (LTC) and 134 for frequent use. 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, whereas in the remainder a health care provider was responsible (a higher consumption of drugs was reported in the second group of patients)  $p < 0.03$ . 7% of patients do not consume all of their medication registered in LTC, leading to home accumulation of these drugs (136 drugs - 14.2%). A 92.2% consistency of daily dose taken by the patient and dose indicated in LTC was reported. Consistency was lower than expected in lotions and sachets and higher than expected in minor doses ( $p < 0.01$ ). Home medicine cabinet drugs registered in medical history (79.7%), in accordance with dose (69.4%); drugs prescribed by doctors and/or specialists (88.8%); drugs prescribed by pharmacists or others (self-medication) 7.5%. Frequency of drug use: daily (45.5%), monthly (24.8%), weekly (12.4%) and occasional (17.4%).

**Conclusions:** Long-term registrations and treatment adherence evaluation must be improved to ensure the correct use of drugs in immobilized patients.

**Aims:** To study relationship depression Parkinson and to investigate if rehabilitation can improve quality of the sick person's life with Parkinson and to diminish speed of progression of the illness.

**Methodology:** Study 2 years 46 patients with Parkinson, divided in 2 groups, a group didn't receive rehabilitation and the other one if he/she received rehabilitation. Auditory stimulation, imaginary visualization with music and repetition after movements, exercises of verbal communication, mental exercise - Puzzles etc. Both groups received the pharmacological same treatment. Depression diagnosis by Hamilton test and DSM IV criteria .The evaluation of the progression of Parkinson one carries out according to scale of Hoehn and Jahr.

**Results:** 60% Parkinson suffered feelings of sadness.20% suffered depression. The group that didn't receive rehabilitation had a quicker progression at the following level of the scale, being slower the progression in the one that if he/she received it, 32% doesn't even progress in that period at a worse level. The depression improves in the group with rehabilitation in a 89%.

**Conclusions:** The evidence of the benefits has been demonstrated that contributes the rehabilitation in the motor activity of the sick persons with Parkinson, decreases the variability from the movements when walking and in the fingers. It improves the march, the speech, the memory and psychological aspects; mainly he/she improves the motor function agreement with international recent studies. The rehabilitation influences diminishing the depression, consequently the rehabilitation improves the quality of the sick persons' life with Parkinson and depression. The study demonstrates that the depression is very frequent in Parkinson; it would be advisable to carry out more studies agreement with other international results to investigate if the depression is before or after Parkinson. The certain thing is the important union of both.

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#### Postantibiotic diarrhea caused by clostridium difficile in elderly and polymorbid patients

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**Aims:** We would like to point out the importance of rational antibiotic therapy and use of probiotics to prevent the development of Clostridium difficile caused diarrhea (CD). Deficiently treated patients can become asymptomatic carriers of CD in nursing homes or at home. Preventing the development of clostridium enterocolitis (CE), relapses and moderation of clinical symptoms shortens the length of

hospitalization and reduces costs.

**Methods:** We analyzed the incidence of CE on the Department of long term ill patients within 13 months (9/2008-9/2009). We tested the stool specimens for CD toxins in each patient with diarrhea. Resistance to metronidazol was defined as the persistence of positivity of CD toxin in the stool specimen in spite of treatment.

**Results:** From 275 patients (mostly immobile) by 28 (10,1%) the diagnosis CE was confirmed during the hospitalization. Bronchopneumonia and urinary tract infections were the most frequent reasons for antibiotic therapy. Ciprofloxacin was the most used first line antibiotic in patients with afterwards determined CE. In our group combined antibiotic therapy seems to be a risk factor for resistance to metronidazol as the first line therapy of CE.

**Conclusions:** For the medical practice is important to indicate antibiotics carefully especially in elderly and polymorbid patients. To our knowledge the use of probiotics can reduce the occurrence of diarrhea during antibiotic therapy.

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#### Quality of life in the elderly patients with hearing loss: first results.

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**Aims:** The main objective is to assess the influence of hearing loss (as measured objectively with audiometry) on quality of life (SF-36) by adjusting the population as confounding variables: demographic (sex, age, ethnicity, education, employment history, marital status), pathological (Charlson comorbidity index and Barthel test dependency for basic activities of daily living).

**Material and methods:** Cross-sectional study aimed at detecting prospective incidence of hearing loss in people over 65 years, and their influence on the quality of life. We choose A sample of 40 patients, drawn from over 65 years, the population served consecutively in a Primary Care Center. Medical history was performed, SF-36, self-perception of hearing loss (HHIE-s), test of dependency for basic activities of daily living (Barthel) and noninvasive complementary tests (audiometry, otoscopy). We analyze the relationship between quality of life with hearing loss (as measured by three different criteria of assessment: Percentage of loss in BOE of 22 January 2000, Weinstein and Ventry criteria and criteria of BIAP) using correlation tests Pearson and ANOVA. Then we performed a multiple linear regression analysis also introduced in the model demographic and disease variables.

**Results:** Thirty patients agreed to conduct the study. Patients with HHIE-s value less than or equal to 8 have a lower loss rate than those with more than 8 (19.13% vs 4.84%,  $p = 0.02$ ). Patients with hearing impairment have lower scores in all domains of quality of life test SF-36 but not obtained statistically significant. The analysis showed that hearing loss as the criteria of BIAP and hearing loss according to the BOE were independent predictors for the physical component of the SF36. For the mental component, smoking variables, test Charlson, presbycusis, criteria and HHIE BIAP-s proved to be independent predictors.

**Conclusions:** Hearing loss is underdiagnosed. Quality of life is influenced by hearing loss.

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#### Pilot scheme of validation prospective study of Multidimensional Prognostic Index (MPI) in a elderly population in home care setting

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**Aims:** The main objective of this pilot observational study is to stratify into different groups with different risk all elderly patients in home care by assigning them on the multidimensional assessment (VMD) geriatric basis a prognostic index (MPI) that can predict, although at short distance (after a follow up of 4 months), "primary outcomes" such as hospitalization and institutionalization.

**Material and methods:** The "tests" that were used are the Activity Daily Living (ADL) and Instrumental Activity Daily Living (IADL) for the functional assessment, the Short Portable Mental Status Questionnaire ( SPMSQ ) for the cognitive study, the Geriatric Depression Scale (GDS) for depression assessment, the Mini Nutritional Assessment (MNA) for the nutritional status assessment, the Cumulative Illness Rating Scale (CIRS) for the comorbidity assessment, the Exton-Smith scale (ESS) for the clinical risk assessment of pressure sores.

**Results:** The MMG belonging to ASL Foggia Province who took part, as has already been said, to the Study Pilot Project were 18. The study shows that patients with MPI1 are 35 (19%), those with MPI2 109 (about 58%, the largest group representing more than half the cases) and those with MPI3 44 (about 23%). As for the VMD we can say that subjects belonging to the group with the most severe MPI (MPI3) appear to have instead of the other two groups, a prognostic score more negative in various scales, validated and used, that explore different areas or spheres (the functional, cognitive and affective, the biological and the health insurance) which, only together, manage to offer a comprehensive look of a very complex patient, as the frail elderly. In fact, the scores show a greater severity of depressive symptoms (GDS = 9.96 +/- 3.21,  $P = 0.028$ ), a more severe cognitive deficiency (SPMSQ = 7.41 +/- 2.84,  $P < 0.0001$ ), a more severe disability (ADL = 0.86 +/- 1.34,  $P = 0.0001$  and IADL = 0.57 +/- 0.97,  $P < 0.0001$ ), an increased risk of malnutrition (MNA = 14.93 +/- 4.35;  $p < 0.0001$ ), higher risk of developing pressure sores (EES = 10.09 +/- 3.27,  $P < 0.0001$ ) and a more severe index of comorbidity (CIRS-Comorbidities = 3.82 +/- 2.94,  $P < 0.0001$ ). The length of stay in days of hospitalization was slightly higher for those within the group MPI3 than MPI2 group (26.33 vs. 21.33), even if the result ( $p = 0.756$ ) does not appear to be statistically significant. On the other end no cases of institutionalization were enrolled during the follow-up period, other primary outcome. Moreover, with regard to secondary outcome, mortality, we can say, but in this case, we didn't reach statistical significance, that the 5 deaths that occurred during the monitoring did not affect the elderly belonging to the MPI1 group but, it concerned, with no very different rates, the two other groups with worse prognoses (MPI2 4 / 3.6% vs. MPI3 1 / 2.2%). Finally, with regard to major diseases, subdivided into apparatus, that the elderly studied population was affected, we can say that subjects in a worse prognosis (MPI3) appear to be more compromised than the other two groups, both from the neurological point of view (MPI1 1 / 2.9%; MPI2 24 / 22.0%; MPI3 19 / 43.2%,  $p < 0.0001$ ), than

from the metabolic point of view (MPI1 2 / 5.9%; MPI2 24 / 22.0%; MPI3 15 / 34.1%,  $p = 0.012$ ) and from the osteoarticular one (MPI1 7 / 20.6%; MPI2 43 / 39.4%; MPI3 29 / 65.9%,  $p < 0.0001$ ).

**Conclusions:** The data obtained, at the conclusion of the Pilot Project Study, cannot certainly validate the Multidimensional Prognostic Index (MPI) in the population of elderly in home care, in question but they have allowed us to create the bases for a complete, prospective and trusted study, and that will tell us if the Multidimensional Prognostic Index (MPI) in hospital can be equally applied, with the same precision and with the same statistical significance at a local level in an elderly population, managed by MMG, who are in home care.

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### The role of the family physician and family nurse in home care – examples from Poland and Estonia

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**Aims:** Across Europe, patients who are disabled and have a long term medical condition may receive professional care in their own home. In Poland and Estonia, this care is provided through health and social care systems, but the structure of healthcare is variable as is the support from social care. The aim of this study is to describe the role of family physicians and nurses who provide home-based healthcare to chronically ill and disabled people.

**Material and Methods:** The study has been carried out as a part of the international project (EURHOMAP: Mapping Professional Home Care in Europe). Data were collected through four vignettes, which were hypothetical descriptions of situations of elderly or disabled people living at home and in need of care. An expert panel of physicians, nurses, social workers and NGO representatives provided analysis of the cases described in the vignettes; 34 completed questionnaires were collected in Poland and 16 in Estonia.

**Results:** In Poland and Estonia an application for home care is made by the patient or their close family. In Poland home care providers included: nurses (77%), family physician (74%), social worker (71%), or the patients children (59%). In Estonia there was less nurse involvement; social worker (88%), children (75%), family physician (69%) and nurse (44%). The expert panel in both countries stressed the role of the informal caregivers (family), for example: Family care and family support is the most important; Children should be included in the provision of care; All professional forms of healthcare will play a supportive role and cannot provide round the clock care, so family is essential.

**Conclusions:** Beside the patient and their family, the family physician and/or nurse take an early role in home-based care in close cooperation with social worker. However the 24 hour responsibility lies to a large extent on the patients close family. The situation seems to be typical for East European countries.

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### Nutritional assessment evolution in frail elderly in primary care.

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**Aims:** To evaluate the nutritional status evolution in frail elderly cohort attending in primary care.

**Design and methods:** A cohort of 115 frail elderly with malnutrition risk detecting in primary care (medical setting or domiciliary visit) was prospectively evaluated (every 6 months) between 2003-2010. Anthropometrics measurements: Body Mass Index (BMI), arm and leg periphery (AP, LP), triceps skinfold (TSF), midarm muscle circumference (MAMC). Functional status: Barthel Index. Malnutrition was defined by two or more anthropometrics measurements under P50 to Spanish elderly people male/female reference. Types: marasmus, kwashiorkor and protein-energy malnutrition. Severity: low (p50-p25), moderate (p25-p10), high.

**Results:** Patients are 69.6% female and in first evaluation they had an average age 83+0.7 years; BMI 22.8+0.4; TSF 10.77+0.74mm (p50-p75) male, 16.10+0.77 female (p25-p50); AP 23,87+0.44 cm (p25-p50) male, 23,26+0.38 (p25-p50) female; MAMC 20,35+0.37 (p25-p50) male, 18,59+0.34 (p25-p50) female. Malnutrition are present in 77.4% of patients: 34% kwashiorkor, 39.6% protein-energy, 26.4% marasmus; 52% low severity, 40% moderate and 8% high. In the six evaluation (mean follow time 33.36 months) there is no statistical significance in the anthropometrics parameters change: BMI -1.59 (95% CI:-0.02+3.20); TSF +0.68(-2.33+0.98); AP -0.52 (-0.45+1.48); MAMC -0.77(-0.20+1.74).

**Conclusions:** There is a very high percent of frail elderly with malnutrition. Individual nutritional intervention only maintenance but no improve the nutritional status in these patients but BMI decreases over time.

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### Current opinions and understanding of delirium: a questionnaire survey of healthcare professionals

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**Aims and background:** Delirium is a common, serious, yet frequently missed and not properly treated disorder among geriatric patients. The reasons for this are unstudied and no guideline on delirium management is available in Hong Kong. This multi-centered, inter-departmental survey aimed to explore the knowledge and attitudes of healthcare professionals pertaining delirium, so to aid the development and implementation of delirium protocol in Hong Kong.

**Methods:** The questionnaire was developed by an expert panel. A survey was sent to all doctors and nurses of the in-patient unit of medical, surgical and orthopedic wards, and doctors of the emergency and general out-patient department of the local hospital. Participation was voluntary and anonymous.

**Results:** Response rate was 29% with 302 respondents (110 doctors; 192 nurses). Majority (50% doctors; 80% nurses) perceived delirium as a significant/ serious clinical problem. 48% of respondents agreed that delirium was under-diagnosed and found difficulty to differentiate delirium from dementia in elderly. 54% opined that delirium requires active intervention. 81% of respondents did not perform routine screening. 86% did not know of any locally validated tool for delirium detection and 48% were aware of the availability of guideline on delirium management worldwide. 60% did not satisfied with the current practice of delirium management and the three commonest reported hurdles to good practice were inadequate resources/ manpower, lack of guideline, and inadequate training. 88% of respondents showed interest to receive training on mental state assessment if provided.

**Conclusions:** Disconnection existed between the perceived significance of delirium and current practices of monitoring and treatment. The lack of basic knowledge of the diagnosis and management of delirium appears to be the determinant. The results support the set-up of delirium protocol and provision of training to healthcare professionals.

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### Preventing oral pathology in elderly

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**Introduction:** Oral pathology has a significant impact on people's life quality either by reduced nutritional conditioning chewing food choices, and difficulties on social communication that leads to isolation. Thus, an objective of the World Health Organization (WHO) is to promote oral health among older people and encourage them to keep their teeth as long as possible. The WHO recommends the development of strategies for public health and integrated programs to promote oral health.

**Aim:** To promote the improvement of oral health in elderly.

**Methods:** We performed a literature review of oral hygiene which was followed by the construction of a questionnaire that was administered to the elderly in a nursing home and two day centres. After having assessed the knowledge of the elderly in this area, we developed an action for health education that used a lecture method with practical demonstration and training of the various materials involved in hygiene. The questionnaire was administered at the end of the operation to measure effectiveness.

**Results:** 52 elderly patients participated in the action with a mean age of 75.4 years (95% CI 72.5 to 78.1) and 86.5% female (95% CI 76.9 to 96.1) most of whom did not have any dental piece itself (76.9%, 95% CI: 65.1 to 88.8). It was found that the worst hit rates in responses were found at the washing of the prostheses, frequency of exchange of brush, daily number of cleaning teeth and washing tongue care. At the end of the session it was recorded a significant improvement in the proportion of correct response increase of 77.4 to 95.5 ( $p < 0.001$ ).

**Conclusions:** Although currently is not possible to assess the medium term impact of this action for health education, one can assert its immediate success, not confirming the inevitability of tooth loss and poor oral health with aging.

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### Use of adult nappies in primary care

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**Aims:** To determine the percentage of use of these types of nappy all of them financed by the national health system and differences by age and sex to the population mapped to a primary care team in rural areas.

**Material and methods:** A cross-sectional descriptive study done in a rural area with a team work and with a population of 1169 people over 15 years of who 52 are users of nappies. Of these, 40 are women and 12 men, aged between 24 and 94 years. The data is collected from the computerized medical record, by e-cap program.

**Results:** Of the total adult population assigned to a Primary Care Team, absorbent nappies are used by 4.45%, from these, the 76.9% of users are women 40% use day type, either anatomical or rectangular, using night type 60%. 23.1% of users are men from these, 16.6% use day type either rectangular or anatomical and 10 of 12 use night type. User's distribution according to age is: aged <60 : 16.6% all men. aged 60-70 : 5% women and 8.3% men. aged 71-80 : 22.5% women and 16.6% men. aged 81-90 : 52.5% women 50% men. aged > 90 : 20% women 8.3% men.

**Conclusions:** Of the total adult population assigned to a Primary Care Team, 4.45% are users of absorbent nappies. Most users are women and a high percentage of them wear day rectangular type. The age group with greater use of nappy is between 81 to 90 years, regardless of sex.

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### Do we assess renal function when prescribing to the aged?

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**Background:** The decline of renal function affects elimination of many drugs. The estimation of glomerular filtration rate is basic before prescribing to the elderly population.

**Aims:** To estimate prevalence of known and undiagnosed renal insufficiency and associated factors.

**Material and Methods:** Study Design: Cross Sectional Study Sample: Random sample of 309 patients older than 75 years attended by GP's  $\geq 10$  times during 2009 at an Urban Primary Care Centre. Data source: Computerized clinical records. Variables: Gender, age, blood pressure, creatinine (Cr), glomerular filtration rate (GFR) using the Cockcroft-Gault (CG) and MDRD equations, renal function type: normal renal function (NRF), known renal insufficiency (KRI) [CG <60 ml/min/m<sup>2</sup> and Cr >1.25 for males or Cr >1.11 for females], undiagnosed renal insufficiency (URI) [Cr  $\leq 1.25$  for males or Cr  $\leq 1.11$  for females, and CG < 60 ml/min/m<sup>2</sup> ], comorbidity, number of drugs, prescription of inappropriate drugs, chronic renal disease (CRD) [KRI+UKI]. Statistic

Analysis: Descriptive and inferential (Bivariate: chi-square, T Student and ANOVA tests).

**Results:** 63.4% females, age 82+/-4.75, hypertension (HTN) 72%, dyslipidemia 42.1%, diabetes mellitus 32%, coronary artery disease 19.7%, N<sub>s</sub> drugs 7+/-3.21. Valid cases to analyze for GFR 279 (90.3%) (CG= 53+/-16.4 ml/min/m<sup>2</sup> and MDRD=66.8+/-20 ml/min/m<sup>2</sup>). CG<60 ml/min/m<sup>2</sup> = 68.8%. Inappropriated drugs in CRD 45.8% (NSAIDs 32.8%, metformin 16.7%). Prevalences % (95%CI): URI= 50.2% (44.3-56.1) KRI= 18.6% (14-23.2) NRF= 31.2% (25.7-36.6) Associated factors with Renal Function type (URI / KRI / NRF): Female: 68.6% / 57.7% / 52.9% (p=0.049) HTN: 71.4% / 92.3% / 66.7% (p=0.003) Age: 82.5 / 82.9 / 79.4 (p=0.000) Cr: 0.95 / 1.78 / 0.86 NRF (p=0.000) CG: 48.5 / 34 / 71.5 (p=0.000) DBP (mmHg): 72 / 70 / 75 (p=0.004)

**Conclusions:** High prevalence of CRD which is related with to: female, high blood pressure and aged. We must estimate GFR before prescribing NSAIDs and metformin to this group.

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### Falls prevention in older people with a tai chi exercise program

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**Aim:** To determine whether a multifactorial intervention, including a tai chi exercise program, could reduce falls, improve balance and functional capacity in older people.

**Material and methods:** Longitudinal pre-and post-intervention study. We include people over 65 years attended in our health care center that had fallen previously at least once. They receive an intervention including: home safety interventions, treatment review, sensory evaluation and tai chi lessons. Study group: patients that receive tai chi lessons. Control group: patients that don't receive lessons. Level significance 0.05. Measurements: age, sex, baseline and 1 year later measurement of: unipodal test, Barthel index and falls number. Analysis for basal group comparison: nonparametric test (MannWhitney). Pre-post intervention comparison: Wilcoxon test for paired samples.

**Result:** We included 50 patients (28 of study group and 22 of control group). Mean age 75+/-0.82, 86% women. The most frequent risk factor is sensory deficit (66%). 56% have a risk falls treatment, 8.2% orthostatic hypotension and 26% present home risk. Falls average before the intervention is 1.96+/-0.23. Barthel test average is 93.10+/-1.43 and unipodal test average 9.57+/-1.042 seconds (right), 8.92+/-1.32 (left). There are not significant differences between intervention and control group for these baseline measurements. Falls average was significantly decreased in study and control group: from 1,86 previous falls (confidence interval 95% (CI: 1,56-2,13) to 0,46 falls (CI: 0,25-0,67) (p0.002) in control group and from 2,04 (CI: 1,67-2,41) to 0,40 (CI: 0,19-0,61) in study group (p0.001). We detect a non statistically significant improve in unipodal test in study group (from 10,64 to 12,2).

**Conclusions:** Multifactorial intervention in older people that have fallen previously reduced significantly rates of falls without a relation with tai chi in an one year evaluation. There is a tendency to improve unipodal test in older who practice Tai Chi.

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### The art of drug prescription for elderly living in nursing home

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**Aims:** Nursing-home patients usually have many medical problems and often take multiple and inadequate medication. Prescriptions are indicated by many specialists but finally Primary Care Physician is the one that signs the recipes. Objectives: To determine if medication critical review could reduce polypharmacy and inappropriate prescribing in these patients

**Material and methods:** A general practitioner made one comprehensive visit to a nursing home. This physician discussed all patients in detail with a senior staff member. Prescribing record of each patient was reviewed. Inappropriately prescribed or unnecessary drugs were withdrawn. Design: quasi-experimental before and after study. Sample: Patients living in a nursing home. Variables: Age, sex, number and type of prescriptions. Polypharmacy was defined as the use of 6 or more drugs on a routine basis. Inappropriate prescriptions were defined according to Beers criteria. Statistical analysis: Paired t-student test to compare means and McNemar test for percentages

**Results:** 89 patients were included, 61,8% were females. Mean age was 87,2 +/- 6,2 years (68 to 101). Average drug use was 7+/-3, (0 to 16) decreasing to 6,75 +/- 3 after review. Inappropriate medication was prescribed to 27% of the patients, diminishing to 15,7% after the intervention. These changes were statistically significant. Polimedication was detected in 63,3% of cases; and after review was reduced to 60,7% (p=0,06)

**Conclusions:** Intervention made over elderly living in nursing homes is a good approach to improving quality of prescription. Medication review by primary care physician lead to reduction in the number of items prescribed. The most important achievement has been reduction of the percentage of inappropriate prescriptions; but the most difficult to reach has been to decrease polimedication. Prescription in frail elderly patient is science, repeating prescription is practice, but prescription avoiding polypharmacy and inadequate medication is art

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### Mobility assessment of elderly people

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**Background:** Over half the population older than 65 have difficulty with mobility. Main factor is aging of the system responsible for movement that leads to reduced mobility or immobility. This may be the primary sign of aging and symptom of many diseases and traumatic injuries.

**Objective:** To examine the degree of mobility and frequency



dependence in the elderly.

**Patients and methods:** There were 200 patients older than 65, who were treated at the outpatient clinic Simin Han, Public Health Care Institution Tuzla. Eksperimental group consisted of people living alone, and members of control group were people who live in a family environment. Assessment of mobility was conducted by the following characteristics: fully mobile - moves independently without aids, limited mobility - use tool such as a walker, crutches, permanently limited mobility - people using a wheelchair and permanently immobile persons.

**Results:** We had examined 200 patients older than 65, 45% of persons belonging to the experimental group and 55% of the control group. The average age of the patients (+/- SD) was 75.4 +/- 6.2 years. The total sample was 57.5% women, 42.5% men. In our study, dependence was more frequent among members experimental group than in the control group ( $p = 0.02$ ). Chances of dependence (OR) were 2.05 times higher (95% CI = 1.12 to 3.75) in the members of experimental group than in the control group. In the total sample, 62% of the respondents were quite mobile, 22.5% with limited mobility and 4% ( $p = 0.76$ ) were not mobile.

**Conclusion:** Aging represents a multiple challenge for doctors in primary health care in both - the individual and in group prevention as well as improvement of quality of life. It is necessary to constantly work to improve the status and protection of the elderly and to help establish a counseling center to work with elderly people, the development, implementation and promotion of all aspects of health care, providing a capacity to accommodate the elderly, carrying out medical and social rehabilitation, development and improvement of prevention activities in all areas and regions  
Keywords: elderly, mobility, dependence

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### The Elderly's Health Logbook

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Aging is a universal process, marked by morphological, physiological and psychological changes that can slow or decrease the performance of the organic system and can ultimately lead to decreasing skills. In 1984, the World Health Organization (WHO) established the age of 60 as the threshold beyond which a person can be classified as elderly, although in developed countries this threshold is set at the age of 65. The variety of chronic diseases affecting the elderly, the progressive loss of hearing, as well as the visual and cognitive impairment and the psychiatric disorders, bring limitations to the elderly population, making them little cooperative, particularly in the transmission of their medical history and usual medication, with the consequent loss of information regarding their health condition, which often adds further complexity to the doctor's work, both at the primary health care level and at the hospital level. The principal aim of this document is to present the project for the Boletim de Saúde do Idoso - The Elderly's Health Logbook which can function as an important record medium for clinic information, and facilitate communication between different health care professionals. After the conclusion of the project, it will be applied and distributed in the community (nursing homes and Primary Health Care), waiting for feedback from the health professionals.

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### Relationship between exercise and high sensitivity C-reactive protein (hs-CRP) in elderly people

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**Aims and background :** Chronic low-grade inflammation might be related to many ageing diseases and high-sensitivity C-reactive protein (hs-CRP) is a marker used in various studies. Since exercise shows a positive effect on the prevention and treatment of chronic diseases and cognitive disorders, the authors hereby attempt to describe the relationship between exercise and hs-CRP in the middle aged and the elderly.

**Material and methods:** Of the patients who underwent a health examination at the Soonchunhyang University Chunan Hospital Health Care Center from March of 2008 to September of 2009, participants over the age of 65 (the elderly group, 251 subjects) and those aged from 40 to 65 (the middle age group, 860 subjects) were chosen as subjects, and their medical history, smoking and alcohol habits, exercise pattern and the results of the blood test were analyzed. The groups were classified into no-exercisers, mild to moderate exercisers and vigorous exercisers and their hs-CRP levels were analyzed according to their age. Covariant factors such as age, gender, hypertension, diabetes, smoking and BMI were used for their relation to hs-CRP according to exercise levels.

**Results:** In the elderly the hs-CRP levels rose in the moderate exerciser group and fell in the greater exerciser group but showed no statistical significance. In the middle age group the hs-CRP level showed a statistically significant inverse relationship with the level of exercise.

**Conclusions:** The groups that exercised more showed a lower level of hs-CRP and this trend was accentuated in the middle age group rather than the elderly.

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### Determinants of depression risk in elderly people in a team of Family Health Strategy- Brazil

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Depression occurs frequently in the elderly population and is a serious public health problem. This study sought to identify the determinants of risk for depression in elderly Team 1 Unit of Primary Health Care Family Health (UABSF) Eastern University in the city of Goiânia. This is a quantitative study, cross, with 92 seniors who completed a questionnaire on demographic, socioeconomic, behavioral and health status, besides the Geriatric Depression Scale (GDS-15). The prevalence of the risk of depression in the elderly was 68,5%. Predictors of depression were identified: male sex, marital status, high educational level, income, lives with family, health problems, negative perception of health status, history of hospitalization in the last six months, bad family relationships, family problems ( alcohol and other drug use

and violence). The identification of risk factors associated with its incidence may help professionals working in the Family Health Strategy to diagnose and propose interventions earlier and appropriate.

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#### Has body mass index any influence in the prognosis of elderly patients with heart failure?

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**Introduction and aim:** Though overweight worsens quality of life in many disorders, current heart failure (HF) guidelines recommend weight loss only when body mass index (BMI) is 30. However that recommendation is based on trials where elderly patients were under-represented. Therefore, what should primary care physicians recommend to their elderly patients? Our aim was to assess long-term prognostic predictors in HF elderly patients

**Material and methods:** We selected, from a group of patients previously studied to assess the prognostic value of natriuretic peptides in relation to body weight, those whose clinical record included BMI and both BNP and NT-proBNP blood levels. Then, we followed up them to know whether they were alive or not. A univariate analysis and a logistic regression model were used to analyze the data; the following variables were included in the regression model: sex, age, BMI, BNP and NT-proBNP levels.

**Results:** 51 patients met the inclusion criteria, [males 19 (37.3%); mean age 80.5 +/- 8.9 years]. During a mean follow up of 37 months, 11 (22%) patients were alive (group A) and 29 (56%) patients had died (group B). There were 11 (22%) lost patients. No significant differences were found regarding to NT-proBNP, BNP and BMI values between both groups. The only significant difference in the univariate analysis was found in triglycerides (group A 155.3 +/- 74.9 mg/dl vs group B 105.42 +/- 50.47 mg/dl, p 0.027). Age showed a trend to be statistically significant (group A 76.36 +/- 9.12 years vs group B 82.31 +/- 8.26, p 0,05). The logistic regression model rendered age as the only significant variable (p=0.019, relative risk 1.156, 95% confidence interval: 1.025-1.305).

**Conclusions:** In elderly patients suffering from HF, age is still the strongest predictor of fatal outcome. BMI was not found to influence prognosis in this population. Therefore, regarding weight loss recommendations in HF elderly patients, primary care physicians, due to their multidisciplinary approach to the patient, should use caution and bear in mind balancing comorbid conditions though larger trials are needed to clarify this issue.

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#### Evaluating and treating weight loss in the elderly

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**Background:** Unintentional weight loss, common among elderly people, can be difficult to evaluate. Accurate

evaluation is essential, however, because this problem is associated with increased morbidity and mortality.

**Objectives:** To review and synthesize the information published about the epidemiology, etiology, diagnosis and nonpharmacologic and pharmacologic strategies to minimize or reverse weight loss in older adults..

**Methods:** We have researched the articles published in the databases of Medline/ PubMed, Medscape, from January 2004 to October 20010, in English language.

**Review:** Prevalence estimates of weight loss among elderly people vary from 7,5 to 27%. The differential diagnosis is broad, ranging from reduced food intake to organic causes to psychological disorders. Medications may also contribute to weight loss, as may social or economic factors. Up to 1 in 4 elderly people with unintentional weight loss will have no obvious medical cause. In others, a limited set of initial symptom-oriented investigations may reveal the underlying causes. A variety of nonpharmacologic interventions may improve energy intake, whereas the role of pharmacotherapy remains limited.

**Conclusion:** The evaluation sometime yields no cause other than 'unexplained'. Consequently, continued weight loss should be monitored. An algorithm for the management of unintentional weight loss in the elderly is provided.

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#### Study on sleep quality in patients institutionalized in the Community Of Madrid, and its correlation with parameters of quality of life, pain and presence of psychopathology

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**Hypothesis and objectives:** Our main objective was to study the quality of sleep in institutionalized geriatric population, and view its correlation with risk factors for poor sleep quality in elderly patients such as pain, psychopathology, anxiety and depression, medical conditions, polypharmacy. 1. Institutionalized elderly reported poor sleep quality as measured by the Pittsburgh Sleep Quality. Scale and the Oviedo Sleep Questionnaire (COS). 2. This poor quality of sleep will be higher with increasing age in women, in the presence of anxiety-depression, with medical comorbidity, polypharmacy-pain. 3. There will be an association between poor sleep quality and poor quality of life in this age group.

**Material and methods:** 50 patients institutionalized in private residences. Inclusion criteria: - Greater than or equal 65. - Understand and sign the informed consent. - Score in the MEC >= 24, indicative of normal cognitive functioning. - Not having a medical condition or severe psychiatric or sensory deprivation (blindness or deafness) intense, which could interfere with the completion of questionnaires. All participants had to sign a consent form, a protocol that reflected the demographic and clinical variables of patients, medical puripatología polypharmacy, and the scales: MEC-35, PSQI, COS, HADS and ENID. Results of studies: Women scored worse in the global PSQI, latency of the PSQI, total sleep time, sleep efficiency, sleep disturbances of the PSQI, Oviedo insomnia, HAD anxiety. In the SF-36, scored worse in physical role, social function and bodily pain, worse for patients in the group with most severe pain. The patients in the group with ENID > 5, worst score in the two subscales of the COS, the subjective perception and insomnia.

**Discussion:** We found that in institutionalized elderly patients there is a poor sleep quality, higher among women, and is associated with a poorer quality of life, more pain and more psychopathology. In future, we intend to conduct a comparative study of institutionalized geriatric population and geriatric population in the community who came to the Primary Care Centre, using the same assessment tools.

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**Primary health care practice and research: the importance of "everyday life" in drug therapy for older patients with multimorbidity**

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**Aims:** There is a tension between adherence to evidence-based practice guidelines and possible harmful consequences of multi-medications in older patients with multimorbidity. The aim of our study was to identify the criteria that family physicians apply when they select pharmaceuticals for older patients with multimorbidity

**Material and methods:** After approval of the institutional review board, a total of 45 family physicians currently practicing in Saxony-Anhalt, Germany, were included in the analysis. A mixed-method study design was chosen. The qualitative part of the data collection included two focus-group and two expert-group discussions. The quantitative part of the data collection consisted of a questionnaire (n=30), which included one specific item to rank criteria on a 5-point scale (ranging from 1=very relevant to 5=not relevant).

**Results:** During the discussions, participants identified four major themes that consisted of eleven criteria, including 1) "Everyday-life"-related criteria (quality of life, age, medication adherence, patient's will); 2) safety-related criteria (possible interactions/ side effects, domestic environment); 3) life expectancy; and 4) physician-related criteria (adherence to best practice guidelines, economical and juridical considerations). The physicians ranked the following criteria as most relevant: 1) quality of life (Mean=1.68, SD=0.58); 2) safety-related criteria (Mean=1.74, SD=0.77); and 3) the patients will (Mean=2.15, SD=0.53).

**Conclusion:** Patient and safety-related factors associated to the patient's "everyday life" seem to be of particular importance. However, current evidence-based guidelines fall short in addressing criteria of "everyday life". Thus, if implementation of evidence-based guidelines in primary health care is to be achieved, we need to engage in research that helps us to further understand what "everyday life" means and to create evidence that evaluates the quality and safety of drug therapy in the context of the "everyday life".

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**Evaluation of risk factors for downs of old persons**

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**Aims:** Evaluation of risk factors for downs of persons elder than 65 years. Evaluation of representation external towards internal risk factors for downs same as mental capabilities of

patients which took participation in survey.

**Method:** Study accounted patients who live in the city center, suburb and village area of Banja Luka city. Survey comprises questions such as patients ambient of the living space (flat or home), evaluation of possibility for movements and difficulties during movements, illnesses of the person and the medication which are taken. All things previously mentioned are evaluated with Morse fall Scale and with the Hendrich II fall risk model. Mini mental test (MMSE) is used to evaluate mental capability of the persons.

**Results:** Results have been analyzed, statistically processed and also presented in tables and graphs. It has been examined 90 persons in total, 70 percent of the number is elder than 80 years, 30 percent of the total number has had a fracture during the previous downs, and 80 percent is using more than 3 medicines. It has been concluded that 97 percent of the examined persons have a high risk of having a down or a fall.

**Conclusion:** Difficulties in conduction of daily living activities, decrease of movability, absence of family support and institution often leads to depression. Consequences of these changes are: poor quality of life, premature sickness and dying. It is prevailing low social economic status of the persons who took participation in the survey.

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**Elderly health service: an introduction**

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**Background:** - Aging population is a growing problem globally. - In 1997, the Chief Executive of the HKSAR, during his policy address, iterated his commitment to the development of elderly health services as a priority - The Elderly health service was established in July 1998 to enhance primary health care service for the elderly. The Elderly health service: Vision: - To provide quality primary health care services for promoting the health of our elderly population Mission: - To provide client-oriented services. - To adopt a whole-person, multi-disciplinary team approach. To develop expertise and professionals in primary health care for the elderly. - To enhance intersectoral collaboration and community participation. The elderly health Centres: Characteristics: - Family medicine approach - Multi-disciplinary input Visiting Health Teams: Examples of health promotion projects: health Education materials and media publicity:

**Conclusion:** When we truly believe in the philosophy of primary health care and work hard at it, our effort will make a difference.

## Cardiovascular diseases

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### Prevalence and control of the cardiovascular risk factors in patients with chronic kidney disease

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**Aims:** To study the prevalence and the control level of the cardiovascular risk factor (CVRF) in patients with chronic kidney disease (CKD).

**Material and methods:** Desing: Descriptive observational study. Setting: Primary care health centre. Participants: The patients diagnosed as having CKD using MDRD4 equation, among all the patients who were seen in the primary care health centre during a period of three months, were selected. Main measurements: Glomerular filtration rate calculated by the equation MDRD-4, level of CKD, presence of hypertension, diabetes, hypercholesterolemia, smoking, obesity with BMI >30. A good level of BP control was defined as having figures lower than 130/80 mm, a good level of diabetes HbA1c<7, a good level of hypercholesterolaemia LDL <100. Prescribed medication was also studied.

**Results:** 139 patients, 61% women, between 38 and 95 years, average 74 years. 73% in level 3 of CKD, 42% with two CVRF and 24% with three or more CVRF. 63,5% with Hypertension, 42% Diabetic, 54% hypercholesterolemia, 13% obese people, 6% smokers. Good control in 45,5% of the hypertensive patients, 56% of the diabetic and 26% of the hiperlipemic. 35% of the hypertensive patients are treated with only one drug, being the most commonly used IECAS 12%, Diuretics 11% and ARA II 6%.With two drugs 43% and with three 18%. The most usual combinations are IECA or ARA II with diuretic 28%, IECA or ARA II with Calcium channel blockers 15%. In diabetic people the antidiabetic drugs most commonly used are metformin 32%, sulfonylureas 11% and insulin 8%. Combination of two oral antidiabetics 29%, combination of insulin and oral antidiabetic 6%. In hiperlipemic people 46% are treated with statins.

**Conclusions:** Patients with CKD have a high cardiovascular risk. High rate of well treated diabetic and hypertense patients. Need of drugs combination to obtain a good control. Bad control of hypercholesterolaemia, probably due to the insufficient use of statins.

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### Coronary risk of the workers in a emergency department

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**Aims:** Valuation of cardiovascular risk factors (CVRF) and calculation of coronary risk of the emergency staff.

**Material and methods:** Observational descriptive study in Emergency Department, from January to August 2009. Emergency Service workers, from all professional roles that voluntarily decided to take part. Measures and interventions: Tracing register with epidemiology data, family and personal precedents relating with cardiovascular diseases;

measurement of blood pressure, weight and height, smoking, exercise, diet, glycemia, cholesterol (total, HDL and LDL), electrocardiogram and usual medical treatment. Measurement of coronary risk at 10 years through the classic table of Framingham and adapted tables for Spanish population (Regicor, 2003).

**Results:** From 94 subjects, 55 took part on the study, whose 34 are female and 21 male. Average values and standard deviation: Age 36 +/- 9 years, body mass index 26.6 +/- 5 Kg/m<sup>2</sup>, systolic blood pressure 122 +/- 5 mmHg, diastolic blood pressure 77 +/- 11 mmHg, basal glycemia 95 +/- 11 mg/dl. Prevalence of CVRF: sedentary lifestyle 54%, obesity 31%, tobacco use 31%, dyslipidemia 18%, hypertension 13% and diabetes 3.6%. It was performed electrocardiogram to 50 participants detecting 6 left ventricular hypertrophy cases (3 for Cornell criterion and 3 for the Sokolow-Lyon criterion). The average coronary risk considering the Framingham table was 3,4 +/- 3,3% (n=38 subjects >= 30 years old) and 2 +/- 0,9%, considering Regicor table (n=25 subjects >= 35 years old).

**Conclusions:** Regarding CVRF, to highlight the high percentage of sedentary lifestyle, obesity and smoking among the evaluated emergency staff. About the low coronary risk detected, just to remark that is due, basically, to the age factor and so in the tables gets a low mark. In a low measure, the antihypersensitive and hypolipemic agent of some participants have contributed to improve the values of blood pressure and cholesterol decreasing the marking scale.

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### Anticoagulant therapy and ischemic stroke

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**Aims:** To determine the prescription of antiplatelet or oral anticoagulant treatment at discharge in patients hospitalized for ischemic stroke.

**Material and methods:** A cross sectional descriptive study performed at a Primary Care Center and its reference hospital. All patients with diagnosis of cerebrovascular event in 2007 were included. Sociodemographic variables, cardiovascular risk factors (smoking, alcohol, hypertension, diabetes mellitus, hypercholesterolemia and obesity), vital signs and blood test results were registered. The information was obtained by reviewing the computerized medical report.

**Results:** We included 297 patients, 242 of whom suffered an ischemic stroke. 65.3% were men with a mean age of 69 plus-minus 13.4 years. Hypertension occurred in 79.6%, diabetes mellitus 80.6%, dyslipidemia in 80.2%. 40 patients had chronic atrial fibrillation. The 20.87% of the total were previous treated with aspirin, 3.36% did so with Clopidogrel and only 7.07% with any oral anticoagulation before the stroke. We recorded the percentage of patients who were prescribed aspirin, clopidogrel or oral anticoagulant treatment at discharge, with results of 34.68%, 24.91% and 12.12% respectively.

**Conclusions:** The benefits of anticoagulation, in routine clinical practice conditions, reducing risk of stroke are greater than the risk of appearing of bleeding complications in patients over 65 years. The main reasons for the non-indication of anticoagulant use to be a limited

knowledge of clinical practice guidelines by the doctor and the fear of bleeding in the patient.

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#### Prevention of cardiovascular risk factors in patients with heart failure in family medicine

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The objective of this study was to investigate the presence and control of cardiovascular risk factors in patients with heart failure (HF).

**Methods:** 62 family physicians registered all patients with diagnosis of HF during regular office visits. All physicians performed detailed physical examinations and completed the special designed questionnaire. Blood samples were taken for lipid profile and glucose level. We used data from paper medical record about cardiovascular risk factors and their treatment.

**Results:** We studied 958 patients (457 males and 501 females). Mean age 64.1 +/- 9.5 years. 63.2% of patients had arterial hypertension, 36.5% had BMI  $\geq$  30 kg/m<sup>2</sup>, 21.4% had diabetes, and 49.6% had hyperlipidemia. 72.6% of patients had at least two important modifiable risk factors for cardiovascular disease (hypertension, hyperlipidemia, smoking, obesity, diabetes); 32.6% of patients had all three risk factors. 24.5% of patients had the target blood pressure, 32.4 % of patients had the target values of total cholesterol, and 82.1 % of patients were non-smokers. Obese patients were less efficient in achieving therapeutic targets. Only 86 (9.2%) of patients were non-smokers and had optimal control of blood pressure and cholesterol level. The pharmacotherapy of risk factors in HF by family doctors was found in some instances not to conform to recommended guidelines.

**Conclusions:** It has been shown that modifiable cardiovascular risk factors in patients with HF were poorly controlled. Controlling hypertension, diabetes mellitus, body weight, lipid profiles and also educating people not to smoke, will help to reduce the cardiovascular risks and prevent the progression of HF.

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#### The usage of aspirin and clopidogrel with ischemic heart disease

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**The aim:** To show the extent to which our patients use two basic medicines, Aspirin and Clopidogrel, to prevent and control undesirable thrombosis.

**Methodology:** The research employed a questionnaire. Seventy patients with ischemic heart disease have been interviewed.

**Results:** 14 men have stabile angina pectoris. Aspirin is regularly used by 12(85,7%), from time to time by one man (7,1%), while one interviewee never used it. 19 women have stabile angina pectoris, 12 take Aspirin regularly (63,15%), 5 from time to time (26,3%), 2 take nothing because of stomach bleeding (10,5%). None of them takes Clopidogrel combined with Aspirin. Out of 3 women with unstable angina pectoris, 2 take Aspirin regularly and Clopidogrel from time to time, when they have enough money to buy it, while one woman takes both medications regularly. Out of 9 men with myocardium, only 2 take Aspirin and Clopidogrel, 3 only Aspirin, while the rest take nothing. It is only that 100% men and women with implanted stent use Aspirin and Clopidogrel, 6 men and 3 women.

**Conclusion:** Despite the unambiguous benefit that can be obtained by double therapy, few our patients use it because of its high price.

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#### Prevalence of cardiovascular risk factors in menopauses

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**Aim:** Cardiovascular diseases are leading cause of death in Bosnian women. We determined the prevalence of cardiovascular risk factors in postmenopausal women who receive care in Family Medicine Teaching Center (FMTC) Tuzla.

**Design and methods:** This study included 60 randomly selected women from FMTC who were in postmenopausal stage at least 5 years. We analyzed cardiovascular risk factors: blood pressure, total cholesterol (TC), triglyceride (TG), body mass index (BMI), blood glucose in patients with diabetes, smoking habits and family history.

**Results:** Mean age of participants was 66,65 +/- 7,86 years; mean age for the last menstrual period was 48,9 +/- 5,05 years. Hypertension had 55 (91,67%) women, 53 (88,33%) had hypelipidemia, and 10 (16,67%) women had diabetes mellitus. Mean systolic/ diastolic blood pressure was 135,42 +/- 19,36/82,83 +/- 10,22 mmHg; mean TC was 6,15 +/- 1,31 mmol/l; mean TG was 1,99 +/- 1,34 mmol/l, mean glucose level for diabetic patients was 7,63 +/- 1,85 mmol/l. More than half of women were obese (65%), 28,33% were overweight, while only 6,67% women had normal BMI. Mean BMI was 30,15 +/- 4,03 kg/m. Majority of women had never smoked (63,37%); 15 (25%) were daily smokers, while 7 (11,67%) were ex-smokers. The most prevalent cardiovascular disease was stroke (21,67%), 16,67% women had angina pectoris, while 5 (8,33%) women had diagnosis of heart attack. More than one quarter of women (28,33%) had positive family history for cardiovascular disease.

**Conclusion:** Results of this study showed high prevalence of modifiable cardiovascular risk factors in postmenopausal women that suggest an unfavorable effect of menopause on cardiovascular risk factors, especially on body weight.

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**Coronary risk of the workers in an emergency department***Alonso R, Saiz C, Roche D, Pérez J, Abia M, Santiago T*

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**Aims:** Valuation of cardiovascular risk factors (CVRF) and calculation of coronary risk of the emergency staff.

**Material and methods:** Observational descriptive study in Emergency Department, from January to August 2009. Emergency Service workers, from all professional roles that voluntarily decided to take part. Measures and interventions: Tracing register with epidemiology data, family and personal precedents relating with cardiovascular diseases; measurement of blood pressure, weight and height, smoking, exercise, diet, glycemia, cholesterol (total, HDL and LDL), electrocardiogram and usual medical treatment. Measurement of coronary risk at 10 years through the classic table of Framingham (Anderson, 1991) and adapted tables for Spanish population (Regicor, 2003).

**Results:** From 94 subjects, 55 took part on the study, whose 34 are female and 21 male. Average values and standard deviation (SD): Age 36 (9) years, body mass index 26.6 (5)Kg/m<sup>2</sup>, systolic blood pressure 122 (5) mmHg, diastolic blood pressure 77 (11) mmHg, basal glycemia 95 (11) mg/dl. Prevalence of CVRF: sedentary lifestyle 54%, obesity 31%, tobacco use 31%, dyslipidemia 18%, hypertension 13% and diabetes 3.6%. It was performed electrocardiogram to 50 participants detecting 6 left ventricular hypertrophy cases (3 for Cornell criterion and 3 for the Sokolow-Lyon). The average coronary risk was 3.4 (3.3) % considering the Framingham table (n=38 subjects) and 2 (0.9) % considering Regicor table (n=25 subjects).

**Conclusions:** Regarding CVRF, to highlight the high percentage of sedentary lifestyle, obesity and smoking among the evaluated emergency staff. About the low coronary risk detected, just to remark that is due, basically, to the age factor and so in the tables gets a low mark. In a low measure, the antihypertensive and hypolipemic agent of some participants have contributed to improve the values of blood pressure and cholesterol decreasing the marking scale.

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**Expenditure in a health centre due to hypertension pharmacological group drugs***Flores J, Guillen F, Requena R, Esparza E, Ortega R, Esteban E, Martin S, Del Puerto MM, Gea P*

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**Aims:** Knowing the cost of antihypertensive drugs in our Health Centre.

**Material and methods:** Retrospective cross-sectional descriptive study from June 2009 to May 2010. The population attended at the Centre is 17,725 patients,

assigned quotas of 12 adults. The sample consists of 3,462 patients with diagnosis of hypertension according to medical record (AP IMO). Expenditure data were provided by the Department of Pharmacy Management Area II, to which our health centre belongs.

**Results:** The variability of expense per quota in our centre ranges from 181.66 Euros / year to 331.75 Euros per year per hypertensive patient. In our team the ARA II (alone or in combination) are the most used drugs (60%), followed by calcium antagonists (11.89%). The prescription profile in the area is similar to the team with a 62.63% ARA II (alone or in combination) and 10.98% of calcium antagonists. The least used are the agents acting on the renin angiotensin and adrenergic peripheral vasodilators, both in our team and the area.

**Conclusions:** Expenditure on ARA II, both alone and in combination, is very high in our centre as well as in the area. Group drugs expenditure is similar in our team and in the area. There are differences in spending per patient treated among team physicians.

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**Relationship between the cardiovascular risk in patients with metabolic syndrome and "hypertriglyceridemic waist"***Sanchez Ruano F, Santonja Granados A, Llobell Bertomeu V, Selles Benavent D, Martinez Moreno F, Silva Leon M*

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**Aims:** a key activity in primary prevention is to identify patients with a high cardiovascular risk (CR). Recently it has been proposed to identify patients with hypertriglyceridemic waist (HW) and act on them to more extensively in the detection of cardiovascular risk factors. We have evaluated the correlation between CR of patients with MS and those with HW.

**Methods:** cross-sectional study in patients treated in primary care. The sample was calculated for an expected prevalence of 25%, confidence level of 95% and maximum random error of 0.05. Inclusion criteria: age between 20 and 70. Exclusion criteria: pregnant women, treatments that cause hyperglycaemia, thyroid dysfunction, terminally ill patients. The MS has been diagnosed by the criteria of the Adult Treatment Panel III. The CR was calculated using the tables REGICOR (coronary risk at 10 years). The criterion of HW has been: waist circumference  $\geq$  90cm associated with triglycerides  $\geq$  177 mg/dl

**Results:** patients included 314 (54% female and 46% men). The median age was 48,9 $\pm$ 13,7 years. 32.2% hypertension, dyslipidemia 36.3%, diabetics 15.6% and 25.8% smokers. The mean index body weight (IBW) was 28,4  $\pm$  5.6. Distribution according to IBW and HW: 0,3% underweight; normal weight 31.5% (1% HW); 14,6% overweight grade I, (13,04% have HW); 21% overweight grade II (18,18% with HW); 20,7% type I obesity (26,15% with HW); 8,9% type II obesity (35,7% with HW); 2,8% type III obesity (55,5% with HW). The prevalence of MS was 42.3%. Coronary risk in patients with MS: 5.4  $\pm$  3.2; without MS: 2.1 $\pm$ 2.1; in patients with HW: 4.64  $\pm$  3.6 and without HW: 3.34  $\pm$  2,9 (p=0,0062). Coronary risk in patients without MS or HW is 0,96  $\pm$  0.3; and in the presence of both: 5.33  $\pm$  3.1; with HW but MS: 1.44  $\pm$  0.5; and without HW but MS: 4.08  $\pm$  2,7 (p<0.0001).

**Conclusions:** the higher CR is detected in patients with MS

and HW, but the HW has no sensitivity for detecting patients with high CR in the absence of MS, since the presence of HW did not significantly modify the cardiovascular risk. Therefore, although simple to use, the presence of HW was not detected in our study increased CR with the identification of MS.

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#### Relative risk (RR) of dying after first stroke according to the different associated factors. Univariate analysis.

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**Aims:** Identify the associated factors to long survival after the first ischemic stroke.

**Material and methods:** Cohort study collected by a community based register between 04/01/2006 to 03/31/2008. The average follow-up was 29,7+/-13,4 months. To establish the presence of first episode of cerebrovascular disease, was required a hospital or neurologist report with the diagnosis of transient ischemic attack or ischemic stroke. Statistical analysis consisted of a bivariate and univariate regression Cox to develop different models incorporating 2-4 covariates and survival analysis with Kaplan-Meier curves.

**Results:** 555 patients were enrolled, 15 to 90-year-old, 48.8% were female. The 26,4% died. The probability of global survival of 0,96 (IC 95% 0,94-0,97) first month; 0,84 first year (IC 95% 0,80-0,87), and 0,69 (IC 95% 0,65-0,72) fourth year. If we use the whole group, the risk factors of minor global survival were: 80-year-old major patients (RR 1,55-2,96); male (RR 1,18-4,04); diabetes (RR 1,10-2,15) treated with associated medication (RR 1,23-6,61); hypertension treated with associated medication (RR 1,05-7,05); haemorrhagic stroke (RR 1,5-3,80); clinical severity measured with NIHSS over 13 (RR 2,7-9,1); history of recurrent cardiovascular event (RR 1,19-7,28); doctor of reference was a man (RR 1,13-2,33); and in those who were not treated with thrombolysis by exclusive previous reasons (RR 1,4-5,5). If we use just the women group less than 80 year-old, the main predictors variables were the severity of the clinical picture evaluated by NIHSS (RR 1.08-1.17) and the thrombolysis shown (RR 0,0000) the most protective effect on mortality .

**Conclusions:** The list of the factors associated to mortality will improve data comparisons about the kind of medical interventions that we can do in clinical practice, research or intervention trials, and facilitate benchmarking among the regional health systems to reduce the burden of stroke.

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#### Predictable factors that change INR levels of oral anticoagulation therapy

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**Aims:** To determine the factors that can alter the INR (International Normalized Ratio) in population treated with oral anticoagulant therapy in regular controls in primary care and distinguish the predictable and most prevalent ones.

**Materials and methods:** Descriptive transversal study performed in a Primary Care Centre, which included all patients who submit INR values outside the therapeutic range established for their underlying pathology, in monthly routine checkup. Patients were recruited during the months of July to December 2010. Of all of them personal data were collected (age, sex, disease that caused the prescription of anticoagulant therapy) and all answered a questionnaire asking about possible causes of alteration of the INR level (previous days presence of a banal disease, drugs or dietary transgressions) and compliance of the weekly dose of acenocoumarol.

**Results:** We collected a total of 210 patients, 36 of whom had an INR outside therapeutic range. 60% were women with a mean age of 75 years. In a 100% of the cases the indication for acenocoumarol therapy was chronic atrial fibrillation. A 17.14% had respiratory infection, a 5.7% had gastrointestinal disease and a 2.8% had mild urinary pathology, prior days to the INR control. The 28% took unusual drugs the previous days. 8.57% acknowledge having made dietary transgressions and 11.42% did not follow a strict adherence (for instance, forgetting some doses).

**Conclusions:** There are many factors that influence the alteration of levels of acenocoumarol. Most of them may be predictable, such as prescribing drugs that interact (the most prevalent factor), mistakes in the compliance of the prescription or taking unusual drugs (especially without medical support). It is important a proper patient education on this type of chronic treatment to avoid these predictable factors.

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#### The awareness of stroke warning signs among primary care patients

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**Aims:** Stroke is the third leading cause of death in Europe and the United States, after heart disease and cancer. This is the most common cause of adult physical disability. Recognition of early stroke symptoms by the public and activation of the emergency medical services are the most important factors in pre-hospital stroke care. The aim of this study was to analyses patient's knowledge of warning signs

in stroke.

**Material and methods:** A questionnaire was distributed to 167 primary care patients, at age 21 to 81, in four family medicine practices. A multiple choice questionnaire was designed and divided into three sections: knowledge of stroke signs, patient's medical condition and sociodemographic data. The number of correct answers to particular questions was analyzed.

**Results:** Most respondents recognized at least one warning sign: 86,67% recognized sudden facial, arm or leg weakness; 85,45% recognized sudden confusion or trouble speaking; 80% recognized sudden trouble walking; 50% recognized sudden vision loss; and 46,39% recognized sudden headache. However, the results indicated that the number of respondents who recognized all the five symptoms and identified one incorrect symptom was low (18,56%), especially among patients who have had heart attack (5%) and stroke (8,33%).

**Conclusions:** The results of this analysis indicate that public awareness of single stroke symptoms is high, but the ability to recognize all the major warning signs is low.

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#### The frequency of anxiety disorder in hypertensive patients and effects to the treatment

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**Objective:** Hypertension is a major public health problem with serious complications if left untreated and has an increasing incidence especially in developed and developing countries. This study is done to investigate anxiety levels and its effects to the treatment.

**Material and method:** This study is done with primary hypertensive patients consulted to GATA Internal Medicine Polyclinic. SPSS 15.0 for Windows pocket programme was used to assess the datas.

**Results:** 63.46% (n=33) of patients were female and 36.54% (n=19) male. Mean age of patients was 57.33+/-15.88 (20-91). When Beck Anxiety Inventory (BAI) scores of patients were examined, the average score was found as 14.61+/-8.80 (3-36) and 25% (n=13) of patients had minimal anxiety, 36.5% (n=19) mild, 25% (n=13) moderate and 13.5% (n=7) severe anxiety. When comorbid diseases were evaluated, 34.6% (n=18) with Diabetes Mellitus, 3.8% (n=2) Chronic Obstructive Pulmonary Disease, 25% (n=13) Thyroid Disease, 23.1% (n=12) Vitamin B12 Deficiency and 48.1% (n=25) Dyslipidemia. As a result of clinic blood pressure measurement, 26.92% (n=14) of patients blood pressure levels were not at target value (130/80 mmHg for Diabetes Mellitus and 140/90 mmHg for other diseases). In terms of systolic blood pressure levels, 26.92% (n=14) were not at target and this rate was found as 11.53% (n=6) for diastolic blood pressure. The mean systolic blood pressure was detected 137.50+/-18.79 (110-180), while the mean diastolic blood pressure was 79.38+/-7.71 (60-90) in polyclinics There was not a statistically significant difference between BAI scores and blood pressure values at target (p>0.231).

**Conclusion:** Chronic diseases of hypertensive patients can lead to psychological problems. Anxiety disorders are the most frequent cause of these problems. For this reason, family physicians are suggested to keep outpatient psychiatric screening scales in polyclinics.

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#### Reliability and Validity of pulse taken by nurses for the detection of cardiac arrhythmias in Primary Health Care

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**Aims:** Pulse taking is an activity that has been usually carried out by nurses. At present, it is no longer made, due to the use of automatic devices. The aim of this study was to determine the variability and validity of taking the pulse for the detection of arrhythmias in Primary Health Care.

**Design and methods:** Design: Cross sectional study - Population: 300 patients older than 65 who attended the nursing room for blood extraction, for any health reason. - Measurements: Four different nurses took consecutively the pulse of all patients in blind form. The pulse was rated dichotomously as rhythmic or arrhythmic and afterwards, all patients had an electrocardiogram done. - Gold Standard: all the electrocardiograms were taken by the same family doctor in order to identify cardiac arrhythmias. We are considered the regular or normal or physiological rate when there were intervals or constant spaces between equal waves. The normal rate knows as Regular Sinusal Rate (RSR) (Linder Dubin. Masson Edit 2002)

**Results:** The prevalence of arrhythmias in the sample was 22% (n=300). The concordance observed between the different nurses varied between 92% and 94%, and the Kappa Index between 0.54 (p <0,05) and 0.67 (p <0,05). The sensitivity of the pulse takes to detect arrhythmias has varied between 23% and 26% and specificity between 95% and 96%. The positive likelihood ratio varied between 4,43 (CI 95% 2,18-9,00) and 7,88 (CI 95% 3,77-16)

**Conclusions:** - Taking the pulse is a traditional nursing activity, inexpensive and easy to do. - Nurses are able to detect about 50% of arrhythmias by means of taking pulse. - The diagnostic gain obtained after taking the pulse is about 40%.

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#### Control of cardiovascular risk factors in patients with chronic kidney disease (CKD) in an urban community health center

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**Aims:** 1) Determine whether the following parameters are within those recommended by evidence for patients with CKD: BP, HbA1c, LDL, HDL, albumin/creatinine ratio (A/C) 2) Check therapy: use of ACE inhibitors or Angiotensin receptor antagonists (ARA) in patients with A/C over 20mg/g, Statins in patients with LDL over 100mg/dl and the non-use of NSAIDs 3) Identify comorbidities

**Material and methods:** Design: Transversal, descriptive. Subjects: All the patients with CKD of the health center.



Measurements: Age, CKD stage, BP, analytical data, pharmacological treatments and comorbidity.

**Results:** Total patients 245 (40% men, 60% female). Age: 75 years old (SD13), CKD Stage: 1-2:7; 3:218; 4-5:20. BP(mmHg): SBP: less than 125:63; 125-130:26; 131-140:73; over 140:83; DBP: less than 75:146; 75-80:44; 81-90:42; over 90:13. Analysis: HbA1c less than 7%:52; LDL(mg/dl) less than 100:66; over 100:179; HDL(mg/dl):53.54(SD36.9); A/C(mg/g):58.4(SD156.9). Patients with A/C over 20:78. Treatment with ACE inhibitors or ARA in patients with A/C over 20:60. Treatment with statins in patients with LDL over 100:55. Treatment with NSAIDs: 18. Comorbidities: DM: 82; hypertension: 225; CHD: 34; stroke: 26; peripheral arterial disease: 13.

**Conclusions:** SBP is less than 130mmHg at 36.32%, DBP is less than 80mmHg at 77.56%. There were no patients with A/C over 500mg/g to consider values less than 125/75mmHg. The HbA1c is less than 7% at 63.41%. LDL is less than 100mg/dl at 26.94%. There are 179 patients with LDL over 100mg/dl of which 30.73% is treated with statin. There are 78 patients with A/C over 20mg/g of which 76.92% is treated with ACEIs or ARA. There are 92.7% not treated with NSAIDs. Considering that the more prevalent comorbidity was the hypertension (91.8%) is important intensify their treatment to adjust to the recommended values, as well as improving the treatment of dyslipidemia and proteinuria. To achieve this goal will be workshops in the health center to raise awareness among physicians of the proposed recommendations for control of CKD.

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#### Ankle-brachial index measurement in a municipality family health care system for diagnosis of peripheral arterial occlusive disease

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**Aims:** Ankle-brachial index (ABI) measurement is a useful non-invasive diagnostic tool for peripheral arterial occlusive disease (PAOD) in daily practice in major vascular centers. However, in family medical practice, ABI measurement was never used routinely! The aim of our study was to analyze the usefulness of a pocket-size, mobile ABI device in a daily practice of a family medicine physician.

**Material and methods:** The study was performed in a municipality primary health care system from January 1st, 2010 through December 31st, 2010. 70 patients (aged 50+) underwent ABI measurement, after complaining of leg pain after various walking distance, using xxx device. The ABI examination followed palpation of groin, popliteal and pedal pulsations, and aortic and groin auscultation. Risk factors for atherosclerosis were recorded. The ABI values less than 0.5 (Group A) were considered significant for PAOD, and such patients were immediately referred to a vascular surgeon. The patients with ABI values from 0.5-0.75 (Group B) were referred to vascular surgeon as well, but in a non-urgent setting. The patients with ABI over 0.75 (Group C) were treated medically with antiplatelet dual therapy (clopidogrel, acetyl-salicylic acid), and were referred to vascular surgeon only if diabetic gangrene was seen.

**Results:** 43 male and 27 female patients (average age 64.3) underwent ABI measurement. There were 15 patients in Group A (10 male patients), 45 patients in group B (28 male patients) and 10 patients in Group C (5 male patients).

**Conclusions:** In a country like Serbia, with high incidence of atherosclerosis, routine ABI measurement is justified, for it might assist a family practitioner to diagnose PAOD on time, and make high-quality decision about medical treatment and/or refer such patients to a vascular surgeon.

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#### Utility of ankle brachial index in high cardiovascular risk patients

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**Aims:** 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 associated factors 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 limbs ischemia) examined in primary care service. Consecutive sampling. Sample size = 126 patients (alfa=0.05; precision 93%) Variables: Dependent variable: ABI. Independent variables: age, gender, 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 >1 > (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% 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 was 7.17, LDL average 115.12, BMI average 30.18. 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 pulses exploration.

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#### Practical aspect of application of antihypertensive drugs

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**The aim:** of this study was to determine the percentage of employment of certain groups of anti-hypertensive drugs in patients with successfully treated hypertension observed in certain populations.

**Methods:** A total of 499 patients was examined. Verified the

diagnosis of hypertension had 312 patients, which makes 62.7% of all treated patients. We applied the prospective method of data collection on patients during doctor visits in the 4 months until March 2010, recording the applied measures, drugs, and measured blood pressure. We use a worksheet for data collection, modified according to their own needs.

**Results:** After four months are excluded 2 patients who died because of worsening complications. Of 310 patients who were left, 114 (or 36.7%) had blood pressure (BP) below 140/90 mm Hg, which is an improvement of 6.7%. Patients with well-regulated BP are an average of 3.2 used anti-hypertensive drugs. Percentage of patients: angiotensin-converting enzyme inhibitors ACEI 85%, diuretics 63%, Ca-channel blockers 62%, beta blockers 52%, ATI 5% and others 5%. Patients in groups with high blood pressure are used less anti-hypertensive drugs, on average 2.7 drugs per patients. Percentage of patients: ACEI 60%, diuretics 58%, Ca blockers 52%, beta blockers 47%, ATI 4% and others 9%. There was a statistically significant lower use of ACEI in the group of patients with hypertension, poorly regulated ( $p < 0,001$ ).

**Conclusion:** To achieve good results in the treatment of hypertension should be extensively applied non-pharmacological recommended measures. In this population of patients with mean age 65.5 years and with co-morbidity in 78% of patients, it is necessary to use 3 or more anti-hypertensive drugs. It is necessary to use drugs from all the registered groups of anti-hypertensive by special indications and contraindications to achieve good blood pressure control, in which the ACEI and ATI extract its efficiency and a small number of adverse effects.

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#### Project to create and consolidate a permanent group to research cardiovascular diseases in primary health care

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**Aim:** To create and accredit a permanent research group formed by Primary Health Care professionals interested in researching the topic of cardiovascular diseases in the North Barcelones and Maresme areas at the Institut Catal de la Salut.

**Material and method/Results:** Recent studies on community prevalence and cohort have been completed by professionals from 27 teams, covering a population of 573,000 people. As a result, at present they concentrate on four areas of research: Peripheral arteriopathy: "Prevalence of the peripheral arteriopathy and predicted value of its silent ways related to cardiovascular mortality". Funding FIS-2007 (PI070403), "Vascular events at short- to mid-term on individuals with peripheral arteriopathy". Funding ETES (PI07/90415). "Is it possible to determinate the rate of the ankle-arm without using mercury?" (an ongoing project). "Tracking of a community-cohort with and without peripheral arteriopathy to determine its predictive value pertaining to cardiovascular and mortality events". Project presented at the FIS 2009 notification PS09/01290 Heart failure: "Impact of a several factors surgery to decrease the levels of NT-proBNP on patients with heart failure in Primary Health Care" (project awaiting funding). Stroke and cerebrovascular risk: permanent collaboration channels already exist between Primary and the Instituto de Neurociencias del Hospital Universitario Germans Trias y Pujol of Badalona; two projects

are ongoing and a further two already completed. A study lead by nursing staff will hold a group community workshop to increase efficiency and control of cardiovascular risk factors.

**Conclusions:** To consolidate the group with a view to establishing continuous research in Primary Health Care and to keep active the research areas already created.

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#### Longitudinal evaluation of quality offered in a health center to CVR patients

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**Aims:** To evaluate the evolution of the measurement of cardiovascular risk (CVR) in a primary care clinic. Material and methods:

**Design:** Descriptive longitudinal. Location: quota of family medicine in a city health center.

**Subjects:** Patients included in the CVR program in 2005, 2006, 2007, 2008, 2009 and 2010: inclusion criteria: having at least one cardiovascular risk factor: smoking, high blood pressure (hypertension), dyslipidemia and / or cardiovascular disease (CVD). In 2005 and 2006 all patients were analyzed ( $n_1 = 316$ ,  $n_2 = 353$ ); subsequent evaluations conducted systematic random sampling ( $n_3 = 89$ ,  $n_4 = 90$ ,  $n_5 = 106$ ,  $n_6 = 114$ ,  $\alpha 0.05$ , accuracy 0.10). Annual evaluation.

**Method:** The quality criteria were: CVR measurement using the SCORE chart at least once in each of the years studied and taking acetylsalicylic acid (ASA) in the presence of CVD (standard since 2008). Compliance and confidence interval at 95%.

**Results:** In 2005, the SCORE table was measured at 31.1% (25.9 to 36.1) in 2006 was 34.3% (29.3 to 39.2), in 2007 a 67.42% (57.68-77.15) a statistically significant difference from previous years. In 2008 a 75.9% (67.8-83.7), this improvement not being significant. In 2009 was measured at 62.3% (53.1-71.5) and in 2010 to 66.7% (58.01-75.32) The ASA intake in CVD cases was met at 33.3% (2.53-64.1) in 2008; at 69.2% (44.1-94.3) in 2009 and 66.6% (46.5-86.83) in 2010.

**Conclusions:** The criteria of quality care to patients with cardiovascular risk improved in the first year follow-up and has stabilized at around 70% compliance.

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#### Arterial hypertension and intermittent claudication

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**Aim:** Determination of characteristics and control of arterial pressure in hypertensive patients with intermittent claudication(IC). In case, those patients show other cardiovascular risk factors, valuation if the control is ideal.

**Methods:** Descriptive Transversal Study.

**Subjects:** Hypertensive patients with intermittent claudication at a primary care urban department. Data collection: revised clinical histories of 271 hypertensive patients with a diagnosis of IC. A sample of n=133 patients was obtained. Variables: we used the following cut-off points for optimal control: HTA <130/80; LDL <100 mg/dl; triglycerides <150 mg/dl; glycosylated Hb <7%. Analysis: univariable analysis to determine the frequency of each variable and its distribution. An absolute frequencies table and the respective percentages have been calculated among in the qualitative variables. For the quantitative variable the average and standard deviation have been calculated.

**Results:** rate of IC prevalence among the hypertensive population was above 2.49 %. Out of the 133 patients, 77.4% were male and 22.6% female, with average age 77.15 (SD 9.82). 21.8% are active smokers, 30.1% non-smokers, 45.1% ex-smokers, 3% without information. 37.6% are diabetics, 68.4% dyslipidemics and 47.37% with other cerebrovascular diseases: 69.84% ischemic heart and 30.16% cerebrovascular disease. A good control of the blood pressure level is observed in 39.1% patients, inadequate control in 58.6%, and without data in 2.3%. Among diabetic patients (n=50), 72% showed a good control of HbA1c, 20% inadequate control, and 8% without data. Among dyslipidemic patients (n=91), 65.93% had adequate triglycerides levels, 30.77% inadequate, without data 3.30%. 36.26% showed optimal LDL, 58.24% had inadequate control, 5.50% without information. Treatments used: 74.40% used antiplatelet, 9.80% anticoagulants, 24.10% vasodilator, 49.60% statins, 72.20% ACE inhibitors; 21.05% surgical treatment.

**Conclusions:** Hypertensives with IC show an inadequate control of arterial pressure and LDL cholesterol. Treatments should be intensified, to improve the forecast of the disease. On the other hand, a lower prevalence was detected, than expected according to the reviewed literature.

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### Analysis of comorbidity and cardiovascular risk in patients with newly diagnosed hypercholesterolemia in primary care

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**Aims:** To describe the lipid profile of patients in which hypercholesterolemia is detected for the first time and to determine their cardiovascular risk and comorbidity.

**Material and methods:** Cross-sectional study conducted in primary care, in 274 subjects whose total cholesterol (TC) level was, for the first time, detected to be equal or higher than 200 mg/dl, selected by consecutive sampling. Lipid profile, cardiovascular risk factors, cardiovascular risk (SCORE and Castelli atherogenic index), comorbidity (Charlson Index) and sociodemographic characteristics were assessed.

**Results:** The mean TC was 232.9 mg/dl and 21.1% (CI: 16.2- 26.1) of the sample satisfied hypercholesterolemia criteria (TC equal or higher than 250 mg/dl). Cardiovascular risk equal or higher than 5% was detected in a 9.5% of the sample. The total lipoprotein cholesterol / HDL cholesterol ratio was higher in: males (4.4 vs. 3.8, p <0.001), Charlson

comorbidity index equal or higher than 1 (4.1 vs. 3.9, p = 0.04), smoking habit (4.3 vs. 3.9, p = 0.04), hypertension (4.2 vs. 3.9, p = 0.03), metabolic syndrome (4.4 vs 3.9, p = 0.02) and obesity versus normal weight (4.2 vs 3.7, p <0.05). We observed a higher proportion of subjects with moderate, or high, cardiovascular risk or cardiovascular disease among those with comorbidity (Charlson Index equal or higher than 1) (87.3% vs 42.3%, p <0.01).

**Conclusions:** More than a third of the subjects, in which TC was detected, for the first time, to be equal to or higher than 200 mg/dl, presented comorbidity and one out of five subjects had hypercholesterolemia (TC equal or higher than 250 mg/dl). Considering the Score function value, one out of ten subjects presented high cardiovascular risk (cardiovascular mortality equal of higher than 5% after 10 years). Both, atherogenic index and cardiovascular risk, were clearly higher in subjects with comorbidity.

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### Use of supplements of omega 3 in cardiovascular primary prevention – what is the evidence?

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**Introduction and aim:** The scientific community has awakened to the importance of Omega 3 fatty acids (Omega 3) after finding that a community of Eskimos from Greenland recorded very low rates of mortality from cardiovascular disease, despite a diet with high fat content. The explanation was at high consumption of fish rich in Omega 3. The aim of this work is review the scientific evidence of use of Omega 3 supplements as a primary prevention of cardiovascular disease.

**Material and method:** 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 2010, 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.

**Conclusions:** 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.

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**Secondary hypertension – when is it reasonable to think about it? A case report***Barros J, Galhardo M, Costa M, Ferreira J*

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**Aim(s) and background:** Arterial hypertension (AH) is an increasingly important medical and public health issue showing a strong correlation with increasing age and cardiovascular disease. Of all hypertensive patients, nearly 85-90% has essential AH; the remainder have secondary causes. Our aim is to enhance the role of the family physician in recognizing the hypertensive patients that should be screened for secondary HA and refer to hospital care to complete the following study in selected cases.

**Material and methods:** We describe the case of MNAM, female, 60 years old, caucasian, with a recent diagnosis of AH stage 1 (under medication), sedentary lifestyle, family history of AH and no history of recent medication affecting blood pressure (BP), who went in December of 2010 to emergency because of an episode of high BP level (180/100mmHg).

**Results:** After the emergency episode, she went to her family physician, in December of 2010. Her previous studies (routine blood tests, ECG, transthoracic echocardiogram) showed no abnormalities. On physical examination she had a BP of 145/80 mmHg with no other relevant features. She went to a private physician who requested several diagnostic exams including an abdominal TC angiography that showed a significant stenosis of the right renal artery due to an atherosclerotic plaque. The patient showed the results to her family physician who decided to refer her to a hospital consultation of Internal Medicine to proceed with the study and possible diagnosis of a secondary AH. Additional imaging studies were negative for renovascular AH. It was concluded that the patient has an essential AH and the renal atherosclerotic stenosis was an incidental finding.

**Conclusions:** This case highlights the importance of the right selection of hypertensive patients for secondary AH screening, with the risk of detecting incidental findings using unreasonable complementary studies.

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**Clinical profile of patients with acute pulmonary edema***Pascual I, Revuelta V, Grau I, Boqué C, Hernández S, Reig R*

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**Aim:** Describe the clinical profile of patients diagnosed of acute pulmonary edema in a Primary Care center and admitted to the referral hospital.

**Material and methods:** A descriptive retrospective study conducted in a Primary Care center and its provincial referral hospital. We included all patients with acute pulmonary edema attended in a Primary Care center between 2006-2008, referred and admitted to the hospital. Socio-demographic variables (gender, age, drug allergies, obesity and toxic consumption) and previous diagnosis of chronic

disease were registered. Information was obtained by reviewing the medical record and data were analyzed using SPSS v.11.0

**Results:** 153 patients with acute pulmonary edema were recruited. 56.2% were women with a mean age of 77.93 plus-minus 10.92 years (age range was 40 to 98 years). 83% had no history of drug allergies, 31.2% were smokers and 4.6% former smokers (although 20.3% was not collected). 66% did not consume alcohol, 3.9% were record as alcoholic and 8.5% of former alcoholism (habit was not registered in 21.6%). 76.5% did not use other drugs (23.5% not registered). 20.3% were obese. Regarding to medical history: 81.7% had hypertension, 56.2% had diagnosis of heart failure, 49.7% had prior ischemic heart disease, 46.4% had dislipemia, 41.2% had atrial fibrillation, 39.3% had type 2 diabetes mellitus and 27.5% heart valve disease. Only in 1 case there were no previous chronic disease registered.

**Conclusions:** Patients treated for acute pulmonary edema could be described as non-toxic consumers, highlighting their pathological medical history of hypertension and previous ischemic heart disease, dislipemia and atrial fibrillation. A large number of them had no previous diagnosis of heart failure. This could indicate that an important percentage of patients with heart failure begin as acute pulmonary edema or a lack of registration or detection of it, so it would be important to intensify screening of heart failure in Primary Care.

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**Does the ankle brachial index improves cardiovascular risk prediction?***Sancho A, Ansaldo M, Tajada Vitales C, Sorribes M, Perez P,*

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**Introduction:** The functions of cardiovascular risk have a low sensitivity because of the production of many cardiovascular events in subjects with low or intermediate risk. The ankle-brachial index (ABI) is an indicator of atherosclerosis disease and predicts vascular events.

**Objectives:** The aim of this study was to evaluate how the ABI reclassifies these patients. Design: We performed a transversal descriptive multicenter study (28 centers) in 3551 randomly selected patients >49 years was performed. The main variables were peripheral arterial disease (PAD) (pathological if ABI <0.9) and cardiovascular risk at 10 years calculated by Framingham, REGICOR and SCORE classifying in low, medium and high categories. Patients with low or medium risk were reclassified into high risk if the ABI was < 0.9.

**Results:** Patients with ABI < 0.9 had a higher risk compared with ABI > 0.9 < 1.4 for all scales: Framingham (45.5% versus 19.8%), REGICOR (27% versus 9.9%) and SCORE (45.1% versus 16.5%). The measure of ABI in men represented an increase in high risk category from 8.5% in Framingham, 27% in REGICOR and 6.8% in SCORE. In women, the increase was 70.4% in Framingham, 134% in REGICOR and 42.6% in SCORE.

**Conclusions:** The ABI reclassifies an important proportion of subjects to a high risk category, particularly in women and with the REGICOR function.

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**Acenocoumarol-associated intracerebral hemorrhage : A case of inappropriate prescription**Villán Villán Y, Parodi López N

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**Background:** Oral anticoagulant therapy with acenocoumarol is commonly used to prevent thromboembolic events in patients at risk. Wider use of oral anticoagulants has led to an increasing frequency of acenocoumarol - related intracerebral hemorrhage. The high early mortality is approximately 50%. Doctors have to identify clinical risk factors associated with incremental risk for hemorrhage.

**Case report:** A 84-year-old woman who has hypertension, atrial fibrillation, congestive heart failure and Alzheimer Disease living in an assisted nursing home. Treatment: Syndrome 4mg (2mg/daily three times a week, 1mg/daily four times a week), digoxin 0,25mg/daily (five times a week), furosemide 20mg/daily, Calcium 500mg/daily, sertraline 100mg /daily, fentanyl patch 50mcg/2 days, omeprazole 20mg/day, lorazepam 1mg/daily. Katz:F. Patient was brought to the emergency department with altered mental status, confusion and left-sided weakness. Previous week she fell to the floor with a head trauma. A review of systems was unattainable because of the patient's mental status changes. The patient was noncommunicative, her pupils were equal, round, and sluggishly reactive to light. Glasgow Coma Scale rating of 6. Intracerebral hemorrhage was seen on computed tomogram. INR:Error (>9). After a few hours her pupils were areactive to light and mydriatic. She was admitted to the neurology care unit.

**Analysis:** Significant differences in quality of therapy between primary care and anticoagulation clinic services have been described. Using HAS-BLED score for bleeding risk on oral anticoagulation in atrial fibrillation (score >3) indicates increased one year bleed risk on anticoagulation sufficient to justify caution or more regular review.

**Conclusions:** -An INR greater than 4 confers a markedly increased risk for intracranial hemorrhage. -Doctors should use tools for predicting bleeding risk in anticoagulated patients with atrial fibrillation for appropriate prescribing.

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**Obesity and high diastolic blood pressure in patients with hypothyroidism**Melentijevic D, Conic S, Stankovic M, Melentijevic S

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**Aim:** Obesity coexists with hypothyroidism. Increased body weight is predisposition to hypertension. Overt hypothyroidism may be associated with hypertension. We investigated presence of obesity and elevated diastolic pressure in patients with hypothyroidism.

**Material and methods:** We studied patients with diagnosed hypothyroidism, in the three-month period who visited the clinic, without other cardiovascular, endocrinology and renal disease. Anthropometric measurements were carried out,

body weight (B W), height and BMI. Sampling was carried out by groups based on BMI values according to WHO criteria for obesity. The presence of hypertension was defined as blood pressure higher than 139/89mmHg , using a standard mercury sphygmomanometer. Data were processed using the methods of descriptive statistics and analytical method to assess the significance of the difference Single Factor parametric ANOVA

**Results:** We studied 43 hypothyreotic individuals, 42 (97,67%) women, 1 man, average age 57,3±19,6. Average value of B M I was 26,78 kg/m 2. Increased value of B M I was found in 26 (60,46%) patients. In relation to B M I patients were divided into groups , n 1=17 (39,53%), n 2=15(43,88%), n 3=9 (20,93%), n 4=2 (4,65%) patients. Among the studied patients extremely obese and underweight was not. Systolic blood pressure was increased at 16 (37,21%) patients, increased diastolic blood pressure at 22 (51,16%) patients of total. We examined whether there is a difference in diastolic blood pressure among patients in relation to the level B W using Single Factor parametric ANOVA. Obtained empirical value of the Fisher ratio is F=0,27, p>0,05 (F 3;39;0,05=2,61 i F 3;39;0,01=4,31).

**Conclusion:** Analyzed data support that obesity coexists with hyperthyroidism. Not statistically proven high value of diastolic pressure in patients with high BMI who are treated for hypothyroidism.

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**Obstructive sleep apnea as a risk factor for hypertension**Guimarães I, Ramos F

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Obstructive sleep apnea (OSA) is characterized by periodic apneas and hypopneas during sleep due to recurrent passive collapse of the upper airway during inspiration. It affects between 2 to 6% of the population, being its prevalence higher in men and increasing with age. Some risk factors for OSA include obesity and craniofacial or upper airway soft tissue abnormalities. It is also suspected to have a genetic influence. OSA is thought to be an independent risk factor for systemic hypertension, being its effect more evident in raising the systolic blood pressure. It can lead to persistent elevation of blood pressure beyond the obstructive events, having an important role in the development of cardiovascular events. The mechanisms by which OSA contributes to the development of hypertension are unclear. One hypothesis is justified by the intermittent hypoxemia which induces a sustained increase in sympathetic nervous system activity and consequently blood pressure raise through increases in cardiac output, peripheral resistance and fluid retention. In what concerns with OSA treatment, lifestyle modification is important and can improve symptoms, but the main treatment is continuous positive airway pressure (CPAP). It is proven that CPAP reduces systemic blood pressure in hypertensive patients, being that reduction more substantial in patients with more severe OSA, refractory hypertension and better compliance. Implementation of therapy is of great importance, not only because even a small decrease in blood pressure reduces cardiovascular risk, but also because it improves considerably the patient's quality of life. Concluding, systemic hypertension should alert the family physician to investigate whether there is any evidence of OSA and whether diagnostic evaluation is indicated.

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**Chronic renal insufficiency in patients diagnosed of essential hypertension***Alvarez Gregori J, Medina Hernandez M, Rios Alonso B, Crespo Martinez C, Porcel Ruiz J, Salvador Garcia M*

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**Introduction:** Chronic Renal Insufficiency (CRI) is associated with high cardiovascular risk. Actually, CRI is staged from estimated glomerular filtration rates (eGFR) from the MDRD formula. The new screening for IRC, the HUGE formula (Haematocrit, urea and gender) has been validated in adult and aged population and it determines the presence of CRI with high sensibility and specificity.

**Aim:** To determine the prevalence of IRC applying both formulae in patients diagnosed with essential hypertension in urban primary care expecting similar results than the previously known in national studies performed in Spain rounding the 12% in the general population.

**Material and methods:** This is an observational, transversal, descriptive study derived from the randomized selection of 380 patients from the overall pool of 2157 subjects diagnosed with essential hypertension following the criteria of the ESH-ESC in our Primary Care Centre covering a health area of about 25.000 habitants. The variables used in the study were age, gender, urea, creatinine and haematocrit. Afterwards, coincidence in the diagnosis of IRC between MDRD and HUGE formulae were compared thanks to cross tables (Chi-Square of Spearman).

**Results:** 380 subjects aged 29 to 99 years old, 60% female. The diagnose of CRI was 11,8% (45) when applying the HUGE formula and 19,7% (75) as eGFR lower than 60 ml/min calculated with MDRD formula, showing significant statistics differences in the diagnose of CRI between both formulae (Chi Square, p-value < 0,01).

**Conclusion:** In our study population, formula MDRD diagnose an 8% more of IRC than the HUGE prediction, exceeding significantly the expected data of prevalence in the population. At least 80% (attending MDRD) or 88% (HUGE) of the hypertensive patients of the study do not suffer from IRC, demonstrating the optimal control of their pathology, diminishing the renal damage and therefore, the possibility of and adverse cardiovascular event.

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**Features of treatment and prognosis of non-ST elevation acute coronary syndrome in patients with iron deficiency anemia***Skotnikov A*

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The aim of the study was to determine features of clinical course and prognosis of non-ST elevation acute coronary syndrome in patients with iron deficiency anemia and high risk of bleeding. The authors analyzed the medical histories of 2473 patients admitted to the coronary care department with diagnosis of non-ST elevation acute coronary syndrome,

and 339 conclusions of post-mortem examination. The frequency of occurrence of anemia in patients with non-ST elevation acute coronary syndrome is 64,5%. Physicians rarely assess the risk of bleeding in these patients, and therefore antithrombotic therapy is appointed only in 62,6% of cases. In addition, at patients with hemoglobin below 90 g/l antithrombotic therapy is carried out in only 30,7% of cases. The opposite situation is observed with respect to the correction of iron deficiency anemia. Patients with non-ST elevation acute coronary syndrome and low level of hemoglobin are appointed iron preparations in 44,9% of cases, while patients with mild iron deficiency anemia - only in 6,5% of cases. Meanwhile, the incidence of myocardial infarction and mortality of these patients depends on the initial level of hemoglobin, as well as from ongoing antithrombotic therapy. Without it, antithrombotic complications occur in 22,1% of cases in the structure of all fatal events. In addition, demonstrated, that in patients with non-ST elevation acute coronary syndrome the incidence of myocardial infarction and mortality while severe anemia are 97,3% and 78,1% respectively. Proved that the highest frequency of fatal (22.1%) and non-fatal (37.4%) thrombotic complications occurs in patients with non-ST elevation acute coronary syndrome and iron deficiency anemia, which antithrombotic therapy in the hospital was not carried out. In these patients the frequency of hemorrhagic complications is equal to 4,3%. Antithrombotic therapy by dalteparin (fragmin) on the background correction of iron deficiency reduces mortality and frequency of myocardial infarction in patients with non-ST elevation acute coronary syndrome, high risk of bleeding and iron deficiency anemia.

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**Effect of valsartan on erectile function in hypertensive patients***Skotnikov A*

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The aim of our study was to determine the effect of valsartan (valsartan) on the androgen status and erectile function in patients with hypertension. 60 patients of 40-65 years of age with the diagnosis of hypertension were included into the research. The ambulatory blood pressure monitoring (ABPM) was determined in all the patients during the first 24 hours and 3 months later. In addition, all patients answered questions of questionnaire on aging male symptoms scale (AMS) and international index of erectile function (IIEF) before and 3 months after the course of antihypertensive therapy. The authors formed two groups of patients. Each group had 30 people. Patients in both groups were comparable in age, the degree of hypertension, severity of erectile dysfunction and androgen deficiency. Patients of the first group received angiotensin II receptor antagonist (valsartan) in monotherapy. Valsartan was administered starting from the first 24 hours after destabilization of blood pressure, and its dose titration was from 80 up to 160 mg/a day. Traditional treatment of hypertension with ACE inhibitors, calcium antagonists, diuretics and beta-blockers was assigned to patients of the control group. Valsartan treatment reduced the intensity of the symptoms of erectile dysfunction in men with hypertension (by 11,3% against 2,2% in the control group, p<0,05). In addition, this therapy has led to a decrease in symptoms of androgen deficiency (20,2% against 12,1%, respectively, p<0,05). Speaking of the hypotensive effect of valsartan should be noted that in both groups, reduction in systolic (SBP) and diastolic blood

pressure (DBP) were comparable ( $p>0,05$ ). However, during therapy with valsartan, we noted an increase in the number of patients of category 'dipper', while the number of patients remaining categories ('over-dipper', 'non-dipper', 'night-peakert') decreased ( $p<0,05$ ). In the control group, the trend towards normalization of jet lag is not observed. Thus, therapy with valsartan normalizes diurnal variations in blood pressure, reduces the symptoms of androgen deficiency and did not contribute to erectile dysfunction.

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#### Blood pressure profile in diabetic and non diabetic patients with clinically significant coronary artery disease

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**Aim:** Diabetes is a risk factor of progression of CAD. The aim of our study was assessment of BP profile in diabetic patients with significant coronary artery disease.

**Material and methods:** The study was performed in 932 patients (640 male and 292 female, mean age 64 +/- 9) with at least one significant coronary artery stenosis ( $\geq 70\%$ ) confirmed by coronary angiography. Study group was divided into 2 subgroups: with diabetes ( $n=226$ ) and without diabetes ( $n=671$ ). Glucose plasma level (assessed after 8 hour fasting), weight and height were assessed before coronary angiography.

**Results:** Analysis of blood pressure profile revealed higher values of mean systolic blood pressure in diabetic group than in non-diabetics: 24 h (130 +/- 16 mmHg vs 123 +/- 13mmHg,  $p<0,001$ ), day (133 +/- 16 mmHg vs 126 +/- 13mmHg,  $p<0,001$ ), night (127 +/- 18 mmHg vs 118 +/- 15mmHg,  $p<0,001$ ), and heart rate: 24h (68 +/- 9bpm vs 66 +/- 9mmHg,  $p=0,003$ ), day (70 +/- 10bpm vs 68 +/- 10bpm,  $p=0,01$ ), night (63 +/- 9bpm vs 61 +/- 9bpm,  $p<0,001$ ). Analysis of relationship between fasting glucose level and mean systolic blood pressure values in diabetics revealed significant correlation in group with one coronary artery stenosis: 24h ( $r=0,27$ ,  $p=0,006$ ), day ( $r=0,24$ ,  $p=0,012$ ), night ( $r=0,27$ ,  $p=0,005$ ). As distinct from non diabetics, in subgroup of patients with diabetes we did not reveal significant correlation between BMI and mean values of BP. Patients with significant coronary artery stenosis and diabetes revealed higher mean SBP and HR values than non diabetics regardless of compensation of diabetes measured by HbA1c level.

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#### Assessing treatment compliance in patients with hypertension in family practice

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**Aim and background:** To assess treatment compliance in patients with arterial hypertension.

**Material and methods:** Patients ( $n=127$ ) treated for hypertension in family practice since at least one year were enrolled. They were asked to complete the Compliance Evaluation Test (CET) and a sociodemographic questionnaire. The level of compliance was classified as "good" if all six items were answered as "No", as "little" if one or two items were answered as "Yes" and as "noncompliant" if three or more items were answered as "Yes".

**Results:** Of patients, 57% were male, the mean age was 59 +/- 8 years and the mean blood pressure was 155/100 mmHg. It was found that the compliance was good in 72% of patients, was little in 24% and was none in 4% of patients. Compliance was significantly better in patients with higher grade of hypertension compared to lower grade ( $p=0,027$ ). Compliance was better in patients with co-morbidity (83%) and with less drug regimen (less than three drugs) (66%) ( $p=0,013$ ,  $p=0,044$ , respectively).

**Conclusions:** Although patient characteristics, physician attitude, frequency of follow-up visits, drug group and simplicity of treatment are related to compliance in daily medical practice, the compliance evaluation test may help physicians to face the problem of nonadherence among their hypertensive patients. The most important factor for therapy compliance is disease awareness and severity, and patients with a higher grade of disease are more likely to be compliant.

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#### Predictors of hypertension during perimenopause.

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**Aims:** It is not well defined why the estrogens deficiency cause the rise of blood pressure (BP) in the menopausal women. To reach this fact; different mechanisms: -Endothelial dysfunction, which decreases the release of nitric oxide (local vasodilator) and increases the release of endothelin (vasoconstrictor). Both facts could lead to increased peripheral resistance. This results in the system of reduced renal natriuresis and increased sodium reabsorption, which also causes glomerular vasoconstriction in the efferent artery. -Sympathetic hyperactivity. -Increased abdominal fat, which causes insulin-resistance. -Increased levels homocysteine. -Elevation of red blood cell count (hyperviscosity). As the perimenopausal stage includes many years in our work we studied at what point there is an increase in blood pressure, to perform so early screening.

**Material and methods:** 94 women aged between 40 and 55 were included without previous diagnosis of hypertension of different primary care centers. To stage menopause we have used the criteria of Straw, and dividing the female hormone in Reproductive Stage (RS) (no menstrual disturbances); Perimenopause (PRM), and this in turn in early and advanced, according to menstrual disorders, and Postmenopause (PSTM). We classified all study patients according to these stages, through a questionnaire about their menstrual regularity, analytical asking them all of the hormone FSH, and BP were taken three times on 3 different days.

**Results:** 24 patients were classified as RS with the mean of 122/78 (Std 102-138 and 72-86), 26 early-PRM stage the mean was 122/80 (Std 104-144 and 72-94), 19 advanced-PRM stage where the mean was 132/82 (Std 116-152 and

76-90) and 25 PSTM stage, the mean was 136/84 (Std 122-148 and 72-92).

**Conclusions:** There are no significant differences between the RS and early PRM, with regard to changes in BP. But we find a progressive increase of the same as we are going to advanced PRM and the PSTM. The most important step we found between early and advanced PRM, where especially the systolic BP increases, with FSH >28, keeping the increase, but less pronounced in the PSTM. We propose that these stages do a more exhaustive screening.

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#### Insulin resistance and blood pressure variability

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**Objective:** Insulin resistance is associated with multiple risk factors for atherosclerosis, including increased blood pressure. The purpose of our study was to assess the association of variability of insulin stimulated glucose disposal rate (M value) during the hyperinsulinaemic euglycaemic clamp with blood pressure variability in hypertensive patients with type 2 diabetes.

**Methods:** In 71 patients, the coefficient of variation (CV) of the M value between the 5-minute intervals during the 120 minute clamp was calculated as mean/standard deviation of the M value. Similarly, the CV of 24 hour blood pressure was calculated as mean/standard deviation of blood pressure, measured by a portable automatic blood pressure monitor.

**Results:** In patients (35 males; age 61+/-9 years; BMI 30.5+/-5.2 kg/m<sup>2</sup>; systolic and diastolic blood pressure 134+/-11 and 79+/-8 mmHg, respectively; HbA1c 8.3+/-1.3%; M index 4.7+/-2.6 mg/kg/min) CV of the M value was positively associated with CV of the systolic blood pressure during the night (r=0.257, p<0.05).

**Conclusions:** Variability of systolic night blood pressure is positively associated with variability of M value during the clamp in hypertensive patients with type 2 diabetes. These results imply that possibly both, insulin resistance and arterial hypertension, are related to disbalance in autonomic nerve system.

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#### Hypertension in patients with recently diagnosed diabetes mellitus type 2

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In patients with diabetes, hypertension occurs in about 60-80% of cases, whether as a consequence of impaired kidney function or as a result of changes in the hypertensive diseases.

**Aim:** of the work was to recognize, to isolate and to determine characteristics of hypertensive disease in the group of patients with recently diagnosed diabetes mellitus

type 2 /T2DM/.

**Material and method:** The study was epidemiological, in Health Centre Zvezdara, it lasted for 6 months. 95 patients with recently diagnosed T2DM /53 men and 42 women, age of 18-75/ were clinically proceeded. Patients visited their own general practice doctors. We followed their blood pressure /normal value-TA130/80/, glucose, electrocardiography /ECG/, fundus.

**Results:** We analyzed the results and noticed that the hypertension was present in 64 patients /67.3%/ and more frequently in the age group over 55 years /59.7%/. Hypertension is diagnosed in all patients older than 65 years. In 50% of patients, hypertension lasts over 5 years. Only 6.4% of patients with hypertension have normal ECG, while 77% of them have left-ventricular hypertrophy. 79.6% has ischemic changes of myocardial. 25.7 % of patients with hypertension has normal results on the fundus and 74.3% of them had changes on fundus /fundus hipertonicus/. Hypertrophic cardiomyopathy and hypertension were found in 21.05% of patients, and there are no significant differences between the number of men and women. /p<0.05/

**Conclusion:** Hypertension is very frequent disease at patients with diabetes. It appears as a complication or as the co morbid conditions. Difficulty of complications and their representation depend and correlate with values and length of hypertension. To prevent the complications, as much as possible, it is necessary to make the diagnose on the time, regular review and effective treatment of arterial hypertension.

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#### Control of cardiovascular risk factors in psychotic and non-psychotic patients in primary health care.

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**Aims:** Describe the follow-up degree of protocols for Arterial Hypertension (AH), Diabetes Mellitus (DM), Dyslipidemia, (DLP), Obesity and tobacco dependency in psychotic patients with Cardiovascular Risk Factors (CRF) compared to non-psychotic patients with CRF.

**Material and methods:** Cross-sectional study carried out in two populations: Psychotic (P) and non-Psychotic (NP) in three urban primary care centers. P: Patients admitted between 15-65 years with >=22651 CRF and psychosis diagnosed N=202. NP: randomized sample of patients without psychosis, with similar characteristics (age and CRF). Ratio 3:1. Clinical variables, complementary examination and lifestyles were collected from clinical record during 2009. Statistical analysis: Estimation of averages and percentages (95% confidence interval) comparing groups using Chi-square and T-student/U-Mann-Whitney.

**Results:** Total sample was 568, 194 P. 70.4% were male. Average age was similar in P and NP with dyslipidemia, obesity and tobacco dependency (44 years). Hypertensive and diabetic NP were older (54 years). Average number of visits was 11 vs. 8. Lowest register in both groups was abdominal perimeter (4.7%) and highest, cholesterol (48.8%). Similar registers were found in body mass index (41.2% vs 45.7%), blood pressure (73.5% vs 69.5%) and cholesterol (25.5% vs 29.8%) Patients with diabetes (P vs NP) also had similar record of glycemia (70.8% vs 76.8%; p=0.58), HbA1c



(69,7% vs 75,4%;  $p=0,43$ ) and lowest record was abdominal perimeter (4.2 % vs 21.7%;  $p=0.06$ ), body mass index (37.5% vs 66.7% ;  $p=0.016$ ), AH (58.3% vs 78.3%;  $p=0.67$ ), CRF evaluation (8.3% vs 31.9%;  $p=0.03$ ) There were significant differences in tobacco dependency register (47.7% vs 31.9%;  $p=0.004$ )

**Conclusions:** The study shows that P and NP patients with AH, DLP, obesity and tobacco dependency receive similar care. There was less follow-up with psychotic diabetics than for non-psychotic diabetics. There was more follow-up in smoker psychotics than non-psychotics.

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#### Electrocardiography and family medicine: are general practitioners able to read electrocardiograms?

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**Background:** Electrocardiogram (ECG) is a common diagnostic test in daily practice of Family Medicine Physicians. Oftentimes General Practitioners (GP) doesn't feel sure about their interpretation and this apparent lack of skills leaves them to engage external services in order to provide it. Aim: To evaluate quality of General Practitioner's ECG readings by comparison with a gold standard defined as Cardiologist reading.

**Methods:** We studied 195 ECG collected consecutively during first 6 months of 2010 in an urban Health Center of Oporto, Portugal, and distributed by three GP. Each ECG was read by each physician and inter-observer agreement was evaluated. After coding by Novacode, sensitivity and specificity of GP's readings were calculated by comparison with that obtained from Cardiologist readings.

**Results:** Inter-observer agreement between GP readings was "good" with an intraclass correlation coefficient of 0,727 (CI 95%: 0,670 - 0,779). When compared with gold standard GP achieve a "good" agreement with an intraclass correlation coefficient of 0,712 (CI 95%: 0,659 - 0,762). Analysis by classes of abnormalities showed a sensitivity of 80,7% (CI 95%: 75,6 - 85,0) and a specificity of 79,1% (CI 95%:73,7 - 83,6) to detection of normal testes and higher to all classes of abnormalities except for myocardial ischemic disease (sensitivity = 57,1% and specificity = 98,2%).

**Conclusion:** GP have good skills on reading ECG requested on daily practice of a Health Center. Better attention should be given to ischemic alterations present on ECG's.

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#### Erectile dysfunction: prevalence and associated risk factors

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**Introduction:** Erectile Dysfunction (ED) is a common disorder in men between 40 and 70 years old. It has been

widely documented in numerous studies their relationship with cardiovascular risk factors (CRF). It is accepted that is a silent marker of coronary artery disease. It has the advantage in contrast to other risk factors that is easy to identify and adversely affects quality of life. AIM: Prevalence of erectile dysfunction in men aged 40-70 years, and association with cardiovascular risk factors (hypertension, diabetes mellitus, dyslipidemia and smoking).

**Material and methods:** Design: Transversal descriptive epidemiological in the field of a Primary Care Center. From total of 360 male patients aged 40-70 years, choosing a sample of 80 patients. Lost: 24 patients, n= 56 male patients. Erectile function was assessed by the SHIM (Sexual Health Index for Male). SHIM: This test has 5 questions (4 questions about erection and 1 question about the sexual act), each question has 5 options. Maximum Score: 25 points We evaluated the risk factors (RF): hypertension, cholesterol, diabetes and smoking. Statistical analysis.

**Results:** The study included 56 male patients between 40 and 70 years. There was a 23% with 0 CRF Odds Ratio (OR):1 Confidence Interval (CI) 95% [1.05 to 1.16]  $p<0.0001$ , 36% with 1 CRF, OR:1.58, ( CI 95%) [1.29 to 1.93] 30% with 2 CRF, OR:1.93 (CI 95%) [1.35 to 3.16] 11% with 3 or more CRF, OR: 2.73 (CI 95%) [1.43 to 4.51] Criteria: hypertension (BP>140/90 mmHg), dyslipidemia (cholesterol>200 mg / dl) Diabetes mellitus (glycemia>126 mg /dl, Smoking>1 cigarette or cigar / day) 58.3% OR:8,7 (CI 95%) of patients aged 60-70 years compared to 18.4% OR:2,8 (CI 95%) aged 40-50 years showed ED. The overall incidence of ED was 39%: 11% minimal (score of 17-21 points SHIM), 21% moderate (8-16 points) and 7% complete (< 7 points).

**Conclusions:** - There is a clear association between ED and cardiovascular risk factors. A greater number of CRF increased incidence and severity of ED - The factors most impact on the ED are: Hypertension, Diabetes Mellitus, Dyslipidemia and Smoking. - Age is the variable most strongly associated with ED.

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#### Guidelines, a way forward with caution. Atrial fibrillation-the decision to hypocoagulate is case-dependent: a case report

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**Aim(s) and background:** Atrial fibrillation (AF), the most common sustained cardiac arrhythmia, shows a strong correlation with aging. It is associated with an increased risk of ischemic stroke and other thrombo-embolic events. Our aim is to enhance the role of the family physician in recognizing that guidelines are important general indications but it is necessary to adapt them for the best interests of the patient.

**Material and methods:** We describe the case of ANG, male, 81 years old, caucasian, with arterial hypertension without associated complications and degenerative osteoarticular disease. The patient went to emergency in January 2011 because of repeated episodes of syncope in the previous day followed by a spontaneous recovery of the consciousness without any neurologic deficit. He was haemodynamic stable and had an irregular pulse. The analysis found an altered kidney function, negative myocardial necrosis markers and AF with controlled rhythm on electrocardiogram. Cerebral CT showed ischemic leukoencephalopathy.

**Results:** After the emergency episode, he went to his family physician, in February 2011. On physical examination the pulse was arrhythmic with controlled frequency and no other relevant features. As recommended by European Society of Cardiology, the stroke risk evaluated using the CHA2DS2-VASc score was high and the risk of bleeding using the HAS-BLED score was low. Despite oral anticoagulation is recommended in this particular case, ANG has a mobility limitation, high risk of falls and limited access to medical care. So it was decided to prescribe AAS 150mg and pantoprazol 20mg. The physician requested several diagnostic exams including an assessment of renal function, echocardiogram and holter 24hours.

**Conclusions:** This case highlights the importance to adapt the existing guidelines to each of our patients in their own benefit.

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**Introduction:** The benefits of physical activity are well known and consist in reducing the risk of death from cardiovascular disease, prevention of diabetes, hypertension, osteoporosis, obesity and colon cancer as well as providing a physical and psychological wellbeing. However, sport activity increases 2.5 times the risk of sudden death and in most cases it is undetectable before the fatal event.

**Objectives:** Review the guidelines to perform physical activity in cardiac disease patients

**Methods:** Review the recommendations and guidelines from the European Society of Cardiology. Review: There are only a few studies on the prescription of physical activity on cardiac patients, so these recommendations are based upon guidelines drawn up at international meetings and based on knowledge and experience of experts. Regardless of each pathology, a thorough examination is essential, depending directly on the outcome and the restriction of physical activity motivated by the existing pathology. There are only a few situations that are not eligible for sports, in other words, that are not suitable to practice one or the other kind of sporting activity and have an absolute contraindication for physical activity, such ischemic disease with high probability of cardiovascular events and not surgically corrected congenital diseases. In most situations the practice of sports at a competitive level is the only contraindication in the practice of sports, being the physical sporting leisure activity accepted up to some degree of intensity and according to heart disease and its conditions. These situations need to have, however, a rigorous follow-up (after certain periods of time or if symptoms start again).

**Conclusion:** It is essential that the family doctor to be aware of the indications and contraindications of physical activity levels in patients with heart disease since most often these patients require a medical certificate for the practice of sport.

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### Cholesterol monitoring relative to sex and age

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**Aim and background:** Hyperlipoproteinemia (HLP) that may be hereditary or acquired (Diabetes, nephrotic syndrome, hypothyroidism, drug intake, increased ingestion of certain foods and physical inactivity) is an underlying factor for the development of cardiovascular diseases. Establishment of the presence of increased cholesterol levels in the population studied in respect to sex and age, as well as of the effect of applied therapy, dietary regime, change of nutritional habits and physical activity over one year.

**Material and methods:** Prospective study was conducted in primary health protection in 480 patients of both sexes (300 women and 180 men) of different age (groups from 25-34; 35-44; 45-54; 55-64 years of age). Investigation was performed over the period of one year and encompassed the poll, doctor's examinations and laboratory analyses. All patients were treated at four checkups.

**Results:** Pathological cholesterol values were found in 48% of our patients studied. Our result show that the age increase the number of patients with hyperlipidemia also rises. In respect to sex, in the former two groups of patients (up to 44 years of age) HLP is equally present in both sexes. A precipitous increase in pathological values of cholesterol is observed in men by 9.8% and in women by 16.2% in the age group between 45 and 54 years of age.

**Conclusions:** Healthcare intervention, relevant to dietary restrictions, increased physical activity and removal of other risk factors, resulted in the decrease in cholesterol level, and at the same time affected the prevention of atherosclerotic changes. At the end of the study it was found out that those pathological values of cholesterol decreased by 23%.

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### Illness representation in hypertensive patients

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**Introduction and aims:** Patient's beliefs about their disease, illness representation (IR), affects the attitude of patients towards the disease.

**Aims:** To assess the illness representation of high blood pressure (HBP) in a sample of hypertensive patients from a Primary Care Center compared to physicians, to analyze the relationship between sociosanitary characteristics and IR, and the relationship between IR and therapeutic adherence.

**Material and Methods.** Design: Descriptive and transversal study. Subjects: 98 patients. Systematic sample (confidence level 95%; precision of 8%). It was administrated the Spanish adaptation of the Implicit Models of Illness Questionnaire (CCSE) which has 36 items, with a 5 point Likert-scale, grouped into 9 factors (Identity, Cause, Disability, Cure, Localization, Personal responsibility, Controllability, Changeability and Chance) to assess illness representation of hypertension and the Morisky-Green test to assess treatment compliance. The data were related to age, sex, occupation and disease control. Statistical analysis: Student's t-test for independent samples and Chi-square test.

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### Physical activity and heart disease: yes or no?

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**Results:** Mean age 60.6 ± 12.7 years, 53.7% men, 44.8% compliant. Age were the only demographic variable related to therapeutic compliance ( $p=0.001$ ). Globally, there were significant differences in illness representation between physicians and patients ( $p=0.01$ ). There were significant differences in IR between physicians and patients, in all the components except identity (factor 1) and mutability (factor 8): patients considered HBP to have a less specific cause, a less precise location, to be a less incapacitating, curable and controllable illness that requires a low personal responsibility and depends more on chance. There were significant differences between IR and therapeutic adherence: non-compliant patients considered HBP to have a less specific cause, to be more acute, more curable and more independence on chance.

**Conclusion:** It's important to emphasize an individual health education to reduce the different illness perceptions between patients and doctors and to improve the therapeutic adherence and the control of disease.

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### Metabolic syndrome, prediabetes and non-dipping hypertension

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The blood pressure (BP) has diurnal variations. A decrease in the night and an increase in the morning show the circadian rhythm of BP. There is much evidence that 24-h ambulatory BP monitoring (ABPM) is superior to clinic BP in the diagnostic and prognostic evaluation of hypertensive subjects than conventional measurement. In particular, ABPM provides the unique opportunity to evaluate BP variations at different times of the night, thus allowing the classification of hypertensive subjects as dippers and non-dippers. Metabolic syndrome (MS) and non-dipping hypertension both increase cardiovascular mortality.

**Aims:** To investigate the association between MS, Prediabetes and non-dipping BP.

**Material and methods:** Epidemiologic study included 69 patients (39 men) aged 29-70 years (mean 49), who have done ABPM to exclusion diagnoses white coat hypertension and because of better regulation of BP. The non-dipper subjects were defined as those whose nocturnal decrease of systolic BP was <10% of daytime BP. No one have diagnosis of DM, MS and prediabetes. MS was evaluated according to the IDF definition (2009). Diagnosis of prediabetes, impaired fasting glucose (IFG) and impaired glucose tolerance (IGT) based on OGTT.

**Results:** From 28 non-dippers, 22 (78.57%) had MS or/and prediabetes, 17 (60.71%) had MS, 15 (53.57%) IFG, and 7 (25.00%) had IGT. From 30 dippers 36.66% had MS or/and prediabetes, 23.33% had MS. From 11 white coat hypertension patients no one had MS and IFG, 18.18% had IGT.

**Conclusion:** The presence of non-dipper hypertension is more frequently in patients with MS and abnormalities in glucose metabolism ( $p<0.05$ ). Intensive monitoring of blood sugar, even when they are normal values in non-dippers is very useful, due to early detection MS, prediabetes or diabetes. Also, useful would be ABPM in patients with MS and prediabetes regardless of whether they have hypertension or not, because early detection and more

intensive management of hypertension in order to prevent organ damage.

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### Control of blood pressure in young women

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**Aims:** Describe the approach followed in our Health Centre with hypertensive women under age 65.

**Material and methods:** Cross-sectional descriptive study by review of clinical histories. We selected 342 patients younger than 65 years with antihypertensive treatment. Study variables: age, diagnosis of diabetes and/or dyslipidemia, smoking, body mass index (BMI), analytical in the last year, last blood pressure (BP) recorded, drugs used in treatment, the risk of cardiovascular events according to the SCORE chart for low-risk populations.

**Results:** 80% were aged between 50 and 65. 18% were diabetic, 37.1% dyslipidemic and 10.5% had both diseases. 17% were smokers, 62% no, and 21% of cases had no data on clinical history. 40.6% had a BMI greater than 30 and 46, 5% were not registered. They had done analytically in the last year's 71.6% of patients. 16% of cases there was no record of TA of patients although they are treated for hypertension. With respect treatment, 47.4% had a single drug, two 40.15, 11.7% three and 0.9% four. The drugs most used are the ARA II in 50.3%, 48.2% followed by diuretics; beta blockers 23.1%, 22.2% ACE inhibitors, calcium antagonists 17%, and selective renin inhibitors 2.9%, alpha-blockers 1.5%. The combination most commonly used, 26%, was ARA II with diuretic. According to the SCORE chart for cardiovascular risk in low risk patients, 82.6% have less than 2% risk of fatal cardiovascular event in 10 years.

**Conclusions:** The majority are between 50 and 65. Four out of ten patients are dyslipidemia and one in ten diabetic and dyslipidemia. The number of smokers is low. In 46% BMI was not recorded, yet the 75% have registered a BMI greater than 30. Calls our attention that nearly 20% have not registered any number of TA despite the diagnosis. Almost half of our patients take a single drug. The drugs used are ARA-II and diuretics and the combination of both is also the most used. Cardiovascular risk is low in these patients. We believe that if we do a good control today, the long-term control will be easier.

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### Absence of sex related differences in the outcomes in a chronic ischemic heart disease cohort. The braid study

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**Aims:** The sex related differences for outcomes in coronary

artery disease(CAD) are a controversial topic in literature. The aim of our analysis was to study the influence of sex in prognosis in a cohort of chronic ischemic heart disease patients(p) followed by primary care physicians(PCP)

**Methods:** BARIHD was a cross-sectional multicentric study made with collaboration of 69 PCP. The PCP included during February 2007,patients that fulfil the inclusion criteria: CAD with at least 1 year of follow up since diagnosis, diagnosis clear established (stable angina-SA,unstable angina-UA,myocardial infarction-MI) in a discharge summary from cardiology department. Follow-up was done by clinical review or telephone contact and death or CV events were recorded, as well as the cause of death.

**Results:** 1108p were included in BARIHD, 72%(798p) male sex, first CAD diagnosis:men vs. women-SA(20.6 vs. 29.1%,p=0.0001),UA(19.5 vs. 27.8%,p=0.0001) and MI(59.9 vs. 43.0%,p=0.0001),time since CAD diagnosis was longer in men(8.0+/-6.3 vs. 6.5+/-5.2 years), women were older (mean age 72.2+/-10.3).Women had a worse risk factors profile, with more hypertension(79.4%), diabetes(34.2%) and dyslipidaemia(76.5%), but with less current smokers (3.2%). There were no differences for previous stroke, heart failure or kidney disease, but previous atrial fibrillation and valvular disease were more common in women. Women underwent coronariography in less cases than men(64.2 vs. 78.7%,p=0.0001). We did not find differences related with sex in therapy with antiplatelets, statins or betablockers. The median of follow-up was 811 [2-954] days,with 13p lost. The outcomes explained by sex are shown in the table.

**Conclusions:** Sex is not related with prognosis differences in patients with chronic ischaemic heart disease in our primary care setting.

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#### Cardiovascular risk factors and cardiovascular events in a stroke cohort from a primary care setting. ICBAR study

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**Aims:** Little is known about the cardiac events of stroke patients followed in the community. The aim of our study was to evaluate the cardiovascular (CV) risk factors and the CV events of a cohort of stroke patients (p) followed by primary care physicians (PCP).

**Methods:** ST-BAR was a cross-sectional study made with collaboration of 33 PCP. The PCP included during February 2009, patients that fulfil the inclusion criteria: Cerebrovascular events with at least 1 year of follow up since diagnosis, diagnosis clear established (stroke-S, transient ischaemic attack-TIA, or both) in a discharge summary from neurology department. Follow-up was done by clinical review or telephone contact and death or CV events were recorded, as well as the cause of death.

**Results:** 473p were included, the prior event was S in 305p (65%), TIA in 128p (27%) or both in 40p (8%). The main etiology of stroke was ischaemic (57%). Dependent status after event in 29%. Time since first cerebrovascular event 6.6+/-5.5 years. Mean age 75+/-10 years, 52% male, 79% hypertension, 29% diabetes, 65% dyslipidaemia, 12% current smoker, 11.2% chronic kidney disease, 18,9% anemia. Cardiac related conditions: coronary artery disease 18% (10% myocardial infarction), 22% atrial fibrillation, 10%

previous heart failure (HF), 12% valvular disease, 5,9% myocardial disease. Prior cardiovascular admissions 14%. Only 39% had an echocardiography. The mean follow-up was 8.2+/-2.3 months, 5.3% had a CV hospitalization (mainly HF-1.9%), 5% died and 3.2% had a CV death (new stroke-1.9%, 0.2%-sudden death, 0.2%-heart failure). Multivariate analysis for the 7.2% of CV events (death or hospitalisation) is shown in the table.

**Conclusions:** The patients with a previous cerebrovascular event must be followed carefully in the primary care settings because they have an important CV annual mortality and no few related cardiac conditions.

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#### Metabolically obese patients with normal weight have greater degree of cardiovascular risks than metabolically healthy but obese patients

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**Objectives:** This study was designed to compare cardiovascular risks between Metabolically obese but normal weight (MONW) and Metabolically healthy but obese (MHO).

**Subjects and methods:** We analyzed 7007 Greek subjects (M 2.843, F 4.164, mean age 62+/-10yrs). Highest quartile of HOMA-IR was defined as "metabolically obese (highly insulin resistant)" and the lowest quartile as "metabolically healthy (highly insulin sensitive)". Subjects with BMI  $\geq 25\text{kg/m}^2$  was defined as "obesity" according to Greek region criteria.

**Results:** Waist circumference, diastolic BP, non HDL cholesterol, total cholesterol/HDL cholesterol ratio of MOF were significantly higher than those of MONW. However, FPG and insulin level was significantly higher in MONW than MOH. Among MOH, prevalences of the metabolic syndrome defined by both NCEP and IDF criteria were significantly higher than that of MONW (44,6% vs 35,8% in NCEP, 40,7% vs 17,2% in IDF) whereas prevalences of type 2 DM and IFG in MONW were significantly higher than MOH (27,2% vs 7,5% in T2DM, 8,8% vs 3,3% in IFG). Furthermore, estimated 10 year CHD risk using Framing+/-ham risk score in MONW was significantly higher than MOH (12,1+/-11,5 vs 8,9+/-7,1).

**Conclusions:** Our study results suggested that highly insulin resistant subjects with normal weight might have higher risk for T2DM and CV event compared with obese, but highly insulin sensitive subjects.

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#### Health promotion program for increasing physical activity and its effects on blood pressure

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**Aim:** Although drug therapy of hypertension has made serious progress in helping people achieving guidelines

targets, the benefit of some simple lifestyle and diet changes seems to have been neglected. Physical activity is one of those. The aim of this study was to evaluate the value of educating third age patients about low-sodium diet in order improve blood pressure regulation.

**Material and methods:** The sample of our study consisted of 48 patients not diagnosed for hypertension or without treatment (22 men, 26 women), age 65-83 years old, who visited the Primary Health Care unit of a remote and rural area between November 2010 and January 2011 complaining for reasons other than hypertension. The patients were randomly allocated to two groups of 24 using strata randomization. The participants in the group A were informed orally and given printed content for the value of moderate activity and were invited to moderately exercise for 30 minutes for 5 days per week, according to European Guidelines for cardiovascular risk (2007). The participants of group B had not such information. All patients received proper antihypertensive treatment

**Results:** Response ratio was 62.5%. A significant difference ( $p < 0.05$ ) was found in both the reduction of recorded Systolic Blood Pressure ( $3.2 \pm 1.2$  mmHg) and Diastolic Blood Pressure ( $2.2 \pm 0.5$  mmHg) between the two groups, 45 days after the intervention.

**Conclusions:** The implementation of health promotion programs is an important aspect of General Practice. The clinical value of our prevention program in combination with low cost might be a rationale for propagation of such programs which would improve the community's health status.

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#### Health promotion program for reducing sodium consumption and its effects on blood pressure

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**Aim:** Although drug therapy of hypertension has made serious progress in helping people achieving guidelines, targets, the benefit of some simple lifestyle and diet changes seems to have been neglected. Sodium consumption is one of those. The aim of this study was to evaluate the value of educating third age patients about low-sodium diet in order improve blood pressure regulation.

**Material and methods:** The sample of our study consisted of 188 patients not diagnosed for hypertension or without treatment (90 men, 98 women), age 65-91 years old, who visited the Primary Health Care unit of a remote and rural area between November 2010 and January 2011 complaining for reasons other than hypertension. The patients were randomly allocated to two groups of 94 subjects using strata randomization. The participants in the group A were informed orally and written for DASH diet, while the participants in the group B were not. All patients received proper antihypertensive treatment

**Results:** A significant difference ( $p < 0.05$ ) was found in both the reduction of recorded Systolic Blood Pressure ( $4.1 \pm 0.9$  mmHg) and Diastolic Blood Pressure ( $3.0 \pm 0.9$  mmHg) between the two groups, 45 days after the intervention.

**Conclusions:** The implementation of health promotion programs is an important aspect of General Practice. The clinical value of our prevention program in combination with low cost might be a rationale for propagation of such

programs which would improve the community's health status.

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#### Can ambulatory blood pressure measuring systems help the general practitioner to diagnose white coat hypertension?

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**Aim:** White coat hypertension (WCHT) is defined as a persistently elevated BP in the doctor's office whereas normal in other conditions. This difference may contribute to wrong classification of normotensive patients as false hypertensive. The aim of this study was to examine if ambulatory blood pressure measuring (ABPM) can help in evaluating WCHT in an urban setting.

**Material and methods:** A randomized sample of 92 patients or escorts who visited our health center for the first time (mean age  $64.3 \pm 5.7$  years, 51 men (52.2%)), mean office blood pressure  $146/85$  mmHg) was used. Tables of random numbers were used for randomization. All participants had sinus rhythm during the study and had no history of hypertension. The General Electric Tonoport device was used for ABPM.

**Results:** Almost one out of seven "hypertensive" - according to office measurements - patients (13.0%. 95%CI: 6.9% - 21.7%) was found not to have similar high values at home using ABPM. Four participants (4.3%). The majority (90.9%) of the participants described the diagnostic procedure as "tolerable" or "innocuous" and "would do it again".

**Conclusions:** The false classification of patients as "hypertensive" just by one visit may lead to wrong conclusions and treatment choices. The use of ABPM whenever and wherever possible might help the General Practitioner to have a better picture of the blood pressure of his patient, especially when there are suspicions or evidence for the presence of WCHT.

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#### Medicament therapy in treatment of hypertension and hypercholesterolemia

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**Aims:** Cardiovascular disease (CVD) is still the main cause for morbidity and leading cause of premature death in the world. Risk factors, such as plasma cholesterol, hypertension and diabetes play a key role in determining CVD. We wanted to recognized patients with hypercholesterolemia in group of hypertensive patients and evaluate the efficiency of the angiotension - converting enzyme (ACE) and statin therapy.

**Material and methods:** Prospective research lasted 6 months, included 279 patients, aged 20-79 years, with hypertension and hypercholesterolemia, chose by random.

The research focused on hypertensive patients with hypercholesterolemia. Blood pressure (BP) was measured and laboratory analyses were performed at checkups (n=6). Drug therapy was prescribed according to indications-ACE to reduce BP and statin to reduce cholesterol. Statistical analysis was performed using the SPSS program.

**Results:** A number of hypertensive patients were 164 (38,78%), 57,92% women, SBP 168,69 and DBP 95,03. The average cholesterol level was 7,44+/-1,22, LDL cholesterol 4,34+/-0,69, HDL 1,19+/-0,12 and triglycerides 2,88. On the end of examined period, we found statistical high difference for decrease BP, total and LDL cholesterol and triglycerides. The average SBP was 138,85 (reduced 12,56%) DBP 80,15, total cholesterol 5,72+/-0,85 (reduce 19,7%), LDL cholesterol 3,93+/-0,47 (reduce 16,4%) triglycerides 1,94+/-0,50 P<0,05 and increased HDL 1,26+/-0,15. We found statistical difference p<0,05.

**Conclusion:** Family doctors can easily identify patients with CVD if they follow accurately the guide lines. Antihypertensive and statin therapy has a great impact on reducing the risk for cardiovascular disease.

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#### Study on the evaluation of patients with peripheral vascular disease and other risk cardiovascular factors in a primary care center

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**Background:** type 2 diabetes mellitus (T2DM) and hypertension are associated with peripheral arterial disease in high prevalence. We know the importance of control of risk factors to prevent the occurrence of vascular complications.

**Aims:** evaluating the characteristics of patients presenting a history of and hypertension and T2DM with peripheral vascular disease, in a primary care center.

**Material and methods:** Retrospective descriptive study in an urban primary care center. All patients presented in the computerized medical record diagnosis of T2DM, hypertension and peripheral arteriopathy. We performed descriptive statistics.

**Results:** 49 patients were detected with the inclusion criteria. The average age is 77 years. The average time from diagnosis of peripheral vascular disease is 4 years. The average HbA1c is 7.7%. The average LDL cholesterol is 115 mg/dl. The average blood pressure is 132/84 and 90% acetylsalicylic acid or clopidogrel treatment are performed. We have not detected any amputation among registered patients.

**Conclusions:** 1.- T2DM patients with hypertension and peripheral arteriopathy showed a poor control of their T2DM, and lipid parameters. 2.- Have been prescribed to most patients receiving antiplatelet therapy 3.- There are probably a bad record of amputation's causes in primary care

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#### Statins: a new insight for the treatment of rheumatoid arthritis

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Rheumatoid arthritis (RA) is an autoimmune disease characterized by inflammatory synovitis, articular dysfunction and increased risk of cardiovascular disease. It is thought that the chronic systemic inflammation characterizing RA may accelerate the atherosclerotic process itself, by contributing to atherosclerotic plaque formation and destabilization, endothelial dysfunction and arterial stiffening. Statins (hydroxymethylglutaryl-CoA reductase inhibitors) are effective lipid-lowering agents, having an important role in reducing cardiovascular morbidity and mortality. The magnitude of the protection and the efficacy on decreasing mortality rates suggest that statins have pleotropic effects independent of cholesterol-lowering effects which may include: endothelial dysfunction improvement, atherosclerotic plaque stabilization, reduction in inflammatory markers and antioxidant properties. The present review was based on a research for randomized controlled trials, reviews, meta-analyses and practice guidelines published in the last 10 years, in English, using the MeSH terms "arthritis, rheumatoid" and "hydroxymethylglutaryl-CoA reductase inhibitors", at PubMed. Twenty two articles were found and analyzed aiming to study the benefits of statins on patients with diagnosed RA. Statins showed not only a clinical improvement in disease activities scores and swollen joint counts, but also a beneficial effect on endothelial dysfunction and arterial stiffness, as well as a reduction in some plasma markers of systemic inflammation such as erythrocyte sedimentation rate and C-reactive protein. Thereby, statins may present as a modest additive therapeutic option for selected patients with RA, by decreasing inflammation in multiple ways and improving long-term cardiovascular risk.

786

#### Deep vein thrombosis in a young adult - case report

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**Introduction:** Venous thromboembolism (VTE) is a public health problem. The annual incidence of VTE in young adult population is 1 per 10,000. The main risk factors of congenital or acquired (described in the triad of Virchow) involving venous stasis, endothelial injury and hypercoagulability. Combined Oral Contraceptives (COC) have an increased risk of Deep Venous Thrombosis (DVT) being higher in the first year of use. Obtaining an early diagnosis and proper as well as identification of risk factors is key to guiding treatment and preventing complications and recurrences.

**Material and methods:** Clinical interview and consultation of the clinical process of the patient. Case Description Wife of 22 years, obese, belonging to a single parent family and middle class, with low relative risk. No personal history and perform relevant pathological COC since 7 months ago by early sexual activity. Recourse to consultation for pain and swelling in that area left leg and difficulty in walking with two days of evolution. No signs of local or systemic infection. Physical examination showed flushed skin, painful palpation of the region left twin. The diagnosis of DVT has led to the prescription of Low Molecular Weight heparins (LMWH) and recommending use of elastic stockings and home as well as the definitive suspension of the pill. After completion of the treatment regimen instituted, the patient was asymptomatic. It

was proposed later in family planning services, adherence to the implant as a contraceptive method, with placement at the appropriate time.

**Conclusions:** The intention of this case report is to highlight the importance of clinical history and physical examination in the diagnosis of DVT in the adult population is difficult because only half of patients are symptomatic. The key points in the management of DVT is prevention and early detection. All family physicians should be familiar with the concepts relating to the background risk. The assessment of benefits, risks, contraindications, family and personal history of the patient should precede the prescription of effective contraception. HPBM treatment has some advantages compared with conventional heparin.

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### Doctor, I had high blood pressure yesterday and I went to the emergency

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**Objective:** To describe the attitude with patients followed in our health center seen in emergency departments with a diagnosis of hypertensive crisis.

**Methods:** A retrospective descriptive epidemiological through review of medical records. In 2009 were treated in our referral hospital 1106 emergency with diagnosis of hypertensive crisis, 107 were patients at our health center. The study variables were age, sex, further consultation at the health center, a previous diagnosis of hypertension. In terms the hypertensive patients were analyzed the basic treatment if there were changes to the treatment and control nurse at the time of the crisis and the year. Of the patients who were previously healthy we analyzed if there was diagnosis, initial treatment and blood pressure checks for nursing in the time to initial consulting and year of diagnosis. The data analysis was performed using PASW Statistics 18.

**Results:** 65.4% were women and 34.6% men. In hypertensive patients, 45% visited their doctor. 85% of previously healthy patients, visited their doctor. With regard to hypertensive patients and then visited the health center: 72, 2% were women and 66, 7% were older than 65 years, 2 patients had discontinued treatment, 53% had a single base drug. The drug most commonly used were the ARA II, 55.9%, followed by diuretics 53.9%, 23.5% ACE inhibitors. There were changes in treatment in 35.3% patients. With regard to patients who were previously healthy and visited your doctor: 60.9% were women. 65% started treatment with a single drug. The drugs used were 60% ARBs, ACE inhibitors 30%, 20% diuretics, beta-blockers 20%, 10% ACA. Initiated controls 55.5% of patients.

**Conclusion:** The majority of our patients were women around age 65. Only the half of them went to the doctor, being difference between previously diagnosed and no. Of the patients with previous diagnosis of hypertension, half of them visited their doctor. In previously healthy patients, 90% visited their doctor. Half of patients with known hypertension had only a drug even though the guidelines recommend a minimum of 2, and were only added a new drug to 35% of patients. The number of patient with controls of tension was low, only a third.

806

### Arterial hypertension - represented by poles

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**Introduction:** Arterial hypertension (HTA) is a mass non-contagious bo- lest the world of today, the disease with highest incidence in the general population (20-25%) and one of the major risk factors for ischemic heart disease, cerebrovascular diseases, peripheral arterial disease and adverse cardiovascular events.

**Objective:** Assess the prevalence of hypertension by sex, and the effect modifiable risk factors (smoking, hyperlipoproteinemia, physical inactivity) and to establish the specificity of hypertension by sex if exist. Method. We used a survey conducted among patients DZ Novi Pazar, who suffer from hypertension in January-February 2008.

**Results:** Respondents were 101 patients with hypertension, 40 men and 61 women. Among women, 82% were pensioners or housewives, while the HTA men are equally represented among the working age and pensioners- ners, smoking was present in 65% of men and 44.3% women; hyperlipoproteinemia (HLP) in 42.5% men and 50.8% women; physical inactivity is the most frequent among women - 75.4%, with men 47.5%. Most patients of both sexes with a rule-based HTA appropriate therapy - 70% men and 72.1% women, mostly polytherapy.

**Conclusion:** The leading risk factor in women's physical idle- occurs when people, men smoking, HLP is equally represented in both sexes in a similar percentage.

819

### Is height is important for cardio-vascular risk profile?

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**Aims:** An inverse correlation between height and risk of coronary heart disease has been reported in many studies. Augmentation index, measure of wave reflections in the artery tree was reported to be associated with an increase risk of the coronary artery disease. We examine whether augmentation index correlate with height.

**Materials and method:** We examined 263 patients between 19.-80. Years of age who attended family medicine office. Augmentation index (difference between early and late pressure peaks divided by pulse pressure) was determined noninvasively with SphygmoCor device. We divided men and women into three equal groups based on height. In group 1 were shortest, in group 3 tallest and in group 2 intermediate height patients

**Results:** Augmentation index negatively correlate with height. Augmentation index in men was for group 1- 20,7, group 2- 17,3 and group 3- 10,9 (F=4,215; p=0,0172) In women group 1- 28,0, group 2- 24,9 and group 3- 18,1 (F=6,9452; p=0,0013).

**Conclusions:** Lower height carries higher cardiovascular risk. Family doctors should pay more attention to shorter

patients in term of both detection of cardiovascular risk factor and treating hypertension and hyperlipidaemia.

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#### How do we treat arterial hypertension in GP offices in Zagreb?

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**Aim:** To determine the prevalence, treatment and achieved control of hypertension regarding type and number of antihypertensive drugs used in GP offices.

**Methods:** The survey was performed on all patients (N=12883) treated by eight GP offices in Zagreb. From medical data for year 2006 we identified prevalence of hypertensive patients and analyzed level of hypertension control according to number and type of antihypertensive drugs. Patients were stratified for gender and age groups set by Croatian Institute for Health Insurance.

**Results:** 23, 47% of analyzed population had hypertension, 64, 84% were older than 65 years. Incidence of hypertension increases with age. Women had higher incidence of hypertension (63, 76%). Majority of patients had one prescribed drug (40, 11%). 30% achieved proper regulation regardless the drug used. Best regulation had those with one drug prescribed, multiple drugs in treatment led to worse regulation.

**Conclusions:** The number of unrecognized patients with high blood pressure is large, as the prevalence of diagnosed hypertension in GP offices in Zagreb is still lower than in the rest of Europe. The degree of hypertension control is not satisfactory. As the overall situation regarding treatment of hypertension remains inadequate, greater efforts are required to identify people with hypertension, and to ensure that they are treated according to the best available evidence.

#### Self-perceived role of general practitioners in care of patients with cardiovascular diseases – a survey in Central and Eastern European Countries

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**Aims:** To explore differences in family physicians/general practitioners (FP/GPs) self-perception of care provided for patients with cardiovascular diseases (CVD) in Central and Eastern European countries.

**Materials and methods:** A special questionnaire has been developed, which first part contained questions about the professional characteristics of the respondent and second one was devoted to the problems of the care provided to the patients with CVD (26 questions). Random samples of all primary care physicians were chosen from relevant physicians registers in Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. To compare countries results the Chi-square test was used and for quantitative variables the Gamma correlation coefficient was calculated.

**Results:** From 3000 family physicians invited to participate in the study a questionnaire was returned by 867 (28,9%) of them (mean age of respondents: 49,3 years, women: 67%). Except Lithuania (57%) and Bulgaria (77%) nearly all (over 95%) of the respondents reported direct access to abdominal ultrasonography ( $p<0,01$ ). Big differences were found in the access to carotid ultrasonography, echocardiography and eye funduscopy ( $p<0,01$ ). The respondents declared that for assessment of the risk for development of CVD they use SCORE more frequently than the Framingham risk score. Independent (without specialist's consultation) initiation of pharmacotherapy for hypertension was reported by almost all respondents. 82,4 % of respondents claimed that they are responsible for care of type 2 diabetic patients. In particular countries this percentage varied significantly (38,6% in Slovakia and 100% in Lithuania,  $p<0,01$ ).

**Conclusions:** FP/GP from Eastern and Central European countries are responsible for care of patients with CVD. There is sufficient direct access to additional examinations and tests for assessment of total CVD risk.

899

#### Quality of monitoring of hypertensive patients based on three files

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**Introduction and aims:** The prevalence of hypertension for the Portuguese population is 42.6%. Hypertension is a recognized risk factor for cardiovascular disease, making cardiovascular disease the leading cause of death in Portugal. That requires the initiation of therapy integrated in an overall assessment of the risk factors for cardiovascular disease. The aims of this study were to evaluate the quality of



follow up and control of hypertensive patients of three files.

**Materials and methods:** Retrospective technical-scientific evaluation and effectiveness; using as unit of study all hypertensive patients monitored in hypertension program of three files, observed in 2009. Type and source of data were clinical process. The type of evaluation was internal inter pares. Evaluation Criteria: Procedure indicators: BMI, waist circumference (WC), lipid profile, blood pressure measurement (BP); ECG; Microalbuminuria. Control indicators (HTA guidelines of the ESC / ESH): Value of BP registered in 2009 <140/90 mmHg (<130/80 if DM or CRF, <125/75 if proteinuria), BMI <25 kg/m<sup>2</sup>, WC <88 cm if a woman, WC <102 cm if male; Total cholesterol <190 mg / dl, LDL <115 mg / dl, HDL > 40 mg / dl and TG > 150 mg / dl; Microalbuminuria <30 mg/24h.

**Results and conclusion:** 806 hypertensive patients were studied, of which 58.9% were female with an average age of 68.4 years old. Procedure indicators: BMI 35.9%, WC 13.5%, lipid profile 61.2%, BP measurement 68.1%, ECG 43.6% and microalbuminuria 24.6% of hypertensive patients. Control indicators: TA controlled 37.1% of the hypertensive patients, 17.3% had BMI <25 kg/m<sup>2</sup>, 0.06% of the women had WC <88 cm and 31.9% of men had WC <102 cm. 18.5% of hypertensive patients had cholesterol Total <190 mg / dl, LDL <115 mg / dl, HDL > 40 mg / dl and TG <150 mg / dl and 71.2% of hypertensive patients had Microalbuminuria <30 mg/24 h in. This data revealed an insufficient registration of the procedure indicators and that the majority of hypertensive patients are not well controlled, justifying the importance of proposing corrective measures. Nevertheless, the control of hypertension that was obtained (37.1%) was higher than in another national study (study PAP 2007) - 28.6%.

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#### Effects of valsartan on visfatin levels and lipid profile in newly diagnosed hypertensive

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**Aim:** The relationship between visfatin and metabolic syndrome in patients with carotis atherosclerosis was found. For this reason in this study, the curative effect of valsartan on hypertension in new diagnosed patients was originated by the effect on visfatin levels. The effect of valsartan therapy on lipid profile was also evaluated.

**Material and method:** With this aim, 40 patients between 38-60 ages with stage one hypertension ( average blood pressure 147,8+/-1,3 / 96,2+/-1,4 mmHg) according to the criterias of JNC VII were included to the study. Initially, in order to determine visfatin levels and lipid profile, blood samples were taken from the patients and valsartan 80mg tablet was started.

**Result:** A relationship with between plasma visfatin levels, triglyceride levels and BMI (r = 0.508 and 0.360, respectively) in hypertension patients was found. After 12 weeks of treatment with valsartan, a significant increase in visfatin levels was observed (p <0.001). When changes in lipid profile of patients were examined, only a statistically change was found in LDL levels. (p=0,008).

**Conclusion:** As a result in the follow-up of a serious health problem hypertension, a new adipocytokine visfatin levels are used, valsartan therapy can increase the levels of visfatin, but new and long-term studies are needed about in a long time bring benefits with this mechanism. Also, beside the

antihypertensive effect of valsartan usage, we are evaluating that it can be used to prevent cardiovascular diseases by the beneficial effect on LDL levels.

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#### Differential diagnosis of patients presenting with leg oedema in general practice: a qualitative study of GP's approaches

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**Aims and background:** In patients with leg oedema, general practitioners (GPs) face a broad range of possible underlying conditions. Patient history and physical examination remain the main diagnostic tools. Little is known about GPs diagnostic approach in these patients. We aimed to analyse how GPs approach patients presenting with leg oedema.

**Material and methods:** In semi-structured interviews, 15 GPs were asked to describe their personal diagnostic approaches in 2-3 of their patients with leg oedema they had prospectively identified. Interviews were taped, transcribed and analyzed qualitatively by two independent raters.

**Results:** Personal intuition, professional experience and knowledge of the patient's previous medical history helped GPs to classify leg oedema in different categories (unilateral, bilateral, cardiac, venous stasis, lymphoedema, lipoedema). GPs used individualised diagnostic work up procedures and diagnosis was mainly dependent on findings from the patient's history and physical examination. GPs had developed different strategies how to handle uncertainty in the diagnostic process.

**Conclusions:** Apart from the classical textbook knowledge, GPs use prior information of individual patients in a specific way. The patient's history and findings from the physical examination allow the GP to group the patient in one or more possible categories of underlying aetiologies. Within these categories, further tests and/or referral to a specialist are utilised to either rule out or rule in disease.

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#### Dairy drink enriched with plant sterols reduces slightly blood cholesterol levels

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**Aims and background:** To determinate the reduction observed in LDL-cholesterol concentrations in patients diagnosed with hypercholesterolemia treated with a cholesterol-lowering diet and those treated with this diet accompanied by a daily dairy drink enriched with sterols.

**Material and methods:** We performed a before-and-after study from September to November of 2010 in six offices. The sample was obtained from the two first patients of each physician that were diagnosed of hypercholesterolemia - basal cholesterol greater than 250 mg/dl by means of a blood

analysis - with a cardiovascular risk less than 10% according to Framingham chart. Patients assigned to the daily dairy drink enriched with sterol and diet took one dairy product daily for six months (Danacol). We carried out another blood analysis after 6 months. The main outcome variable was the reduction in LDL-cholesterol after the intervention. Both paired and independent Student's t tests were performed considering only p values < 0.05 as significant.

**Results:** A total of 126 patients were included. Mean basal LDL-cholesterol levels were 182.1 +/- 31.3 mg/dl and 186 +/- 28.6 mg/dl, respectively. Patients assigned to usual care presented mean LDL-cholesterol levels of 163.9 +/- 27.5 mg/dl after six months (10% lower) while those also assigned to the daily dairy drink enriched with sterols and diet had a mean of and 157.5 +/- 25.6 mg/dl (15.3% lower). Both interventions resulted in significant lower concentrations although no statistically significant differences were found between both groups.

**Conclusions:** Hypercholesterolemic patients on diet achieved a reduction of LDL-cholesterol of 10% after six months. Those assigned to the daily dairy drink enriched with sterols and diet achieved an extra reduction of 5.3%, although this difference was not statistically significant compared with those patients assigned to usual care.

## Cross-cultural medicine

90

### What herbal products are your patients using

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**Aims:** Investigate concomitant use of herbal products and prescribed medications.

**Material and methods:** Reaserch of available data on herbal products and their intereactions with medications.

**Results:** St Johns wort,used for treatment of depression, sedation and as antibiotic causes multiple interactions through induction of cytochrome P450 (antiretrovirals, benzodiazepines, oral contraceptives, digoxin, methadone, omeprazole etc). Ginseng, asian plant is used as immune system buster and an antidiabetes agent. The abuse can cause hypertension, behavioral changes, interact with warfarin,can produce effects similar to estrogens.Ginkgo is used for treating poor circulation and cognitive disorders. It can increase bleeding risk with warfarin, aspirin, COX-2 inhibitors. Garlic is used as antimicrobial and cholesterol lowering agent. It can increase bleeding risk,especially with warfarin. Grapefruit juice is thought to help loose weight and improve cardiovascular health.It interacts with calcium channel

blockers,cyclosporine,statins,midazolam,estrogens,which can cause hypotention,miopathy,liver toxicity. Echinacea is believed to stimulate immune response,prevent infections.Its flavonoids may inhibit or induce cytochrome P450 enzyme,depending on their structure.Licorice can lower transaminaze levels and is used for the treatment of chronic viral hepatitis.Larger doses can cause hyperkalemia and serious increases in blood preasure,a syndrome known as mineralcorticoid excess.

**Conclusions:** There is a clear need for better public and physician understanding of herbal products. Regulatory

policies are also needed to protect people from untoward effects on their health and finances.The principles and standards of evidence for safety and efficacy of drugs used in conventional medicine should be applied to herbal products as well.

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### The Hippokrates exchange programme - going global!

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**Aims:** To introduce viewers to the Vasco da Gama Movement's Hippokrates Exchange Programme for General Practice

**Materials and methods:** The poster presentation will offer: A brief history of the programme An overview of exchange activity in Europe in 2010/11 Evidence of how the Hippokrates Exchange Programme helps meet WONCA Europe's definition of a General Practitioner, by drawing on the learning outcomes of previous participants Practical information on how to take part on the programme

**Results:** There are currently 22 participating European countries, and the programme will soon be extending worldwide via the WONCA world network.

**Conclusions:** Viewers should be able to appreciate the benefits of taking part in the exchange programme, how it is relevant to professional development, and understand how to take part should they wish to do so.

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### Culturally sensitive care – new challenge for general practitioners in the Czech Republic

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**Aims:** Approx. 425 000 migrants reside in the Czech Republic (CR) in January 2011 (4, 2 % of population), ten times more than 20 years ago. Migrants in CR have been in the risk of not receiving the appropriate level of health care. A cultural sensitivity is supposed to be one of the basic characteristics of primary care provision. The aim of our project was to identify main health problems of foreigners, barriers on the health provider' s side and to initiate an education system for health care providers in culturally sensitive care.

**Materials and methods:** Demographic data were analyzed. Study trips to Austria and UK were organized. Web portal has been released for education and information of health care providers. The Centre for Subsequent Education in Culturally Sensitive Health Care for Citizens from non EU Countries has been established at the Faculty of Medicine. Workshops and educational seminars have been organized around the country.

**Results:** Predominant group of people in economic motion in the CR comes from Ukraine (30%), Slovakia (17%), Vietnam (14%). Diseases having higher prevalence in foreigners

compare to Czech population are: TBC, STD, mental disorders, stress, infectious diseases, diabetes, job-related injuries. 5 - 15 % of patients in selected GP surgeries in Prague are people from Vietnam and Ukraine. As key barriers on health care provider's side were identified: lack of information and experience, not speaking foreign languages, time consuming care for foreigners, xenophobia, intolerance, discrimination, administrative complications and barriers with payments from commercial insurance subjects.

**Conclusions :** Standards of good care for citizens from third countries have been created. Czech GP's have become more ethnically conscious, they need continual education and support. Young doctors are more often exposed to specific health needs of foreigners and regard the ethnical diversity in CR as a normal phenomenon.

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#### The effectiveness of acupuncture in the treatment of primary headaches in adults

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**Aim/background:** Prevalence of primary headache in primary health care is high. It affects both genders with no geographical preference. According to the WHO, headaches are probably one of the top five causes of disability worldwide. Alternatives to traditional treatments have been increasingly studied, given the insidious nature of the pathology and impact on the patient's life quality with use (and abuse) of drugs, whose side effects are not innocuous. The objective is to review the available evidence on the effectiveness of acupuncture in the treatment of primary headaches in adults.

**Material/methods:** Bibliographic research conducted in 09/2010. MeSH terms: headache, acupuncture. Research of guidelines, systematic reviews (SR), meta-analysis (MA) and randomized controlled trials (RCT) on the databases: Cochrane Library, PubMed, National Guideline Clearinghouse, DARE, TRIP, Bandolier, Portuguese Medical Journals Index, published between 01/2005 and 08/2010, in portuguese and english. The Strength of Recommendation Taxonomy (SORT) scale of the American Family Physician was used for the assessment of evidence levels and attribution of strength recommendations.

**Results:** 217 articles were found. 9 met the inclusion criteria 1 Guideline, 1 MA, 4 RCT, 3 SR. All consistently support that there is improvement in symptoms/life quality of patients with tension headaches, showing reduction in intensity and frequency, but it's not so well established for migraine. In most studies, the placebo effect was greater than expected.

**Conclusions:** Acupuncture is a beneficial treatment for tension headache, either isolated or in combination with other treatments (SORT A). For migraine, evidence of acupuncture benefit was also found (SORT B). There was heterogeneity in the type of traditional acupuncture used (number of sessions, needles used per session) and drug treatments allowed during the tests. Further studies are needed, mainly to see if the placebo in such studies has real therapeutic value.

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#### Tools in communication

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**Aims:** Make easier the communication between patients and health staff without a common language.

**Material and methods:** Study design: experience. - Description: In the last years, immigration has increased and there may sometimes be serious difficulties in communication because the language is unknown. Languages learning is not too spread among health staff. There are tools to reduce this lack. One of them is Universal Doctor Speaker, a program inserted in the computerized clinical history. The first disadvantage is that loading is slow. When it opens, you can choose among 10 languages: French, Chinese, Spanish, English, Portuguese, German, Arabic, Russian, Romanian and Urdu. It is easy to use and you can do the medical history following the several menus. It is necessary to have speakers because the program makes possible reading aloud the anamnesis question. Another tool is the translator mobile with which you can get into contact with a interpreter who can help you (in less than 15 minutes) to understand each other in English, German, Italian, Spanish, Romanian, Portugueses, Polish, Russian, Turkish, Bulgarian, Arabic, Swahili, Wolof, Mandinga, Mandarin Chinese, Urdu, Punjabi and Hindi. If you need another language, you will be able to contact (in less than 4 hours) in Swedish, Dutch, Chinese, Norwegian, Danish, Japanese, Persian, Czech, Slovak, Albanian, Berber, Hebrew, Greek, Hungarian, Lithuanian, Macedonian, Quechua, Serbo-Croat, Taiwanese, Ukrainian, Vietnamese and Korean. The mobile has two earphones with microphone, one for the patient and another one for the the health professional.

**Results:** We have noticed empathy increasing and improvement in the relationship between patients and health staff. The tools were only used when the translation was essential and very important to the health of the patient.

**Conclusions:** Some tools make easier the communication between patients and health staff without a common language. They are useful tools but not much efficient because they are slow and take too much time in the visit. It has to restrict their use to few questions. It is necessary to have an appropriate computer. The tools increase empathy.

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#### Adolescent sexual and reproductive health services in Bolivian primary health care: opportunities, challenges and threats

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**Aims:** CERCA, Community Embedded Reproductive health Care for Adolescents in Latin America, is an interventional

research financed by the FP7 program of the European commission. The project seeks to contribute to global knowledge about how primary health care can be more responsive to teenagers sexual and reproductive health (SRH) needs. Its immediate objective is to create a community- embedded model to improve the sexual and reproductive health and health care in Bolivia, Ecuador and Nicaragua. The consortium consists of three European partners, Ghent University (Belgium) as consortium coordinator, Lithuanian University of Health Sciences (Lithuania), University of Amsterdam (Holland) and four Latin American research institutions. In this study we examined Bolivian primary health care providers views on obstacles for addressing adolescents sexual and reproductive health and their suggestions for intervention.

**Material and methods:** 46 health care providers from 2 primary health centres in Cochabamba (Bolivia) took part in the study. Participants expressed in writing their opinion about barriers that face adolescents and health care providers for access to quality SRH care and what could be improved. Thereafter the answers were discussed in groups. Written participants' ideas were assessed applying qualitative analysis method.

**Results:** The study participants identified obstacles at different levels for providing quality SRH care to adolescents : socio-cultural environment, health system context, peculiarities of the health care facilities as well as skills and motivation of health care personnel. Participants suggestions for strengthening SRH care for adolescents targeted all above mentioned levels.

**Conclusions:** Our findings underscore the need to develop a comprehensive strategy to promote adolescents SRH care including community involvement, re-organization of primary health care facilities, improvement of health care providers knowledge in sexual health issues and communication skills.

## Gender issues

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### Factors that turned out to be independent predictors on the long survival after the first episode of ictus. Multivariate analysis

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**Aims:** Determine the independent predictors of mortality after the first ischemic stroke

**Material and methods:** Cohort study collected by a community based register code Ictus between 04/01/2006 to 03/31/2008. The average follow-up was 29,7 (0,03-50,4) months and analyses were performed with the use of time-to-event methods, according to the intention-to-treat principle. To establish the presence of cerebrovascular disease at baseline, medical record documentation was required consisting of a hospital or neurologist report with the diagnosis of TIA or ischemic stroke. Statistical analysis consisted of multivariate regression Cox and survival analysis with Kaplan-Meier curves.

**Results:** 555 patients were enrolled, 15 to 90-year-old. The conditional annual probability of dying was top in the first year (59,2%). There are not differences in the percentages of men's mortality (25,5 % IC95 22,4-33,1) and women (25,8 %

IC 20,8-31,6). The 36,3% of all stroke happens in women aged over 80. The rate of mortality of the men in the period 65-79 years is significantly superior (RR 1,18-4,04). The 64,6 % (IC95 52,1-75,9) of the women's mortality takes place in the 80-89 age period. The chance of survival at the end of following in women treated with trombolysis was 1, while in the men was 0,38+0,19. After adjusting for all variables, have been obtained as independent predictor variables: the age (RR 1,08 IC95% 1,04-1,06) and a recurrent cardiovascular event (RR 6,97 IC95% 2,23-21,7).

**Conclusions:** The main associated factors to long survival after the first episode of ischemic stroke are the age and the recurrent cardiovascular event. The right secondary cardiovascular prevention is an essential factor to improve the survival after the first ictus. We have to propose revise the age restriction in trombolysis guidelines, especially among women.

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### Gender differences in perception of barriers to information from primary care health system

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**Aims:** To study and analyze whether there are gender differences in the perception of barriers to information from primary care health system with the intention to incorporate improvements in promoting health information and primary care service.

**Material and methods:** Qualitative research of 10 focus groups with 83 users between 18 and 80 years in 2007. The scope of operation was the urban area Salamanca, Spain. Capture across through healthcare professionals of primary care. Informed consent discussions were videotaped and transcribed verbatim. After categorization, triangulation and encoding, we analyzed gender differences in program Nudist Q6.

**Results:** The women attended (60.2%) and more involved in discussions (54.7%). Although all mention the same content, interest or insisting they show differences. User-dependent barriers were more interesting to women. Of the barriers originated in the health system the accessibility is the first in both. In women followed: the treatment (18.4%), shape (13.2%) and content (11.5%) of the information. Males show greater concern however for the time (20.8%), environment (10.3%) and the presence of computers in the consultation.

**Conclusions:** Although all identified barriers in the information are of interest to both sexes, and should be reduced, this analysis allows us to find variations in effect on gender. To improve accessibility to the information and in addition in the attention to males we should take care of the sensation of lack of time and the environment in a medical office and in women the treatment, the form and the content of information.

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**Differences of domestic violence cases detected in primary health centers by sex***Fons-Martínez J, Escribà-Agüir V, Lluich-Rodrigo J, Rivera-Casares F*

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**Objective:** Describe the cases of domestic violence (DV) declared in Valencian Community (VC) Primary Health Centers (PHC) and analyze their differences by sex

**Method:** VC has a unified medical report for DV cases detected in people above 14 years in health services. We present a descriptive analysis of the 4573 DV medical reports recorded in 2006-2010, at VC PHC. The independent variable is sex and the dependent variables are: a) Socio-demographic b) History of abuse c) Characteristics of the abuse d) Medical assistance

**Results:** Most of the records are shown in women (89.8%). Analyzing the dependent variables, we found this significant differences by sex: a) Socio-demographic characteristics: women (W) are younger than men (M) (W mean age: 35.1 years, M: 37.7 years), more M are employed (56.8%, compared to 49.1% of W). No differences were found in marital status, educational level or country of origin b) History of abuse: 80.1% of W and 71.6% of M have antecedents of at least one type of abuse. M have more antecedents of only physical abuse and W of only psychological abuse or combined types of abuse, including sexual c) Characteristics of the abuse: the most frequent are only physical or combined physical and psychological (28.6% and 59.7% of W's records, 44.6% and 48.7% of M ones). Physical damage is caused, in both groups, mostly by body parts (88.4% in W and 81.7% in M), injuries caused by sharp weapons and blunt instruments are more frequent among the M d) Medical assistance: additional medical tests are more common in W victims (11.2%) than in M ones (7.2%), although the tests carried out were the same. There are no differences, in relation to sex, in the percentage of cases receiving any treatment, but there are in the type of treatment, the most common being pharmacological treatment (W: 80.3%, M: 58.6%) and cures (W: 30.7%, M: 56.9%) (treatments not mutually exclusive).

**Conclusion:** The records in DV are almost 9 times higher in W than in M. The differences detected, by sex, are done more because of the characteristics of the abuse than by the socio-demographic characteristics of victims. These differences are also shown by different treatments

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**HPV infection in men***Rodrigues S, Sá L, Ribeira S*

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**Background:** While much is known about cervical human papillomavirus (HPV) infection and its consequences in women, including cervical intraepithelial neoplasia and cervical cancer, little is known about the infection in men. Objectives: To review and synthesize the information

published about the epidemiology, symptomatology, diagnosis, treatment and prophylaxis of HPV in men.

**Methods:** We have researched the articles published in the databases of Medline/ PubMed, Medscape, from January 2004 to October 2009, in English language, using the key-words: HPV, men, review. Review: Adolescent and young adult men acquire HPV at high rate. Infection is often asymptomatic or subclinical, allowing transmission to occur without the knowledge of partners. Genital warts due to HPV types 6 and 11 are one of the most common sexually transmitted diseases. Warts commonly recur despite different medical and surgical therapies and there is a significant psychosocial burden. HPV types 16 and 18 are strongly associated with anogenital precancers and cancers. There's no standardized screening for HPV infection or early detection of disease in men.

**Conclusion:** Preventing HPV disease/infection through immunization may be important for protection of unvaccinated sexual partners.

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**Implementation of the detection and attention service to gender violence in primary care of the health service of castile y Leon. Assessment at 3 years***Fernandez-Alonso MC, Menendez Suarez M, Guzman Fernandez M, Herero Velazquez S, Valpuesta Y, Alonso A, Calvo Martinez R, Martinez R*

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**Aims:** To implement a detection and attention service to women victims of gender violence (IPV) in Primary Care (PC) and to evaluate the process of implementation and development after 3 years.

**Material and method:** Design stages and preparation of the process are evaluated, training of professionals, elaboration of an action protocol, piloting and implementation of the service. Targeted population of the intervention: Women over 14 years who visit PC for any reason. Type of intervention: mass screening to every woman over 14 who visits PC. Method: Through specific questions in the course of a clinical interview. Presentation of the experience: Phases: 1. Analysis of situation and opinion study to professionals and victims 2. Training: Design and development of a Training Program in IPV for doctors, nurses, social workers, midwives, paediatricians, emergency and mental health professionals 3. Elaboration and approval of the protocol 4. Piloting 5. Implantation of the service in 246 health care centres and development of it 6. Evaluation

**Results:** Situation analysis: various studies were performed on estimated prevalence, professionals and victims opinion prior to the start of the process Professionals who had received some kind of training (2006 to 2010) Number: 6.091, most of them were PC professionals with clear predominance of women (doctors and nurses) Piloting of service (2007): in 22 PC Centres Implantation (2008): in 246 health care Centres. Made screening: 120.033 women (10,8% of the total) (2008 to 2010) New cases detected: 2.127 (1,7 % of the respondents)

**Conclusions:** The implementation of a screening and care program for IPV is a complex process requiring prior training of professionals, prevision of resources and systematic analysis of the results. Although screening has significantly improved from the baseline, cases detected in these two years are less than expected in relation to known studies.

This result suggests us to review the used screening tool.

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### Female sexual dysfunction treatment

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**Introduction and aim:** Female sexual dysfunction takes different forms such as lack of sexual desire, impaired arousal, inability to achieve orgasm, pain with sexual activity or sexual dysfunction related to a medical condition or substance use. Approximately 12% of women have distressing sexual problems. Even though the problem dimension, clinicians resist to approach this issue. The aim of this work was to define female sexual dysfunction therapy management.

**Methods:** Classic literature review about female sexual dysfunction therapy management. Article search on Evidence-based medicine data-bases, between January 2000 and April 2010, in english, portuguese and spanish, using the key-words: dysfunction, female and treatment. The grades of recommendation were applied using Strenght of Recommendation Taxonomy (SORT).

**Results:** Management approach must be adjusted to underlying physical and psychological factors, using multidisciplinary team intervention, when necessary. Pharmacologic therapy is used only when pharmacologic interventions have proven ineffective. For postmenopausal women with vaginal dryness or dyspareunia, low dose vaginal estrogen are recommended (SOR A). If these are contraindicated, water-based lubricants can be used (SOR B). In postmenopausal women with hypoactive sexual desire disorder, but not in premenopausal women, a testosterone trial can be suggested (SOR B). In postmenopausal women with vasomotor symptoms, estrogen/progestin therapy is a considerable option, unlike tibolone (SOR B). If sexual disorder is related with selective serotonin reuptake inhibitor, using a phosphodiesterase inhibitor can be tried. Bupropion is also an option. Herbal supplements are not recommended.

**Conclusion:** Non pharmacologic therapy is mostly effective and should always be first option. When it fails to succeed, there are several pharmacologic options. However better evidence it's still necessary about ideal dosages and criteria for use.

### Infectious diseases

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#### Azygos lobe, "a comma in inverted position". Presentation of a case

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**Aims and background:** The azygos lobe is a strange anomaly of the lung but its radiological appearance has been well defined. The combination of the pleura along the fissure

together with the azygos vein gives an image similar to a comma in inverted position. It has been accepted as a normal variation but can simulate several diseases.

**Material and methods:** A descriptive analysis of one patient who presented this finding in our primary care centre is discussed.

**Results:** Female patient aged 44 years with history of ovarian cyst and smoking habit. She attended our centre with three-day course of fever, joint aches, chest pain and cough. Temperature was 38 °C, blood pressure 135/101 mm Hg, heart pulse 87 beats/minute, and oxygen saturation 96%. The clinical examination showed coryza, nasal congestion and some isolated ronchi were heard. Point-of-care C-reactive protein (CRP) was 110 mg/l. A clinical suspicion of atypical pneumonia was made and she was treated with levofloxacin 500 mg o.d. and a chest X-ray was immediately requested. Another physician read this plain radiography and a definite diagnosis of pneumonia was made. However, in the following day the radiologist informed this radiological procedure as normal but with an azygos lobe finding in the upper lobe of the right lung. The patient presented a flu-like syndrome with high concentration of CRP but had been inappropriately given an antibiotic regimen

**Conclusions:** The azygos lobe is an uncommon variant of the upper lobe of the right lung and its significance is given by the potential risk in carrying out erroneous diagnoses of other diseases such as pneumonia and that it is scarcely reported in the medical literature. Awareness of this phenomenon by general practitioners has to be taken into account.

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#### Adherence to penicillin in streptococcal pharyngitis can be improved with the use of mobile messages

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**Aims:** To assess the drug adherence observed among patients with pharyngitis treated with a twice-daily regimen with penicillin V who received a mobile short message (SMS)

**Material and methods:** We performed a prospective study in October to December 2010 in six offices in the primary care setting - three offices assigned to SMS and other three without - including patients with positive rapid antigen determination test for group A beta-haemolytic streptococcus, not allergic to -lactam antimicrobials, treated with penicillin V 1.200,000 UI bid. The short communication was sent at the third day only to patients assigned to intervention. Patient compliance was assessed by pill counting. Patients were given the bottle with 30 pills and they were appointed at the seventh day. They all were asked to return the bottle with the remaining pills. Chi-square tests were performed considering p values < 0.05 as significant.

**Results:** A total of 42 patients were enrolled (18 in the intervention group), with a mean age of 26 +/- 5.8 years. The mean number of remaining pills in the intervention group was 2.6 +/- 1.7. Conversely, the percentage of remaining pills observed among the twenty-four patients assigned to control group was slightly greater, although no statistically significant differences were observed (6.3 +/- 3,0).

**Conclusions:** In this pilot study patients who received SMS support slightly improved adherence. On the basis of these results a clinical trial using electronic monitoring could be carried out to better assess whether the use of these short

messages help patients to better comply with the antibiotic regimens.

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#### With eyes wide open – a case of Ramsay-Hunt syndrome

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**Introduction and aim:** In the presence of an acute health condition first evaluated at the hospital, the Family Doctor should not dismiss his clinical responsibility and consider the diagnosis and the prescribed therapy as definitive. By the illustration of a rare cause of peripheral facial palsy, this case highlights the risk of such an attitude and the importance of a careful examination along with good medical knowledge.

**Material and method:** Case report of a patient followed in a Portuguese Health Center

**Results:** A 68 years old male patient presented to the emergency room with a sudden difficulty in closing his right eye, a slight disartry and face asymmetry. He was discharged with the diagnosis of peripheral facial palsy and medicated with ophthalmic teardrops. The next day, without improvement of his clinical condition, he visited his Family Doctor. In the physical exam it was evident a right peripheral facial palsy without other abnormal signs and the patient started oral corticotherapy. A week after the first consultation, some vesicles had appeared on the palate and right auricular pavilion. The patient began antiviral therapy and physiotherapy. A month later, there had been a partial recovery of the overall clinical status.

**Conclusion:** The appearance of herpetic vesicles allowed the diagnosis of Ramsay-Hunt syndrome, a rare condition whose prompt recognition and treatment with antiviral agents may improve the likelihood of a complete patient's recovery. The late appearance of these signs delayed the beginning of a specific therapy and may have contributed to sub-optimal results. This case highlights the importance of actively looking for herpetic vesicles as well as considering the early use of antiviral therapy, when in the presence of a peripheral facial palsy. The continuity of care allows the Family Doctor to obtain relevant new information as the situation evolves, which in this case determined a change in the therapy initially prescribed.

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#### Study of the ferritin serum levels in patients with acute hepatitis

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**Aim:** Our purpose is to study ferritin serum levels in patients with acute hepatitis and to estimate its potential contribution to the differential diagnosis of this condition.

**Material and methods:** We studied 47 patients with acute hepatitis (33 men and 14 women, with an average age of 33,8 years old). Nine of the patients (19%) suffered from

acute hepatitis A, seventeen (36%) from acute hepatitis B, fourteen (30%) from acute hepatitis C, and seven (15%) from drug induced hepatotoxicity. Serum markers as well as ferritin serum levels were measured using an imuno enzyme linked method. Multiple regression method was used for data processing.

**Results:** Ferritin serum levels were normal in only seven (14,9%) of the patients, with an average rate of 693,6 +/- 192,3 ng/ml. Data analysis using the multiple regression method led to a statistically significant correlation between ferritin and ALP ( $p=0,025$  /  $r=0,012$ ), but it did not prove any significant differences between the two parameters.

**Conclusions:** Ferritin serum levels increase in acute hepatitis, regardless of its cause, thus being a useful serum marker for this condition. However increased ferritin serum levels are not specific and therefore cannot be considered as a reliable differential diagnosis factor.

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#### Intervention in general practice to increase vaccination rate against influenza and pneumococcal in elderly population

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**Aims and background:** Vaccination is one of the most important public health measures to prevent and control infectious diseases. Influenza and pneumococcal vaccination is recommended for people over 65 years, particularly for those with underlying chronic medical conditions. The aim of our study was to find out the effectiveness of minor interventions: written recommendation for vaccination and invitation for vaccination during the visit in general practitioner's office on vaccination rate against influenza and pneumococcal.

**Materials and methods:** All of the 327 people 65 years or older attending one general practitioner's office were included. Letters with recommendations for vaccination were sent to all of the including population before the season of vaccination against influenza 2009/2010. The vaccination was also recommended during their visits in general practitioner's office in a season of influence vaccination. Vaccination rate against influenza and pneumococcal after the intervention in the season 2009/2010 were compared to the vaccination rate before the intervention in the season 2008/2009.

**Results:** 125 men (38.2%) and 202 women (61.8%), age from 65 to 93 years (average 73.6 years, SD 5.7 years) were included. 310 (94.8%) of elderly had at least one and 245 (74.9%) had two or more chronic medical conditions. In the season 2008/09, 31 elderly people (9.5%) have been vaccinated against influenza, and 3 elderly people (0.9%) against pneumococcal disease. The intervention statistically important increase vaccination rate against influenza (29.2% vs. 9.5%,  $p < 0.001$ ) and pneumococcal (9.5% vs. 0.9%,  $p < 0.001$ ) in the season 2009/10.

**Conclusion:** The proportion of influenza and pneumococcal vaccinated elderly people in Slovenia is low and does not reach the goals and recommendations of the World Health Organization. With an intensive personal doctor recommendation we could increase the influenza and pneumococcal vaccination rate in the elderly.

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**Fever perception in the families who admitted to the pediatric emergency service due to fever***Nerkiz P, Aydoğan Ü., Onar T, Doganer C, Gok F, Saglam K, Ozcan O*

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**Aim:** Parents make much of small and insignificant elevations in body temperature of their children, and lead to emergency services busy unnecessarily. In our study, fever perception of the parents who brought their children to emergency service due to fever complaint was reviewed.

**Material and method:** The study was conducted among parents who brought their children to Pediatric emergency service due to fever, between January and September 2010. A questionnaire including questions about perception levels of fever was performed to 400 parent.

**Results:** Mothers educational status of 400 children in the study were as follows: primary school 11,8% (n=47), secondary school 5,5% (n=22), high school 45,8% (n=183), and 37% (n=148) university graduates. Fathers educational status of patients in the study were as follows: primary school 2,3% (n=9), secondary school 2,3% (n=9), high school 32,5% (n=130), and 63% (n=252) university graduates. When parents were asked the references they learned from about fever; 16,5% (n=66) the internet, 3,8% (n=15) newspaper, 8% (n=32) television programs, 10,8% (n=43) allied health personnel, and 61% (n=244) physician. Parents measure fever of children 24,8% (n=99) by touching with hands, and 75,2% (n=301) by using thermometers. Types of thermometers that parents used for fever measurement: 67% (n=268) digital thermometer, 21,3% (n=85) mig thermometer, %11,3(n=45) ear-type thermometer, and 0,5% (n=2) other types. The question about limit degrees that parents accepted as fever was answered as; 12,3% (n=49) 37°C, 22,8% (n=91) 37,5°C, 36,3% (n=145) 38°C, 17% (n=68) 38,5°C, 9,3% (n=37) 39°C, and 2,5% (n=10) 39,5 and above.

**Conclusions:** Although it is known that fever is a natural defense response, they were taken with unnecessary fear. Ever so, participants of our study are well educated rather than other sectors of society, we determined that parents have incomplete and inaccurate information and applications related to the fever.

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**Comparison of three predictive rules for assessing severity in elderly patients with community acquired pneumonia.***Vila-Córcoles A, Ochoa-Gondar O, Hospital I, Juarez M, Alvarez M, Epivac S*

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**Aim:** To compare the ability of the Pneumonia Severity Index (PSI) and the British Thoracic Society CURB-65 and CRB-65 rules in predicting short-term mortality among elderly patients with community-acquired pneumonia (CAP).

**Material and methods:** Population-based study including all people over 65 years-old with a radiographically confirmed CAP in the region of Tarragona (Spain) between 2002-2008. Treatment setting and clinical variables were considered for each patient. PSI, CURB-65 and CRB-65 scores were calculated at the moment of diagnosis, and 30-day mortality was considered as main dependent variable. The rules were compared based on sensitivity, specificity, and area under the receiver operating characteristic curve (AUC).

**Results:** Of the total 649 CAP cases, mortality rate was 12.5% (15.3% in hospitalised and 1.5% in outpatient cases; p<0.001). Mortality increased directly with increasing PSI, CURB-65 and CRB-65 scores. The three rules performed too similarly to predict 30-day mortality, with an AUC of 0.74 (95% confidence interval [CI]: 0.66-0.77) for the PSI, 0.68 (95% CI: 0.62-0.75) for the CURB-65, and 0.72 (95% CI: 0.66-0.79) for the CRB-65.

**Conclusions:** Differences between discriminatory power of the PSI and the simpler CRB-65 score are small, which support the recommendation for using this simplified severity score among elderly patients in primary care or emergency visits.

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**Anti-pneumococcal revaccination uptakes in Spanish people 60 years or older***Vila-Córcoles A, Ochoa-Gondar O, Hospital I, Juarez M, Alvarez M, Epivac S*

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**Objective:** To analyse the degree of compliance in the recommendations for revaccination using 23-valent polysaccharide pneumococcal vaccine (PPV23) in older adults.

**Methods:** Cross-sectional population-based study including 27,204 individuals 60 years or older assigned to 9 Primary Care Centers in the region of Tarragona (Spain). By checking electronic clinical records (which contain specific field for antipneumococcal vaccinations) it was determined for each individual the number of prior doses of PPV-23 and the date of the last dose. Persons were classified as "eligible" or not for revaccination according to they had received or not a PPV-23 before 65 years-old, respectively.

**Results:** A total of 15160 persons had received any dose of PPV23 in the last ten years, of which 4796 (17.6%) were vaccinated in last 3 years, 4185 (15.4%) between 4-5 years, 2604 (9.6%) between 6-8 years and 3575 (13.1%) between 9-10 years. Percentage of people who had received at least one dose of PPV23 was 55.7% (95% confidence interval [CI] : 55.1-56.3), increasing significantly with age (25.8% in 60-64 yrs., 52.9% in 65-69 yrs, 69.2% in 70-74 yrs and 72.7% in people 75 yrs or older); p<0.001). A total of 1192 eligible subjects for revaccination were observed, but only 156 of them (13.1%) had been revaccinated (95% CI: 11.3-15.1). Considering eligible subject for each age strata, revaccination rates were 12.7% in 60-64 yrs, 5.3% in 65-69 yrs and 8.8% in 70-74 yrs.

**Conclusion:** Revaccination coverage using PPV23 is extremely low, despite recommendations for revaccination in all persons who receive PPV23 before 65 years-old. These persons have high-risk conditions for pneumococcal infections, so revaccination uptakes should be greatly increased.



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**The relationship of nasal staphylococcus aureus carriage in hemodialysis patients with sociodemographic datas***Aydođan Ü, Yuksel S, Gok D, Akbulut H, Yilmaz M, Sari O, Senses Z, Doganer Y, Saglam K*

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**Aim:** The most important reason of death in hemodialysis patients is infectious diseases. The most common factor in them is staphylococcus aureus. The staphylococcus aureus colonization in the anterior nasal mucosa of patients and health personel is the main reservoir for staphylococcus aureus infections.

**Material and methods:** Our study was performed in 5 different regions of ankara between july-october 2009. 185 patients of hemodialysis with the reason of chronic renal failure was included to our study. Nasal swab samples was taken with sterile ecuvioned sticks from inside the both two nasal meatus. Sample sticks were planted into sheep blood agar and incubated 24 hours in 37 centigrade oven. It was evaluated at the end of 24 hours by a microbiologist. Then it was determined as gram (+) cochus typed, catalase (+) coagulase (+) staphylococcus aureus colonies.

**Results:** 64,3% (n=119) of the patients were male and 35,7% (n=66) were female. The mean age of the participants was determined 58.88+/-15.94 in males and 58.15+/-14.99 in females. According to culture outcomes Metisilin sensitive Staphylococcus Aureus (MSSA) was detected in 14,1% (n=26), Metisilin resistance Staphylococcus Aureus (MRSA) was detected 1,1% (n=2) of our patients. When comparing our patients distinguishing features of marital status, education, cigarette usage, health insurance, monthly income, abode, and patients care with staf aureus carriage; no significant difference was determined. In order p=0.972, p=0.536, p=0.311, p=0.699, p=0.401, p=0.283, p=0.208.

**Conclusions:** Staphylococcus aureus infections causes severe health problem especially in hemodialysis patients and in-patients. In our study; when the number of people living at the same home accretes nasal staf aureus carriage also accretes. According to a study that Matthew and his colleagues did in USA ,the sociodemographic factors influencing nasal staf aureus carriage were ethnicity(nonhispanic white),being over 60 and being female. But in our study by investigating the relationship between our patients sociodemographic features and nasal staf aureus carriage; no statistically significant relationship was determined.

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**UTI: optimization of empirical antibiotic therapy in women***Gomes A, Sousa S, Afonso A, Monteiro F*

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**Introduction and aims:** Uncomplicated urinary tract infections (UTI) are a frequent reason for consultation and are the second most common clinical indication for empiric prescription of antibiotics (AB) in Primary Health Care. The

high incidence of UTI, its usually mild nature and the necessity for therapy before the availability of microbiologic results led to the necessity of establishing protocols of action in several countries. Antibiotic resistance is, however, a growing problem due to high use and spread of AB. The objective of this study is to determine the most effective antibiotic for empirical treatment of uncomplicated UTI in adult women. The intention was also to determine the association of bacterial agents with age as well as antibiotic sensitivity with age and with the laboratory.

**Methods:** Results of bacteriological urine examination (BUE) and its antibiotic sensitivity tests (AST) from adult women were collected. The results were derived from 2 extra-hospital laboratories, the Esposende Clinical Laboratory (LACE) during August and September of 2008, and the S. Lázaro Clinical Laboratory (LACSL) during November and December of 2010. The data were processed using Microsoft Excel 2007 and SPSS v17.0, performing descriptive and inferential analysis.

**Results:** The most frequently isolated bacterial agent was E. coli (77.6%), a prevalence independent of women's age (p=0.652). E. coli was sensitive to fosfomycin (99%), to 3rd generation cephalosporins (98,9%), to nitrofurantoin (92.1%) and to amoxicillin/clavulanic acid (90.1%). It proved to be resistant to amoxicillin (60.2%), to 1st generation cephalosporins (39.3%) and to cotrimoxazole (25.1%). The sensitivity of E. coli to antibiotics was independent of women's age (p> 0.05), but it was higher in LACSL in relation to amoxicillin, amoxicillin/clavulanic acid, cephalosporins 1st and 2nd generation and Nitrofurantoin (p <0.05).

**Conclusions:** E. coli is the most common etiologic agent of uncomplicated UTI in adult women and fosfomycin should be considered as the first-line antibiotic for empirical treatment. However, it is important to consider the profile of antibiotic resistance in the specific population.

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**Community-acquired pneumonia (CAP) antibiotic treatment in a spanish sanitary region***Daza P, Sampietro S, Insausti M, Arrondo M, Aramburu A, Oiarbide M*

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**Aims:** To determine the differents antibiotics used against the community-acquired pneumonia in our sanitary region, depending on the attention place, the hospital or the primary care services.

**Design and method:** During a year, 406 people older than 14 years were diagnosed CAP from a population of 43.500. Were included patients diagnosed at the hospital and in primary care. It was considered that the patient had pneumonia when radiology was confirmed by a radiologist.

**Results:** The number of patients diagnosed CAP during a year were 406 (population of 43500), 0,8% was the incidence. 161 community-acquired pneumonia were diagnosed in primary care services, 8 in primary care emergency services, 110 in emergency hospital, 38 in health private services and there were 85 diagnosed in the hospital. In primary care services the most common antibiotic used was amoxicillin/clavulanic (31,8%), amoxicillin was the second (18,6%) and finally quinolones (moxifloxacin 17,8%, levofloxacin 16,3%). In the hospital the most common antibiotic used were quinolones (68%) (levofloxacin 42%, moxifloxacin 26%), amoxicillin/clavulanic was the second

(27%), and amoxicillin was used 2,4%. In other hand, we investigate the relation between the clinical evolution and the different antibiotic used, the mean days with feber for the patients who took betalactam was 2,63% and 1,69 (p=0,009) was for the patient who took quinolones.. 10 days after, 74,5% of patients treated with betalactam had criteria for clinical cure and the 51,2% of those treated with quinolones (p=0,018).

**Conclusions:** The community-acquired pneumonia antibiotic treatment is different depending on the attention place, in the primary care services is more common use betalactam, but in the hospital the most used are the quinolones, being significant the use of levofloxacin in the admission patients and the low use of amoxicillin in the hospital. The patients treated with quinolones had a mean day less without feber than those who took betalactams. However, the 10th day after the treatment, there was a significantly higher number of patients with criteria for clinical cure in the group of betalactams.

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#### Cat-scratch disease – clinical report

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**Introduction:** Cats are domestic animals very common in Portuguese houses, however they are reservoirs of infectious agents and potential sources of infection to humans. The Cat-Scratch disease is a zoonosis caused mainly by *Bartonella henselae* transmitted to humans by inoculation into wounds caused by scratches and cat bites, previously infected by cat fleas.

**Clinical report:** We report a case of Cat-Scratch disease of an immunocompetent 44-year-old woman, married, with two sons, unemployed (Graffar Class IV), with smoking habits and previous history of intravenous drug use. The patient attended the health center complaining of painful swelling in her right arm, lasting two weeks that didn't relieved with non-steroid anti-inflammatory drugs. Additionally, the patient complained of anorexia, asthenia, rigors and fever. She presented a crust in a finger of the right hand, epitrochlear lymphadenopathy and other smaller regional lymphadenopathies. Her symptoms started three days after she was scratched by her kitten. The patient's laboratory evaluation, tuberculin reaction and chest X-ray were normal. A presumptive diagnosis of cat-scratch disease was made based on the epidemiology and the clinical presentation. Due to the painful lymphadenopathy, she was treated empirically with azithromycin for five days with fast resolution of most of the symptoms. The diagnosis of *B. henselae* infection was confirmed by serology and PCR on lymph node biopsy. For the epidemiological study of the origin of the infection, it was additionally performed an investigational study of the patient's kitten and their ectoparasite.

**Conclusion:** Among healthy individuals the Cat-Scratch has a benign course, being possible to diagnosis and to treat it in primary care. However, to better understand the epidemiology and clinical spectrum of Bartonellosis in our country, future studies need to be performed in patients and animal reservoirs to identify circulating *Bartonella* species.

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#### Knowledge and attitudes of healthcare workers towards risk of TB and HIV infection in a rural South African hospital

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**Background and objectives:** Occupational exposure to Human immunodeficiency virus (HIV) and tuberculosis (TB) are highly concerning to healthcare workers in Kwa-Zulu Natal (KZN), in view of the high prevalence in this area, and the high level of drug resistance. There have been a number of cases of occupational drug-resistant TB transmission in KZN, and the level of risk in hospitals is extremely difficult to quantify. We wished to examine the knowledge and attitudes of healthcare and allied workers toward risk of occupational TB and HIV acquisition.

**Method:** A questionnaire was developed to examine knowledge and attitudes towards TB and HIV in a broad range of hospital workers. A pilot study of 20 individuals was performed and appropriate refinements made to the questionnaire. The questionnaire was circulated around hospital workers, including clinical, paramedical, support and domestic staff, with one of the investigators available to assist with completing questions if needed. Questionnaires were anonymised and collected on a voluntary basis, and response rates were high. Fluent Zulu and Afrikaans speakers were available to assist with language difficulties when needed.

**Results:** 229 responses were received from a broad and representative range of hospital workers. Forty respondents (17.4%) had previously taken a course of PEP, mostly for needlestick injuries. Four (10%) of these respondents stated they would not take PEP again for a 'high risk' exposure. The majority (29; 72.5%) of those prescribed PEP completed the course, and 19 (8.3%) of respondents reported significant HIV exposures but chose not to take PEP. Knowledge regarding TB risk and management was variable and misconceptions were widespread regarding risk levels and risk behavior.

**Conclusion:** Tuberculosis and HIV are major public health concerns in South Africa, and work is needed to improve the knowledge and risk behaviours of health workers in South Africa.

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#### Development of quinolone and trimethoprim-sulfamethoxazole resistance in e.coli strains isolated from urine cultures

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**Aim:** *E. coli* is the most common cause of urinary tract infections in both hospitalized patients and in community acquired infections. The aim of the study is to monitor the development of *E. coli* strains resistant to Trimethoprim-

Sulfamethoxazole (SXT) and to quinolones, isolated from patients with community acquired urinary tract infections.

**Materials and methods:** We studied the antibiotic resistance patterns of 620 E.Coli strains isolated from urine cultures of patients that visited Vironas Health Center and were diagnosed with urinary tract infections. The study was conducted from 05/2008 since 4/2010.

**Results:** The percentage of E. coli strains resistant to Trimethoprim - Sulfamethoxazole was 22%, while the percentage of E. coli strains resistant to ciprofloxacin was 18% and to norfloxacin 17%.

**Conclusions:** While the percentage of resistant E. coli strains to Trimethoprim - Sulfamethoxazole was expected, there was a significant increase of E. coli strains resistant to quinolones in the community. This can be attributed to the often prescription of quinolones, as an empirical treatment, for uncomplicated urinary tract infections in primary care. Thoughtless use of quinolones should be stopped and their use should be limited, only after urine culture and isolation of multiresistant E. coli strains (according to the guidelines of the KEELPNO- the Greek CDC).

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#### Study of the vaginal flora in postmenopausal women with symptoms of vulvovaginitis

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**Aim:** The hormonal changes related with the menopause cause very significant changes in the vaginal environment and also vaginal flora. The aim of this study was to evaluate the vaginal flora in a group of post menopausal women.

**Materials and methods:** We have studied 102 post menopausal women, not under hormonal replacement treatment, between 50 and 65 years old, with symptoms of vulvovaginitis.

**Results:** In 43 women (42%) no bacteria were isolated. In these specimens a significant decrease or absence of galactobacilli was noted. Non-specific vaginitis was diagnosed in 29 women (28%), Gram - positive cocci were isolated in 16 women (16%), Candida species in 9 (9%) Gram-negative bacteria in 12 (6%). Gram-positive cocci (7 S.agalactiae, 6 E.faecalis, and 3 S.aureus) and Gram-negative bacteria (3 E. coli, 2 P. mirabilis, 2 K. pneumoniae, 1 E. aerogenes and 1 C. braakii) were evaluated only when there were the only isolated bacteria in the culture.

**Conclusions:** These results show that in postmenopausal women, the causes of the vulvovaginitis symptoms are not always related with the presence of pathogens. The most common diagnosis was that of non specific vaginitis.

#### Mental health

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#### Anxiety and depression in caregivers of dependent patients

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**Aims:** Estimate prevalence of depression and anxiety in main caregivers of dependent patients according to Law 39/2006 of the care system.

**Material and methods:** We select 294 main caretakers of dependent patients according to Law 39/2006. Descriptive, cross-sectional and multicentre study. Recruited during the first semester of 2009 in 8 urban centers and 2 rural ones of the Communities of Andalusia and Murcia. We measure levels of anxiety and depression through the Hamilton scale, the social by means of the Duke-UNK scale, sociodemographic, medical variables and associated perceived support to the care of the employee was used the test of 7 and tests of Wilcoxon and t of student. Multivariate analysis with the most excellent data was realised.

**Results:** 254 caregivers presented/displayed anxiety (86%) (IC 95%: 82,47-90,31%) and depression 191 (65%) (IC 95%:59,51 - 70,41%). The anxiety presence was related of statistically significant way ( $p = 0.043$ ) to: caregivers nonremunerated, low social support, previous diagnosis of anxiety and depression, taking of psychotropics and diagnosis of depression by means of Hamilton scale for depression. The depression presence is related to: caregivers nonremunerated, kinship, previous diagnosis of anxiety and depression, to consume psychotropics and with anxiety diagnosis according to the Hamilton scale. We did not detect statistically significant differences in the association of dependency degrees and the appearance of depression and/or anxiety.

**Conclusions:** The prevalence of depression and anxiety in caretakers of dependent patients is significantly greater than in the general population. To greater social support smaller prevalence of these upheavals.

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#### Sexual dysfunction in consumers of antidepressants

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**Aims:** To determine the incidence rate of sexual disorder in consumers of antidepressants. The area of the study will be the Primary care of Health, taking part, of multicentric form four health's centers.

**Material and methods:** patients older than 18, who suffer affective disorder capable of treatment with antidepressants, will constitute a potential subject to incorporation. They will be informed about the aims and conditions of the study and assent will be asked for participation. The chronogram of visits begins with a basal visit, where, after prescription of treatment following the clinical criteria of the investigator, and obtained informed assent, variables are completed, and questionnaires and detailed scales are facilitated to the patient. The second visit will take place 6 weeks of the beginning of the study. Diagnosis of affective disorder specified and codified as CIE-10 will be registered. Patients included, will complete, in the basal visit, Goldberg and Hamilton scales for anxiety and depression and " index of sexual female function (FSFI) and male (SHIM) questionnaires. In the only visit of follow-up, to 6 weeks, PRSexDQ-Salsex (Montejo and cols, 2000) will be registered, in relation with the possible sexual secondary dysfunction to the use of antidepressants, and again outcomes for

Hamilton's for anxiety and depression. For the calculation of the sample size there is accepted an incidence of 30 % of affectation of the sexual function in consumers of antidepressants, according to bibliography. For a power of test of 80 %, confidence interval of 95 %, and estimating a sample loss of 10 %, it turns out to be a total sample including of 266 patients.

**Results and conclusions:** Descriptive statistical analysis for registered variables will be realized so, analysis multivariate for detection of associations between variables (ANOVA). Analysis will follow by means of model of logistic binary regression for qualitative variables

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#### Let the food be your medicine....Hippocrates 400 BC

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**Purposes:** The term orthorexia nervosa is defined as a new type of eating disorder characterized by people obsessed with a diet that allows them to improve health through maniac research and an excessive focus on food quality rather than quantity (as is the case with anorexia nervosa and bulimia). The present study conducted on a sample of 400 people in the city of Caserta. The aim of this work is therefore to establish the scale of the "orthorexia nervosa" in the setting of general practice, through a careful study of the prevalence of the disorder and co-morbidities related knowledge to recognize and assess the eating disorder by the 'using specific questionnaires.

**Design and method:** A group of General Medicine Doctors has submitted the "Orto15" questionnaire, used for the diagnosis of orthorexia nervosa, proposed by Donini, in patients aged between 17 and 50 years and, simultaneously, has compiled a spreadsheet information concerning the major co-morbid conditions such as some psychiatric and metabolism disorders.

**Results:** 400 questionnaires were collected. 12.5% had psychiatric disorders (anxious-depressive disorder, OCD) and 10% a metabolic disorder (diabetes mellitus, dyslipidemia). 45% of the population is considered normal weight, 30% are overweight, 9% is obese and 16% are underweight. Data processing highlighted some information such as: 71.4% of people are willing to pay more to have a healthy food 73% of people think that healthy eating is improving the appearance 67.7% states that food choice is influenced by the "fear" about their health 60% says that emotional states affect their eating behavior 65% of people feel guilty when transgresses with food.

**Conclusions:** 4% have a diagnosis of orthorexia nervosa; 11% people have a high potential to suffer from orthorexia. The data obtained lead us to greater attention to this disorders and a better assessment of comorbidity.

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#### Turning points in primary care: Recognizing mixed affective disorders in the context of agitated depression

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**Aims and background:** The majority of patients with mood disorders are treated by General Practitioners (GPs). In the UK population aged 16-64, 7.7% of patients present with mixed anxiety and depression, 75% have a history of depression and 25% are frequent healthcare utilizers. It is estimated that six disability days per month are due to depression. 10-15% of depressed patients commit suicide and 25% of those visit the GP the previous week. By 2020 depression will be the second world's disabling condition after ischemic heart disease. Depressive episodes dominate the lifetime course of bipolar affective disorder and the frequency of depressed patients developing manic/hypomanic symptoms raises to 50%. Approximately 50% of patients suffering from mood disorders are diagnosed by GPs as symptoms tend to be entangled with physical and social factors. The interface between unipolar and bipolar disorders becomes blurred when patients present with mixed symptomatology. Patients displaying agitated depression are sometimes misdiagnosed and treated inadequately which can lead to increased risks. The poster aims at aiding GPs to identify mixed affective states and highlights evidence based treatment pathways for this population.

**Methods:** Review of the literature.

**Conclusions:** The misdiagnosis of mixed affective disorders in primary care has prognostic and therapeutic implications. Patients with agitated depression are more likely to present restlessness, psychomotor agitation, increased talkativeness, irritability, racing thoughts, distractibility and sexual hyperactivity. The clinical importance of agitated depression in mixed affective disorders lies in the possible negative effects of antidepressants (exacerbation of agitation, induction of rapid cycling and increased suicidal behaviour). There is evidence for mood stabilisers and antipsychotics as treatment of choice for this group of patients.

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#### Health-related quality of life in elderly with insomnia

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**Objective:** To determine the prevalence of insomnia and assess the impact on health-related quality of life (HRQOL) in a representative sample of elderly people.

**Material and methods:** Cross-sectional study conducted in 926 people over 65 years. The presence of insomnia was established according to DSM-IV-TR by psychiatric interview. Other variables were health status (EuroQol-5D) and sociodemographic characteristics. The data were analyzed by ANOVA, nonparametric tests (Kruskal Wallis test) and tests for proportions comparison (likelihood ratio chi-square and phi coefficient).

**Results:** The mean age was 74.4 +/- 6.0 SD (range 65-95) and the proportion men/women was 45.2%/54.8%. Following primary insomnia (PI) criteria (DSM-IV-TR), the prevalence of this disorder was 8.9% (CI 95%:7.1-11.0) and following the differential diagnosis criteria, the prevalence of sleep disorder related to another mental disorder (SDRMD) was 9.3% (CI 95%:7.5-11.4) and the prevalence of sleep disorder due to a general medical condition (SDDMC) was 7% (CI 95%:5.4-8.9). The median value in the self-reported health (range 0-100) was 70 and significantly lower in the elderly with insomnia (p<0.001). In either type of insomnia the value of health

states was significantly lower ( $p < 0.05$ ): 0.87  $\pm$  0.16 SD in elderly without insomnia, 0.80  $\pm$  0.19 SD in elderly with PI, 0.73  $\pm$  0.19 in elderly with SDRMD and 0.76  $\pm$  0.19 in elderly with SDDMC. In the elderly with any type of insomnia was higher ( $p < 0.001$ ) the proportion of patients with problems or limitations in any of the dimensions contained in the EuroQol-5D: mobility, self care, usual activities, pain/discomfort and anxiety/depression.

**Conclusions:** Insomnia, whether primary, related to another mental disorder or due to a general medical condition is a common health problem that affects one in four elderly. In those who suffer this disorder, the HRQOL is lower and affects the physical, psychological and social dimensions.

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#### Hyperfrequentation groups: suffering from organic symptoms/ versus psychic symptoms

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**Purpose:** We have patients of hyperfrequentation patients who have 12 or more annual visits, taking into account psychiatric cases as well as chronic cases. It is a comparative study during 3 years.

**Design & methods:** The Medical Care dispositive that has participated in this research who have received a total of 86.063 requested visits. They are people aged from 15 to 93 years. Some us think that 20% of the users consume 80% of the health resources.

**Results:** In this study, the index of hyperfrequentation is 13,79 visits/ year. Hiperfrequentation community. -83% of the hyperfrequentation users belong to retired people older than 60, with higher proportion of women (60%) than men (32%). -The chronic pathologies found are: 1) Poliarticular arthrosis (37%). 2) High blood pressure (27%). 3) Diabetes mellitus (19%). 4) Chronic bronchitis (9%). 5) Vertigo and dizziness (10%). -Concerning psychical suffering, we have got the following results: 1) Afective disorders (39%). 2) Somatoform disorders (16%). 3) Anxiety-emotional disorders (14%). 4) Personality disorders (3%). 5) Psychosis (2%). 6) Adjustments disorders (21%). 7) Complicated grief (5%).

**Conclusions:** The integral or holistic focus (biopsychosocial model) of falling ill, makes easier and more understandable the task of the General Practitioner. This sort of patients hardly ever get better and it is also improbably that their visits to the Health Center decrease, so it is very important to establish a good relationship between Doctor-Patient in order to bear the work and avoid "burn-out" and inadequate practices. Working in this way, we can avoid three things: 1) That the sick person becomes more distressed than he is. 2) That the Health System will not finish in bankruptcy. 3) That the Doctor finishes suffering from "Tomás Disease", and so burned up like. A Doctor must be a DOCTOR he has to cultivate more the relation with his patients take his mask off and he also has to be comprehensive and assertive.

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#### Memory loss study in family medicine sphere

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**Aims:** Several studies bring to the conclusion that dementia is being less diagnosed in Spain. Making screening test it is not displayed to be useful if it is not indicated. This study tries to show if family, patient or primary care team hunch matches with a positive test.

**Material and methods:** It is a prospective descriptive study. We made mini-mental test (MMSE) validated by Lobo et al. in 1999, to three family medicine centers with different populations, during one year, to patients who complain about memory loss felt by themselves, their relatives or their primary care team.

**Results:** Total number of tests done were 78. There were 51 (65,61%) women, 27 (34,61%) men, middle age of the pattern was 71,23 years old in a range of age between 58-90 years old. Test is being done because a patient hunch to 39 (50%) people, because a relative hunch 24 (30,76%) and a primary care team hunch 15 (19,23%). MMSE score shows a severe cognitive impairment (<14 points) in 3,84%, moderate cognitive impairment (15-19 points) in a 0%, mild cognitive impairment (20-24 points) in a 26,92%, borderline result (25-29 points) in 19,23% and normal score (30-35 points) in 50%. From pathologic test in a 77% there were patient or relative suspicions and a 23% family medicine team suspicions.

**Conclusions:** We should make screening tests for dementia and cognitive impairment diagnosis in all memory loss suspicions from the patients themselves or from their relatives. The detection notice is bigger for patients and relatives hunches than for sanitary professionals. Although a great number of tests were negative, is considered to be very important making the screening due to the social and pathological impact of this kind of diseases.

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#### Determination of depression, anxiety and hopelessness circumstances in parents of pediatric chronic diseases and cancer patients

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**Aim:** Malignancies and other major chronic diseases in children cause compliance problem and psychological disorders by effecting all family members economically and psychologically. In our study, we aimed to determine sociodemographic attributes, depression and anxiety levels and hopelessness scores among parents of children who have haematologic/ oncologic malign or chronic diseases.

**Material and method:** The parents of patients (60 mother, 51 father) applied to GMMA Department of Pediatrics, outpatient clinic of Haematology and Oncology between 1st of July, 2009 and 1st of June, 2010; the parents of healthy

children (64 mother, 45 father) applied to GMMMA Department of Pediatrics outpatient clinic were enrolled in the study. Beck Depression Scale, Beck Anxiety Scale, Beck Hopelessness Scale and sociodemographic information form prepared by us were conducted to the study and control group.

**Results:** Mean age in parents of children patients was 35.72+/-5.13 years and control group's mean age was 33.31+/-5.57 years. Comparing the depression scores in parents of children patients with control group, depression scores in parents of children patients were statistically significant higher than control group ( $p < 0.05$ ,  $p = 0.035$ ). Comparing the anxiety and hopelessness scores between groups, no difference was determined statistically significant ( $p = 0.064$ ,  $p = 0.695$ ). In the group of parents of children patients; when the depression, hopelessness, anxiety scores were investigated, statistically there were no significant difference between mother and father ( $p = 0.217$ ,  $p = 0.447$ ,  $p = 0.102$ ).

**Conclusions:** We determined, having a children with malign or chronic disease, could be a risk factor for depression without any gender differences between parents. We evaluated the social and psychological support for the parents of children patients with haematologic and oncologic malignancies were indispensable factor with their medical treatments.

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#### Does appointment duration and doctor-patient relationship influence medicine's prescription? patient's opinion

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**Aims and background:** Prescription and chronic use of medicines for anxiety and depression are growing in Portugal. Almost all studies approach doctors and healthcare system perspective. Is important to know patients opinion. Therefore, we aimed to study anxious and/or depressed patients opinion about appointments duration and doctor-patient relationship (DPR) in medicines prescription.

**Material:** Validated questionnaire. Questions: A: If appointment's duration was bigger, anxiety/depression prescription would be smaller B: If DPR was better, anxiety/depression prescription would be smaller. - Investigating doctors; - 3 Family Medicine doctors patients; - Secretaries that distribute questionnaires

**Methods:** Observational, descriptive study. Data obtained in a convenience sample (8-20 November 2010).

**Results:** 164 questionnaires obtained, 70,7% female and 73,2% under 50 years. 56 patients (34%) were/are under anxiety/depression medication (group 1) and 76 (46%) had anxiety/depression diagnosis (group 2). Group 1: A: 38,2% agree; 35,6% disagree; 26,3% no opinion B: 42,1% agree; 39,4% disagree; 18,4% no opinion Group 2: A: 35,7% agree; 37,5% disagree; 26,8% no opinion B: 37,5% agree; 42,9% disagree; 19,6% no opinion

**Conclusion:** The majority of patients are woman. They are in working active group of the population. 1/3 was/is under medication for anxiety/depression. The majority of this group considers that bigger appointment duration and better doctor-patient relationship could decrease prescription. 1/2 of the patients had, in some part of their lives anxiety and/or depression diagnosis. The majority of group don't think that

bigger appointment duration and better doctor-patient relationship could decrease prescription. Can we say that patients under prescription are more sensitive to communicational skills of their family doctor and appointment duration? This is a question that leads us into a new investigation subject.

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#### Self harm attempts attended by a Paramedic Emergency Service (DCCU); a descriptive qualitative study

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**Aims:** To analyse the profile of patients attended and treated due to suicidal attempts by a Paramedic Emergency Service. To compare profiles and suicidal behaviour of these patients with previous descriptive studies.

**Design and methods:** A Descriptive qualitative study; Data was collected between January and December 2010. Main variables of interest: age, sex, attempted suicide method, way of transfer to hospital, stationary distribution. Data was analyzed using SPSS 15.

**Results:** A total of 6279 patients were treated by the Paramedic Emergency Service between January and December 2010 due to self-harm. 94 were suicidal attempts. Mean age was 40.5 + / - 10 years, 56.4% men and 43.6% women. The most common method used was BZD poisoning, 61.7% of cases, of which 31 were men, 27 women. 87.2% were taken to hospital by DCCU, 5.3% by conventional ambulance, 6.4% refused to be transferred to hospital, 1.1% was taken by other specialized medical devices (not specified). Stationary distribution: winter 19.1%, spring 27.6%, summer 25.5%, fall 26.5%.

**Conclusions:** The number of patients justify the need for this study. The predominant profile of the patients were males featuring after 40 years. The main mechanism of autolysis is similar to that in other studies highlighting the BZD. The stationary distribution was uniform. There is a change in the profile of patients with suicide attempts that would require further study in future. KEY- WORDS Suicidal attempts Emergency Family Medicine \*DCCU: Dispositivo de Cuidados Criticos y Urgencias. It's a Paramedic Emergency Service formed by various medical professionals, including A&E Middle Grade doctors and nursing staff specialised in Accident and Emergency.

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#### Study on the impact of anxiety relaxation workshops in Primary Care

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**Aims:** Assess the impact of group workshops on relaxation and cognitive techniques for reducing anxiety conducted in a

health center

**Material and methods:** Design: Descriptive longitudinal, pre-post intervention evaluation. Field of Study: Urban Health Centre with two rural clinics. Selection Criteria: People with anxiety disorders resulting from medical practice, nursing, social work or mental health. Subjects: Patients who participated in the workshops between October 1997 and December 2010 (80% sessions effective coverage assistance), (N = 237). Intervention Workshop group (10-12 people) with weekly sessions (8 sessions, lasting 2 months), led by the center's social worker, including training in breathing, relaxation techniques (Jacobson's progressive relaxation and Schultz autogenic training) and cognitive techniques (coping with stress and problem solving). Measurements: Age, sex, reason for participation and psychotropic drugs. We compare the Goldberg Anxiety and Depression Scale (GADS), pre and post-intervention using T Students for paired samples, alpha 0.05. We assessed the average number of visits to Primary Care 6 months before and after the workshop.

**Results:** Included 237 patients, 83.5% women, mean age 48.02 years (standard deviation 12.75), reasons for conducting the workshop: 56.5% Anxiety 95% Confidence Interval (50.23-62.85), somatic symptoms 8.9% (5.24-12.40), caregivers 5.9% (2.90-8.90). 53.2% takes psychotropic drugs, no differences in the GADS and pre and post intervention scores compared to the untreated group. The average decrease of anxiety pre-post intervention is 3.26 EADG points (2.99-3.54) ( $p < 0.001$ ) anxiety scale and subscale points 2.29 (2.04-2.53) ( $p < 0.001$ ) in depression subscale. There is an average decrease of 1.57 (0.71-2.41) ( $p < 0.001$ ) visits 6 months after the workshop.

**Conclusion:** The workshops on relaxation techniques can be useful in reducing depression in primary care and decreasing attendance to primary care.

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#### Anti depressant drugs in non psychiatric conditions : GP's opinions, and international guidelines

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**Background:** Main indications of antidepressants (ATD) are psychiatric conditions. Those drugs are also effective for non psychiatric conditions. In several cross sectional studies, it has been found that 20 to 30 % of the prescriptions could have been motivated by non psychiatric diseases. Antidepressant drugs also have sometimes officially these indications, sometimes not. Most of them are related to situations in primary care (eg. Migraine, fibromyalgia). Those situations have been previously retrieved in a previous qualitative study. In this study, GPs have assessed 24 precise pathological situations leading to prescription. The use of ATD seems to be sometimes inappropriate, according to the guidelines.

**Research question:** In non psychiatric conditions, what are indications and evidence levels for antidepressant drugs?

**Method:** The databases of the french HAS (High authority of health care), the NICE (UK), the National Guideline Clearinghouse (USA) have been examined. Guidelines have been screened with the following key words: antidepressant(s) tricyclic(s), serotonin, ISRS. For each condition quoted or associated with the key words, the level of evidence has been compared between the databases and

with the related use by the GPs. A complementary search has been performed for inconsistent data, on pubmed and on the Cochrane database.

**Results:** 864 guidelines have been examined, only 40 were left after the screening. 21 non psychiatric conditions associated with the assessment of ATD were founded in the guidelines. For one third, they were related to pain conditions. Two times out of three, GPs were prescribing for these diseases. Several inconsistencies have been founded between the sources, for several conditions: migraine, neuropathic pain, irritable bowel and urinary track incontinence.

**Conclusions:** Even if the use of antidepressant drugs is frequent, clear information is not really available, and the results difficult to implement in daily practice.

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#### Comorbide diseases in patients with generalized anxiety disorder

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**Aims:** Generalized Anxiety Disorder (GAD) is one of the prevalent psychiatric diseases. The prevalence of anxiety and depressive disorders is 10%-20% in primary care units according to epidemiologic studies. Especially undiagnosed patients due to somatic complaints are referred to unrelated specialists and unnecessary tests are done. Consequently physicians working at primary care units ought to have sufficient information about GAD.

**Material and Methods:** The sample group of our study is formed by 74 patients applied to Gulhane Military Medicine Academy Psychiatry policlinics and diagnosed with DSM-IV Generalized Anxiety Disorder. The diagnoses of patients were approved by psychiatrists after examination and application of Beck Anxiety Scale. Besides patients comorbide diseases and medications were recorded during face to face interview. Data were analyzed using SPSS for Win.V.15.00 (SPSS Inc., Chicago,IL.,USA) software package.

**Results:** The average age of patients was 42,19 +/- 12,85. 76,72 percent of patients with GAD had physical comorbidity, including diabetes mellitus (6,85%), hypertension (12,33%), cardiovascular disease (4,11%), thyroid disease (16,44%), allergy (28,77%), asthma (2,74%), migraine (15,07%), gastrointestinal disease (32,88%), hyperlipidemia (39,73%), vitamin B 12 deficiency (20,55%).

**Conclusions:** Anxiety disorders are frequently seen in primary care units. Because of non-specific clinical findings it may be difficult to distinguish anxiety disorders from somatic illnesses. Also patients with GAD often have multiple medical comorbidities. In our study only 23,28 percent of patients have not comorbide disease. Primary care physicians frequently see patients with chronic medical illness are in an excellent position to assess patients mental state and begin appropriate interventions.

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#### Relation between Beck anxiety scale and using antihypertensive drugs

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**Aim:** Hypertension is a common health problem in worldwide accompanying with anxiety disorders mostly. When we decide to give treatment for anxiety to these patients we have to deal with patients clinical situation as first. The anxiety scales may benefit for us about this purpose. This study is done to investigate anxiety levels of 52 hypertensive patients.

**Material and method:** We surveyed the data of the patients who applied to Gulhane Military Medical Faculty Internal Medicine Polyclinic suffer from hypertension. We gave the patients Beck Anxiety Scale (BAS) and they answered the questions in it. Data analysed from 52 patients of hypertension. The collected data has been analysed thereafter with SPSS 15.0 for Windows pocket program.

**Results:** In BAS score we classified the patients in four groups which includes normal/minimal, mild, moderate and severe according to their scores. Moderate and severe anxiety were detected according to the BAS scores in 20 patients of 52.13 (65%) of these 20 patients were using two or three antihypertensive drugs. Nobody was using anxiolytic or antidepressant drugs in the group that moderate and severe anxiety detected according to the BAS. The mean age of the patients in normal/minimal anxiety group, mild anxiety group, moderate anxiety group and severe anxiety group were 61 (+/-15,642 SD); 55,95 (+/-14,596 SD); 55,23 (+/-18,435 SD); 58,14 (+/-17,06) respectively. There was no significant difference according to the anova test and the result was 0,791.

**Conclusion:** When we analyzed the scores of patients for BAS we found that especially in moderate and severe anxiety group the patients were not using any kinds of anxiolytic or antidepressant. The test shows us that the level of the anxiety the patients have. Not absolutely but commonly the people who have moderate and severe anxiety according to the BAS should be treated. The treatment should be planned considering their clinical situation first as well as the scores of the scale.

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#### Management of patients with suicidal ideation and behavior

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**Introduction:** Suicidal ideation and behavior are among the most serious and common psychiatric emergencies. Primary care providers may be in a unique position to help, due to their frequency of interaction and proximity to their patients. However, many family physicians have difficulty in dealing with these cases. The purpose of this study is to summarize the steps of the management of patients with suicidal ideation and behavior, and to identify the main risk factors for suicide.

**Methods:** A classic review was made using the keywords suicide, suicidal ideation, suicide attempt and management in the Medline/Pubmed, scientific journals and text books of reference.

**Discussion:** Major risk factors for suicide include psychiatric

disorders, hopelessness, and prior suicide attempts or threats. High impulsivity and alcohol or other substance abuse increase the risk of committing suicide. There are also some protective factors against suicide such as social and familiar support, pregnancy and religiosity. Patients suspected to be at risk of suicide should be asked about suicidal ideation and intent and, if present, the lethality of the plan should be evaluated. Patients at imminent risk require psychiatric support and must be continuously monitored until they are in a safe situation. After immediate safety has been ensured, appropriate medications, counseling and social support should be provided in order to control the underlying factors or psychiatric disorders. Follow-up must be ensured to prevent the recurrence of symptoms or risk factors. Referral to secondary care is advised when suicidal intention is very high and the patient safety is compromised. There are no data to show that screening for suicide in primary care reduces mortality. Nevertheless, it is thought that a targeted approach to situations of high risk of suicide, based on risk factors, could be appropriate and important in primary care setting.

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#### Control of cardiovascular risk factors among schizophrenic patients in primary care

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**Introduction and aim:** Schizophrenic patients are at high risk of certain cardiovascular risk factors such as smoking, lack of exercise and fat-rich diets. They have higher rates of conditions like obesity, type II diabetes mellitus, dyslipidemia or high blood pressure. With this study we intend to describe the distribution of these conditions and risk factors among Spanish schizophrenics and the degree of control achieved by GPs of these risk factors among this high risk population in comparison to general public.

**Methods:** Cross-sectional observational study. The electronic records of 424 patients in 5 primary care health centers were revised. Socio-demographic and cardiovascular epidemiologic data was gathered. All the schizophrenic patients in those centers were included and controls were selected by matching patients of the same center, age, gender and GP. A total of 196 cases (46.2%) and 228 controls were selected (53.8%). Statistical processing was done with SPSS package using Chi-squared and T-student analysis.

**Results:** There was a higher number of schizophrenics with no recorded BP than among general population (24.0% vs. 37.7%,  $p=0.007$ ) and fewer of them had a good control of their SBP (55.7% vs 65.8%,  $p=0.007$ ) and DBP (57.9% vs. 68.9%,  $p=0.007$ ). There was a non-significant difference in the proportion of recorded cholesterol against schizophrenics (49.1% vs 48.5%) and they had a worse control (10.1% vs 8.2%,  $p=0.7$ ). When comparing those patients who took antipsychotic drugs with those that did not, there were no significant differences in the proportion of patients with bad control (10.4% vs 8.3%,  $p=0.7$ ). There was also a non-significant difference in the proportion of recorded diabetic control against schizophrenics (50.6% vs. 49.4%) but they had a significant worse control of their diabetes (75% vs 25%,  $p=0.013$ ). There were more schizophrenics with no record of their smoking status (23.7% vs 18.9%,  $p<0.000$ ) and when it



was recorded, the rate was significantly higher (45.6% vs 27.6%,  $p < 0.000$ ) but there were no differences in the rate of alcoholism (21.1% vs 20.4%,  $p = 0.87$ ). There was no significant difference in the prevalence of stroke (2% vs 0.9%,  $p = 0.31$ ) or ischemic heart disease (1.3% vs 4.1%,  $p = 0.074$ ).

**Conclusions:** Follow-up, recording and control of modifiable vascular risk factors (BP, smoking, HbA1c) among schizophrenics needs to be improved by GPs and psychiatrists. A better communication and a coordinated follow-up of these complicated patients would improve diagnosis and control of these conditions. We have however found no evidence of the complications of the above mentioned risk factors, probably due to the fact that the sample of patients analyzed is somewhat young.

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#### Assessment of the presence of depression in middle aged population

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**Aims:** The aim of our study was to determine the presence and the frequency of signs which characterize depression, among middle-aged population.

**Methods:** We analyzed 162 patients (pts) of both sexes (m:f=81:81), average aged 49.2 years. All of them, in our out-patient department, completed specially made Questionnaire (PHQ-9) for the depression self-assessment, that referred how often the patients in the last 2 weeks had signs of depression (D).

**Results:** We found that only 9 pts (5.55%) showed no signs of D. All were males. 24 (15.6%) had several signs more than 7 days, 27 (17.6%) had more than 5 signs every day. The following signs were present: 1. Dysphoric mood and/or anhedonia were present in 50.3% (m:f=20.9:29.4) 2. A sense of helplessness and emptiness was present in 77.1% (m:f=26.8:50.3) 3. Insomnia/hypersomnia were present in 65.4% (m:f=26.8:38.6) 4. Fatigue, loss of energy had 76.4% (m:f=29.4:47) 5. Poor/increased appetite had 47.7% (m:f=15:32.7) 6. Feeling of worthlessness or guilt had 47.7% (m:f=20.9:26.8) 7. Impaired concentration was present in 38.5% (m:f=17.6:20.9) 8. Psychomotor agitation/retardation had 38.5% (m:f=23.5:15) 9. Recurring thoughts of death or suicidal ideation had 20.9% (m:f=15:5.9). All the signs, except the suicidal thoughts, were at the higher percentage present in women. 69 pts (4.6%) showed the signs that are considered common to the general population; 93 pts (57.4%) showed signs of different form of D.: 35 (21.6%) showed mild form, 30 (18.5%) showed moderate/mild form of D. with anxiety, 19 (11.7%) showed moderately severe D. and 9 (5.55%) showed severe D.

**Conclusion:** Our study showed, according to the PHQ-9, that only 5.55% had no symptoms and more than half of analyzed pts. showed the signs of different forms of D., as well as the high rate of frequency of the symptoms of D. This situation is mainly the result of very bad financial situation, high rate of unemployment, increased rates of morbidity and mortality in middle-aged population in our country.

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#### Minor surgery and mental health: an association to bear in mind

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**Aim:** The minor surgery team of the health centre observed a high number of mental health problems in the patients attended, scantily gathered in the bibliography. An study was designed to verify the above mentioned association and its possible implications in Primary Care.

**Design and methods:** The team covers a population of 37.000 people attended by 20 family physicians. A case-control study was designed: cases were taken from minor surgery agenda attended for a period of a year (Oct/2008-Oct/2009) [n=325]; controls were taken in a random way from the total of the population attended [n=325] compared with the case for age, sex, an doctor assigned. The main exposure variable tested was either to have a mental health diagnosis or treatment during the year before the study was performed. Appropriate inclusion and exclusion criteria were defined. The association between variables was tested by the Mantel - Haenszel test and the strength of the association by odds ratio and its C.I. at 95%.

**Results:** It was checked that there were no differences between each group by age (17 to 92 years), sex (50,2% men) or family doctor. The rate of diagnosis and treatment on mental health observed in the case group was 39,1% and in the controls group 29,8%. The association was significant ( $p = 0,017$ ) and O.R. = 1,51 [1,10 - 2,09]. Association was also tested by using only as variable the treatment or the diagnosis (OR 1,63 and 1,49 respectively). The association was higher in men aged between 45 to 60, OR=3,97 [1,43-11,07].

**Conclusions:** The study shows how the integral attention to patients in Primary Care allows to bear in mind associations - like this: to look into a minor surgery demand as a symptom/risk on mental health- that otherwise would not be made.

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#### Psychological changes of Tokyo University Egogram (TEG) for music in the perspective of music therapy and primary care medicine

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**Aim(s) and background:** We have investigated the relationship of music and egogram in the Japanese Music Therapy Association and in the Japanese Primary Care Association. In the primary setting, we have managed many patients to lessen many problems, by using not only giving the medicine, but also advising them in the light of music therapy. This study would be useful for those patients to lessen the psychosomatic symptoms.

**Material and method:** The subjects were 138 children learning the piano, 53 parents of those children above, 36

music piano teachers, and 24 patients visiting primary care clinic with psychosomatic problems such as insomnia, fatigue, irritating. The method is as follows: 1) the subjects answer the Questionnaire of Tokyo University Egogram (TEG) about 5 minutes, 2) They can listen the music of their own selection for 10minutes with earphone, 3) after that, they answer again the same questionnaire. TEG has 60 short questions and it consists of 5 area of egogram, which are critical parent(CP), nurturing parent(NP), adult(A), free child(FC), adapted child(AC). Each area can be calculated with 0-20 points scores and evaluated. We got the frequency of various types of TEG(27 types in Japan), and the changes of egogram points after listening to the music.

**Results:** Each group has different frequency egogram type. The common changes of the egogram included elevated NP, elevated FC, and decreased AC. The characteristic points of the changes after music were decreased AC in the children, elevated FC in the parents, decreased AC and elevated FC in the teachers, and decreased AC in the patients.

**Conclusions:** In addition to our previous research, pianist careers and lectures on music therapy, we have investigated that the patients seemed to have the tendency of high level of NP/AC and low levels of FC, and the decreasing AC after listening to the music. We are now researching these data more precisely, suggesting that application and/or advises of adequate music would be useful for reducing several symptoms of the patients with psychosomatic problems in the primary care setting.

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#### Mental health disease, our daily life in primary care. Strategies for improvement in our work

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**Aims:** The evaluation of the Programme to support the Primary Care Mental Health (PSP), implemented in our area, includes mensuals training sessions and once consultancy weekly. And electronic medical history share.

**Material and methods:** The 15 family physicians, participated 8 teams ( doctor/ nurse). In one week, we have 2173 appointments (ap), (8 temas 736 ap.), 1891 ap. direct in health center, 282 ap. ( telephone contacts and separate reports). Home visits were excluded. 1- Observational Study. We registered for a week, all appointments related to disorders of Mental Health basically anxiety and depression. Review clinical history, list of prescription; age and gender, bypass or control the PSP, and treatment. Statistical official data, spss 15.0. 2- Qualitative Research. Focus Groups. We organized coordinations meetings with the voluntary participations of all temas ( doctors/ nurses).

**Results:** 1\_We study n= 736 ap. (53,3%), 135 ap. ( 18,34%) for mood disorders. 95 (70%) women, 40 ( 30%) men with age 51 y. not differences between groups. Anxiety (71) 52,59% and of depression (61) 45,18%. Patients visiting others services; CSM Mental Health Center (31) 22,96%, PSP (20) 14,81%, both (6) 4,44%, CAS Center for Drugs Addicts (4) 2,96%. 2\_ Meeting to discuss improvements to the Programme; adapted algorithms and clinical practice guidelines, visits joint attention psychiatrist/ GP.

**Conclusions:** Mental Health play an important part of our work and high demand of appointments. This specifies patients visit many Health Services, duplicating care

(appointments). We must monitor the therapy for this patients, with electronic alerts ( appointments, treatments).

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#### Brief intervention. Relaxation techniques. Minor mental disorders in primary care

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**Aims:** The preliminary evaluation of the Programme to support the Mental Health in primary care PSP, we consider other strategies in tackling the disease could be as relaxation techniques. And design a brief intervention.

**Material and methods:** We organized different mixed groups ( maximum 10 patients) with and without diagnosis, a minimum intervention, 4 sessions of 90 minutes ( 2 outside / 2 inside the Health Center). Session begins with 5 minutes to redefine the objectives of the session, with music singing a song. 65 minutes for sessions exercises and 20 minutes relaxation. For exercise sessions with physical expression and sessions outside in a urban park near, walking, stretching exercises 3-4, and 2 movements of tai chi. For relaxation exercises used the method of Jacobson. 1\_ Descriptive Study. Review clinical follow, list of prescriptions (drugs): age and gender, bypass or control of PSP, treatment. 2\_ Qualitative. Evaluation the intervention with 3 questions by telephone; - (1)Was the sessions useful?, -(2) Have practiced the techniques at home?, - (3)Did you enrolled in another activity?.

**Results:** Intervention in n=64 women with a mean age 54 y, 52,9% diagnosed with anxiety and 41,17% with depression. WE calculated 85 % attendance. Statistical analysis with spss 15.0, differs with groups with CHI test. Analysis of the speech; -(1) was answered 100 % to the sessions had been useful, highly valued activity. (2) 11,7% practiced exercises frequently. (3) 47,05% enrolled in another activity. Walking activity was initiated more.

**Conclusions:** - The activity aimed are highly valued. - Working in mixed groups ( patients with and without diagnosis) has not altered the routine of sessions and has allowed the self-control within the groups. -We need for strategies to preserve the activity.

724

#### Comparison of health characteristics between Depression Family and Normal Family

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**Aim:** Depression is one of the most common psychological problems in primary care. And family acts as important stress factors in depression. Purpose of this study is to compare the characteristics of depression and normal family.

**Material and methods:** We named depression family when one or more family members have depression, using the

Centre for Epidemiological Studies Depression Scale (CES-D). When there was no depression patient in the family, they are called as normal family. 158 participants of 79 depression families and 144 participants of 72 normal families are included. We investigated demographic characteristics, lifestyle, dietary life, family function, sleep disorder, quality of life, male sexual problem, female sexual problem, physical measurements, co-morbidity and medication of depression and normal family.

**Results:** Depression family members were older than normal family members, and had lower education level, more abdominal obesity and more metabolic syndrome. They showed lower physical activity, more insomnia, more sexual dysfunction than normal. In aspect of family function, depression family were lacking in cohesion and communication. By all quality of life measures, depression family had lower score than normal family.

**Conclusions:** When we meet depressed patient, we should also pay attention to his family member's physical activity, obesity status, quality of life, sexual function and family function.

795

#### Management of delirium in primary care

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**Aims:** Delirium, also called acute confusional state, is characterized by impairment of cognitive function, consciousness or perception that develops over a short period of time (hours a days) and with a fluctuating course. It is a medical emergency associated with considerable morbidity and mortality rates. Early diagnosis and prompt treatment with resolution of symptoms are correlated with favorable outcomes. The purpose of this review is to enhance the role of the family physician in preventing, diagnosing and treating delirium.

**Material and methods:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms "Delirium" AND "diagnosis" AND "prevention and control", published from January 2005 to December 2010 in English, Spanish and Portuguese.

**Results:** A structured process for screening and diagnosis of delirium should be established in primary care practice. Risk factors are age (65 years or older), cognitive impairment (past or present), dementia, current hip fracture and severe illness. Several tools are available to screen and diagnosis alterations in the cognitive status, such as Mini Mental State Evaluation, Abbreviated Mental Test Score, Clock Drawing Test and Confusion Assessment Method. Preventive and clinical practice strategies should be used in the care plan of all patients at risk of developing delirium. To treat the symptoms of delirium, non-pharmacological and pharmacological interventions can be used. Caution with pharmacological agents is advised because of its uncertain effectiveness and side effects. Antipsychotic medications have been considered the cornerstone for treatment; however there is lack of evidence supporting their use. The use of benzodiazepines is being evaluated.

**Conclusions:** This review highlights the important role of the family physician in the prevention, identification, diagnosis and treatment of delirium in the primary care setting. It also

enhances the importance of staff educational strategies aimed at increasing knowledge and awareness about delirium in all health care settings.

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#### Screening for depression with two verbally asked questions in primary care

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**Aims:** Depression is a common and costly mental health problem seen often in general practice. Detailed screening questionnaires for depression can be time consuming and as a result underused. We aimed to evaluate a short screening tool for use in general practice, two questions asked verbally by general practitioners. If screened positive, it could be followed by further questions from the depression criteria (DSM-IV).

**Materials and methods:** 211 patients not taking psychotropic drugs were asked during their consultation for any reason: If during the past month have they often been bothered by feeling down, depressed, or hopeless? and, if during the past month have they often been bothered by little interest or pleasure in doing things? After the consultation patients were interviewed by another general practitioner and were evaluated for depression according to the DSM-IV diagnostic criteria.

**Results:** 78 patients were screened positive - answered yes to at least one question. Depressed according to the interview were 14 of them. Not depressed were 64. Screened negative were 133 and from those only one was depressed according to the interview. The two screening questions showed a sensitivity of 93%. Although the positive prognostic value was only 18% the negative predictive value was 99%, a negative test was almost a true negative.

**Conclusions:** Two verbally asked questions for screening for depression would detect most cases of depression in general practice. This screening tool can become very easily a part of any consultation and as a result the percentage of undiagnosed cases of depression could be reduced.

#### Mother and child care

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#### An Audit to assess women over 35 years of age on the combined oral contraceptive with cardiovascular risk factors

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**Aim of audit:** To assess the number of women over 35 years on the combined oral contraceptive pill with a cardiovascular risk factor including smokers, BMI >35, BP >140/90, diabetic and hyperlipidaemia. To assess how many of the women on the combined oral contraceptive pill (COCP) >35 years knew of the risk of cardiovascular disease (CVD).

**Material and methods:** A retrospective search was performed using Socrates of all women in the practice prescribed the COCP over a one year period from 31/07/2009 to 01/08/2010 >35 years of age. A questionnaire was devised to assess CVD risk factors when on the COCP if smoker >35years. Telephone calls were made to all women and the option of discussing alternative methods of contraception was offered. Data was collected from the notes on Socrates regarding BP recordings and Cholesterol recordings were noted from the investigations section.

**Results:** In the year period 39 women >35 years were prescribed the combined oral contraceptive. 16 of these women were smokers and 11 of these smoked 15 or more per day. None of the women had a BMI >35. Two of the women had BP >140/90 recorded and one of these women was on antihypertensives. None of the women were diabetic. Eleven of the women had a recorded total cholesterol of > 5.0mmol/l. A practice protocol needed to be developed to rectify prescriptions being given to women with a category 3 or 4 according to the faculty of Sexual and Reproductive Health Care Royal College of Obstetricians & Gynaecologists guidelines.

**Conclusions:** This audit highlighted the need for a practice protocol and prescribing guidelines for the effective monitoring of COCP prescribing in women over 35 years. A regular recall and review system is necessary for effective monitoring. Since the audit has been carried out a practice protocol has been drafted and a recording system introduced into the consultation notes of all women on COCP. The COCP has been stopped for any women with a UK category 3 or 4.

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#### Noninvasive screening - the probability of events abstract

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**Aims:** Congenital anomalies are the cause of 20.0-25.0% of cases of perinatal death, while 3.0% of children are born with malformations of varying size. We examined the predictive values and defined the credibility ratio of the combined test results.

**Methods:** Of 317 examined pregnant women, 16 (5.05%) gave a pathological karyotype after amniocentesis: of these, nine (2.84%) had chromosomal number aberrations and seven (2.21%) had chromosomal structure aberrations. We determined the ultrasonographic parameters using the standards of the Fetal Medicine Foundation. We measured free Beta-subunit of choriogonadotropin (Beta-HCG) and pregnancy associated plasma protein A (PAPP-A) in venous blood from pregnant women using a combined commercial assay.

**Results:** Sensitivity of the test is 94.0%, and specificity is 99.0%. The positive likelihood ratio [likelihood ratio test (LR+)] is 94.00, a negative likelihood ratio is [likelihood ratio test (LR-)] 0.06. The pretest probability that pregnant women carry a fetus with chromosomal abnormality is 1:250. Posttest odds after the combined test to discover this abnormality is 0.3760, and probability of the same case is 0.2732 if it happens that the test result is positive. The result of our study confirms the justification of combined test usage in routine clinical practice, since the posttest odds rate in the case of a positive screening increases several times over (almost 90

times); the probability of detecting a chromosomal abnormality was about 70 times.

**Conclusion:** The combined screening test, if used methodologically correctly, has a high predictive value in detecting fetal congenital anomalies.

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#### Chronic hoarseness in a child

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**Aim and background:** The symptoms associated with gastroesophageal reflux (GER) in children vary according to age and their prevalence ranges from 1,8% to 8,2%. The cardinal symptoms among older children and adolescents are chronic heartburn and regurgitation. One of the possible complications is chronic hoarseness due to reflux laryngitis. We report such a case in order to alert to GER as a cause of chronic hoarseness in children.

**Results:** We present the case of a 6 year old girl, with irrelevant personal and family history, who went to her general practitioner (GP) for a routine visit. The GP noticed hoarseness and vocal fatigue. The girl's mother confirmed that her voice had always been like that and that she had no complaints of any kind. The girl was referred to an otorhinolaryngologist (ORL) who performed a nasopharyngolaryngoscopy. She was diagnosed with GER, adenoid hypertrophy, right vocal fold edema and sulcus glottidis. The ORL prescribed esomeprazole, desloratadine and nasal fluticasone, as well as voice therapy. A couple of months later the vocal fatigue had disappeared and after nine months the hoarseness was completely gone.

**Conclusions:** GER induced trauma to the vocal folds and subsequently hoarseness and vocal fatigue. Appropriate treatment resumed the symptoms. Hoarseness is insufficiently recognized by the patients, their parents and even by physicians. Nonetheless it can be the only symptom of GER. Failing to recognize it, delays GER diagnosis and treatment, increasing the complications and worsening the prognosis.

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#### Topical steroids in the treatment of primary phimosis in children: evidence-based review

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**Aims:** Phimosis is defined as the presence of non-retractable foreskin by narrow preputial ring and can be classified as primary or secondary. Primary phimosis is present in 96% of newborns, and has a tendency to regress spontaneously in the first 3 years of life, therapeutic intervention must be considered only after this age. Circumcision is the classic treatment and it is associated with morbidity and costs that cannot be negligible. Through recent years, several authors reported the use of topical steroids as an alternative

treatment with a high success rate. The goal is review the available evidence on the efficacy and safety of topical steroids in the treatment of primary phimosis from 3 to 18 years old.

**Methods:** It was performed a research of guidelines (G), systematic reviews, meta-analysis and randomized controlled trials (RCT) in Pubmed, sites of evidence-based medicine, Index of Portuguese Medical Journals and references of selected articles published between January 2000 and September 2009, in portuguese, english and spanish, using the keywords (MeSH terms) phimosis and steroids. It was used the scale Strength of Recommendation Taxonomy (SORT) of American Family Physician, to evaluate the level of evidence and assignment of recommendation forces.

**Results:** 42 articles were found, 4 of which met the inclusion criteria: one G, that proposes treatment with topical steroid 0.05% to 0.1% twice a day for 20 to 30 days (SOR A); and three RCT in which it was found that the use of topical steroids in the treatment of primary phimosis is effective, with a resolution rate of 65.8% to 90% and no reported side effects (evidence level 1).

**Conclusion:** The available evidence suggests that the use of topical steroids for the treatment of primary phimosis in pediatric patients is effective and devoid of side effects (SOR A), so is an alternative treatment to circumcision and can be initiated in General Practice consultation.

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#### Satisfaction with child's doctor

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**Background:** In Slovenia, parents choose pediatrician for every child. Patient complaints and views can help us detect errors and take appropriate action. This is only possible through systematic collection of the user's opinions. The aim of our study was to develop and validate a questionnaire measuring the satisfaction of parents with child's doctor and to measure the level of their satisfaction.

**Methods:** We surveyed parents who brought their children to the doctor and evaluated their satisfaction with the doctor in the past 12 months using modified EUROPEP questionnaire. The questionnaire contained 23 questions. The answers were rated from 1-5.

**Results:** There were 566 questionnaires returned out of 900 (52.8% response). Mean scores were from 3.93 (telephone access) up to as high as 4.78 (confidentiality of information). Low scores were given also to waiting time in the waiting room (3.94), interest in personal problems (4.16), relief of emotional stress (4.17). Parents were besides confidentiality more satisfied also with the doctors' willingness to listen their complaints (4.65), with quick amelioration of child's health problems (4.54) and with the way how the child was examined (4.53). Cronbach alpha for all item in the questionnaire was 0.94. Satisfaction of parents with child's doctor in Slovenia showed to be very high. It ranged from 42.4 to 100.0, a mean was 84.7 percentage points (CI 83,4-86,0). Those who have to wait longer in the waiting room were less satisfied, for each 9 minutes of waiting time the total score was lower by one point ( $p < 0.001$ ).

**Conclusions:** The questionnaire has proved to be a valid, reliable and feasible instrument for measuring parent's satisfaction of with child's doctor. The results have shown the potential areas for quality improvement: improving telephone

access, reducing waiting time in the waiting room, more emphasis on communication skills. The parents were less satisfied with the treatment of emotional and mental problems. Many years of work can contribute to the burnout of the doctor, what can reflect itself in lower interest of the doctor for the child's personal and mental problems. That can lead to lower satisfaction of child's parents.

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#### Evaluation of the indication of Vitamin Supplementation in Healthy Children

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**Aims:** Marketed Vitamin Supplements (VS) have properties which are often attributed to a symbolic representation that makes the nutrients contained in those products to be seen as more effective than those same elements available in food. This contributes to one of the most frequently asked questions in the Child Health's appointment in Primary Health Care, which concerns the need to use these supplements to optimize the growth of healthy children. Therefore, it is necessary to clarify the real importance of the use of multivitamins in healthy children. The objective of this paper is to do a review about the current evidence on the use of VS in healthy children.

**Methodology:** Research databases SUMSearch, Cochrane, TrypDatabase, Medline / Pubmed articles with the keywords: "vitamin supplementation" and "child", in the last five years.

**Results:** Studies show that the VS does not have significant effect on increasing height/weight of healthy children and that micronutrients increase the height, but did not significantly increase the weight. In healthy infants, exclusively breastfed, there is evidence for vitamin D supplementation, since the first days of life, and for iron from 4 months of age, both of them until 6 months of age, when the food diversification must be started. The use of VS can be, however, indicated in specific situations. Excessive supplementation with vitamins can be harmful, particularly with vitamins A and D, which can cause severe calcifications.

**Conclusions:** Studies about the pattern of drug use indicate its abuse in children and that VS are between the drugs one of the most consumed. Within this context, these supplements have been widely exploited by the pharmaceutical industry as product that promotes health. For these reasons, the clarification of VS indications becomes crucial to promoting effective interventions in the practice of a medicine based on evidence.

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#### Between fruits and vegetables is the game. The Mediterranean diet

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**Aims:** To know the eating habits related to daily consumption

of fruit and vegetables among schoolchildren in our region.

**Material and methods:** This is a descriptive transversal study in children 8 to 10 years in a rural district. Previous consent of parents each one self-completed a questionnaire at school, in front of the investigators, in which they are asked about eating habits and especially the daily consumption of fruits and vegetables in each of the different foods. The sample was 170 children from a total of 293 census (INE2008), from 8 to 10 years old. The students are in 3rd and 4th in all Primary schools in our region. Children on special diets are excluded.

**Results:** The 63% of children intake fruit and vegetables five or more times a day, while 37% do not reach the minimum recommended, being 13% those who consume two or fewer servings per day and 2% do not take normally any of these foods. As for fruits, 98% take one or more fruits per day, 50% say they consume twice daily, being the 2% who do not take usually any fruit a day. Consumption of vegetables, 89% take one or more daily servings of vegetables, 45% of children said to take four servings of vegetables everyday in salads as preferred, and 11% who admit to not take any of these per day.

**CONCLUSION:** The consumption of fruits and vegetables in the schoolchildren from our region is higher than those reported in other studies of urban areas; these effects may be due to greater access to fruits and vegetables in a rural and agricultural region. More than half of children followed the nutritional recommendations of fruit and vegetables of the Mediterranean diet, but there are still almost 40% of children not reaching these recommendations and 2% did not usually take any of these two foods. These data reveal the need of carrying out joint action plans by parents, educational and health services to strengthen or establish healthy habits.

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#### Doctor I feel sad and tired

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**Aim and background:** Postpartum thyroiditis (PT) is a syndrome of transient or permanent thyroid dysfunction occurring in the first year after delivery, caused by autoimmune inflammation of the thyroid gland. The prevalence ranges from 5-7% . In Spain, this condition is managed by general practioners during pregnancy and postpartum period. Low thyroid reserve due to autoimmune thyroiditis (AT) is increasingly recognized as a serious health problem during pregnancy as: 1) Thyroid autoimmunity increases the probability of spontaneous foetal loss. 2) Thyroid failure due to AT can lead to permanent and significant impairment in neuropsychological performance of the offspring. 3) Evidence is emerging that as women age, subclinical hypothyroidism as a sequel of postpartum thyroiditis predisposes them to cardiovascular disease. Consequently, PT is no longer considered a mild and transient disorder, therefore screening should be considered. We present a case of PT to highlight the screening process and evidence based guidelines for a safe management in primary care.

**Material and methods:** We present the clinical case of a 31 year old euthyroid, pregnant female that developed PT. Evidence based guidelines are presented for the diagnosis and management of PT in primary care.

**Conclusions:** Due to the potential detrimental consequences of PT in both the pregnant woman and the foetus, identification and adequate treatment is mandatory. GPs are in the best position to do so. The diagnosis of PT must be based upon a high index of clinical suspicion. Women presenting with non-specific physical and/or psychological complaints in the first postpartum year should undergo testing of thyroid function. This should be done by measuring the serum TSH concentration followed, if abnormal, by determining the free T4 .

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#### Genetic Disorders - The discovery of a weakness

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**Background:** Difficulties in learning are a frequent complaint in primary care consultation among young patients. When there is an association of various symptoms such as changes in behaviour, attitude and social interaction, an underlying disease should be considered. The interest of this case lies in the presence of nonspecific complaints and suspicious clinical signs that together lead to an uncommon diagnosis in primary care.

**Case description:** Fifteen year old, examined in consultation with school information referring to behaviour and motor coordination disruptions with difficulties in learning, especially in maths. As antecedents, patient had a history of hyperactivity and attention deficit disorder at the age of five, of repeatedly missing monitoring and psychology consultations at the health centre and of attending a centre involved in children education and therapy. Objectively, patient showed normal growth and development, with no apparent cognitive impairment, with appropriate language, but also with stereotyped hand movements, no eye contact, and a mild fine tremor and slight motor incoordination. Laboratory tests and imaging were normal. On clinical suspicion of X-Fragile Syndrome (XFS), research was carried out on the mutation of the FMR1 gene, which confirmed the diagnosis.

**Discussion:** The XFS has a wide clinical spectrum, ranging from a state of mild intellectual impairment associated with behavioural problems and learning disabilities to severe cognitive deficit. Girls, who have two X chromosomes, present less severe clinical conditions. Given the multiplicity of problems associated with XFS, early intervention with occupational therapy, physiotherapy and development assessments consist in important assistance methods to consider. The identification of XFS requires, in addition to informed consent, family assessment and referral to genetic counselling consultation.

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#### PTCO study – prevalence, prevention and treatment of childhood obesity

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**Aims:** Childhood obesity is considered a public health problem whose prevalence has dramatically increased in recent years. Early obesity can predispose children to chronic and cardiovascular diseases, as well as psychological problems. There are few national studies on overweight and obesity in preschool children. The aim of this study was to determine the prevalence of overweight and obesity in children aged 5-6 years and to describe the dietary habits and physical activity.

**Material and methods:** Observational, descriptive and transversal study at the primary care center of the authors, between January and August 2010, to all children born in 2004. A questionnaire of dietary habits (consumption of fast food, sweets, and soft drinks), physical activity and number of hours of sedentary activity (watching television or computer games) was applied during the consultation of 5-6 years. The data collected was treated in a computerized database – SPSS' (version 17.0).

**Results:** The study involved 80 children. The prevalence of obesity and overweight was 17.5% and 22.5% respectively. The frequency of fast-food meals is moderate (41.2% consumed 1-2 times per month), but the consumption of soft drinks is alarming (45% of the sample consumed daily). The consumption of sweets more than 2 times per week was 45%. It was found that 74% of children do exercise, however, most at school and only once a week. In most children, the number of sedentary hours does not exceed 2 hours daily.

**Conclusions:** The prevalence of overweight found is lower than other studies conducted in Portugal, while the values of obesity found are higher than expected. However the sample was too small to draw valid conclusions about the national prevalence of overweight and obesity. The adoption of healthy habits and lifestyle is the best measure to prevent and treat obesity.

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#### Frequency of enuresis nocturna and some comorbid pathologies in nursery class aged children

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**Aim:** Even though psychological and environmental factors, familial tendency, immaturation of central nervous system, inadequate or inappropriate toilet training etc. could take part in etiology of Enuresis Nocturna (EN), there is not any independent risk factor to explain all the cases. Our goal is to examine the prevalence of EN and some comorbid pathologies among group of nursery class aged children.

**Material and method:** This cross-sectional research was carried out among the students of nursery classes in Ankara. After taking approvals of parents, questionnaires including informations about EN, habitual snoring, recurrent otitis media(ROM) were delivered to parents of participants. Questionnaires filled by parents were gathered back. Data was transferred to SPSS for Windows Version 15.00( SPSS Inc., Chicago, IL, USA) packet programme was used for calculation and analysis.

**Results:** In 86 participant students, 58,13%(n=50) were male, 41,86%(n=36) were female. Seconder enuresis was detected among 16,27%(n=14) of participants. In seconder enuretics, 57,14% (n=8) were male, %42,85(n=6) were female. Distribution of seconder enuretics was as follow: 78,57%(n=11) EN, 7,14% (n=1) daily enuresis, 14,28% (n=2) enuresis continua. Frequencies of EN in cases were as

follow: 63,63%(n=7) once a week, 9,09% (n=1) twice a week, 27,27% (n=3) daily. Family history including first degree relatives was positive in daily enuretic student, 2 students had an enuresis continua, 54,54%(n=6) of students had an EN. Among participants with EN; 27,27% (n=3) recurrent OM (2 times per year), 9,09%(n=1) recurrent OM(3 or 4 times per year) and habitual snoring were ascertained.

**Conclusions:** We found a considerable big amount of EN frequency in a small sample of nursery class. EN is a serious problem that affects the child's school and social life. Therefore, psychosocial dimension of the problem should not be ignored in nursery class aged children with EN admitted to primary care centers.

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#### Evaluating the anxiety states of the families with asthmatic children and the ways how these families cope with stress

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**Objective:** Besides the significant developments in treatment, asthma still poses to be a widespread medical emergency among the children and the rate of being hospitalized is ever increasing. It is known that chronic illnesses are affecting the family functions. In this study, the anxiety states of the families with asthmatic children and the ways how these families cope with stress are analyzed.

**Method:** The parents of 40 children who are diagnosed with asthma and aged between 2-11 as the research group and the parents of 40 healthy children as the control group are included in the study. Personal Information Form, The Ways of Coping Inventory (WCI) and State-Trait Anxiety Inventory (STAI) were applied to the parents in the experiment and control group of the study.

**Results:** The STAI state and trait scores of the mothers in the research group was higher than the control group. There was not any statistically meaningful difference between the STAI state and trait scores of the fathers in the research and control group. The STAI state and trait scores of the mothers in the research group was higher than the fathers ( $p < 0,05$ ,  $p < 0,01$ ). The ways of fathers and mothers coping with stress are compared in each group. The results of confronted coping scores ( $p < 0,01$ ), positive reappraisal scores ( $p < 0,05$ ), negative reappraisal scores ( $p < 0,01$ ) and seeking social support scores ( $p < 0,05$ ) of fathers and mothers in the research group were found statistically meaningful. There was not any statistically meaningful difference between accepting responsibility scores. The WCI sub-scale scores of the fathers and mothers in the control group were identical.

**Conclusions:** The anxiety levels of the mothers with asthmatic child is evidently higher than the anxiety levels of the fathers; supports should be given to the mothers who have children with chronic illness. Understanding the conditions of the families and how they cope with hardships can gave the way for successful interventions.

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### The correlation between vitamin B12 and folate levels of pregnant women and fetal cord blood in relation to smoking condition

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**Aim:** For neurological development; B12 and folate are important vitamins, supplements are recommended in pregnant women. In the studies; neural tube defects are increased by folate deficiency, and it is shown that vitamin B12 (Vit-B12) levels are reduced by smoking. In our study, the effect of smoking on vitamin-B12 and folate levels were investigated.

**Materials and methods:** Our study was performed on 2 group of smokers and nonsmokers pregnant. 3th trimester serum and postpartum cord blood were analyzed in terms of vitamin-B12 and folate levels.

**Results:** Serum Vit-B12 levels in 49 pregnant women who smoke were an average 167,96 +/- 45,76 , whereas folate levels were 11,93+/-5,15. Vit-B12 levels of cord blood were 248,85+/-81,86, whereas folate levels were 16,29+/-3,26, respectively. Accordingly, 77,6% pregnant smokers (n=38) have the serum Vit-B12 deficiency, folic acid deficiency was not detected. Vit-B12 deficiency during the fetal cord blood was 35.5% (n=11), while there was not a lack of folate. Vit-B12 levels in the serum of 33 smoking pregnant women were an average 178,93+/-72,89, folate levels were 11,80+/-5,00, respectively. Vit-B12 levels in cord blood were 255,43+/-104,85, while folate was found 15,80+/-4,89. Vit-B12 deficiency; were detected in venous blood of 66.7% (n=22), in cord bloods of 33.3% cases (n=8). There was not a lack of folate in both groups. It was not detected that a statistically significant difference ( $p > 0.05$ ) between smoking use status and Vit-B12 and folic acid levels.

**Conclusions:** In our study, Vit-B12 deficiency were about 1/3 percent of the cord blood. Although, the smoking makes Vit-B12 deficiency, in our study, Vit-B12 deficiency did not associated with smoking. A lack of folate was not observed because of the folate supplementation during pregnancy. As a result, appropriate diet consisting of Vit-B12 supplement should be recommended for both the comfort of pregnant women and the healthy development of the fetus.

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### An outlook of uric kidney stone affected families in Romania

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**Aims:** The incidence of uric acid lithiasis increased continuously in children, and it is known that this disease occurs even in toddlers. The precise knowledge concerning the chemical composition of urinary calculi is essential for their dissolution possibilities; thus, it has been revealed that

calculi composed by pure uric acid dissolve much more easily when compared with those constituted by mixtures (uric acid and its salts).

**Material and methods:** A randomized, 15 years prospective and comparative survey was conducted in a primary care center, located in the city of Timisoara, Romania. One studied 55 urinary calculi, obtained from children with uric acid diathesis, analyzed by Fourier Transform Infrared Spectroscopy (FT-IR). Spectra were measured on a JASCO - FT/IR spectrophotometer, with automatic listing of absorption bands, in the range 600-4000  $\text{cm}^{-1}$ . The patients were examined by complex metabolic investigations; after stone removal, they were attentively follow-up. The genetic transmittance of the disease was revealed in 11 cases (20%). The chemical composition of urinary calculi proceeding from members of the same family were analyzed comparatively.

**Results:** The interpretation of IR spectra revealed three types of paragenesis (chemical compositions) concerning the examined calculi: pure uric acid - 12 cases (21.82%); uric acid and ammonium urate - 19 cases (34.54%); uric acid, ammonium urate, sodium urate and potassium urate in 24 cases (43.64%). The ethiopathogenetic factors involved in uric kidney stone affected families revealed: conditions which lead to excessive production of uric acid (recurrent hemolitical states); exaggerate elimination of uric acid in urine (long-term corticotherapy); genetic and metabolic conditions (Down syndrome, obesity).

**Conclusions:** The inheritance of kidney stone disease is very useful for family care providers. The oversee of uric kidney stone affected families orientates about the risk of recurrent stone forming episodes in children. The calculi proceeding from children are homogenous and monocomponent, whereas those obtained from their adult relatives are heterogenous and multicomponent.

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### Smoking in pregnancy

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**Purpose:** 1. To know the level of smoking in pregnant women and their partners. 2. To know the relationship between pregnancy, smoking and respiratory diseases in postpartum neonatus

**Design and methods:** 454 children who had born between 30/06/2009 and 01/07/2008. Telephone interviews were conducted their own mothers on previously validated questionnaire. Period allows match 2nd or 3rd trimester of pregnancy with period or influenza vaccine. Surveys done by administration (40%) and sanitary staff (60%), and period 01/01/2010 to 28/02/2010. Cross sectional study. Semi-urban area.

**Results:** a) telephone answering 51% ; 33% agreed to the study, 15% is deferred, 3% refused. 1% wrong numbers; 48% not answered. Admsinitartion staff inquiry or medical personal isn not different. b) maternal age (mean) = 32,29 years. Range 18,9 - 43,34 ; 16% without current partner. Studies: non =3%; Primary=13% ; secindary=19%; hugh school=48%; University=16%; Work now=74,19%. c) snuff: smoke 51,58%; 90% relapse abstinence in pregnancy and postpartum. 10% did not quit in pregnancy. Of the non-smokers: 32% never, 20% stopped and fell pregnant; 32% ex-smokers and 16% in pre-existing addiction. 20% of smokers



received advice and assistance by Health' Primary Attention. Partners : In total group: Non-smokers 45,2% ; Ex-smokers 22,6%; Smokers 32,25 ; In group of smoking women : Non-smokers 54% ; Ex-smokers 23%; Smokers 23%. In group of smokers women : Non-smokers 5 %; Ex-smokers 21%; Smokers 74%.

**Conclusions:** 1.-The completion of calls was high (33%). 2. Task perfectly manageable by the administrative staff. 3.-Prevalence high maternal smoking general population (50,46%), high parental prevalence (32,25%). 4.-Relationship-significant smoking relapse postpartum mother or partner smoking. 5.-No significant relationship respiratory infections and smoking

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**Treatment of Acute asthma exacerbations in children: Safe and effective dosing of albuterol/salbutamol administered by MDI with a spacer**

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**Aim and objectives:** Most cases of asthma are diagnosed in childhood. Inhaled short-acting beta 2-agonists are the mainstay of emergent treatment of acute asthma exacerbations. Albuterol is the most frequently used in acute setting, however recommended dose is still subject of debate. The aim of this work is to determine the safe and effective dose of albuterol by metered-dose inhaler with a spacer.

**Material and methods:** The authors searched TRIP Database, National Guideline Clearinghouse, Guidelines Finder, Canadian Medical Association Infobase, The Cochrane Library, DARE, Bandolier, MEDLINE e UpToDate using the MeSH terms: "Asthma/therapy" and "Albuterol/administration and dosage" or keywords "Asthma" and "Sabutamol". The search was limited to articles published between 2001 and 2011 in English, Spanish, French and Portuguese. The Strength of Recommendation Taxonomy of the American Family Physician Journal was used to assess the Level of Evidence.

**Results:** Nine articles were included (one clinical decision support system, six guidelines and two clinical trials). The clinical decision support system (UpToDate) recommends 1/4 to 1/3 puff/Kg. Guidelines advise doses between 2 and 10 puffs, every twenty minutes. The clinical trials recommend doses similar to those of the guidelines, but they mention that dosing should be adjusted to age or size but it should not be on a fixed mg/kg basis which causes reduced exposure in young children, with a corresponding risk of unnecessary suboptimal dosing. No adverse effects were reported with the mentioned doses.

**Conclusions:** Despite Albuterol Summary of Product Characteristics advice 1-2puffs/dose, most of the analyzed articles recommend doses of 4 - 8 puffs (or 1/3 puff/Kg to maximum 10 puffs), repeated every 20 minutes on the first hour (Grade B). After this period, it is suggested to repeat dose every 1 to 4 hours; however, the recommended dose is not consensual at the moment. More clinical trials are needed to know the ideal dose of albuterol.

## Patient relationship

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**Family Dynamics in Somatizing Patients Presenting to the Family Medicine Department of the University College Hospital, Ibadan, South West Nigeria. West Africa**

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**Aim:** Family dynamics is the pattern of relationship and manner by which family members help each other cope with life situations. The family is an emotional unit and the interaction within is stronger than that of peers and friends. Somatization disorder is characterized by recurrent, vague physical complaints with unidentifiable physical cause but undertone of psychologic distress and unhealthy family dynamic. The aim is to evaluate family functioning in these patients for astute management of the disorder.

**Material and methods:** An observational case control design of 120 patients. The Family Relationship Index was used to assess the family dynamics via degree of cohesion, expressiveness, and conflict resolution. The World Health Organization Somatoform Disorder Schedule was used to assess for somatization. Analysis was done with the Statistical Package for the Social Sciences version 16 which included independent sample t - test, Analysis of variance and Pearson correlation all done at 5% level of significance.

**Results:** The Family Relationship Index revealed that the somatizing patients scored significantly lower than the comparison subjects on cohesion (mean=6.42, p=0.000) and expression (mean=5.92, p=0.012) with significantly higher scores on conflict (mean 3.13, p=0.000) The severity of the disorder correlates positively and significantly with the conflict scores (rs =0.407, p=0.00) but correlated negatively with cohesion scores (rs =-0.283, p=0.002) and expression scores (rs =-0.319, p=0.000).

**Conclusion:** The family dynamics that may mediate or contribute to somatization includes deficient emotional expression, poor family cohesion and conflict resolution as evident in this study. Somatization usually presents as a medical dilemma to the family physician, therefore the identification and management of the dynamics at work in a patient's life and its connectedness to the disorder puts the Family Physician at a vantage point to effectively manage these patients.

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**Culture of the safety of the patient in primary care. A new challenge.**

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**Aims:** In our entity, it was created the Functional Unit of Security of the Patient (FUSP) with representation of every welfare area, included the Primary care (PC), whose aim is,

between others, the diffusion of the culture of the safety of the patient (SP) in the different welfare levels.

**Material and methods:** Descriptive transversal multicentric study. Administration to all the professional(P) from two PC centers (n:53) the Questionnaire on the perception of the safety of the patient (Agency for Healthcare Research and Quality) that measures 12 dimensions of the culture of safety and allows the identification of articles or dimensions that can be considered to be strengths and those that can be considered to be opportunities for improvement to determine priorities in future interventions.

**Results:** Participation: 62,2 %. Valuation (0-10) of SP's degree on the part of the P: average 7,2 (+/-DE:1,72). Strong points (item : punctuation): Safety perception: 8:93,7; Expectations and actions that favor the safety: 19:68,2, 20:86,4, 21:77,3; Learning organizational and improvement continues: 9:85,2; Teamwork in the unit: 1:92,6, 3:68,2, 4: 86,4, 11: 77,8; Support of management towards the safety of the patients: 23: 81,8; Teamwork with other units: 28:81,8, 32: 86,4; Honesty in the communication: 35:72,7, 39:81,8; Feedback and communication of mistakes:34:68,2, 38:86,4; Not punitive response to the mistakes: 8:77,3, 12:68,1; Problems in the changes of shift: 27:72,7; 29:72,7; 33:77,2; Expectations and actions that favor the safety: 20: 77,8. Opportunities of improvement: Staff resources: 2:59,3; 5:66,6; 7:68,2; 14:62,9.

**Conclusions:** In PC exists an important culture on the safety of the patient, though, according to its professionals, the optimization of the management of the welfare pressure and of the coverage of professionals, might improve it.

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#### How does the induced prescription affect the relation doctor - patient in our daily consultation?

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**Aims:** Description of the induced prescription (IP), analysis of its management and repercussion in the relation doctor-patient.

**Material and methods:** Descriptive transversal study in an urban Primary care center with a population assigned: 23656. Record of the new prescriptions (NP) and analysis PI assumed by seven teams (doctor and nurse, 70 % of the welfare reformed team) for three weeks of activity. Exclude: days of domiciliary visit and holiday duty.

**Results:** 936 NP. Prevalence IP:39,4 %. Pharmacological group more frequent: Analgesic/AINEs: 17,34%, Antimicrobial: 15,18%, cardiovascular pathology/diabetes: 11,38%, ophthalmological: 9,49%, psychiatric: 8,67 % .Diagnosis: respiratory pathology: 17,50%, bone pathology: 17,34%,cardiovascular/diabetes:13,28%, ophthalmological: 10,30%, psychiatric: 8,13%, digestive: 7,86 %, dermatological: 6,78 %, other: 28,81 %. Origin IP (OP): 37,67% second level private medicine (SLPM); 24,93% second level reference (SLR); 10,57% self medication; 8,67% hospital discharg; 8,13% primary attention private; 10,03% other. 56,91% did not provide written information from the prescribing doctor. Degree of Agreement with IP: 61,79% total agreement. Subgroup in total disagreement (11,11%) : OP more frequent : SLPM (41,46%) , SLR (21,95%). Degree of

agreement front the IP (DAIP) :48,78% withdrawal of the drug, 26,82% proposal of change. Patient answer (PA) :31,71% accepts change without difficulty, 24,39% with difficulty, 19,51% did not accept the change. 36,58 % was a motive of conflict. Prescription done: 39,02 % (93,75 % for debt in the pharmacy, rest to avoid confrontation).

**Conclusion:** The IP, especially from the second welfare level, particularly of the private medicine, is a motive of conflict in the daily practice in primary care. The sanitary education of the patient and the improvement in the communication between welfare levels might optimize the prescription, which should be a responsibility of all.

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#### Does age influence in the requirements of information in the organization of primary care health system?

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**Aims:** To identify and analyze possible differences in the information needs of the organization of primary care health system (PC) by age group in order to make more effective interventions to improve.

**Material and methods:** Qualitative research of 8 focus groups with 63 users in 2007. Were grouped by age: 2 groups of young persons (Y:18-30), 4 middle-aged group (M:31-64) and 2 more of senior (S:65-80). The scope of operation was the urban area Salamanca, Spain. Capture across through healthcare professionals of primary care. Informed consent discussions were videotaped and transcribed verbatim. After categorization, triangulation and encoding, we analyzed the differences in content and intent of the messages by age group Nudist program Q6.

**Results:** Adjusted for each age group, most are needs of information (Y: 56.8%, M: 42.8% and S: 50.4%) followed by observations (Y: 37.7%, M: 39.2% S: 31.3%), the most assertive were the middle-age (12.9%) and senior (11.7%) also made more suggestions for improvement (6.6%). All request information, first on the organization of the PC (Y: 43.2%, M: 35.8% S: 52.9%), followed by information on bureaucracy (Y: 29.7%, M: 34 , 1% S 23.9%), third, especially young people, seeking information on the requirements for access services (Y: 20.3%, M: 16.3% S: 16.3 %) and coordination of information received, while the middle-age require additional resource information.

**Conclusions:** The lack of information may limit the access to the services causing inequities among citizens. Incorporating the needs expressed by age can improve the effectiveness of information provided to the population.

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#### Knowledge and attitude of health professionals about empowerment

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**Aims:** To assess knowledge and attitude about patient empowerment in health professionals.

**Methods:** A descriptive-observational study has been carried out for two months in 2010 in different Primary Health Care Centers and Hospitals of the Public Health System in Spain. Sample: 143 people, 45 men and 98 women, 73 doctors and 70 nurses. Average age: 40 years old. Data were collected anonymously.

**Results:** 40% have heard about empowerment. 53% always give information to patient. 43% think that patients are prepared to take decisions. 52% think that only some patients are prepared to take decisions. 46% think psychiatric patients cannot take any decision. 54% think that patients can take decisions on any illness. 87% do not mind when a patient asks for a second opinion from another professional. 69% do not mind when a patient brings a different treatment from another professional. 36% do not mind when a patient brings information from TV, Internet, magazines. 93% think coordination between hospital, primary care, specialists and chemists would improve empowerment. 100% think that the patient is the most responsible person for his own health care.

**Conclusions:** Many health professionals have not heard about empowerment. It must not be forgotten that we come from a paternalistic management model which seems to fit and be well-accepted by both patients and health professionals. We observe that psychiatric illness is still stigmatized. Empowerment should be bidirectional: not only providing government programmes to educate the whole population for self-care, but also encouraging health professionals to give information to patients about their health and to respect their position when taking a decision. This would really mean giving up being health authorities and moving towards patient empowerment.

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#### Difficult encounters in primary health care: an approach using focal groups.

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**Objectives:** The dysfunctional clinical relationship is called difficult encounter (DE). The objectives are to know the perceived magnitude, causes, emotions and coping strategies for the DE.

**Methodology:** Qualitative study with focus groups.

**Results:** 15 doctors, 12 nurses and 6 patients took part in study. Perceived magnitude: A low frequency of DE is perceived, though doctors perceive clinic relationships that cause them discomfort much more frequently. The professionals remark the big emotional impact of the DE. Causes: Is predominant the causal attribution to the personal characteristics of the patients (aggressive, demanding) on the health workers or the professional's (inflexible, non-empathetic) in the case of the patients. Is outstanding the causal attribution of the professionals to the non-realistic expectations of the patients and, in general, to the structural factors such as the lack of time. Emotions: On the health workers are predominant the negative emotions related to anxiety, anger and impotence, occasionally, aversion to those

patients. Feelings of guilt and self-improvement also appear. The patients perceive a lower emotional impact, predominating emotions of aggressiveness to the professional. Coping: The coping of the health workers are mainly the reinforcing of self-control and the decrease of the emotional tone of the relationship. The patients do passive copings of acceptance of the situation.

**Conclusions:** The dysfunctional clinic relationships are more frequent of what we think. The personal characteristics of the parts of the relationship are the main cause of the ED and is outstanding the causal role of the non-realistic expectations of the patients. Anxiety, anger and sensation of unfairness are the main emotions on all the actors. It would be important to design interventions on the professionals that increase their emotional control. It seems necessary to clarify the expectations of the patients related to assistance.

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#### Patients awareness about "general practitioners"

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The role of a general practitioner is to responsibly organize and implement measures serving to preserve and improve the health of patients and their health education. The objective is to determine to what extent our patients are familiar with the model of "the chosen doctor" as well as their attitude towards their doctors in the Health Care Centre in Kragujevac-"Palilule" unit.

**Method:** The research was carried out through an individual work method in a small group using a questionnaire made by the general practitioners from Kragujevac as a research tool. The study was conducted in February-March 2010. The survey covered a total of 100 patients of whom 65 women and 35 men, aged 35-72 years. 63 respondents have their chosen doctor and out of the remaining 37 who were undecided, almost half (45%) are not aware of the new Health Care Law. Both women and men equally lack information on it, the most uninformed patients however, being those employed. When asked: "What are the reasons for your undecidedness?", 2 respondents have no confidence in one doctor; 4 respondents don't want to choose, the doctor's shift doesn't suit 10 respondents, 10 respondents don't mind choosing, 1 respondent has no particular reason.

**Conclusion:** Many of our patients do not have a developed awareness of the need for commitment to one doctor, whom they can and should choose. Their ignorance and indifference regarding the new amendments to the exercise of the right to health care is astonishing and therefore we doctors have to work on the popularization of this new model of "the chosen doctor" so that our patients can have better health service.

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**Treat it with a smile**Uskokovic S

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**Aim:** To show the significance of doctor's smile and informal conversation with a patient in improving the patient's health.

**Method:** Conducting a survey consisting of a unique questionnaire on the patient's satisfaction with the received services from the chosen doctor. 603 patients of both sexes, from 25 to 89 years of age have been surveyed.

**Results:** 50% of the surveyed patients are satisfied with receiving the usual medical therapy when they go to the doctor's. 63% of them appreciate the scheduling of health checks. 75% of the surveyed patients feel better after having an informal talk with their doctor during the health check and 90% of them like their doctor's smile.

**Conclusion:** Health check, diagnosis and medical therapy are the primary tasks of a family doctor, but a compliment, a little joke and a wide smile give hope and fill the heart even of the most seriously ill patient.

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**Patient-centered clinical interview, profile our family medicine residents**Cozar Garcia J, Alcalde Molina M, Valverde Bolivar F

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**Introduction:** The Formative Agenda (FA) is a validated instrument that helps to define the formative objectives of family residents from Jaen Training Unit (TU). The FA values the learning priorities of several aspects of the clinical interview. It is completed by the tutor and the resident after analyzing several consultations that have been videotaped

**Aims:** To know patient-centered clinical interview profile of our family medicine residents

**Material and methods:** In this study, we analyzed 128 AF of the last six promotion of family medicine residents of Jaén, performing a descriptive analysis of items that define patient-centered interview (knowing the opinions and expectative of patients, degree of understanding, making Shared decision ...) To calculate the significance of the results according to gender, health center and age group has used the x2 test

**Results:** The 61% of the residents give instructions to the patient without guide the problem which has prompted the inquiry, although the 72.4% participate in a takes shared decisions The 55% of residents are writing to the patient's plan of action. Only 19% of the residents made an approach on the patient's expectations and opinions about their health problem. The 81% do not know as to understand the impact of the problem in the life and family life of the patient. The 19% are concerned to know the patient's views on the diagnosis and treatment, but only 52% checked the patient's understanding.

**Conclusions:** Ours residents of family medicine needed to learn more about the patient-centered clinical interview.

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**Reasons of low response to abdominal ultrasound**Gmajnic R, Pribic S, Cupic N

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**Aims:** Some diagnostic examinations, in primary health care, cannot be performed immediately after given indication. Abdominal ultrasound is a common diagnostic method in primary health care. Patients often have to wait for ultrasonographic exam for three to four weeks, except for urgent cases. Patients can arrange their appointments on the waiting list personally, or by phone. At the same time they receive detailed information on how to prepare themselves for the procedure.

**Methods:** During the period of 18 months, on one diagnostic location, 3125 patients were scheduled for abdominal ultrasound. 487 (15,58 %) of them did not show up on the appointed date or time. We investigated their reasons of absence.

**Results:** Patients claimed following reasons: They performed that examination in a private institution (9,79 %); They performed that examination in another public health institution (14,83 %); They forgot (11,86 %); They misunderstood the time or date of the arranged appointment (31,85 %); At the same time they underwent some other diagnostic examination (5,93 %); At the same time they were hospitalized (0,56 %); They felt better and decided that examination was not necessary anymore (15,43 %); Other reasons (9,49 %).

**Conclusion:** Out of 487 people who did not arrive on scheduled appointment, 24, 2 % performed the recommended examination at another location, while the remaining 75,38 % of them, did not performed recommended examination at all. Most of them missed their appointment because of technical reasons, such as misunderstanding or mistakes in writing down the time or date. We suggest that better communication would improve the response on scheduled examination.

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**Solid scientific consensus on the information to offer patients. Health education**Alonso L, Ribatallada Diez A, Badia Casas R

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**Aims:** This project is working to agreeing to medical professionals of different specialties, nurses and professionals in content information material to give the consultations to our patients. It's very important for consensus among professionals of different specialties, both hospital levels as primary care. The aim of the initiative and who have given impetus to this project has been agreed to make some sheets with scientific rigor and standards-based guide for health education, such as, the plain language, font size, date editing / revision in sheets, etc. The sheets used in both primary care and the hospital. We produced over 60 pages and are reviewed periodically. The sheets are free access of professionals and patients. Spread on a website to which

access both from their professional consultations as patients from their computers. We have started the translation.

**Material and methods:** 1\_ There was a review of official statistics of Government, distribution by nationality, to determine in which language translate. 2\_ Qualitative Study, FOCUS GROUP, to choose the most appropriated papers to translate in first phase.

**Results:** Distribution by nationality, we choose the translation in english, french and arabic The web counters use the sheets include the number of times pages are viewed. The number of entries to the monthly sheets ranges between 1877 and 2200 monthly. It served to choose the sheets.

**Conclusions:** Adapting to the social reality we have started the translation into English, French and Arabic. Likewise, the various conferences and meetings where we presented this film have connected with other professionals from other countries who collaborate in the future. At the moment in which communication technologies are the tool most sought, and where the sources of information are varied, it is time also to provide solid scientific consensus on the information we can offer patients, and this is produced by professionals motivated, trained and backed by scientific societies, following the rules recommended by experts in health education.

## Philosophy and ethics

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**Ethical attitudes of health care professionals in their relations with patients, relations among peers and management/organization of the health care system**

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**Aims:** Given the scarcity of studies on the determinants and basis that influence health professionals ethical decisions, this study was devised to identify and compare the professionals ethical attitudes and the justifications for their decision making.

**Material and methods:** Cross-sectional study, quantitative, involving doctors and nurses from health centres of the central region of Portugal (cluster sampling). Participants were asked to list ethical problems in three hypothetical cases, recommending and justifying their proposed solutions to those problems. Software used: Microsoft Word and Microsoft Excel

**Results:** The authors inquired 107 health professionals, 56 doctors and 51 nurses, 72.9% female. The professionals ethical attitudes did not seem to be influenced by their career or gender, and their decision making is justified by principlist and professional ethics.

**Conclusions:** Ethical problems in primary health care are daily concerns similar to critical, dilemmatic situations seen in hospital care. The involved subtlety may make them go unnoticed with possibly disastrous consequences for patients, families and local community. In general, doctors and nurses are concerned with upholding patients individual rights, but they do so while protecting the bonding relationships in a blend of principlist and caring approaches. Primary health care, when compared to hospital care, deals with distinct facts and values, often of greater amplitude and complexity albeit less dramatic, thus justifying further research to help thoroughly examine this interface between bioethics and primary health care.

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**Inappropriate use of statins in primary prevention. The important role of cost-effective analysis**

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**Introduction:** Among the reforms needed to maintain sustainable healthcare systems, control of spending must be a priority. According a Meta-analysis of 11 Randomized Controlled Trials published at Archives of Internal Medicine on June 2010, there is no evidence for the benefit of statins on all-cause mortality in a high-risk primary prevention.

**Aim:** Examine our prescription of statins to people who have never had a cardiovascular event as well as its impact in the change of cardiovascular risk level. Calculate the economical cost of this preventive action considered of low efficiency

**Material and method:** In this retrospective study we analyzed our prescription of statins among hypercholesterolemic patients without prior cardiovascular event along year 2010 Hypercholesterolemia was defined as values superior to 250 mg/dl of total cholesterol on two different blood tests. Changes on personal cardiovascular risk previously and after statin prescription, were calculated by applying REGICOR score, an adapted risk table for Spanish population but which is currently used in all Catalonia

**Results:** From 10001 people included in the study, 3003 (30%) were taking statins along year 2010. From 600 individuals at high risk, only 144 (24%) achieved a moderate risk by reducing total cholesterol with statins, while of those 4004 at intermediate risk, 646 (16%) achieved a low risk. The economical cost was 200000 euro in year 2010

**Conclusion:** In our setting, widespread prescription of statins as primary prevention, represents an unwarranted economic burden with little impact on the individual cardiovascular risk

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**What do patients know about informed consent?**

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**Aim and background:** Nowadays, medical paternalism is not considered a good practice any more; instead, patients have become autonomous moral agents. According to Spanish Health Basic Law, since 2002 the informed consent process is mandatory, therefore, patients have had enough time to be acquainted with it and to understand the meaning of this process. Our aim was to assess patient level of understanding about the informed consent process.

**Material and methods:** transversal descriptive study based on a survey handed to patients (p) older than 16 years (Spanish Health Law age of majority) treated by a Family Doctor in a rural outpatient Primary Care Emergency Clinic. The questionnaire consisted of 14 multiple choice questions and one open question.

**Results:** 101(91%) patients (p) agreed to participate (mean age 38 +/-15 years, range 16 to 79; only 2 were younger than 18; males 41). 61 p had signed a consent form at some moment Only 71 p answered that they knew what informed consent meant. None of them understood it as an ongoing process during their illness; among those 71p, 59 p believed that informed consent was to fill in and sign the consent form; the remainder 12 p considered it information but given only once. Most of the patients were of the opinion that physicians inform due to a legal requisite (41%) or to protect themselves from lawsuits (28%), only a minority believed it is done for patient well-being. Many p agreed with the need to sign (37%) or did not matter to them to sign (35%). Most of the patients said that they read the consent forms (63%) and that they understood them always or almost always. 64% of the p interviewed agreed with a shared decision model, 35% p thought they can decide by themselves and only 5% p preferred the paternalistic model. 10% p stated that the need of a signature undermines their trust and 7% did not like to sign. 82% of p do not want the physician to keep potential upsetting information from them.

**Conclusions:** In our country, patients do not fully understand the process of informed consent yet. Therefore educational campaigns on this topic are needed to improve public understanding and avoid misinformation.

## Public health issues

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### Use of alcohol among elementary and high school students in Gjilan-Republic of Kosovo

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**Background:** Conducted research at four high schools of Gjilan, a region in south-eastern Kosovo, gathering data about alcohol use among the students shows that number of young people getting involved in alcohol use is increasing. As a sample for alcohol use we considered drinking a beer, a glass of wine, liker or other kind of alcohol, five days a week.

**Methods:** Research was done in September 2010. We developed a structured questioner, with ten questions to be answered and 400 students (100 per each school) were randomly chosen to be interviewed. Students were 14 - 18 years old. Data were analyzed and conclusions were made based on them.

**Results:** 29.5% of students (72% of them male) answered that they drink alcohol; 51.4% of participants started alcohol drinking under peer pressure; 92% of them drink alcohol at city cafeteria; 37.3% have a family member who drinks alcohol and 94.6% of them are aware that drinking is harmful.

**Conclusion:** Results shows that there is a need of action at three identified levels - family, schools, and peers - for stopping negative trends. 74.5% of students suggested that health education and promotion would help to minimize this habit.

**Results:** with recommendations were represented to the municipality officials, and local and country level GOs and NGOs, for acting in preventive and other related measures.

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### Learning more about older patients vaccinated against influenza can direct future planning of vaccination strategy

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**Aims:** High risk groups for influenza vaccination include elderly (65 years and more) and chronically ill patients. Recently, new risk groups have been added. Due to the limited vaccine supply, this imposes on family physicians a task of planning of vaccination strategy. We propose that learning about patients required vaccination can be the first step in trying towards this direction.

**Material and method:** The structure analysis of the patients in a family medicine practice required vaccination, based on using diagnoses of chronic diseases including Diabetes, Asthma, COPB, chronic heart diseases (angina, infarctus, myocardiopathy), chronic renal insufficiency and malignant diseases. In addition, a semi-structured questionnaire was applied, to gain an insight into repeated vaccination, motivation for vaccination, source of information and a pattern of behavior in regard to disease prevention and receiving the

protection.

**Results:** A total of 210, out of 1500 patients on the list (756 aged 50 and more, 486 aged 65 and more), required vaccination. They were all elderly, except for 13 patients being younger than 65, 4 of them younger than 50. A proportion of vaccinated among the patients with chronic diseases was 40/107, 5/25, 7/27, 31/75, 2/4 and 11/46 for Diabetes, Asthma, COPB, chronic heart diseases, chronic renal insufficiency and malignant diseases, respectively. They were previously vaccinated for 5-20 times, the number exceeding 10 in 2/3 of vaccinated patients. Motivation for vaccination included reasons such as a decline in the health status (20 patients), an intention to protect grandchildren (2 patients) and a self-protection (all others).

**Conclusions:** Patients requiring vaccination were mostly well-being elderly. The structure analysis raised a question on whether the vaccine is delivered to whom it needs most and imposes on a family physician a task of sharing a decision.

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#### Social correlates of alcohol consuming among Kosovar adolescents: A population-based cross-sectional study

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**Aim:** Study objective of this project is to explore the problem of alcohol misuse among adolescents in Kosova and to better understand the social mechanisms that influence adolescent alcohol consuming, we analyzed the relationship and relative importance of a broad spectrum of social variables of alcohol consuming during adolescence.

**Design:** Cross sectional questionnaire survey performed with 261 students from 4 secondary schools in October 2005. The survey was performed in Gjilan, town in south-east of Kosovo.

**Main results:** From all questioned students, 26.5% consumed alcohol regularly and 12.6% consumed alcohol occasionally, a significantly higher proportion of boys was consuming alcohol ( $P=0.003$ ) and this proportion increased across study class. Less than 50% of students count a unemployment and financial problems, two main causes for misusing alcohol, 36.0% consider family problems a main cause and 19.2% believe that young people drinks to celebrate. Students in Gjilan continue to consume alcohol despite their knowledge about the health consequences of alcohol misuse, but in the same time, most of them consider information and counselling the best way of preventing from alcohol misuse

**Conclusions:** The prevalence and trends of alcohol consuming among students in our survey indicates that it's the last time that we should start acting. The sale of alcohol in Kosova is legal and has no restrictions on the age when purchasing it. Alcohol can be purchased by everybody including the small children. We recognized the importance of reducing alcohol among youth, noting that comprehensive approaches are more effective than programs that focus on a single behavior

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#### First cigarette smoking experience among secondary-school students in the Spanish Province of Barcelona

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**Objective:** The objectives of this study were first to estimate the prevalence of cigarette smoking among secondary-school students (13- to 16-year-old) and then to identify and analyze the social and cultural risk factors associated with the first cigarette smoking experience.

**Methods:** An anonymous, closed, self-administered questionnaire was used for the data collection. Data were analyzed using Spss program. Chi-squared and hypothesis tests for difference of percentages were applied with a significance level of 5%, and 95% confidence intervals were calculated

**Results:** Of the 274 students who completed the questionnaire 17% declared they were smokers Smoking prevalence was significantly higher among girls (26.1%) than boys (8.1%) ( $P<.001$ ) and progressively increased with age. Initiation occurred at 13 to 14 years of age. The most common reason for starting was to try something new (92.5%) The first cigarette was generally smoked in the company a school friend (36%).The greatest risk factor in the family environment was having a smoking sibling

**Conclusions:** The study shows the high prevalence of smoking among adolescents, particularly among girls. Smoking prevention strategies should involve home, school and social environments as well as the students themselves.

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#### The sociodemographic attributes of obese individuals and the evaluation of their behaviour and attitude towards obesity

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**Aims:** Obesity is a clinical state characterized by excessive fat deposition in body. Obesity prevalence has significantly increased particularly in the last 15-20 years. The prevalence in Europe according to Bregghöfer at al is 28.3% among men and 36.5% among women. According to TURDEP a population-based study conducted in our country obesity prevalence has been determined as 22.3%, respectively 30% among women and 13% among men in our country. In our study we aimed to find out obese individual's knowledge and aspect of view concerning obesity.

**Material and methods:** Our study has been performed on overweight or obese 156 individuals who consulted to our endocrinology unit between January 2009 and April 2010. SPSS for windows version 15.00 was used for all the statistical calculations and analyses.

**Results:** 156 individuals 13 men and 146 women has been enrolled to our study. Average BMI was 35,40+/-4,35. The average age of individuals was 42,01+/-10,20. As we

questioned the most causative factor; 49.7% (n=77) of the participants attributed their obesity to irregular, excessive or fast-food nutritional habits, and 34.8% (n=54) to lack of physical activity together with fast-food nutritioning. 42.6% (n=66) of participants were not doing regular physical exercises. And again 95.5% (n=149) of the participants were feeling uncomfortable with being overweight and 90.4% (n=141) of them were considering obesity as a disease. It was determined that 79.5% (n=124) of the subject lost weight and then regained.

**Conclusions:** Since obesity is a condition easy to diagnose but difficult and demanding to treat, it is essential to maintain a multidisciplinary approach to obesity treatment. In this treatment physician, psychologist, dietitian and the patient should all act in unison. In our study 79.5% of the subjects stated that they previously lost weight through some methods but then regained weight. The fear for getting sick was the primary reason to want to lose weight.

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### Gender and age differences among smokers

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**Introduction:** Smoking is one of the most common risk factors for chronic diseases occurrence.

**Aim:** To identify reasons for smoking, nicotine dependence level and smoking cessation desire regarding age and gender of subjects, patients of one family medicine team. Subjects and method: 135 patients (62M+73F) at the age of 24-79. We used a purposely created questionnaire containing following data: age, gender, smoking duration, daily cigarette consumption, reasons for smoking, smoking cessation desire and Fagerstrom test, to establish level of nicotine dependence.

**Results:** Mean age of subjects 53,3 years (SD 9,19), average smoking duration 29,1 years (range 3-60), average daily cigarette consumption 21,4. Comparing two groups of patients, aged less than 65 and 65+, main reasons for smoking are: habit 50,4% vs.46,8%, problems 10% vs.12,5%, loneliness 4,8% vs.25% (x2 14,1) and nervousness 13% vs.12,6%. Nicotine dependence: moderate 48% vs. 56,2%, light 29% vs.34,3%, heavy 23% vs.9,3% (x2 6,8). Smoking cessation desire: 56,2% vs.69,9%. Comparing female and male smokers: main reasons for smoking are habit 42,4% vs.58%, nervousness 12,3% vs.8,06%, loneliness 8,2% vs.11,2%, problems 13,6% vs.6,45%, enjoyment 8,21% vs.6,45%. Nicotine dependence: moderate 45,2% vs.54,8%, light 43,8% vs.16,1% (x2 10,75), heavy 10,9% vs.29,03% (x2 5,9). Smoking cessation desire: 61,6% vs. 70,9%.

**Conclusion:** Main reason for smoking in all groups is habit. There are statistically significant differences in: higher presence of the reason 'loneliness' at the age 65+, heavy nicotine dependence in the aged less than 65 and in men, light nicotine dependence in women. We didn't find any statistically significant difference in smoking cessation desire regarding sex and age of subjects. Our work as well confirms that the priority in primary and secondary prevention of chronic diseases should be given to persons aged less than 65, especially men.

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### Accuracy of death notification forms in rural South Africa

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**Introduction and aim:** The death notification form (DNF) is designed to provide important mortality statistics and demographic details that inform health care planning and provision. There are concerns that the data recorded on the DNF is frequently inaccurate and incomplete. The aim of this study was to quantify the extent of this problem in our department.

**Material and methods:** Retrospective review of DNFs produced by doctors working in the department of family medicine at a government hospital in South Africa. 120 case files and accompanying DNFs were reviewed over a period of 6 months from May to October 2009.

**Results:** Of the 120 DNFs reviewed, 112 (93%) had at least one minor error. Major errors were found in 46 (38%) of the DNFs. In addition, the majority of DNFs were only partially completed. Of particular note was Part F in which the demographic details regarding usual address, education level, usual occupation, type of business/industry and smoking history were not completed on any of the 120 DNFs.

**Conclusions:** The incidence of errors and inadequate completion of DNFs in our department is unacceptably high. Lack of training and supervision and limited appreciation of the importance of the DNF contribute to this. This is likely to represent the situation across the region and has implications for the accuracy of mortality and demographic statistics in South Africa. Training and supervision of medical personnel and clerical staff is essential to improve the quality of death certification.

### Pulmonary diseases

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#### Coverage of seasonal influenza vaccination in pediatric asthma

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**Aims:** The influenza vaccine has shown effectiveness reducing the incidence of annual flu in studies of patients at risk, as is the case of asthmatic patients. The Catalan Health Institute (Institut Català de la Salut) recommends seasonal influenza vaccine for patients of any age with chronic respiratory disease, including asthma. The aim of this study was to determine the degree of compliance of influenza vaccine in the pediatric population with asthma.

**Material and methods:** We performed a cross sectional study conducted in a Primary Care Center, which included all pediatric patients (0-14 years) diagnosed of asthma. In all cases it was checked the administration of influenza vaccine as recommended. Patients were recruited during the months of October to December 2010, the vaccination period



scheduled by the Catalan Health Institute. Data were collected through the review of medical records and were analyzed using the statistical package SPSS version 11.0.

**Results:** Of a 4471 pediatric population, we selected all the diagnosed of pediatric asthma, it was a group of 252 children. A 60.31% of those were men with a mean age of 7.3 plus-minus 3.5 years. Vaccination coverage was 28.2% and in all cases, vaccination was carried out in the primary care center

**Conclusions:** While yearly influenza immunization is widely recommended for children with asthma, there is currently a low percentage of vaccination in this group of patients. It would be beneficial to promote additional measures to improve vaccination coverage among this population group, for example by taking advantage of all opportunities to vaccinate children with asthma whenever they make clinic visits in the fall and early winter in the primary care center.

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### Suberosis – a cork workers disease

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**Introduction:** Suberosis is an interstitial lung disease, a hypersensitivity pneumonitis due to cork dust inhalation and is also classified as Extrinsic Allergic Alveolitis. It is an occupational lung disorder of cork workers, associated with repeated exposure to mouldy cork dust, in Cork Industry. In our area, this is the most prevalent occupational disease, probably the most frequent in Portugal, because it is one of the most important Portuguese export industry.

**Case description:** Male, 46 years-old, Portuguese, cork worker, nuclear family, Graffar IV, Duvall familiar cycle - phase V. Smoker (20 UMA). He went to his Family Doctor presenting productive cough and malaise during workdays, with some improvement on weekends. He presented chills and bilateral sibilance. The chest X-ray requested was normal but the thoracic CT showed a pattern of interstitial lung disorder, with multiples parenchymal small and diffuse cysts, mostly on the upper lobes. He was referred to the Pneumology Unit. There, it was requested a bronchoalveolar lavage that showed an increase of polymorphonuclear leucocytes; the study of pulmonary function revealed impaired diffusion capacity and decreased compliance. Suberosis was diagnosed in 2001. Since then, the patient has stopped smoking and was changed from his work station to the office of the same factory.

**Discussion/Conclusion:** Suberosis is an occupational lung disease of cork workers, especially prevalent in Portugal, due to the developed Cork Industry in this country. However, the airway involvement that is present in some cases, makes the diagnostic approach complex, being difficult to distinguish from other interstitial lung diseases and occupational asthma.

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### Interventions for Chronic Obstructive Pulmonary Disease (COPD) patients at the Emergency Medical Services of the City of Belgrade

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**Aim:** The purpose is to show how many patient interventions have been estimated as urgent by the dispatch centre versus how many of those turned out to be objectively urgent on scene and how many patients have been transferred to medical centres for further treatment.

**Method of study:** Out of 3009 interventions performed by one Belgrade EMS team in the period 10 March 2006 - 15 December 2009, there were 140 interventions associated with diagnosis j42, j43, j44, j45 and j96.

**Results:** 42.1% were patients less than 65 years, and 57.9% patients over 66. 19.3% of calls were estimated as urgent by dispatch centre, 32.1% were estimated as urgent by EMS physician on scene and 35.7% were taken to medical centres. 38.6% of patients had only one of the above mentioned diagnosis. 20.4% of these were taken to medical centres and 18.5% turned out to be objectively urgent on scene. There were 61.4% of patients with COPD and other associated diagnosis. 40.7% of them were urgent. In 10.7% symptoms reported to the dispatch centre were not found on scene. In 19.3% the presence of EMS team was found to be unnecessary on scene - i.e. patients symptoms would have been dealt with by them taking their own already prescribed therapy.

**Conclusion:** Even though patients have their prescribed medications they rely heavily on EMS. This service is free and therefore patients with multiple illnesses feel comfortable in placing a call for an EMS team. Many don't visit their own family doctors regularly and some don't know how to properly use their medications, for example, puffers. Often, when calling EMS patients report only COPD or difficulty with breathing symptoms because they know that these symptoms are more likely to be accepted for emergency treatment by EMS. COPD associated with other illnesses is the cause of twice as many more urgent interventions than on its own. We believe that evaluation of the urgency of calls at the dispatch centre could be more accurate.

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### Descriptive study of COPD patients in primary care

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**Aim:** To know the demographic characteristics, risk factors associated with occupational exposure and pathology of COPD patients treated in primary care in an Autonomous Community.

**Design and methods:** descriptive, observational, multicenter, transverse study. Place: 52 Primary Health Care Centers. Participants: 162 Primary Care Physicians. The information was collected during ten days from COPD patients between 40 and 70 years old, who attended the clinic for any reason, with the criterion of the first patient to come and only one patient per day. Personal Data collected was age, sex, smoking, clinical history and occupational exposure. A descriptive statistical analysis was performed using SPSS 18 program.

**Results:** Information was collected from 987 COPD patients of which 80.7% were men. The average age of all the

patients was 70,9 years, having a small difference between men (71.5; D.E: 10) and women (67.6; D.E: 13.3) Of all COPD patients, up 24,6% of men still smoking despite COPD diagnosis, while the figure is only 5% of women. Among the risk factors, notes that 71.2% of COPD women studied, have lived with smokers. 7.5% of the men and 8,3% of the women have worked in catering. Among the personal background of the patients studied, up 60,8% were hypertensive, and 31.8% diabetics. 24% was also diagnosed with heart failure and 16.4% with ischemic heart disease.

**Conclusions:** We need more strategies to motivate COPD patients in the abandonment of snuff consumption. - Living with smokers, is a high risk factor for the disease. -They are patient with diverse serious pathologies associated.

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### Nonresolved Pneumonia And The Value Of The High Resolution Computed Tomography (HRCT) In Primary Health Care

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**Aim and purpose:** To evaluate the role of High Resolution Computed Tomography (HRCT), in diagnosis of local infiltrative lung disease.

**Material and methods:** 76 patients with lobar and segmental pulmonary infiltrates underwent HRCT. Initial clinical and radiographical data suggest the presence of primary pneumonia. The duration of disease of disease before HRCT examination was 4 - 12 weeks. Despite intensive antibiotic therapy no evidence of resolution of pulmonary infiltrates was noted. Bronchoscopy has been made and no signs of lung cancer were found.

**Results:** The presence of lobar or segmental air-space consolidation or reticulonodular infiltrate was noted in all cases. HRCT features of primary pneumonia were found only in 35 patients. The typical pattern include subpleural localization, air-bronchogram within zone of consolidation and volume loss of affected lobe. Diffuse emphysema was the most common associated condition in the group (14 patients). In 41 patients (46,1%) HRCT accurately excluded the presence of primary. Infiltrative tuberculosis was found in 17 patients, lung abscess in 9, infarction in 5, bronchiectasis in 4, bronchioalveolar carcinoma in 4, and invasive aspergillosis in 2. Correct diagnosis was made in 69 cases (90,7%).

**Conclusions:** HRCT proved to be more accurate than X-ray examination in assessing local air-space disease, and is a useful diagnostic tool for patients with nonresolved pneumonia.

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### Reflects Puls Oximetry pulmonary function and quality of life in people over 40 years with COPD in general practice?

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**Aim and background :** Puls oximetry is a simple screening

test for systemic hypoxia. This study aimed to evaluate puls oximetry in general practice, in patients with stable COPD, and assess how pulse oximetry results (SpO<sub>2</sub>) reflect lung function and symptoms.

**Material and methods:** Among 18931 adults aged 40 years or more, listed at 7 general practice offices, 1784 were identified in the medical records with a diagnosis of asthma or COPD within the last five years. Of these a random sample of 1111 patients were asked by mail to take part in the project. 380 patients took part in the baseline examination. Oxygen saturation was measured by pulse oximeter Nonin Onyx II. Spirometry was carried out following ERS/ATS guidelines, using Spirare equipment. Respiratory symptoms and disease specific quality of life items experienced the previous week were registered on a validated COPD Questionnaire (CCQ). The questionnaire utilises a seven-point scale where 0 = asymptomatic/no limitations and 6 =extremely symptomatic/totally limited.

**Results:** 12 of 378 patients from baseline examinations had oxygen saturation  $\leq 92\%$ . 11 of these patients had COPD (FEV<sub>1</sub>/FVC<0.7), eight with severe COPD (FEV<sub>1</sub> % predicted <50). 7.1% of the patients with COPD had SpO<sub>2</sub>  $\leq 92\%$  compared to 0.5% in those with FEV<sub>1</sub>/FVC ratio  $\geq 0.7$  (p<0.001). Median score of the COPD questionnaire (CCQ) was 3.0 in the patients with SpO<sub>2</sub>  $\leq 92\%$  compared to 1,6 in the patients with SpO<sub>2</sub> >92% (p=0,001).

**Conclusions:** Oximetry in primary care has the potential to help in the diagnosis and assessment of COPD, and, in some instances, identify unsuspected hypoxia. Being easy to use and acceptable to patients, pulse oximetry may be useful in the monitoring of patients with obstructive lung diseases.

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### Cystic adenomatoid malformation of de lung: presentation of clinical case.

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**Background:** Cystic adenomatoid malformation(CAM) is a rare lung disease. Characterized by adenomatoid proliferation of alveoli and terminal bronchioli. It is usually diagnosed perinatally, but some silent cases are discovered during childhood or adulthood. His treatment is surgical. It will be the pathological anatomy the one that confirms his diagnosis. Let's sense beforehand the case of an asymptomatic girl up to 3 years.

**Clinical case:** 3-year-old girl, with prenatal diagnosis of Disease quítica pulmonary(CAM) in low right lobe, by means of prenatal ultrasound scan. To the birth she is asymptomatic, with parameters antropométricos of percentile 50 To 8 days of life thoracic TAC is realized image compatible with CAM being detected in pulmonary right base of 3X2 cm. To 6 months of life it suffers an episode of bronquiolitis, demonstrating later events of bronchial hyperreactivity well controlled with treatment. Coinciding with the education, it begins with recurrent respiratory infections. New thoracic TAC is realized. We observe cystic basal right injuries with diameter 4.1X 5X 3 cm, compatibly with CAM type 1, with discreet boss in bilateral and diffuse mosaic more accentuated in low right lobe I segment 6. Is performed in lobectomy lower right and the Anatomopathologic study shows several cystic pulmonary formations, with low diameters to 2cm confirms the diagnosis. The postsurgical

evolution of the patient was satisfactory. It continues his controls in neumología infantil.

**Conclusions:** The MAQ is a congenital slightly frequent disease and always is necessary thinking about it in pediatrics, if we detect recurrent respiratory infections. His treatment is surgical though the patient is asymptomatic and a narrow follow-up of the same ones is recommended by the risk of possible recidiva or his malignant degeneracy

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#### Inhaler technique: evaluation of factors associated with good practice in patients with chronic obstructive pulmonary disease

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**Aims:** Evaluate inhaler technique in patients with chronic obstructive pulmonary disease (COPD) in an urban health center. Describe the characteristics of these patients and to study which of these characteristics are associated with performing a good inhaler technique.

**Material and methods:** Study design Transversal descriptive study. Location Urban Primary Health Care Centre. Participants 84 patients with COPD at least 6 months. Main measurements Data collection through review of medical history and conducting a personal interview to evaluate inhaler technique according to the regulations of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR).

**Results:** Finally the sample was 34 patients, 82.4% were men, mean age of 72.6 years. 70.6% have primary education, 61.8% are former smokers, 58.8% are mild-moderate COPD and 38.2% are controlled with a pulmonologist 88.2% recalled having received prior instruction (67.5% by the prescribing doctor). 74.4% use two or more drugs and 67.6% use more than one type of inhalation device. 35.5% made a good technique inhalation.

**Conclusions:** Approximately one third of COPD patients successful inhaler technique and although there is no variable that is statistically significant relationships with this fact, the younger and higher educated seems to be there.

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#### A "flamed" squamous cell carcinoma

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**Background:** The Pulmonary Neoplasia (PN) is the leading cause of cancer death in both sexes. Among histological subtypes, the adenocarcinoma (32%) and squamous cell carcinoma (SCC) (29%) are the most frequent. Smoking is the main risk factor, accounting for 85% of cases. This association is stronger for SCC. The clinical manifestations result from local tumor growth, invasion or obstruction of adjacent structures and metastasis. Aim: To demonstrate the importance of Family Practice (FP) in primary prevention of lung cancer.

**Material and methods:** Familiar interview, medical record and articles research in UpToDate, PubMed and Medscape.

**Results:** Male, 44 years old, caucasian, smokes 30 cigarettes per day for 14 years. Appealed to the primary health care (PHC) with inflammatory signs of the second finger of right hand, without history of trauma, with one month of evolution. After a week, returned to the medical consultation with intense pain in the anterior-inferior right costal grid without associated respiratory clinic. Underwent X-ray costal grid and the result was normal. Five weeks later, his clinical condition worsened, with persistent inflammation of the finger, costal grid pain and the appearance of bulky, stiff and painful cervical lymphadenopathy. Performed complementary exams which revealed right pulmonary SCC with metastatic bone, liver and adrenal gland (stage IV). Underwent amputation of the middle and distal phalanges of the affected finger and chemotherapy. Died after two months.

**Conclusion:** This case raises a reflection about the sudden progression of a clinical situation and the role of the FP in monitoring the same. An initial diagnosis, apparently not serious, can motivate, for its persistence, the discovery of a clinical situation much more complex, as is the case of pulmonary SCC. Additionally, this case demonstrates the importance of FP in primary prevention of lung cancer, particularly in the fight against smoking.

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#### Clinical profile of hypertensive patients with sleep apnea-Hypopnea Syndrome (SAHS) visited in primary care. Case-control study

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**Aim:** To define the clinical profile of hypertensive patients with SAHS seen in primary care and compare it to hypertensive patients without SAHS of the same age and sex.

**Material and method:** Case-control study. Urban primary care center. Subjects: from the computerized medical history of all patients older than 30 years old (N=15.539), patients with SAHS and hypertension (cases) were selected. By matched random sampling, hypertensive patients without SAHS of the same age and sex (controls) were selected. Variables: demographic and anthropometric variables, history of drugs, cardiovascular risk factors (obesity, dyslipidemia, diabetes mellitus), cardiovascular disease (ischemic heart disease, stroke, atrial fibrillation, heart failure, arteriopathy), tissue damage (microalbuminuria, left ventricle hypertrophy, GF<60), blood pressure and kind of treatment.

**Results:** 128 patients were analyzed: 64 cases and 64 controls. The average age was 65 years old. Non statistically significant differences (SSD) were observed regarding alcohol (42 vs 33%), smoking (39 vs 27%) and benzodiazepines (17 vs 8%), but there was a SSD regarding antidepressant consumption (13 vs 2%; p<0,05). There was a higher incidence of cardiovascular disease (25 vs 17 events) in the case group compared to the control group, but in none of the studied pathologies SSD were observed. As for cardiovascular risk factors, obesity was predominant among cases (70 vs 36%; p<0,001) and overweight among controls (16 vs 42%; p<0,001). There were no SSD for dyslipidemia, nor diabetes, antihypertensive drugs or tissue damage.

**Conclusions:** Hypertensive patients with SAHS have more

obesity, higher rates of antidepressant consumption and have higher incidence of cardiovascular disease than hypertensive patients without SAHS, although these differences were not statistically significant.

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### Spanish validation of the Chronic Obstructive Pulmonary Disease - Population Screener (COPD-PS)

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**Aim:** Obtain a simple, useful and self-scored questionnaire to detect COPD in general population by validating a Spanish previously adapted version of the COPD-PS questionnaire.

**Materials and methods:** Observational, cross-sectional study in patients aged 35 years or older with a scheduled visit for any reason in 10 Spanish Primary Care sites was meant to be included in the study. Control sample was collected from patients not previously diagnosed with COPD, Cases were COPD GOLD I-II previously diagnosed, and classification was confirmed using spirometry. Socio-demographic and basic clinical data were collected, as well as COPD-PS and EQ5D questionnaire responses. The psychometric properties of the questionnaire were studied.

**Results:** 79 cases and 94 controls were included. The mean time for completion was 47.7 seconds. Feasibility: 2.3% of the participants did not respond to any single item, 4.1% of the sample scored zero. Validity: correlation with EQ5D was moderate (- 0.349) and with FEV1 was moderate-high (- 0.647); the questionnaire score was associated with all the COPD indicative parameters studied. A cut-off point of 4 or 5 resulted into a good sensitivity (93.6% and 65.4%) and specificity (64.8% and 87.9%) with a high classification rate of 78% for both. Reliability: the intraclass correlation coefficient was 0.94.

**Conclusions:** The questionnaire presents adequate psychometric properties to apply it in primary care. Considering a cut-off point of 4, predictive parameters of the original questionnaire improved and it becomes especially useful for COPD screening among community-attended subjects.

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### Quality control of spirometry in primary care

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**Aims:** to evaluate 2 methods of control, designed to increase the quality of spirometries in primary care centers (P.C.C) participants in a multidisciplinary primary care and hospital programme to improve COPD care.

**Material and methods:** randomized controlled trial in 17 P.C.C. Quality control of spirometries were randomized into three branches: 1) Supervision from hospital (HOS),

2) Compute Program incorporated to the spirometer (CP) and 3) Usual practice, that will be the control group (CON). All spirometries done during 10 months were included in the analysis. All participants used the same model of spirometer (Datospir Micro, Sibelmed, Barcelona) and received the same training (Sixteen hours of theory and 20 hours of practice). The parameters used to assess the results were the ones of quality control (QC) (Perez-Padilla 2008; A and B= Good quality, C, D and E= low quality)

**Results:** We analyzed 1758 spirometries (HOS: 379, CP: 1070, CON:309) Patients mean age was 58(SD17) years. 52% were women. Mean pulmonary function was: FVC 3,23 (SD 1,25) liters, FEV1 2,45 (SD 0,98) liters and %FEV1 0,75. Following errors were observed: at the end of maneuvers in 52% (test time < 6 seconds in 32%) and at the beginning of maneuvers in 4%. 47% of the spirometries met the quality criteria (grades A and B), 41% in the HOS group 53% in the CP group and 47% in the control group. Median number of maneuvers performed was 4 (3-8)

**Conclusions:** Quality of spirometries done in primary care centers must improve. The compute program spirometry (with an automated software) was the most effective method. The most common mistake was a time of maneuver of <6 seconds

770

### Clinical prediction rules for pneumonia. Elaboration of a calculator

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**Aims:** To determine the symptoms and predictive signs of community-acquired pneumonia. To develop a calculator that allows us to know the probability of identifying patients with community-acquired pneumonia treated in primary care services

**Design and method:** Setting: primary care Subjects: Prospective Multicentric Study 313 patients, attending over a year in 34 primary care medical offices, with suspected pneumonia who underwent a chest x-ray. It was considered that the patient had pneumonia when radiology was confirmed by a radiologist. Method: We studied the following signs and symptoms: cough, expectoration, initial chill, labial herpes, temperature, chest pain, dyspnoea, rhinorrhoea, odynophagia, gastrointestinal symptoms, headache, myalgia, asthenia, confusion, heart rate, respiratory rate, blood pressure, arterial oxygen saturation and data lung auscultation. Statistical analysis: was used the SPSS 15.0 program. We performed a logistic regression model by adjusting the method step-by-step (Wald forward step). Then we identified those variables whose coefficients were significantly different from 0 ( $p < 0,05$ ), for that the Wald test was used and we estimated the odds ratio (OR). The Hosmer- Lemeshow goodness of fit test was used.

**Results:** 313 chest ray-x were made. 161 patients had confirmed pneumonia and 152 patients had chest ray-x reported as negative pneumonia. The probability of pneumonia was significantly influenced by the following variables: initial chill pleural pain, absence of odynophagia, asthenia and crackles. The importance of each one is defined by:  $\log(p/1-p) = -1,395 + 0,831$  pleural pain +  $0,657$  initial chill -  $0,885$  odynophagia +  $0,908$  asthenia +  $0,853$  crackles Using the regression equation we developed a calculator to make a pneumonia prediction. The discrimination power of the model

was 71% (ROC curve)

**Conclusions:** Only five symptoms and signs are good predictors for pneumonia in primary care. This model allows us to estimate the probability of having community-acquired pneumonia in any patient. The discrimination grade of the model is admissible. It would be recommended a validation study.

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### Antibiotics in exacerbations of asthma

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**Aims and background:** Current guidelines explicitly do not recommend prescribing antibiotics for asthma exacerbations in order to avoid overprescription. We aimed to assess: 1) the prescription rate of antibiotics related to asthma exacerbations in primary care, and 2) which clinical patient characteristics are associated with antibiotic treatment.

**Material and methods:** We retrieved all electronic patient records concerning asthma exacerbations in adults during 2008 recorded patient contacts by the centralized out-of-hours General Practice (GP) service in Amsterdam. Through uni- and multivariate analyses, we compared the clinical patient characteristics documented by GP's of patients who received antibiotics during asthma exacerbation.

**Results:** Of 540 identified exacerbations of asthma, 108 (20%) were treated with antibiotics, of which in 16 cases (15%) a suspicion of pneumonia was documented. Univariate analysis showed that antibiotic prescription was positively associated ( $p < 0.05$ ) on history taking with age, cough, sputum and symptoms of flu; and not ( $p > 0.05$ ) with duration of symptoms or common cold. On physical examination, antibiotic prescription was associated ( $p < 0.05$ ) with an ill appearance, fever, rhonchi and focal aberrations on auscultation. There was no association ( $p > 0.05$ ) with present ENT-problems and wheezing. Multivariate analysis yielded a Nagelkerke  $R^2$  of 0.331 for the variables age, ill appearance, sputum, rhonchi and fever. Antibiotic prescription was not associated with other treatments of exacerbation.

**Conclusion:** Antibiotics are prescribed more often for asthma exacerbations in primary care than proposed by international guidelines. Fever appears to be a major trigger for antibiotic therapy, in contrast to recommended care. This suggests that overprescription of antibiotics for asthma exacerbations is prevalent.

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### Clinical features of asthmatic patients treated in a emergency reference center in primary care

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**Aims:** Describe the clinical characteristics of asthma patients treated at a center of reference in primary care urgent.

**Material and methods:** Design, setting and framework achievement or level of care, selection criteria, number of subjects, number of subjects responding and dropouts, interventions (if appropriate), variables and methods of assessing response. Prospective descriptive study of all patients attending the emergency room for asthma attacks during 2010. Variables were collected on the degree of asthma control, number of exacerbations treated in the ER and income, type of chronic treatment.

**Results:** 92 patients. 63% female. Average age 35 years (13 DE). 38.9% smokers. 67.4% with a history of atopy. 71.7% were under some inhaler chronic treatment: beta-adrenergic or inhaled corticosteroid (IC) or both. According to the GINA Guidelines and Alerts: 42.4% without treatment, 10.8% CI only low dose combination therapy 27.2%, 19.6% CI and high-dose beta-adrenergic or other long-term oral treatment added. The duration of asthma was higher in the combination inhaler treatment group ( $p < 0.001$ ), with greater severity and clinical instability, as measured by hospital admissions ( $p < 0.03$ ) or more urgent care received in the previous year ( $p < 0.05$ ). Asthma control in the last month 'asthma control test' (ACT): more control the daily treatment group required fewer and less serious (66%) of all severity groups considered (31.5%). Of those receiving treatment ( $n = 68$ ) showed stability only 10% of those who were not ( $n = 10$ ) showed stability only 41% ( $p < 0.05$ ). 51% of asthmatics with criteria of instability in the past year ( $n = 70$ ) were not long-term treatment with inhaled corticosteroids compared with 92% of the stable ( $n = 13$ ) did not need treatment ( $p < 0.05$ ).

**Conclusions:** The non optimal degree of control of asthma with the prescribed chronic inhaler treatment causes asthma emergency visits at all levels of severity. We need to improve the level of asthma control at all levels of severity, especially serious.

## Quality improvement

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### An audit on the management of osteoarthritis of the knee (OA knee) in a general outpatient clinic (GOPC)

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**Aims and background:** Patients with osteoarthritis of knee (OA knee) may suffer from intolerable pain and physical disability, limiting their daily activity and damaging their quality of life. Goals for managing OA knee are controlling pain, improving function and health-related quality of life, control for risk factor and avoiding adverse effects of therapy. The objectives are to assess the process of management of OA knee using evidence-based audit criteria; identify areas of deficiencies and to implement changes; achieve improvement in management of OA knee in a general outpatient clinic (GOPC).

**Methods:** All patients with OA knee who attended the GOPC from 1/7/2008 to 30/9/2008 were recruited in the first audit phase. Six audit criteria including proper documentation for diagnosis, patient education for weight reduction and exercise, using Acetaminophen as first line pharmacological treatment, assess of gastrointestinal risk for those using NSAIDs were adopted from a major clinical guideline, The Care and Management of Osteoarthritis in Adults, National Institute for Health and Clinical Excellence, 2008. Standard were between 85-95%. Data were collected by case-note review. Deficiencies in care and their reasons were identified

and discussed in a practice meeting in our clinic. Changes in practice were implemented. Second cycle audit was performed nine months after the implementation of practice changes. The results of the two cycles were compared.

**Results:** The first and second cycles recruited 317 and 348 patients respectively. Of all the six criteria, there were significant improvements after practice changes. Five out of six criteria attained >90% compliance in the second cycle.

**Conclusions:** This audit allowed our staff to identify the inadequacy in the management of OA knee and led to the successful changes for improvement in clinical performance.

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#### Clinical pathway and its application in primary health care

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**Background:** Clinical pathways are one of the main tools used to manage the quality in healthcare concerning the standardization of care processes. It has been proven that their implementation reduces the variability in clinical practice and improves outcomes.

**Aim:** Hence, clinical pathway is defined for prevention and an early detection of colon cancer in Medical centre in Valjevo due to the project of The World bank and The Ministry of Health of Serbia. They include all patients who are 50 and more and their relatives ill from colon cancer.

**Method:** During the pilot programme of application of clinical pathway 150 calls were sent to home addresses of the patients. 130 of patients were included in clinical pathway while 130 samples of waste material were tested to bleeding for 4 weeks of pilot programme.

**Results:** The results of 122 tests were negative (93,8%), and 8 of them were positive( 6,2%).One patient had colon cancer (0,76%) which was operated , the irritable colon was diagnosed to one patient (0,76%) , one polyp on colon was discovered and removed during the colonoscopy , gastroscopy was done to one of the patients after the colonoscopy with good findings. Tests to bleeding were repeated to two patients (1, 54%) and the results were negative. Two patients are lost between primary and secondary level, they didn't make an appointment for colonoscopy.

**Conclusion:** It is crucial that the media, local community and non-government organizations are involved in health education and to emphasize the importance of prevention of colon cancer. The role of chosen doctor is especially significant in increasing of answers to calls for testing and in following of given results and education of patients as well.

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#### Retinography in non-mydratic camera, our 4-year course improving quality in primary care.

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**Aims:** The Retinography is used for the study of the fundus in diabetic patients, to detect the degree of vascular-retinal pathology. Thus, the objective was to make digital retinal photographs for the early detection and rapid referral to an ophthalmologist.

**Material and methods:** The photographs were taken by retinography mydratic camera TOPCON TRC-NW6S and sent to family doctors by e-CAP program. The nursing staff took photographs of fundus of diabetic patients referred by the team of eight Health Areas in Primary Care (Reus-Altebrat). The family physician was trained by experted ophthalmologist discussing cases with suspected pathology. If necessary, the ophthalmologist make a fast referral to hospital service.

**Results:** In these 4 years we have screened a total of 5739 diabetic patients. Every year, respectively: 1631, 2090, 2655, 2948. Each time the family doctor acquires more experience and confidence in the interpretation of retinal images with the camera unit in Primary Care. In 2007: 23% diabetic patients screened (52% men), 19% forwarded for assessment by an ophthalmologist, 7% referred to the hospital for monitoring and treatment. In 2008: 30% of diabetic patients screened (55% men), 18% forwarded for assessment, 6% referred to the hospital for monitoring and treatment. In 2009: 37% diabetic patients screened (46% men), 14% forwarded for evaluation by an ophthalmologist, 5% referred to the hospital for monitoring and treatment. In 2010: 41% of diabetic patients screened (45% men), 15% forwarded for evaluation, 2.5% referred to the hospital for monitoring and treatment.

**Conclusions:** This technique allows a screening of patients with diabetic retinopathy, that if not treated early, can lead to total loss of vision. Its introduction has reduced the excessive derivation to ophthalmology and the practical disappearance of the waiting list, that before the starting of this program was of more than one year.

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#### Could be useful the creation of non-presential visits to improve the accessibility to rheumatology practices?

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**Introduction:** Nowadays exists a delay between family doctor's derivation and the execution of the first visit by rheumatologist around 6 months according to the Primary Attention Center of our area. This delay causes work overload for specialists, family doctor's disquiet, the possibility to request complementary tests, and a delay for the resolution of patients problems.

**Objective:** To evaluate the impact of an intervention that modifies the appointment system and the waiting time for the rheumatology practice specialists. Location: ABS urban, near to Barcelona. Design: Quality improvement Participants: To draw up an agenda of first rheumatologist visits.

**Methodology:** Establishment of a non-presential visit model (online visits) on January 2010 in rheumatology agenda. Online visits: where the rheumatologist can value complementary tests that have been done in primary, makes bureaucratic proceedings and gives solutions for family doctors doubts. Establishment of clinical protocols about action and derivation. Variable analysis: number of derivations to rheumatology, average of delayed days for the first rheumatologist assessment, number of solved cases by online visits. Derivations of first visits because of bureaucratic proceedings/ total of rheumatology derivations.

**Results:** Total number of first visits on 2009: 261. In 2010: 218 (-16%). Average of delayed days 1st visit in 2009: 165 days. In 2010: 14 days. Online solved cases: 70 Number of derivations of bureaucratic proceedings/ total of rheumatology derivations in 2009: 188. In 2010: 73

**Conclusion:** A substantial number of first rheumatologist visits can be resolved through online visits. The creation of this new appointment model improves the accessibility to the specialized practice considerably.

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#### The most common chronic diseases and its management in a pediatric population

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**Aims:** To determine the prevalence of chronic diseases that require intensive interventions in the pediatric population of a primary care center and describe by whom is performed the management.

**Material and methods:** A cross-sectional descriptive study conducted in a primary care center, which included all pediatric patients (0-14 years) recorded in the center. Coded diagnoses of asthma, type 1 diabetes mellitus, cerebral palsy, autism, growth retardation and Attention deficit hyperactivity disorder were quantified using the computerized record in history

**Results:** A total of 4,471 medical histories were recorded. 339 patients of the total, had a diagnosis of a chronic disease. The medical diagnoses registered with the highest prevalence were: asthma in 74.3%, Attention deficit hyperactivity disorder in 12.1%, growth retardation in 6.8%, cerebral palsy in 2.4%, autism in 1.2% and type 1 diabetes mellitus in 0.9%. In a 57,8%, the management of the patients was performed in primary care by their reference pediatricians, monitoring was shared (primary care and referral hospital) in 13.9% of the cases, 8.9% was made by physicians outside the hospital, 10.9% took place in the child mental health center, 5.3% were followed in private hospitals and 3.2% from top-level hospitals.

**Conclusions:** The most common chronic childhood disease in our center is asthma, and is in primary care where the management of most of these patients is performed. Describing the frequency of disorders that require greater interventions and knowing where this is done, offers opportunities for improvements in patient care and service quality, allowing planning health resources to control the demand in this group of patients.

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#### Evaluation of users satisfaction - how has it changed?

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**Aims:** During July 2008 it was undertaken a survey in order to assess users satisfaction of the health unit of Póvoa de Varzim, namely its headquarters and external departments. The results revealed the dissatisfaction of users and the need to promote and implement actions. Thus, in an attempt to solve the handicaps encountered, between 2009 and early 2010, two Family Health Units(FHU), a Custom Care Unit at Headquarters, and an FHU at extension were formed. After the implementation of the above services, authors have decided to perform another study which aim was to evaluate how the changes introduced improved the users satisfaction, ending the cycle of quality.

**Methods:** An internal retrospective evaluation was conducted considering accessibility and acceptability dimensions. A selective sample with institutional base of users with 18 years or more, Portuguese speakers, embodied in institutions and with more than 1 consultation with your General Practitioner in the last 12 months. The authors collected data between 1st and 8th June 2010, through the application of EUROPEP questionnaire, validated for the Portuguese population.

**Results:** The authors distributed 966 questionnaires, with a 47% response rate. The average age was 45,2 years, among which 65% of the responses were provided by females. The global assessment was considered as "good quality" for 51% of users, higher than the 2008 study(31%). Indicators evaluated showed a remarkable service improvement, namely by having obtained "good performance" in almost all services provided, except in what is concerned with "Organization and services", whereas in 2008 only "Relationship and communication" in extension's got "good performance".

**Conclusions:** A remarkable improvement on users satisfaction was observed on the overall performance, highlighting the importance of the changes introduced by FHU. It is still necessary to continue the evaluation and correction of the "failures", promoting suitable solutions.

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#### Integrated training of GP/FM teachers in the field of quality improvement "inGPInQi project" in brief

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**Aims:** Presented Project (inGPInQi) is focused on the quality improvement (QI) education in: hypertension and diabetes mellitus - two of the most important health problems in Europe. Its objective is to improve the existing training programs for both, general practitioners/family doctors (GP/FD) and teachers in family medicine in the field of QI by implementing innovative tools in existing educational systems in Europe. The ultimate goal of the project is the improvement

of the European patient care through innovative education of GP/FD in quality concepts.

**Methods:** The Project products (such as: training materials and courses) will be based on the data of the identified GPs in the educational systems and required GPs competencies. The GPs' real requirements may be reflected in every stage of planning, execution and assessment of training programs. In such a way improved VET planning can be then multiplied on EU level. This will obviously provide GPs with opportunities for vocational advancement but also enable developing of common, European frame of reference for GPs' occupational competencies what is a vital added value of the Project.

**Results/impact:** Through the Project - the innovative didactic tools and methods for FM trainers to complement existing speciality trainings and continuous medical education programs for GPs among partner' countries will be developed [ (1) Guide Book containing guidelines on effective development (2) new guidelines for the management of: arterial hypertension and diabetes mellitus, (3) innovative VET program in QI for family medicine teachers, (4) distance-learning module on QI for GPs, (5) Internet tool to identify individual, QI educational needs]. The products will have universal character, adaptable to educational systems in all Project countries, and beyond.

**Conclusion:** InGPinQI Project is expected to have a direct and primary impact on the national vocational training (specialization and CME) in FM in Europe as it will promote a coherent, innovative and international approach to education in the field of QI, and will give trainers of FM various instruments improving their skills and competencies in this field.

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#### Development of the Competency Framework in Quality Improvement for General Practitioners and Family Physicians In Europe

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**Aims:** Aim of the poster is to present the process leading to the development of the competency framework in the area of Quality Improvement for GPs/FPs in European context.

**Material and methods:** Extensive literature review was carried out to develop a draft list of competencies and domains. It was followed by two rounds of reviews by the expert panel of EQUIP members. Finally the amended draft of QI competencies assigned to the relevant domains underwent two rounds of Delphi consensus panel.

**Results:** The list of QI competencies arranged in domains which reflect the areas covered by the Quality Chasm Model.

**Conclusions:** There is a need to develop the competency framework for QI to better inform CPD curricula for General Practice and help in the identification of knowledge and skills gaps.

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#### Atrial fibrillation and hypocoagulation in a family health unit – quality assessment

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**Objectives and background:** Atrial Fibrillation (AF) is the most common type of arrhythmia in adults, associated with a fivefold higher risk of stroke. It is crucial to be able to stratify thromboembolic risk in these patients, together with the corresponding appropriate therapeutic response (antiaggregation or hypocoagulation). It is our aim to assess and ensure the quality of AF-type classification records, as well as the establishment of an antiplatelet/hypocoagulation therapy according to the current recommendations, among AF patients at a Portuguese Family Health Unit.

**Methodology:** Studied dimension: technical and scientific quality. Unit under study: patients from the Family Health Unit, having a record of AF in the list of current active problems, until 31/12/2009. Data type: process. Data source: clinical process. Evaluation: internal, retrospective. Sample: institutional/selective. Indicators under study: AF-type classification, use of antiplatelet/hypocoagulation therapy, according to current recommendations. Type of intervention: educational, structural.

**Results:** Of the 139 patients studied, 12% were described as AF type (unsatisfactory pattern). With reference to antithrombotic therapy, 60% of the patients with an isolated AF were adequately treated (satisfactory pattern). It is worth mentioning the actual good patterns obtained among patients without risk factors (RF), as well as in those patients with one or more less validated RF, or with a moderate RF. Among the patients with two or more moderated RF, or high RF, 59% were hipocoagulated as recommended (satisfactory pattern).

**Conclusions:** The unsatisfactory pattern associated with AF classification may be a result of failure or difficulties linked with AF-type subdiagnosis. Some patients with an indication for hypocoagulation had absolute or relative contraindications associated with it, something which might justify some of the results.

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#### Quality of health care assistance received by patients treated for asthma crisis in a reference primary care emergency centre

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**Aims:** To evaluate the quality of healthcare received at time of urgent attention and at time of the discharge of patients complaining of worsening asthma.

**Material and methods:** Design, setting and framework achievement or level of care, selection criteria, number of subjects, number of subjects that respond and dropouts, interventions (if appropriate), variables and methods of assessing response Prospective study of patients treated at a



centre of reference in Primary Care by Emergency asthmatic exacerbation 2010. Variables: peak expiratory flow (PEF), type of medication administered, provided health education, degree of agreement between the care received and reflected in the discharge report.

**Results:** 92 patients with asthma exacerbation. FEM used in 90% of patients as a first step in assessing the severity. FEM was realized fall > 20% in 98% of those who could obtain the theoretical FEM (n = 61). Variability > 15% in FEM post-bronchodilatation 73.5% was seen in patients. 73% were given a systemic corticosteroid. No patient required an urgent blood gas. 66.3% received health education in the form of inhaled technical instructions, 60.9% prevention of asthma triggers (allergens, mainly anti-smoking advice) or poor control (treatment failure) and 78.3% had written instructions. At discharge 84.4% received inhaler treatment for long-term control of asthma and 15.6% were treated with bronchodilators. 35.9% were discharged without systemic corticosteroids. The report showed high congruence with the diagnosis in 83%, the degree of control perceived by the patient and physician in 61% of the treatment prescribed at discharge appropriate to the severity of the exacerbation and the degree of previous control in 59%.

**Conclusion:** The determination of the severity of bronchial obstruction and treatment of the exacerbation is done according to the recommendations of current guidelines. The review of inhaler technique, poor control factors and treatment at discharge is points to improve in our centre.

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#### Mortality rate at emergency department

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**Objective:** To determine the incidence of mortality at Emergency Department (ED), describe the socio-demographic characteristics, determine the length of stay and establish the predictability of the deaths that occurred during the study period and the total mortality rate. II.

**Methods:** Using a cross sectional observational design, from 1 February to 31 August 2010, the medical records of patients who passed away during their stay in the ED were analyzed descriptively, excluding those admitted as not revived corpse, 107 patients in total. III.

**Results:** Out of the patients treated (56, 353), 107 patient died with a mean age of 77.05 a 15.56 years, range 27-29. 41.1% women, mean age 81.5 +/-15.97 and 58.9% men (mean age 73.94 +/- 15.20). 31.8% of them were vital activity independent, although in 19.6% of the cases there were no records. Cardiovascular was the most common previous symptom (72.9%), followed by endocrine (44.9%), respiratory (36.4%), and neoplastic (35.5%). Psychiatric (6.5%) was the least common. The reason for consultation was a respiratory disease (35.5%), followed by neurological (26.2%), and digestive (14%). There was only 1 case of cardiac arrest (0.9%). The average length of stay in ER was 23.51 (28.99 +/-) hours. 68.32% of them exited in the first 24 hours. The mortality rate average was 0.18; the highest occurred in April (0.25) and the lowest in February (0.08). 78.5% of the deaths were predictable, and 21.5% not.

**Conclusions:** Most results are consistent with those described in the literature, but the cause of death was

respiratory instead of the expected neoplastic. It is essential to use quality indicators in the ED, as well as a comprehensive record to extrapolate conclusions, identify problems and propose improvements that may enhance a better management, greater efficiency and satisfaction. Limitations of the study were as follows: incomplete records, selection bias, the short inclusion of patients (only 7 months) and the fact of being a retrospective study, which makes harder the interpretation of cause and effect of the variables studied.

#### Quality of life

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#### Comparison the effect of transdermal and oral estradiol treatment on sexual function with surgical menopause patients

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**Aim:** We aimed to investigate the effect of transdermal and oral estradiol treatment on sexual function with surgical menopause patients

**Material and method:** Patients who were underwent total abdominal hysterectomy and bilateral salpingooforektomi were included the study. Study was performed with prospective, controlled and randomized. Oral estrogen tablets (Estradiol hemihydrate 1x2 mg / day) was given for the first group and transdermal plasters for second group (estradiol 4mg/3-4 per day). The third group was considered as the control group. First group 18, the second 17, and the third one were finished with 17 patients. Patients, CBC, biochemistry, hormone tests, Female Sexual Function Search Index (FSFI) and Menopause Rating Scale (MRS) were performed before and postoperative 12 and 28 weeks after surgery. Data obtained from patients were compared eachother.

**Results:** In both three groups, there were no statistically differences between age, weight, height and BMI (p>0,05). Initially, all patients' CBC, biochemistry, and thyroid hormone levels were in normally range. After surgery, on the third month, all patients' FSH levels were higher than 78 mlu/ml, E2 levels were lower than 15 pg/ml, LH levels were higher than 33 mlu/ml (all patients had entered menopause). According to FSFI, all patients clinically had decreased sexual function after menopause. Use of estrogen therapy in both groups showed improvement in FSFI scores, but not in control group. Oral or transdermal estrogen have been observed to cause improvement in symptoms of menopause while assessed by MRS scale (p=0.002, p=0.001 respectively).

**Conclusion:** According to this study, estrogen treatment had a positive effect on sexual life and menopause symptoms. Postmenopausal women who have psychologic problems, diminish expectations of sexually; can use estrogen treatment consider by individual risks, potential benefits and a good follow-up.

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**Rare disease in the family***Cunha M, Ribeiro L, Magalhães A, Silva C, Cardoso M, Sá Nogueira M*

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**Background:** DiGeorge Syndrome (DGS) results from an anomalous embryonic development of the pharyngeal pouch system. In 90% of the cases, it is consequence of a deletion in the 22<sup>nd</sup> chromosome (22q11). Pathological hallmarks include cardiac defects, absence or hypoplasia of thymus and parathyroid glands. The morbidity and mortality associated to this disease are due to the cardiac defects and infectious interurrences. Rare diseases are origin of significant morbidity for the patient and family, physically, economically, emotionally and socially. A multidisciplinary and multimodal intervention, managed by the family physician (FP), is crucial for an improvement of the quality and quantity of life.

**Aim:** To demonstrate the role of the FP in the presence of a rare and incurable disease.

**Material and methods:** Familiar interview, medical record and articles research in UpToDate, PubMed, Medscape.

**Results:** Female, 5 years old, hospitalized since birth until 8 months old with the diagnosis of DGS. Clinically, she presented facial abnormalities, cardiac malformations, thymus aplasia, tracheomalacia, renal hypoplasia and growth retardation. She was discharged to Primary Health Care (PHC). Nowadays, her stature, weight and psychomotor development are adequate (frequents school, physical and speech therapy and communicates by sign language). She is in spontaneous ventilation, enteric nutrition and without pharmacotherapy.

**Conclusions:** Towards a disease with serious anomalies, in which the intervention of the Secondary Health Care is unquestionable, the role of the PHC is unfairly ignored. In this particular case, the FP offers a proximity medicine, enabling the ideal conditions to provide her a lifestyle as similar as possible to the children of her age. The FP even unable of healing the rare or chronic disease, can assure that its effects are limited by anticipating cares/crisis, offering preventive and healing cares and orienting in a humanly and personalized form.

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**Our most elderly patients and their health***Jimenez Ramirez C, Perez M, Castillo J, Diaz G, Martin E, Ballesteros A*

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To analyze the social and health profile of the patient too old for a basic health area.

**Subject:** Total population > 90 years of total quotas. Exclusion criteria: not to be included, be in residence or not having at least one visit in 2009.

**Material and methods:** Design: cross sectional study. Data

were obtained from the IMO-H meetings, collecting variables: sociodemographic, chronic diseases, personal history, dementia, drugs, falls, vision or hearing problems, visits / year plant. Statistical analysis: description and frequency distribution, chi-square, t-test, ANOVA.

**Results:** Elderly > 90 years: 99. Average age: 92.4 years 64.6% women 39.4% lived at home with their children being cared for by relatives. 60.6% is hypertensive and diabetic 20.2%. Most common cardiac pathology: arrhythmia. 12% have had a stroke (p = 0.022) and 75.8% have diagnosed dementia. 69.7% suffer from severe osteoarthritis and 19.2% have suffered falls, with a history of hip fracture if they live alone (p = 0.008) A 51.5% consumed > 5 drugs / day (p = 0.012), a relationship between Specialized consumption and visits (p = 0.004). Incontinence diapers, 43.4% (p = 0.0001). Included in fixed program 50.5% (p = 0.0001) with differences if the caregiver is familiar (p = 0.0001), age (p = 0.003), no medical visits (p = 0.035). 52.5% and 43.4% had vision or hearing problems. Hospital admissions: 1.6 (0-2). Medical visits per year: 9.06.

**Conclusions:** 1 .- The older patients have few chronic diseases. 2 .- Half of incontinence wear diapers and have vision or hearing problems and do not live alone. 3 .- More than half are less than 5 drugs regularly. 4 .- They are included in program frozen under the level of health.

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**Quality of life in patients with chronic rheumatic diseases***Miceta A, Misetich D, Stevanovic B, Bojovic M*

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**Aims:** Quality of life stands out as an important indicator of health, and has a special role in evaluating the health status of patients with chronic and degenerative diseases. Aim was to describe and compare the health-related quality of life and to identify impact of social and demographic characteristics on it- among patients with chronic rheumatic diseases, residents of two parts of one urban municipality, central and peripheral.

**Methods:** The study was conducted in general practice in two areas- the central part and suburb of the city, from 12 to 16 April 2010, among patients with some of the chronic rheumatic diseases. In this study we used EQ-5D questionnaire

**Results:** The investigation involved 147 patients, 67 patients on the suburb and 80 in central part. Inflammatory and degenerative rheumatic diseases are equally represented in both groups. A higher percentage of people declare themselves in bad health in central part, in the group of older than 65 years (37,5% vs 23,9%). Usual activities 12.5% inhabitants of central part is unable to perform, which is three times more than in suburb while the most reported problems in both territories are moderate pain and moderate problems with mobility. The values of the subjective assessment of health conditions are deteriorating with age, particularly in the age group over 65 years in the central part.

**Conclusions:** Beside the differences between gender, education, age groups and territories, there are no substantial differences in estimation of quality of life between patients with rheumatic diseases.

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**Quality of life of chronic patients***Vukadinovic N, Cimbalevic B*

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**The aim:** Quality of life is the individual's perception of their position in life and culture of the existing system of values and establish indicators of how patients are functioning and how the disease limits their activities. Aim of this study is to measure quality of life of chronic patients and determine its movement with age.

**Material and methods:** Filling of the 15D questionnaire (Harri Sintonen, Finland). The questionnaire contains 15 questions with 5 grades and covers physical, mental and social aspect of life. Questionnaire completed by chronic patients in February 2010. In the Home health Krusevac. Data are classified according to the original program by author.

**Results:** The study included 150 subjects with mean age 68.86, of which 55 men and 95 women. Overall quality is 0.7852 a 0.138. Quality of life declines with age (0.8795 in age groups up to 59 years, for the group to 69 years 0.8424 \*\*\*, for the group to 79 years 0.0707 \*\*; at 0.6031 in the group over 80 years). Movement ability decreases after 69 years from 0.0633 to 0.0512 for groups of up to 79 years ( $t = 4$   $p = 0.001$ ) to 0.0387 in the group over 80 years ( $t = 2.55$   $p = 0.05$ ). Breathing after 69 years from 0.0661 to 0.0551 to 0.0369 by age groups ( $p = 0.01$ ). Discharge declines after 69 years from 0.04793 to 0.0403 to 0.0306 ( $p = 0.05$ ). The usual activity decreased gradually and significantly after 69 years of 0.0642 0.0532 ( $p = 0.01$ ). Mental activity decreased after 69 years from 0.0658 to 0.0417 ( $p = 0.001$ ). Discomfort and symptoms, depression and mental suffering is significantly higher after 69 years. Then decreases and vitality.

**Conclusions:** Quality of life decreases significantly with age after 69 years and after gradually.

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**WAIST-HIP RATIO and BMI correlates with the socio-economic status of obese***Petrovic T*

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Obesity is a multi-factorial chronic disease which results from interaction between kaja genotype and environmental factors. For the assessment of obesity BMI and WHR (Wast-Hip Ratio) index were used.

**Aim:** determine whether there was a correlation and what values existed between BMI and WHR-indices of participants and their socioeconomic status. The research was done within the population of patients who belonged to the Health Center in Kragujevac.

**Methods:** The study was conducted in the 2010 / 2011 survey and it covered a total of 218 people, 28% men and 72% of women. The targeted sample were people whose BMI exceeded 25kg/m<sup>2</sup>. Mple were people whose BMI exceeded 25kg/m<sup>2</sup>.

**Results:** Values of BMI and WHR indices were compared to the first and the fifth examination with respect to these parameters. BMI at baseline in the category of moderate and very high risk was found in 46.3% women and 18.3% of men. At the last review the number of people with high BMI was reduced by 50% ( $p < 0.05$ ). It was statistically very significant that the more obese lived in the city ( $p < 0.001$ ) which could be connected with the type of physical work (there is more frequent heavy physical labor in villages), but also with the type of food ingredients and their preparation (represented in the "fast" food). Married people were more obesity prone. At the last review the number of extremely obese decreased by 50% and moderately obese by 55%, which was also the result of emergency measures during the six-month study. ( $P < 0.05$ ). The analysis of the results showed that at the first 8.2% of men with WHR via 1.0 and 83.4% women with a WHR index by 0.85, making a total of 62.4% obese in Garowe-in. At the last review, 59.2% of examinees were obese. (No significant differences:  $p > 0.05$ ).

**Conclusion:** The reduction of body weight reduces hypertension, cardiovascular disorders, joint pain and therefore food restriction is nec

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**Degenerative sickness of locomotor system – sickness and prevention***Arandjelovic S, Mitic S, Miljkovic S, JoksimovicStevanovic D*

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**Resume:** Degenerative sicknesses of lateral wrists (artrosys) and spine (spondilosys and diskatrosys) are obviously among most common reasons for patients to seek doctor's help in a general practice ambulance. Basic factors, responsible for these medical problems are not well known, but inherited predispositions, tissue evolution, hormonal balance disorder, as well as other outside factors, are mostly blamed for it.

**Objectives:** Determination representation of degenerative illnesses of the locomotor system (DOLS), per gender and per age. We also stress appearance of other illnesses, which are connected to above mentioned. Finally, we observe the body weight connection with degeneration of the locomotor system.

**Methods:** There are histories of illnesses, physical examinations and anamnesis of randomly chosen patients from the general practice ambulance of Dom Zdravlja Nis, used in our study.

**Results:** There are 100 patients of both genders included in the study, of different age. Out of the total number, there were 45 male and 65 female. All patients were divided in groups per their age and by analyzing it we came to the following conclusions: in the group of age between 25-34, 9% ailed from one of DOLS; 35-44 years of age 21% were ill; from 45-54 there were even 36% effected with this illness. Of course, the most patients, around 45% were from the oldest group (from 55-64). There are other most common illnesses connected: HYPERTENSIO ARTERIALIS -45 patients out of the total number, out of which there were 30 women (66,6%) and 15 men(33,3%).

**Conclusion:** Clinically manifested degenerative illnesses of the locomotor system are burden for the society, due to lowered productivity and common sick leaves of the employees, who experience this problem. Therefore

prevention and elimination of correctable risk factors is very important duty of the general practice doctors. It means that the stress should be put on obesity prevention, curing artery hipertenzia and other arteriosclerosis developer, suggesting routine light physical activities. All this is called – promotion of a healthy life.

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#### The state of chronic lower back pain and its relationship with occupations

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**Aim:** 70 to 90% of people is having complaining of lower back pain for a period during a lifetime and the individuals occupation takes an efficient role on this. Because the pain is subjective complaining quebeck lower back pain scale is in use to measure it objectively. In this study the intensity in state of chronic lower back pain and its relationship with occupatins has been investigated.

**Materials and methods:** This study was carried out with male adolescents on five different family medicine center in Turkey. The QBPS applied to the individuals has been scored between 0-100 and the individuals with higher scores has been adopted like the lower back pain is more severe.

**Results:** 376 male adolescents has been included to our study. The average age of participants were 20.68+/-2.60. The average score determined from the QBPS was 9.02+/-10.3. The determined score in 25.3% (n=95) of the participants was 0, the determined score in 42% (n=157) of the participants was 18.9%, the determined score in 3.8% (n=14) of the participants was 11-20, the determined score in 4% (n=16) of the participants was 30 and above. Statistically significant differancy between the occupational groups and QPBS scores has been determined (p=0.01). The significant differancy in scores was originated from farmers and tradesman.

**Conclusions:** Lower back pain was presented in 74.7% of te male adolescents. The tendency to the lower back pain was determined especially in some ocupational groups like farmers and tradesman who are lifting heavy things and standing for along time. The lower back pain incidence and morbidity in the under risk individuals will be reduced by the physicians with education and illuminations about the causes of lower back pain.

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#### Employers and Insomnia

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Sleepless man is not in harmony with his biological clock, feels bad, exchange process of organism waste products is disturbed and biological vitality significantly decreases.

**Aims:** Aim of the research is investigation of the correlation

(cause-consequence relation) between work capability and insomnia as a psychophysiological factor.

**Material and methods:** Investigation was performed during March 2010 by testing all the patients with insomnia problem. Questionnaire, besides general data, included test about presence of insomnia ranked by the number of positive answers in three groups: without symptoms, weak symptoms and more severe forms of insomnia. Psychiatric patients were not included in this investigation.

**Results:** Investigation was performed in March 2010., on the population of patients from medical records conducted by four general practitioners. In this period 1759 patients were observed and examined. Insomnia was declared by 74 patients what is 4.2%. Almost one half of this number (44.5%) is employed. In educational structure of people with insomnia more than a half (51%) is high educated persons, persons with high school 30.3% and 18.2% persons with accomplished compulsory education. Almost half of the patients (53%) have contacted their doctor, as they were aware of the fact that sleeping is a basis for healthy way of living. Punctually 57.5% of employed persons medically treat insomnia. Only 24% of interrogated persons use medicaments regularly and the rest periodically. Insomnia symptoms (easier and more severe) exist in the percentage of 42% in the population of medically treated persons, while untreated 36%. Others have symptoms of periodical insomnia occurrence.

**Conclusions:** Sleeping is a naturally recurring state, essential for organism vitality and rest after activities. It is necessary to study how much job influences on sleeping problems on one side, and on the other how much insomnia and constant medicaments consuming influences on work efficiency. What could be done to increase activity and efficiency at work? Natural sleeping, without medicaments, is the basis for healthy and relaxed way of living.

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#### Correlation between Sleep, Pain And Depression in Primary care Patients using dolotest

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**Aim:** Sleep problems, pain experience and depression have been proved to share some neurophysiological pathways including the serotonin-noradrenergic system. This study aim to find frequency and intensity of sleep problems among patients seeking primary care and to detect how the intensity of sleep problems correlate with experienced pain intensity and with risk of Major Depression Disorder (MDD)

**Material and method:** 715 patients seeking primary care were asked to fill in a DoloTest and a Major Depression Inventory. DoloTest is measuring graded entry on eight domains of Health Related Quality of Life; test results are visual presented as a DoloTest-Profile, which both the patient and healthcare provider can understand, and as a DoloTest-Score, a sum score of all domains

**Results:** 332 patients 47.1% (43.3-50.7) reported sleep problems on 20 or higher on the 0 to 100 scale for experience of sleep problems on DoloTest. Dividing this scale in to five equal segments showed that the average experienced pain intensity rose statistically significant with each step from 19.4 (17.3-21.5) in the lowest fifth to 59.3 (50.3-67.9) in the highest fifth. The frequency of patients meeting criteria for MDD was 1.6% (0.3-2.8) in the lowest

fifth of sleep problems and rose to 73.2% (59.6-86.7) in the highest fifth of intensity of experienced sleep problems.

**Conclusion:** Close to half of all patients coming to primary care are experiencing sleep problems, but not necessarily presenting it. Increased experienced intensity of sleep problems are associated with significant increase of both average pain intensity and risk of Major Depressive Disorder. DoloTest provide an easy way to find and evaluate this coexistence.

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#### Quality of life and toxic habits

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**Aim and purpose:** There is limited data examining the association between toxic habits (TH), smoking, alcohol and other drugs with quality of life (QOL) in adults. The aim of the study is to identify the effect of TH on QOL. We examine the association between TH and the SF-12 QoL questionnaire Physical and Mental Component scores in adults of an Urban Primary Care Center.

**Design and methods:** We choose sample of 50 patients men and women, aged 18-75 years randomly. Examination included information on TH related to lifestyle. QOL was assessed by SF-12 QoL questionnaire. Information on alcohol intake, smoking and use of other drugs were obtained from all of them, aged 18-75 years. The variables we study are: 1. Gender; 2. Age; 3. Marital status; 4. Ethnic origin; 5. Studies; 6. Smoking or not; 7. Alcohol intake or not; 8. Use of other drugs; 9. QOL. The statistical analysis will be realized by SPSS.

**Results:** From a total of 50 patients between 18 and 75 years old with any problem related with TH we have seen 22 men and 28 women. Distribution by age is: 8 from 65 to 75, 10 from 45 to 65 and 22 younger than 45 years old. Distribution by marital status: 12 singles, 20 married, 7 divorced, 2 widower. By ethnic origin: 27 european, 12 latin, 1 arabic and 1 asiatic. Level of studies: 6 primary school, 19 secondary school and 16 university. We have found 9 smokers and 32 non smokers, 18 drinkers and 23 non drinkers. Association between QOL (mental or physical) and TH: from 24 patients with worse physical QOL score, 19 were non smokers and 14 were non drinkers. On the other hand, from 28 patients with worse mental QOL score, 23 are non smokers and 15 non drinkers. Work in progress.

**Conclusions:** Only the highest alcohol consumption (>4 drinks/d) is associated with worse QOL in adults. Moderate alcohol consumption in middle age offered no special benefits compared with abstinence over the long term. We are not able to conclude any relation between tobacco and QOL because of the low number of smokers in our sample. Work in progress.

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#### Living will: useful but still unknown by most of the patients in an urban health centre

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**Aim:** to evaluate the opinion and knowledge about the Living Will (LW) of the patients in an urban health centre. The LW is an advance directive, prepared when an individual is alive, competent and able to make decisions, regarding his specific instructions about cares to receive if he could not communicate when he needs them.

**Material and method:** transversal, descriptive study in urban health centre. 228 patients over 18 years were randomly selected among those visiting 4 of the doctors from September to November 2010. 33 patients refused to participate. Data (age, gender, civil and working status, chronic diseases, knowledge of LW, informer, opinion about LW, and Life Support Preferences Questionnaire validated for Spain :LSPQ-e) were recorded and statistically analyzed with SPSS.

**Results:** Age: 18-50: 85 (43.6%), 51-70: 82 (42%), >70: 28 (14.4%). Partner: 143 (73.4%). Active workers: 105 (53.8%) Chronic diseases: 98 (50.3%) Knowledge about LW: 49 (25.1%), informed by health workers: 7 (14.3%). LW are useful: Yes 175(89.7%)-No 7 (3.6%), undecided (Ud):13 (6.7%). LSPQ-e: a- Cerebral hemorrhage, subsequent coma, and heart attack: CPR? Yes 34 (17.5%)-No 119(61%)-Ud 42 (21.5%). B- Old, single, coma, Pneumonia: Antibiotic? Yes 39 (20%)-No 114 (58.5%)-Ud 42 (21.5%). C- Inoperable cancer: chemotherapy? Yes 110 (56.4%)-No 73(37.4%)-Ud 12 (6.2%). D- Severe Alzheimer's disease, Diabetes M., osteomyelitis. Amputation? Yes 90 (46.1%)-No 6 (3.1%)-Ud 98(50.8%). E- Chronic pain after hip-surgery, anorexia: Nasogastric intubation? Yes 111(56.9%)-No 64(32.8%)-Ud 20 (10.3%). F- Young relative, brain-damage, renal failure: Dialysis? Yes 111(56.9%)-No 64(32.8%)-Ud 36(18.5%).

**Results:** Only 33% know about LW, and only 15% of them have been informed by a health worker. The patients want to be treated if there is some life expectancy, despite a bad quality life. If bad quality life and low life expectancy, they choose to not be treated. Bias: the patients who do not come to doctor (active workers or immobilized) are not represented here.

**Conclusions:** the patients consider the LW helpful, but they believe that doctors should inform them about it more often.

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#### Quality of life among chronic patients – gender differences

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**Aim:** The aim was to investigate how chronic patients themselves assess the quality of their life, if quality declines with age, and whether there is a difference between the sexes.

**Method:** The study was conducted at the Health Center Krusevac, 2010. Years, interviewing patients 15D questionnaire (Harri Sintonen, Finland). Data were statistically analyzed (SD, T-test)

**Results:** The study included 150 patients: 53 men, average 69.4 +/- 8.27, and 97 women, average 68.36 +/- 8.97, divided into five years groups. Questions were related to the assessment of mobility, vision, hearing, breathing, sleeping,

eating, speech, elimination, usual activities, mental function, discomfort, depression, distress, vitality and sexual activity. In a group of patients up to 55 years, there is a statistically significant difference in the assessment of excretion (0.6979 +/- 0.302 men, women, 0.9605 +/- 0.105,  $t = 2.29$ ;  $p = 0.05$ ). In the group of patients 60-64 years, the difference in speech quality was statistically significant (0.9406 +/- 0.119 men, 1 women;  $t = 1.897$ ;  $p = 0.05$ ). In the group 70-74 years, the difference in sleeping are highly significant (0.7965 +/- 0.168 men, women, 0.5601 +/- 0.218,  $t = 3.315$ ,  $p < 0.01$ ), while the difference in the assessment of discomfort is statistically significant (men 0, 7574 +/- 0.232, women 0.597 +/- 0.21,  $t = 1.985$ ;  $p = 0.05$ ). Among patients 75-80 years, the difference in sexual activity is statistically highly significant (0.1318 men, women, 0.1707 +/- 0.081;  $t = 3.277$ ;  $p < 0.01$ ). Among patients older than 80 years, there is a statistically significant difference in hearing (0.4467 +/- 0.206 men, women, 0.6847 +/- 0.263,  $t = 1.763$ ;  $p = 0.05$ ), speech (0.8271 +/- 0.228 men, women 1,  $t = 2.502$ ;  $p = 0.05$ ) and usual activities (0.4748 +/- 0.123 men, women, 0.7124 +/- 0.238,  $t = 2.062$ ;  $p = 0.05$ ). Among all respondents, a statistically significant difference are in the assessment of movement (0.1 +/- 0.8902 men, women, 0.8306 +/- 0.206,  $t = 1.967$ ,  $p = 0.05$ ), sleeping (0.7196 +/- 0.277 men, women 0, 6195 +/- 0.247,  $t = 2.25$ ;  $p = 0.05$ ) and depression (0.7603 +/- 0.089 men, women, 0.6767 +/- 0.231,  $t = 2.466$ ;  $p = 0.05$ ), while the assessment of excretion is highly statistical significant (0.7182 +/- 0.268 men, women, 0.7715 +/- 0.289,  $t = 2.851$ ,  $p = 0.01$ ).

**Conclusion:** The quality of life of chronic patients decreases with age. And was lowest among people age over 80 years. This is not only a consequence of disease, but a subjective attitude towards life. In areas for which patients are believed to be important for life, quality of life was assessed as better, regardless of which declines with age.

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#### Use of phytotherapy in the population of urban health center

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**Aim:** Describe the percentage of our population who use or have ever used some type of herbal medicines, their sociodemographic characteristics and their health problems.

**Material and methods:** Cross-sectional descriptive study Urban health center Patients treated in primary care for any health reason that having served its application were asked by the consumption of medicinal plants It asked 131 patients who were treated in 5 family medicine consultations during two days of February 2011 The variables: gender, age, medical conditions (ICD-10), consumption of medicinal plants, the source of your prescription and consumer time

**Results:** This study consists of 131 participants of whom 63% are women. The age groups are comprised between 15-44 years by 26 people, 45-64 years 48 and 57 over 65 people. The herbal medicine was used by 60 people (46%) within which 70% were women. In herbal medicine consumption, by age group was distributed as follows: 15-44: 9 people (compared to 17 not), 45-64 years: 27 (compared to 21) and > 65 years: 24 (front to 33) The reasons for use of herbal medicine were symptoms of anxiety (11), insomnia (8), stimulant (7), constipation (7), gastric symptoms (6), dyslipidemia (3), abdominal pain (3), weight decrease (3), menopause (2) and diuretics (2). Medicinal plants used in the

survey were: infusion of thyme, lime, anise (34), valerian (12), passionflower (4), royal jelly (4), goji berries (3), ginkgo biloba (2), evening primrose oil and soybean (3), horsetail (3), Fuca (1), tips of raspberry (1), Boldo (1) and homeopathy (1)

**Conclusions:** The consumption of medicinal plants in the users of our center is approximately half the cases, with the majority in women and in the age group 45 to 64 years. What most prompted the use of herbal medicine was the mental health-related anxiety, insomnia, improve mood, followed by digestive problems. Among the most commonly used herbs are herbal teas and valerian.

#### Rural medicine

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##### Home care visits-need is increasing

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**Aims:** As a result of the current economic situation a rise in patient home care has been observed especially in rural areas under the supervision of the local general practitioner (GP). The purpose of this study is to identify chronic diseases that create the requirement for home care in rural areas and the aetiology presented that led to GP home visits for this group of patients.

**Material and methods:** The study data were collected from our Primary Health Care Centre registration records on GP home visits and include reasons for calling a GP for a home visit, diagnosis, patient age, gender. The data obtained include all home visit records for 2010 as registered by specialist and trainee GPs.

**Results:** During this period 110 home visits were made by GPs concerning patients with chronic diseases. 47.27% of the visits concerned patients who had suffered a stroke and 21,81% of the visits patients with cancer. Mean age 75 yrs. The reasons for reaching out to a GP were mainly concerning complications of their main disease such as catheterization of bladder, dressing of wounds or incidents which required intravenous fluid therapy.

**Conclusions:** A crucial aspect of the daily practice for a rural GP is providing home care for the elderly, patients with chronic diseases and terminally ill patients. In addition, patients with chronic diseases experience various disease related complications that require continuous care and practical intervention. Provision of constant and sufficient GP home care for these groups of the population seems to have become one of the main priorities of our Health Care System.

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##### Chest pain. Is the primary gatekeeper model of benefit?

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**Aims:** Chest pain presents a diagnostic challenge in primary

care. Non cardiac causes are common but it is important not to overrule the possibility of serious conditions such as acute coronary syndrome and pulmonary embolism. The aim of this study is to identify the key underlying aetiologies of chest pain.

**Material and methods:** We reviewed data from patients who were referred to our Primary Health Care centre with chest pain for the period of January 2010 to January 2011.

**Results:** We examined data from 91 patients. Only a small percentage of the patients presented heart disease. The aetiology for the majority of the cases included oesophageal, musculoskeletal and psychological disorders as well as pulmonary infection. For some of the presented cases the cause of chest pain could not be determined and the patients were referred to the hospital for diagnosis.

**Conclusions:** The majority of the patients that attended our Primary Health Care centre with complains of chest pain were not suffering from cardiac disease. An accurate diagnosis by the GPs resulted in only a small number of referrals to the hospital. The results from our research suggest that there is potential cost-effectiveness associated with the implementation of the Primary Gatekeeper Model in our country's Health Care System.

no significant changes in the levels of ALT, AST and TB compared to the G1. Significant increase ( $p < 0.001$ ) of measured biochemical parameters, indicating the likely occurrence of liver damage, was observed after exposure to CCl<sub>4</sub> (G2, G4) in comparison to G1. Histopathological observations showed that administration of AA alone was without effects on liver tissue in rats (normal cellular architecture was observed for G1 and G3). The liver sections of G2 and G4 revealed extensive injuries, characterized by moderate to severe hepatocellular degeneration and necrosis around the central vein, fatty changes, inflammatory cell infiltration, ballooning degeneration, and the loss of cellular boundaries.

**Conclusions:** Obtained results strongly suggest that *A. annua* essential oil doesn't have any adverse effect on liver function and ultrastructure and no protection against CCl<sub>4</sub> induced hepatotoxicity in rats. Thus, it would be reasonable to expect that phyto remedies (some of which are often and broadly used by local people), based on *A. annua* essential oil, would not have hepatotoxic in effect either, and that their application doesn't represent, at least in this sense (hepatotoxicity), a health risk.

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#### General Practice Surgeons Experience of Training and Practice: Results from a Qualitative Inquiry

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#### In vivo determination of hepatoprotective/hepatotoxic effects of *Artemisia annua* essential oil

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**Aim and introduction:** In Serbia, many different plants are used by the local people, especially in rural communities, for treatment of a wide range of medical disorders. In many cases, physiological action of applied phyto remedies is not known. The objective of this study was to investigate the possible hepatoprotective/ hepatotoxic effect of the *Artemisia annua* (Asteraceae) essential oil (AA) in carbon tetrachloride (CCl<sub>4</sub>)-induced hepatotoxicity model in rats.

**Material and method:** The drugs (essential oil solution in olive oil, carbon tetrachloride solution in olive oil and pure olive oil) were injected intraperitoneally, once daily, into adult male Wistar albino rats (200 -250g), randomly divided into four groups (G1-G4; 8 animals each). G1 (control group) received pure olive oil for 7 days; G2 received CCl<sub>4</sub> olive oil solution (50%, v/v) at the dose of 2 ml/kg (only on the 7<sup>th</sup> day); G3 received AA olive oil solution (12%, v/v) at the dose of 300 mg/kg (for 7 days); G4 received AA solution for 7 days and CCl<sub>4</sub> solution on the 7<sup>th</sup> day (the same doses and concentrations as in G2 and G3). On the 8<sup>th</sup> day, rats were sacrificed and blood withdrawn by cardiac puncture. Following biochemical parameters were estimated in the serum: alanine amino transferase (ALT), aspartate amino transferase (AST) and total bilirubin (TB). Histopathological changes in the liver of G1-G4 rats were also studied. Chemical composition of the AA oil was analyzed by GC and GC/MS.

**Results:** GC and GC/MS analyses of AA enabled identification of more than 100 different constituents, representing 92.6% of the total oil. The dominant constituents were alpha-pinene (9.1%), 1,8-cineole (8.2%) and artemisia ketone (16.1%). Administration of AA solution (G3) showed

**Aims and background:** Rural and remote communities cannot support local specialist care due to the low volume of cases and the lack of immediate collegial support. There is, however, a growing evidence base suggesting the benefits of treating patients in their home communities for common surgical procedures where possible. The emerging health human resource solution in Canada and internationally has been to provide enhanced skills training to general practitioners to balance the need for primary care and the occasional specialist procedure. In Canada, however, there has not been a consistently supported training program to support GPs who wish to gain enhanced skills training, nor is there a recognized process of accreditation or regulatory framework for those who do gain such skills. This has led to challenging training and practice conditions for GP surgeons which threatens the sustainability of the practice and thus of the best possible care to rural residents. The aims of this qualitative study were to document the training and practice experiences of GP surgeons in Western Canada.

**Materials and methods:** In-depth qualitative interviews were undertaken with 57 GP surgeons in British Columbia and Alberta between 2006 and 2007.

**Results:** Participants revealed participation in structured as opposed to participant-driven training programs was more efficacious and training undertaken with mentors who had previously practiced as general practice physicians in a rural environment were more likely able to meet their rurally-specific educational needs. Within a practice environment, there is a clear need for formal and standardized accreditation where currently it is mentor and health-authority dependent. GP surgeons would benefit from a comprehensive regulatory environment.

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**The lack of proper control of hypertension among rural residents of a remote area of Greece***Mariolis A, Mihas C, Domeyer F, Leontsinis I, Kontou A, Petropoulou E, Grigorakos L*

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**Aim:** Given the geographic morphology of Greece (many small islands and mountainous terrain) there are many remote rural areas, where both communication and transportation is difficult. As a result, access to medical services is also problematic, leading to poor health knowledge. This study aims to evaluate blood pressure control in a population of hypertensive subjects living in a remote, rural area of Greece.

**Material and methods:** The study included 89 individuals (43 men and 46 women, aged over 50 years) living in the Southern Mani area, Greece, and currently treated for hypertension. The sample is part of a larger cohort-project examining a variety of Primary Health Care (PHC)-related factors in the area. The 2007 ESH-ESC guidelines were followed for the evaluation of the studied sample. Moreover, socio-demographic data were collected. In addition to descriptive statistics, the 95% confidence intervals (95%CI) of the observed proportions were calculated. Statistical analysis was performed with STATA 8.0 statistical software.

**Results:** Blood pressure was not satisfactorily controlled in 28.1% (95%CI: 19.1%-38.6%) of the studied sample. The subjects' age was positively associated with poor blood pressure control ( $p=0.004$ , chi-square for trend). Educational level was inversely associated with poor blood pressure control, indicating a possible association ( $p=0.07$ ). Frequency of visit to a doctor was also a potential beneficial factor to better control of blood pressure ( $p=0.051$ ). Male and female subjects did not differ with respect to blood pressure control.

**Conclusions:** There is a recorded problem regarding regulation of blood pressure in this remote and rural population. Given that hypertension represents a very common condition, the impact of this observation in terms of public health policy seems considerable. PHC services need to be improved with extra personnel that need to understand the problem and be properly educated in order to improve their population's health.

**Social problems**

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**And emergency birth-control methods among under 19s***Alonso-García MC, Piñana-López A, Canovas-Inglés A, Bueno-Ortiz J, Fernández-Lorencio J, López-Maestre M*

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**Aims:** In the face the increasing demand for emergency birth-control methods in the past few years, we, in the medical profession, are witnessing unwanted pregnancies among adolescents under 19. This situation is on the increase, due to such risk factors as immigration, broken families and low cultural levels. As well as early sex relations with sufficient

information about sexual education, but badly approached in order to prevent an unwanted pregnancy. All of this causes a great debate on the controversy about the open sale of emergency birth-control methods, and the bill for minors without informing their parents. The aim of this study is to know the number of adolescent under 19s patients who are assisted by the medical professionals in Area 2 in Cartagena (Murcia)-Spain, within the public network of the Murcia Health Service, and who request these services.

**Material and methods:** A retrospective, quantitative research carried out about the codified cases in OMI-AP software of the health centers, in Area II Primary Care Management of Cartagena (2003-2008 inclusive) performed by teenagers treated in surgery between 13 and 19 years old inclusive, from January 2003 to December 2008. Variables studied are: age and birth origin

**Results:** The study included 151 cases of emergency contraception, accounting for over 50% of all cases of teenagers treated, teenagers from Murcia in all range ages 15 and 16 years. It is worth noticing that emergency contraception has the highest rate sample in the community of Murcia between 15 and 16 years with statistical significance

**Conclusions:** emergency birth-control methods are sold without the medical prescription in all communities of Spain. In unwanted pregnancy cases improving conditions for maternity is highly recommended and the prevention of pregnancy

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**Influence of the crisis in daily life: Changes in work incapacitation***Gentile J, Domenech I, Tarabishi H, Nuria M, Miravalls M, Andreu M, Llorach N*

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**Aims:** Work incapacitation is the impossibility of carrying out a task due to the weakness that an illness involves; the medical certificate of sick leave is a document that doctors sign affirming that incapacitation. The Spanish Health Care System confers valuable consideration in these cases. In this study, we will analyse the changes in the duration of sick leaves in the last three years coinciding with the global financial crisis.

**Material and methods:** Descriptive retrospective study in which we compare the duration in days of sick leaves executed and the days of sick leave per active population assigned to two centres (A and B) in our area of work in January and June in the last three years (2008-2010).

**Results:** Duration of sick leaves executed in Centre A: January 2008: 26.86; June 2008: 26.85; January 2009: 29.71; June 2009: 32.68; January 2010: 32.07; June 2010: 33.74. Centre B: January 2008: 27.91; June 2008: 28.93; January 2009: 30.81; June 2009: 32.62; January 2010: 31.77; June 2010: 31.27. In Centre A duration rose by 19 % and in Centre B by 12%, global rise by 15.5%. Days of sick leave per active population assigned to Centre A: January 2008:12.68; June 2008: 13.43; January 2009: 11.34; June 2009: 11.05; January 2010: 9.79; June 2010: 9.71. Centre B: January 2008: 13.29; June 2008: 13.72; January 2009: 12.03; June 2009: 11.47; January 2010: 9.9; June 2010: 9.8. The average of days of sick leave per active population decreased by 23.5% in Centre A and 26.3% in Centre B, global decrease 24.9%.

**Conclusions:** The number of days of sick leave per active



population has progressively decreased by 25%, probably in order to keep a job in a context of financial crisis. Valuable consideration is lower than the salary and so they reduce purchasing power. This decrease is at the expense of minor pathologies as the average duration of sick leaves has risen, which means that sick leaves are due to serious pathologies.

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### Frequent users of the Emergency Department

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**Aims:** Patients attending in the Emergency Department (ED) repeatedly are defined as frequent users, the objectives of the present study are: -To investigate the reasons for consultation in these patients. -To describe the frequent user patient's clinical profile. -To analyze the social profile of this group of patients.

**Material and methods:** Design: Descriptive. Setting: Emergency Department of a community hospital. Subjects: consecutive patients treated in the ED the last three months with a history of more than 6 emergency room visits in the last year. The data were analyzed using SPSS 15. Variables: age, sex, number of admissions in the ED in the past year, history of chronic diseases, psychiatric history, destiny, social profile and primary diagnosis.

**Results:** 16 patients were included, mean age was 57.5 +/- 20 years. 7 were men and 9 women. Average annual admissions in the ED was 15.4 +/- 7.2, range [7-32]. 68.8% had a history of chronic disease and 37.5% psychiatric disorders. 81.3% were discharged of the ED. The diagnoses were varied, the most common psychiatric disorders. The social profile of family conflict was predominant in 3 cases, 3 patients were living alone without family support, and 2 patients were dependent for their daily activities.

**Conclusions:** The clinical profile was predominantly middle-aged patients with a history of chronic disease. Most patients did not require hospitalization.

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### The environment visits the primary care offices

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**Background and aim:** Our Primary Care Team, attends a neighborhood in a city, it has a terrain full of architectural barriers and structural constraints to housing, which has long been contemplated by the team when planning interventions. Other circumstantial facts, limited in time, as construction work, also may affect significantly the activity. We want show how the environment affects the activity number of a healthcare team in primary care. Show the impact of the works on the streets of the district in the number of nursing emergency visits in the center. Reflect the increasing number of nursing visits for injuries caused by falls in the street in 2009 over the previous year, coinciding with the works on the

street.

**Material and methods:** It's a retrospective descriptive study. Extraction of data from computerized medical records of the types of injuries handled the emergency in 2009 by the nursing staff of the primary care team. Comparison with 2008.

**Results:** In 2008 the nurses of primary care center attended a total of 167 new injuries of which 71 were acute. In 2009 the total increased to 292 injured, 198 were of acute wounds. Of these, 123 were caused by falls in the street: 90 adults and 33 children. Increased 279% between the two years.

**Conclusions:** In 2009 significantly increased the number of injuries from falls in the street, coinciding with numerous works in the neighborhood. Variations in the environment, can vary substantially health care activity in the center. In primary care, the environment must be taken into account for planning assistance. In practice, if we forget what happens in the community and we don't look around, we find surprises in the office and homes and lost the opportunity to optimize the work.

Saturday 10<sup>th</sup> September**Diabetes mellitus**

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**Improving the process of care for diabetic patients is not followed by an improvement of the degree of metabolic control and complications of diabetes in three years***Rivera-Casares F, Benítez-Granados A, Colombo-Gainza E, Medio-Cornejo E, Lluch-Rodrigo J*

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**Aims:** The aim of this study is to assess the evolution of care process and metabolic control in diabetics at primary care along three years.

**Material and methods:** From the list of diabetics visited regularly at health center, we obtained a representative sample and reviewed primary care and hospital electronic records, yearly from April 2007 to April 2010. We collected the variables needed to evaluate care process and metabolic control.

**Results:** We included 317 patients, 53.6% women, mean age of 69.3 years. The proportion of patients with at least one annual visit for primary care physician increased from 80.8% to 84.2%, for ophthalmology from 18.2% to 28.7%, lipid determinations from 68.7% to 78.3%, albumin/creatinine ratio from 25.3% to 64.8%, glycated hemoglobin from 60.4% to 72.4%, and blood pressure measurement from 73.0% to 80.3%. The average of therapeutic adjustments changed from 0.7 to 0.8, and the proportion of diabetics without drug treatment descended from 21.8% to 13.2%. Patients with glycated hemoglobin lower than 7% descended from 63.1% to 60.9%, LDL-cholesterol from 27.6% to 25.0% and patients with blood pressure lower to 130/80 mm Hg descended from 25.9% to 20.5%. Patients who met all 3 standards changed from 5.2% to 4.9%. The proportion of patients who had ischemic heart disease or cerebral ischemia changed from 15.2% to 15.0%, peripheral arteriopathy increased from 4.2% to 6.3%, diabetic nephropathy from 7.7% to 10.5 %, retinopathy from 10.0% to 11.2%, and neuropathy from 5.2% to 6.9%.

**Conclusions:** We must pay attention to care process of diabetics and redefine it for optimal control standards could be achievable. Maybe to achieve improved metabolic control and complications could require a longer period of time, so it is necessary to perform the analysis over a longer period.

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**Metabolic syndrome and obesity at people with diabetes***Conic S, Cukvas L, Stankovic M*

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Metabolic syndrome (MS) includes findings of abdominal obesity and at least two parameters to the IDF criteria (2005). In people with MS, there is a significant incidence of type 2 diabetes (type 2 DM). The aim is to examine the relationship

between Waist Circumference (WC) and obesity in people with type 2 DM.

**Method:** Individuals with type 2 DM was verified, was conducted anthropometric measurements and biochemical analysis were done. Based on the criteria for MS, the sample for study was formed (N = 26).

**Results:** The study included 26 people with type 2 DM verified with MS, 14 (53.85%) females and 12 (46.15%) were males, aged 57.65 +/- 9.12. According to Body Mass Index (BMI) values are grouped into 5 groups (n1 = 2; n2 = 8; n3 = 11; n4 = 4; n5 = 1). The mean value of WC is 103.27 cm and the mean value of groups increases, with the increase of BMI. Data analysis (parametric Anova Single Factor) was found to be highly statistically significant difference between the value of WC in relation to BMI; Femp = 5.67, F4, 21 (0,05 0,01) = 2.84; 4.37; p <0, 01

**Conclusion:** MS is not always correlate with the degree of obesity. However, these two parameters are of type 2 DM, is significant, resulting due to insulin resistance, which is the pathophysiological basis of MS and diabetes in obese patients.

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**Diabetes mellitus and oral complications in radiological evaluation***Szczepanik-Barczewska E, Różyło-Kalinowska I, Barczewski Ł*

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**Aims:** Diabetes mellitus cause changes in arteries endothelium, production of inflammation factors. This state may result in worse immunological response of the organism, as well as of the stomatognathic system itself. As even half of the patients with diabetes are undiagnosed, dental examination may provide the first indication of the disease. Important clues are xerostomia, oral candidiasis, impaired wound healing, recurrent oral infections and ketone breath. Periodontitis apart from retinopathy and diabetic foot, is the so-called sixth complication of diabetes mellitus. Very often periodontitis is clinically mute, but can be seen due to orthopantomograms.

**Material and methods:** The material comprised patients referred to the Department of Dental and Maxillo-Facial Radiology of the Medical University in Lublin for orthopantomograms (April 2006-April 2007). All the investigated were divided into two groups: patients with diabetes mellitus (103), and control group (199). There were 302 orthopantomograms taken, evaluated and described. Data concerning their general health state, were also taken.

**Results:** In the group with diabetes mellitus (DM), the duration of the disease was 7.1 years in women and 6.5 years in men. Organ complications (retinopathy, diabetic foot) were noted in one-fifth of the patients. Periodontitis was observed on 15 orthopantomograms patients with DM (14,56% of the group) and on 25 of the control group (12,56%). In the group with DM, a number of teeth on average (16.5) was lower than in a control group. The prosthetic restorations were more often found in the group with DM.

**Conclusions:** Independent studies have shown that diabetics with periodontitis exhibit more diabetes complications and can have worse metabolic control compared to those without periodontitis. Perhaps, poor metabolic control may also lead to different changes in the masticatory organ, which might impede the process of

prosthetic restoration or implants and finally lead to early edentulousness.

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### Evolution of diabetic treatment in a health center over 3 years

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**Aims:** The aim of this study is to describe the changes in drug treatment of diabetics in a health center over 3 years.

**Material and methods:** From the lists of diabetics visited regularly at health center, we obtained a representative sample by reviewing electronic records from April 2007 to April 2010, in annual periods. We collected antidiabetic drugs prescribed to each patient, diabetes treatment settings (changing dose or drug) and glycated hemoglobin, and also antihypertensive, lipid lowering and antiplatelet therapy.

**Results:** We included 317 patients, 53.6% female, mean age 69.3 years. Patients without drug treatment increased from 21.8% to 13.2%. Most used group is biguanides, up from 48.2% to 60.7% of diabetics. Glitazones and exenatide had a minimal and stable presence (2.3% and 0.3% respectively over last year). Sulfonylureas, meglitinides and inhibitors of alpha-glucosidase showed a medium and stable use (18.5%, 14.2% and 6.6% respectively over last year). Incretins increased steadily from 1.3% to 13.5%. NPH or mixed insulin decreased from 19.9% to 15.5%, while slow insulin increased from 5.9% to 11.2%. Basal-bolus regimen has a low and stable use (1% last year). Combined insulin and oral agents increased from 11.1% to 14.2%. Average of therapeutic adjustments increased from 0.7 to 0.8/year/patient. Annual average of antidiabetic drugs increased from 1.8 to 2.2 drugs. Antihypertensive drugs increased from 69.1% to 77.2%, lipid-lowering therapy from 51.5% to 64.0% and antiplatelet from 26.0% to 31.3%. Glycated hemoglobin <7% was significantly associated with the use of greater number of drugs (for last year,  $p < 0.0001$ ). The use of insulin was significantly associated with worse glycosylated hemoglobin (for last year,  $p < 0.0001$ ), same as not using any drug (for last year,  $p = 0.03$ ). This happened consistently for the three periods.

**Conclusions:** We are witnessing a major change in drug treatment of diabetes, although with important differences in the use of new therapeutic groups. Clinical inertia decreases very slowly.

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### The use of patient-centred health information systems in type 2 diabetes mellitus

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**Background and aim:** There is an increasing need for changes in the delivery of diabetes mellitus (DM) care, as well as to seek innovative approaches to DM self-management. The use of patient-centred health information

systems (PCHIS) in DM has the ability to support patients in two essential ways: educationally and motivationally. PCHIS can also assist General Practitioners (GPs), who play a central role in DM care, in effectively managing diabetes, beyond clinical visits. The aim of this review was to assess the potential benefits of using PCHIS in DM care.

**Material and method:** Two electronic databases were searched using several terms related to PCHIS. The search was limited to literature published between January 2005 and June 2010. Published experimental studies that evaluated the use of PCHIS in patients with type 2 DM were selected and then reviewed for appraising their quality, according to criteria established a priori. The studies were then summarized qualitatively, as well as grouped according to their outcomes, and a narrative synthesis was undertaken.

**Results:** A total of 828 articles were retrieved and 8 satisfied the inclusion criteria (7 randomized controlled trials and 1 quasi-experimental study). The quality criteria were partially accomplished in most studies. The systems used in the reviewed studies varied considerably, from being solely web-based interventions, to involving the use of a mobile phone, isolated or combined with the internet. Seven studies measured glycemic control; other outcomes were referred less often. The majority of the interventions had a positive impact on overall glycemic control but other variables showed mixed results.

**Conclusions:** This review suggests that PCHIS might be useful in DM self-management, but the number of studies available in this area is still insufficient. More quality research is needed, so that solid evidence can lead to practical implications for patients and GPs, as well as for other caregivers.

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### Evolution of parameters following instigation of insulin analogue treatment on diabetic patients in primary healthcare

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**Aims:** to analyse the changes in the regular clinical and analytical control parameters for diabetes following instigation of treatment with basal insulin analogues.

**Material and methods:** a retrospective observational study on a cohort of patients belonging to two contingents, in the field of basic community and teaching healthcare, recommended for treatment with basal insulin analogues by their doctors. The variables studied before and after instigation of the treatment were: age, sex, previous treatments, insulin prescribed, basal glycaemia, blood pressure (systolic SBP/diastolic DBP), body mass index (BMI), HbA1c and record of hypoglycaemias, collected in a database for two periods (basal and at 6 months).

**Results:** a total of 89 patients were studied, 55.1% women, with an average age of 66, treated previously with other types of insulin (39.8%), with oral anti-diabetic drugs (32.3%) and with Metformin (23.7%). The HbA1c values decreased from an average of  $8.8 \pm 1.86\%$  to  $7.9 \pm 1.21\%$  ( $p < 0.01$ ); basal glycaemia dropped from an average of  $188.9 \pm 78.8$  mg/dl to  $153.3 \pm 61.8$  mg/dl ( $p < 0.001$ ); SBP decreased from  $137.0 \pm 17$  mmHg to  $131.0 \pm 17$  mmHg ( $p = 0.013$ ); DBP dropped from  $76.6 \pm 10$  mmHg to  $74.0 \pm 12$  mmHg ( $p = 0.012$ ); and BMI went from  $30.1 \pm 4.9$  to  $30.2 \pm 4.7$  ( $p < 0.001$ ). Finally, there

were no significant differences between hypoglycaemias pre- or post-study.

**Conclusions:** the instigation of treatment with insulin analogues in diabetic patients entails a significant improvement in analytic parameters and better control of blood pressure without any change in hypoglycaemic events. Overall, weight increase was minimal.

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### Retinography in primary care. Can we follow the clinical guidelines

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**Aim:** The aim of the present descriptive study is to recognize the number of diabetic patients Type 2 in our environment, the rank of A.D.A. 2.010 criteria completion (in the present case, the annual demand of retinography), and the incidence of Diabetic Retinopathy in our population.

**Design and methods:** A adult population was study in this research, whose number is 6.239 people of both genders and aged 15 to 96 years. Semi-Urban habitat. 442 patients with criteria of Diabetes Mellitus Type 2 (using criteria of A.D.A. 2.010), was detected. 6 General Practitioner and 1 Pediatrician.

**Results:** From the 62 Retinographies requested, only 13 patients meet the criteria of Diabetic Retinopathy; 3 of them was referred to the Retina Unit to receive a specialized treatment by laser.

**Conclusions:** The number of retinographies requested is still low in the Primary Care Attention. We have to continue to emphasize in the early diagnostic, because the diabetic retinopathy remains the first preventable cause of blindness. Curiously, in the Primary Attention Team there is a professional that does not request a single retinography. Also call our attention, computed the population affected by Diabetes Mellitus type 1, the Pediatrician that have 1.126 patients in his care, and a prevalence of 23 diabetic patients did not request any retinography.

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### Physical exercise in diabetic patients in primary care

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**Aim(s) and background:** Diabetes is a Public Health issue and physical exercise is part of its non-pharmacological intervention. The Family doctor/General Practitioner has a leading role in exercise motivation in diabetic patients. A study was made to verify the metabolic and anthropometric

impact in diabetic patients after 6 month exercise counselling based in their motivation stage in the Health Centre consultation.

**Material and methods:** Longitudinal intervention study. Population: diabetic patients in follow up in the Health Centre that came to consultation between 10<sup>th</sup> September 2009 and 15<sup>th</sup> November 2010, randomized as case or control. Variables studied: gender, age, Body Mass Index (BMI), Abdominal Perimeter (AP), Fasting Glucose (FG), A1c Glycosylated Haemoglobin (HbA1c), Physical Exercise Level (validated questionnaire). Consultations 3/3 months. Intervention: PACE instrument used (Provider Assessment and Counselling for Exercise) based in motivation level stratification to exercise and a protocol was applied. Control group: usual counselling in consultation. Approved by ethics committee. Descriptive and inferential statistics with t student and Wilcoxon tests.

**Results:** 88 diabetic patients with mean age 64,06 +/- 11,10 years old (between 36 and 88), 50% female, after 12 drop-outs. After 6 months of intervention, the physical activity increased in the intervention group (ns) and decreased in the control group (ns). The weight decreased in both groups (intervention ns and control p=0,005) and the AP decreased in the intervention group and had no change in the control group (ns). The FG decreased in both groups (ns) and HbA1c increased in both groups (intervention p<0,001 and control ns).

**Conclusions:** Although there was no statistical significance, there was a positive evolution in the physical activity level practiced by diabetic patients after intervention vs control group. The intervention group also had a weight and AP reduction. Perhaps the statistical significance was not reached because of the small sample size.

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### Effect of standardized management in patients with type 2 diabetes mellitus in Chinese community

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**Aim:** To analysis the effects of the community-based standardized management model on the control of type 2 diabetes mellitus (T2DM).

**Method:** (1) A community in Hangzhou, which carries out the standardized management model in patients with T2DM, was chosen as the study group. Another similar community, which patients with T2DM were managed without carrying out the standardized model, was chosen as the matched group. The general information and follow-up information of diabetic patients in two groups in past 5 years were investigated and analyzed. (2) 4 communities were chosen from more than 30 communities which were spreaded by the standardized model and analysis their effect.

**Results:** (1) In the end of the study, the follow-up rate in study group declined from 97.8% to 91%, and that of the control group declined from 78.1% to 44.4% (P < 0.05). The control ratio of fasting blood glucose (FBG) in the study group increased from 50.0% to 63.5%, while in the control group it decreased from 31.7% to 27.6% (P < 0.05). FBG in the study group decreased from 8.21 +/- 3.27mmol/L to 7.06 +/- 1.69mmol/L, while in the control group from 8.07 +/- 1.67mmol/L to 7.34 +/- 1.51mmol/L (P < 0.01). The incidence of complication is 68.9%, while 82.3% in the control groups (P < 0.05). (2) The Standardized model applied one year later,

some aspects were improved, such as GP's team building, the patients' number of discover and manage, the residents' knowledge of chronic disease, and the residents' satisfaction on community health service.

**Conclusion:** Standardized management of T2DM in the community plays an important role in maintaining the continued follow-up, controlling blood glucose, increasing the incidence of complication in patients with T2DM. It is an effective way to manage patients with T2DM in community.

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### Screening for diabetic retinopathy and glaucoma in primary care

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**Introduction and aims:** Diabetes and glaucoma are the leading cause of predictable blindness in the Western world. From Primary Care have begun to make two tests, Fundus Eye in the Camera Retinography non-mydiatic (CRNM) and measurement of intraocular pressure using the tonometer. The objectives are to provide the experience and results in the use of fundus and the tonometer to detect eye injuries. Reduce the waiting list in the service of ophthalmology, as well as reduce the time of diagnosis and the treatment ahead.

**Material and methods:** We study the diabetic patients included in the screening and / or glaucoma. We performed in all of them Retinography and intraocular pressure. These tests evaluate the value and the reference hospital ophthalmologists; considered pathological cases are referred to hospital, the rest are cited by another control in our unit.

**Results:** The family doctors referred to the unit CRNM 2655 diabetic patients. Of which require evaluation by an ophthalmologist of reference only 377 diabetics. They had the following pathologies: diabetic retinopathy, 200 (53%), macular degeneration 34 (9%). It ended up deriving a total of 103 patients (27%) to hospital. In the measurement of intraocular pressure were recorded 95 patients (6%) with high tonometry with glaucoma and ocular hypertension in 41 patients (43%). Of which were derived 27 patients (28.4%) to hospital for his treatment.

**Conclusions:** We achieved an internal circuit which makes it very accessible patient care and referral cases to ophthalmologist only in the really necessary cases and avoids possible diagnosis delays.

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### Hypoglycaemia

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**Introduction:** The sugar values in the blood in the range of < 3 mmol/l represent hypoglycaemia, caused by a disturbed balance between the intake of glucose in the organism, the

creation of glucose in the liver and the peripheral consumption of glucose

**Aim:** The aim of the paper is monitoring the frequency of the causes of predisposed factors influencing the occurrence of hypoglycaemia, monitoring the severity of hypoglycaemia according to the existing clinical symptoms; determining the severity of hypoglycaemia present in Type 1 and Type 2 diabetes

**Method:** A retrospective analysis of the data from the protocol and the medical records of individual patients, examined at the Health Care Centre in Cacak.

**Results:** The results show that an almost the same number of patients develop hypoglycaemia due to skipping meals (37,5%) and inadequate therapy (35,5%), while a slightly smaller number of them develop the condition due to intense physical effort. The majority of the patients who were given the therapy in the form of a human insulin, suffered from hypoglycaemia (74,2%). At the same time, only 10% of the patients who were receiving analogies of human insulins suffered from hypoglycaemia, which corresponds to the statistics available from the literature; 78, 3% of the patients showed expressed signs of autonomous hypoglycaemia (tremor, perspiration, fear, hunger and tachycardia). Most of the patients suffering from type 1 diabetes showed signs of moderately severe hypoglycaemia (68,3%); almost 4/5 of the patients suffering from type 2 diabetes also suffered from a mild form of hypokalemia; hypoglycaemia mostly occurs at night.

**Conclusion:** To prevent hypoglycaemia, patients must be trained to recognize the symptoms of hypoglycaemia, not to skip meals and make sure that every meal contains 50% of carbohydrates, to have a snack before a physical activity, to correct the therapy and practice self-control.

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### Renal failure in patients with diabetes mellitus

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**Introduction:** Diabetes mellitus(DM),as a metabolic disease, time is complicated by diabetic nephropathy,frequent cause of chronic renal failure(CRF) The aim is to determine the extent to which the weakened kidney function in patients with type 2 diabetes.

**Method:** Medical cards of the registered patients with type 2 diabetes were reviewed by retrospective analysis.As a measure of kidney function is estimated the glomerular filtration(GFR) rate with a special calculator,using the MDRD formula: $GFR(ml/min/1,73m^2)=186 \times \text{serum creatinine}^{-1.154} \times \text{year}^{-0.202} \times (0.742 \text{ if is female gender})$ .On the basis of GFR,CRF is divided into the five stages.

**Results:** Among 108 patients with type 2 diabetes,there were 69 women(63.9%) and 39 men(36.1%).78 patients (72.2%) are on oral therapy,while 30 patients are insulin therapy(27,8%).The mean age of tested examines is 64.6 +/- 6.9years.Most patients in the age category 55-64ages,44.4%.Patients an average of diabetes suffered7, 0 +/- 5.0 years.When that patients with insulin had a significantly longer diabetic period(12.3+/-4.8) than those treated with oral therapy(5.0 +/- 3.4).Medium value of GFR is 68.9 +/- 15.9.The men had slightly better GFR(73.0 +/- 19.2) than women(66.7+/-13.2).The majority of diabetics(68.5%) had II stage CRF.I stage had only 6.5%,while 25% had stage III.No one of patients had IV and V degree of CRF.In the

group treated with oral therapy, the mean GFR values were 69.1 +/- 16.5, while in the group with insulin were 68.5 +/- 14.3. Testing the significance of difference ( $p < 0.01$ ), conclude that diabetics on insulin therapy have a significantly lower renal function than suffered patients with oral therapy.

**Conclusion:** Diabetes mellitus substantially impairs renal function. Recommendations is that doctors in primary health care made the calculation GFR. Early detection of kidney disease at the primary level, with the cooperation of Nephrology, contributing to slow down progression of CRF.

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#### Effect of cigarette smoking in type 2 diabetics

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**Introduction:** Type 2 diabetes mellitus is one of the main pillars in Primary Care and kidney disease is one of its complications frequent. We know that there is an association between cigarette smoking and inadequate kidney in a patient with type 1 diabetes mellitus, but is not so clear is the role that cigarette smoking has on renal function of patients with type 2 diabetes mellitus. Objective: To explore the relationship between cigarette smoking and the glomerular filtration patients with type 2 diabetes mellitus.

**Method:** Study design: Cohort study, multicenter. Study Scope: Primary Care Health. Variables to measure: Personal history: Age, Duration of diabetes, arterial hypertension, dyslipidemia, retinopathy, low e-GFR and metabolic syndrome. Biochemical: Triglycerides, total cholesterol, HDL cholesterol, Gibb, ACR, e-GFR, micro and macro albuminuria. Anthropometrics: BMI, waist circumference. Treatment: Diet alone, OHA, insulin+OHA. Study subjects: We randomized systematic sampling in type 2 diabetics, over 18 years, who agree to participate in the study and sign on informed consent. Sample size: We estimate a reduced incidence of smoking GFR in 20.9% and 12% in nonsmokers. With a confidence level of 95%, the ratio of unexposed / exposed to 1 and a 90% power, with Yates correction, we will need 386 exposed and 386 unexposed. Add a 20% loss, so our sample size would be 927 patients.

**Results:** Data will be reported as means +/- or median (range). Mean differences of normally distributed variables will be compared by an unpaired Student's t test. In a multivariate logistics regression analysis, we'll explore the effect of independent variables (i.e., smoking status, metabolic syndrome, duration of disease,...) on the binary dependent variable (i.e., presence/absence of low e-GFR) and it will be expressed as odds ratio (95% CI). For these analyses, skewed distributed variables (i.e., ACR and triglycerides) will be logarithmically transformed.

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#### Benefits of exercise in diabetic patients. Group intervention in primary care. Ragocap study.

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**Background:** Patients with diabetes (DM) who practice regular physical activity can improve metabolic control and quality of life. Objective: To assess if the regular physical exercise improve metabolic control (HbA1c) and quality of life of patients with type 2 DM at three months of follow up.

**Material and methods:** Pragmatic randomized clinical trial conducted in three urban primary care centers. Ninety-four patients were studied (47 in control group (CG) and 47 in intervention group (IG)) with type 2 DM over 50 years without contraindications to physical exercise (according to Robledo's criteria) and low scores on the IPAQ questionnaire. Patients assigned to the IG participated in a walking exercise consisting in a 45 minutes promenade, twice a week for three months, led by a health professional. The main outcome measures were HbA1c and quality of life (SF-36). Secondary outcomes were measured anthropometric and laboratory parameters of metabolic control. The t-student was used to compare differences between groups and multiple regression analysis was done to adjust possible confounding variables.

**Results:** The mean age of the patients was 71.22 (SD 9.21). 59.6% were women. The median of the difference in HbA1c between basal and month 3 was 0.1% (interquartile range (IR): -0.45-0.4). No statistically significant differences were observed between CG and IG 0.35 (IR: -0.25-0.43) vs 0.00 (IR: -0.5-0.3),  $p=0.236$ . A quality of life improvement was observed in all dimensions of SF-36 in IG but the difference was not statistically significant. The dimensions of the SF-36 which had the most important change were the vitality (decreased 8 points in the CG and increased 3 points in the IG,  $p=0.077$ ) and mental health (decreased 1.5 points in CG and increased 4.6 IG points,  $p=0.23$ ).

**Conclusions:** No significant differences between CG and IG on HbA1c and quality of life were observed. Nevertheless, there were a tendency on improvement in several SF-36 scores in the IG.

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#### Assessment of regulation of diabetes mellitus type 2 in relation to the level of physical activity

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**Introduction and aim:** Physical activity is one of the important non-pharmacological measures in the treatment of diabetes mellitus type 2. The aim of this study was to investigate the significance of differences in values of glycosylated hemoglobin compared to the level of physical activity, in working age persons with DM type 2.

**Material and method:** The study included patients suffering from DM type 2, which are reviewed in two months period, and which met the requirement of working capacity. Questionnaire, designed for research, was used to evaluate level of physical activity. According to values of physical activity, respondents were divided into three groups: insufficient, moderate and sufficient physical activity. Anthropometric measurements (body weight, body height and body mass index) and biochemical analysis (HbA1C) were conducted for all patients. Mean, SD and parametric Anova were used for statistical analysis.

**Results:** The study included 15 (53.57%) male and 13 (46.43%) female patients with a median age of the total sample 53.9 +/-4.28. Compared to type of therapy, most patients were on oral therapy, 16 (57.14%) , on combined therapy were 7 persons (25%), while on only insulin therapy were 5 (17.86%) patients. Based on the results of the evaluation of physical activity, there were 8 patients with insufficient physical activity, 12 with moderate, and 3 with sufficient physical activity. HbA1C, a standardized indicator of regulation of diabetes, was used as a parameter of comparison groups. Based on the results obtained by statistical analysis (Femp = 0.123),  $p > 0.05$ , it was determined that there was no significant difference in values of HbA1C compared to the level of physical activity.

**Conclusion:** Values of HbA1C depend on a comprehensive treatment approach, and are not solely dependent on the degree of physical activity.

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#### Assessment of metabolic control of diabetes and risk of chronic complications

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**Introduction:** To prevent chronic complications, diabetes treatment requires establishing and maintaining strict metabolic control. Target values for glycemia, HbA1c and lipoproteins are defined according to level of vascular risk. Goal. To assess metabolic control of Diabetes Type 2 patients and risk of vascular complications.

**Method:** The study was done at Health Care Center VraDar, in the period January-March 2010. Data from Diabetes Type 2 patient files: preprandial glycemia, HbA1c, lipid status, complications, and therapy were analyzed.

**Results:** The study included 112 patients, 54 women and 58 men, average age 64, diabetes duration 10 years. Following target values for low vascular risk were achieved: preprandial glycemia in 8% of subjects, HbA1c 42%, total cholesterol 17%, LDL 29%, HDL 69%, triglycerides 45%. Macrovascular risk for level of preprandial glycemia was present in 8% of subjects, HbA1c 20%, cholesterol 53%, LDL 56%, HDL 27%, triglycerides 25%. Microvascular risk for level of preprandial glycemia was present in 84% subjects, HbA1c 38%, cholesterol 30%, LDL 15%, HDL 4%, triglycerides 30%. Arterial hypertension was present in 83% of subjects, and well regulated in 25%. Chronic complications were present in 39% of subjects, macrovascular in 22%, and microvascular in 17%. All subjects were on oral hypoglycemics , 28% on monotherapy, 72% on combined therapy.

**Conclusion:** The majority of subjects did not have good metabolic control of diabetes, with a risk for vascular complications, which were registered in 39%. Adequate patient training for self-management of glycemia and lifestyle changes, as well as optimal application of therapy and adequate control of therapeutic efficiency are indispensable.

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#### Assessment of relationship between glycemic control tromboocyte activity and microvascular complications in type 2 diabetes mellitus

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**Aim:** Tromboocyte activity and aggregation potential are essential components of thrombogenesis and atherosclerosis and can be conveniently estimated by measuring mean platelet volume (MPV). It has been shown that MPV was significantly higher in Diabetes Mellitus (DM). The aim of this study was to investigate the relationship among MPV, glycemic control and microvascular complications in type 2 DM.

**Material and methods:** 110 patients (60 Diabetics, 50 controls) admitted to Gulhane School of Medicine Internal Medicine outpatient clinic from June 2009 to April 2010 have been included in this study. Case group, which were diabetics, were divided in two groups as their HbA1c levels (HbA1c<7 (n=30) and HbA1c>7 (n=30)). Control group was made by nondiabetic healthy controls (n=50). Heart failure, renal failure, hypertension and other chronic diseases were excluded by history and physical exam and also patients with abnormal hemoglobine and thromboocyte in were excluded.

**Results:** While patients' MPV results investigated diabetics group's MPV (8,54+-1,07 fL) significantly higher than nondiabetics group's (7,99+-0,87 fL) ( $p=0.004$ ). There were significant differences between MPV levels and HbA1c levels when patients were divided in two groups as HbA1c levels according to diabetes regulation ( $p<0.001$ ). Patients with microvascular complications have had higher MPV values than patients without complications, however only rethynopathic patients have had significant statistical differences (rethynopathy  $p=0.02$ , nephropathy  $p=0.14$ , neuropathy  $p=0.22$ ).

**Conclusions:** Our results have showed a close relationship between poor glycemic control and increased tromboosit activity in patients with type 2 DM. Furthermore, tromboocyte activity recovered through improved glycemic control, may prevent the possible role of tromboocytes in vascular events in diabetic patients.

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#### HbA1c – good method for screening / diagnosis of type 2 diabetes mellitus?

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**Aim:** To evaluate the validity of HbA1c as a screening / diagnostic test and the best cut-off point for diagnosis of Type 2 diabetes mellitus.

**Material and methods:** Research of reviews, clinical guidelines and original studies published between January 1, 2005 and December 1, 2010 in English, Portuguese, French and Spanish, using the MeSH terms "Diabetes Mellitus, Type 2" "Diagnosis", "Hemoglobin A, Glycosylated" Sensitivity and

Specificity “.

**Results:** There were obtained 40 articles of which 7 were selected: two systematic reviews, a non-systematic review, a clinical guideline, a randomized cross-sectional study, a cohort study and a case control study. The articles found differed in HbA1c cut-off used (ranging between 5.9 and 6.5) and in the sensitivity and specificity of HbA1c value for the diagnosis / screening of type 2 diabetes, with sensitivity to fluctuate between 42.8 and 81 % and specificity between 77 and 99.6%.

**Conclusions:** There is no perfect test for the screening / diagnosis of type 2 diabetes. However, HbA1c because of its convenience, reproducibility and predictability of macrovascular and microvascular complications, especially, emerges as a test of cost / benefit ratio favorable. The cut-off points are, however, more controversial, although most studies point to a cut-off value between 6.1% and 6.5%. As a screening test, a cut-off closer to 6.1% would be more suitable, while as diagnostic test, a cut-off of 6.5% will be more correct.

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#### Evaluation of the control of diabetes mellitus in general practice.

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**Introduction:** The sickness rate of diabetes mellitus is growing both in Latvia and all over the world. However, if the number of diagnosed patients with diabetes mellitus in Europe has reached 6.9% of the population, than in Latvia it is only 3.7%. GPs regular consultations on possibilities of reduction of risk factors, such as- healthy diet, exercising, smoking cessation, limiting alcohol abuse, compliance of treatment, are basics for qualitative survival.

**Aim:** To evaluate the control of diabetes mellitus in concrete general practice in movement.

**Methods:** An assessment of the data of the Latvian Register of patients with diabetes mellitus and the IDF. The retrospective cohort study about the control of diabetes mellitus in the concrete general practice.

**Results:** In 2010, 55 patients with diabetes mellitus, aged from 20 till 79 years, were evaluated in comparison with the data of 2007. The level of HbA1c has remained consistent in 48 % (-6.5 mmol/l). In the range of 6.5-7.5 mmol/l- it has increased from 27% to 36%. But the number of patients with the level of HbA1c above 7.5 mmol/l, has decreased (25%-17%). There is an increase in overweight patients (18%-64%). However, pathological obesity has lessened (80%-34%).

**Conclusions:** 1. The GPs and his team competence and regularly managed consultations improve the showings of the control patients with diabetes mellitus. 2. Patients compliance is of a great importance.

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#### A retrospective review of the quality of diabetes care in public primary care clinics in Hong Kong – do disparities of care exist?

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**Aims:** To investigate the quality of care for patients with Type 2 diabetes in Hong Kong primary care setting and potential disparities by patient characteristics and clinics.

**Material and methods:** Cross-sectional study in three general out-patient clinics (public primary care clinics) in Hong Kong involving 1970 patients. Main outcome measures were achievement rates of seven process measures and three intermediate outcome targets, and adjusted odds ratios of age, sex, socio-economic status and clinic on the quality measures.

**Results:** The achievement rates for the recording of HbA1c, blood pressure, cholesterol, body mass index, smoking status, nephropathy screening and retinopathy screening in the previous 12 months were 92.8%, 99.9%, 91.0%, 47.9%, 91.3%, 69.0% and 38.0%, respectively. 58.0%, 38.2% and 36.4% of patients achieved the glycaemic, blood pressure and cholesterol targets, respectively. Older patients were less likely to have records of process measures but more likely to achieve the HbA1c target. Women were less likely to have smoking status recorded and to achieve the HbA1c target. Patients of lower socio-economic status were less likely to have records of process measures and to achieve the blood pressure target. Family Medicine training practices had better achievements of quality measures.

**Conclusions:** There is scope for improvement in the quality of diabetes care in the general out-patient clinics. Variations in the quality of care were observed. Measures are needed to eliminate the identified inequalities of care.

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#### Alpha lipoic acid in the treatment of poly-neuropathy of diabetes

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**Introduction and aim:** Peripheral neuropathy is a very frequent micro-vascular complications of diabetes and suffers from it more than half of patients with diabetes. Various signs and symptoms related to dysfunction of peripheral nerves. Modern drug therapy does not know the proper remedy for this irreversible complication of diabetes, but it is known that the fundamental role of alpha lipoic acid that protecting Schwann cells improves segmental demyelination, protects the axon- reducing axonal degeneration and improves micro-circulation in the vasa vasorum. The aim is evaluation the effects of alpha lipoic acid in alleviating the subjective symptoms in patients with poly-neuropathy.

**Methods:** We observed 20 patients (9 women and 11 men) suffering from diabetes from 3-15 years (average 8 years) and mean age 59 years. All patients diagnosed on the basis of neuropathic complications by using a single filament. Alpha lipoic acid is prescribed to all patients at a dose of 600 mg daily, 2 hours before getting up for 6 months. All patients were controlled twice: first after one month and then after three months. The results obtained after conducting the survey 6 months.

**Results:** We analyzed four symptoms: pain, burning skin, numbness and paresthesia. Evaluation was carried out of the chosen doctor and patient on a scale of 1-5 (higher grade for



larger problems). At the beginning of therapy, most patients for the presence of all four symptoms gave the estimation of 4, and at the end of therapy, the most common grade was 2. Also based on subjective assessments of their symptoms by 14 patients at the beginning of treatment rated as very strong, and after 6 months, 7 patients had mild symptoms, and 13 moderately strong.

**Conclusions:** Reduction of symptoms of diabetic polyneuropathy was in all patients where use of alpha lipoic acid. Alpha lipoic acid should be given long enough in adequate therapeutic doses.

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#### Associated risk factors in a 5-years follow-up of diabetic foot of T2DM patients

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**AIMS:** To determine the frequency of presentation of pathologic foot in patients with Type 2 diabetes mellitus (T2DM). To describe associated risk factors of pathologic foot development.

**Material and methods:** Design: Cohort study. Setting: Urban primary care center. Patients assigned to a medical quota, included in the Andalusian Diabetes Mellitus Process. Sample: 202 T2DM patients. Follow-up period: 2005-2010. Methodology: Dependent variable: Development of Pathologic Foot (PF). Independent variables: Age, sex, hypertension, dyslipidemia, cardiovascular disease, HbA1c, nephropathy, retinopathy or pharmacological treatment, in the first valuation and in every age results valuation: smoking status, sensitive points to the monofilament, palpation of pedial and posterior tibial pulses. Bivariate Analysis: Chi-squared test for qualitative variables and T-student test for quantitative variables. Multivariate Analysis: binary logistic regression. Significance level 0,05.

**Results:** Mean age 67+/-11,1 years; 59,7% men; smoking status 23,5%; hypertension 83,3%; dyslipidemia 88,3%; cardiovascular disease 19,1%; nephropathy 10,9%; retinopathy 7,9%; without pharmacological treatment 22,1%; 22,5% has developed PF. In the Bivariate analysis PF is associated to an increase in the HbA1c levels in the first valuation ( $p=0,013$ ). In the multivariate analysis statistical significance is obtained for the altered palpation of pedial and posterior tibial pulses  $p=0,024$  (Exp.B=2.786, IC 95%: 1.14-6.79).

**Conclusions:** The main risk factors to develop PF in T2DM in our study are the increase in Hb1Ac levels and altered palpation of feet pulses in the first valuation. We should identify these risk factors and work on them to reduce diabetic foot progression.

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#### Evaluation of kidney function in patients of type 2 diabetes

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**Introduction and aim:** Diabetes mellitus type 2 (DM-2) is a major cause of chronic kidney disease (CKD), which is the final stage of kidney failure. In the United States, diabetes is the most common cause and the reason almost half of new cases of kidney failure. To investigate the efficacy of family physicians in assessing the level of risk, potential flow and outcomes in CKD patients with DM-2 duration for more than 10 years.

**Design and methods:** We retrospectively analyzed the kidney function in 60 patients of Team 1 Family Medicine health facility in Kalesija, with DM-2 duration for more than 10 years. For the assessment of kidney function was utilized proteinuria identified in patients, the key indicator of kidney damage. For estimating the risk and possible flow of CKD, the estimated glomerular filtration rate (eGFR) was calculated using the MDRD electronic calculator. To assess regulation of blood glucose glycosylated hemoglobin (HbA1c) was analyzed, for the assessment of hypertension the average blood pressure in patient for the past year was analyzed. For assessment of the outcome of CKD the findings of specialist nephrologists were used. The study did not include patients who had a current urinary tract infection, other acute disease, or uncontrolled high blood pressure or heart failure.

**Results:** 23 (38.3%) patients with DM-2 have impaired kidney function (GFR is <60 ml / min), 37 (61.6%) patients have unregulated blood pressure (BP> 130/80 mm Hg), 32 (53.3%) patients have unregulated diabetes (HbA1c> 7%) and 1 (1.6%) patients going on dialysis.

**Conclusions:** Patients with DM-2 with duration longer than 10 years should be regularly screened for CKD. Electronic MDRD calculator is a useful and accessible tool family physician can use for prevention of CKD progression. Family physicians should be periodically checking creatinine serum and calculate eGFR using the MDRD calculators once per year. In case of significant decline in kidney function it is advised to consult the nephrologists to determine the best way to protect the kidney and identify the need for further treatment (dialysis, transplantation).

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#### The management of diabetic patients in Family Medicine in Banja Luka (B&H)

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**Aim:** Diabetes mellitus is a common problem in Primary Care. These patients are in high risk of developing micro and macro vascular complications. With the adequate management, these complications can be prevented or prolonged. The goal of this study was to determine successfulness of family physicians in the treatment of diabetic patients. Second goal was to determine the quality of adoption (use) of existing guidelines on the management of diabetic patients by family physicians.

**Methods:** We observed 66 patients with diabetes registered in Health Center of Banjaluka. The data were taken from their health charts and filled out the prepared questionnaire. Data were collected during November 2010. We followed whether the family physician, during last year, made all the necessary tests: blood glucose, HgA1c, urine, protein in urine, total cholesterol, examination of eye bottom, review of the feet,

blood pressure and body mass index (BMI), checked for smoking status and monitored whether they achieved the targeted values of blood glucose, HgA1c, total cholesterol and blood pressure. The prevalence of micro and macro vascular complications was also monitored.

**Results:** All patients were regularly measured blood glucose levels and determined BMI. Measurement of arterial blood pressure and total cholesterol was done in a very high percentage (over 90%), foot examination had more than one half of patients, while the other parameters monitored at less than half of patients. Targeted blood glucose levels and HgA1c were achieved at the 1/3 of patients, while only 19 patients had normal total cholesterol values. From 66 patients with diabetes, 34 of them had high blood pressure and all have had achieved the targeted values. 44 patients had presence of micro and/or macro vascular complications.

**Discussion and conclusion:** The data were compared with the current guidelines and the results of similar surveys in the region and beyond. According to our data we have found that family physicians acted in accordance with the recommendations in the guidelines regarding the scope and conduct of regular tests. As for results of treatment, they should be better.

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#### Association between fibrinogen level, insulin resistance and dyslipidemia

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**Background:** Insulin resistance, with its attendant clustering of cardiovascular risk factors known as metabolic syndrome is associated with the development of coronary heart disease. It has become clear that the metabolic syndrome also involves abnormalities of hemostasis. However, the underlying mechanisms are still poorly understood. Some studies have demonstrated that high fibrinogen level was associated with some symptoms of the metabolic syndrome. The aim of this study was to investigate the association between hypercoagulability, insulin and lipid levels.

**Methods:** The study was conducted in Health Center of Gastouni in 94 non-diabetic patients without clinical evidence of severe chronic diseases, 46 women and 48 men aged 40-60. A fasting blood sample was collected for the analyses of fibrinogen, insulin, total blood cholesterol, tryglycerides and HDL cholesterol.

**Results:** The patients with hypercoagulability (fibrinogen>5,4g/l) had significantly higher fasting insulin level comparing with patients without hypercoagulability (8,3 +/- 0,38 IU/ml and 3,28 +/- 0,43uIU/ml respectively, p=0,02), higher total cholesterol (6,6 +/- 0,53 mmol/l and 5,5 +/- 0,14 mmol/l respectively, p=0,04) and lower HDL cholesterol (1,14 +/- 0,08 mmol/l and 1,35 +/- 0,04 mmol/l respectively, p=0,02).

**Conclusions:** We can conclude that high fibrinogen level is tightly connected with hyperinsulinemia and dyslipidemia in non-diabetic patients. Hypercoagulability and impaired fibrinolysis are possible candidates linking hyperinsulinism with atherosclerotic disease.

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#### Metabolic syndrome is associated with silent brain infarction in non-diabetic adults

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**Aim:** Metabolic syndrome (MetS) is associated with an increased risk of the subsequent development of cardiovascular disease or stroke even among persons without diabetes. MetS was found to be significantly associated with silent brain infarction (SBI) in neurologically healthy people. However, information is scant regarding its relationship of MetS to the SBI in non-diabetic adults. Therefore, we conducted a cross-sectional study.

**Methods:** We studied 1,029 healthy consecutive elderly subjects aged >=65 who underwent MRI of the brain as part of their routine health check. Exclusion criteria were as follows; history of a stroke or TIA, history of diabetes, or taking antidiabetic medications. We examined associations between full syndrome (at least 3 of the 5 conditions) as well as its components and SBI by controlling possible confounders.

**Results:** One hundred fifty subjects (14,6%) were found to have one or more SBI on MRI. Age was found to be significantly related to SBI prevalence (OR, 1.09; 95% CI; 1.05-1.13). The components model of MetS showed a strong significance between high blood pressure (OR, 1.83; 95% CI; 1.13-2.98) and SBI. An increasing number of MetS components showed more prevalent SBI and multiple SBIs (p<0.001).

**Conclusions:** MetS was found to be significantly associated with SBI in non-diabetic adults. Though only elevated BP was found significant component, subjects with a greater number of MetS components showed more prevalent SBI.

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#### Overweight and the frequency of hypertension and type 2 diabetes-relationship with smoking and physical inactivity

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**Background:** Overweight and obesity are associated with a significantly increased risk for hypertension and type 2 diabetes but not all overweight and obese develop these comorbidities. We have studied the prevalence of hypertension and type 2 diabetes in a cohort of middle aged and elderly overweight and obese men and women.

**Methods:** During the period of one year 950 overweight and obese patients (BMI>25KG/M2) who were consecutively admitted to our medical center to diagnostic or therapeutic procedures agreed to participate in our evaluation. Clinical and laboratory results were taken in all patients about the performance of physical activity and smoking.

**Results:** Among all overweight and obese patients (BMI 28 KG/M2), 551 (58%) with a mean age of 54,5 years revealed

hypertension (mean BMI 27,2 KG/M2), 266(28%) with a mean age 63,0 years type 2 diabetes (mean BMI 27,4 KG/M2) and 133(14%) with a mean age of 59,5 years hypertension and type 2 diabetes(BMI 26,5 KG/M2). With respect to gender 12% of all overweight and obese women developed hypertension and type 2 diabetes corresponding to 16% of all overweight and obese men. Regular physical exercise was reported by 15% of all overweight and obese patients, by 18% to those with hypertension, by 12% of those with type 2 diabetes and by 13% with hypertension and type 2 diabetes. 42% of all patients were smokers.

**Conclusion:** Protective factors might prevent the development of hypertension and type 2 diabetes in certain patients with overweight and obesity. The high prevalence of sedentary life style and smoking demonstrates the need for continuous life style recommendations and disease management programs.

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#### The effect of metformin therapy to blood parameters in patients with impaired glucose metabolism

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**Aim:** Type-2 diabetes mellitus (DM) is a disease that has an increasing incidence and serious complications. Cardiovascular diseases are the main reason for the increase in mortality and morbidity in diabetic and homocysteine have a great role in this situation. Hyperhomocysteinemia can develop vitamin-B12 deficiency as a result of long-term use of metformin therapy in patients with DM. In this study, we also investigated the effect of metformin treatment on blood lipid parameters and homocysteine in the newly diagnosis of DM and IFG patients.

**Material and Methods:** This study was carried out in May 2009 – May 2010, on the patients with newly diagnosed type 2 DM and IFG to whom the applicant to the GATA Endocrinology discipline. Homocysteine and lipid parameters are investigated in patients before treatment and 3 months after metformin treatment.

**Results:** 26 patients were enrolled the study. 14 (53.8%) patients were female and 12 (46.2%) consisted of male patients. The mean age of patients was 54.77 +/- 7.59 as a result of Metformin treatment an improvement were determined in all lipid parameters of individuals. However, as there is a minimal reduction in homocysteine, a statistically significant difference was not found between the groups of levels before and after being treated ( $p = 0,832$ ).

**Conclusions:** As a result of the use of metformin, vitamin-B12 deficiency is known to may develop and cause hyperhomocysteinemia in chronic. In our study, as a result of the treatment, a statistically change were not determined in homocysteine levels in patients with DM. this is may be due to shortness of our study. In our study demonstrated that all lipid parameters were improved by metformin treatment. In the light of this conclusion, it was thought to be effective of protecting developing chronic cardiovascular complications in patients with DM of metformin treatment by editing lipid parameters.

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#### The effect of Metformin and Metformin + Calcium Treatment on the vit-B12 levels

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**Aim:** Diabetes mellitus (DM) is, characterized by chronic hyperglycemia; a carbohydrate, protein and fat metabolism disorders leading to a metabolic disease. Metformin (MET) is a commonly used drugs in the treatment of DM. However, Vit-B12 deficiency may occur in patients as a result of this treatment regimen. Vit-B12 deficiency is often associated with macrocytic anemia and a group of neuropsychiatric. In our study, MET and MET +calcium (Ca) treatment with Vit-B12 levels were investigated in patients with newly diagnosed DM and IFG.

**Material and methods:** 25 patients with type 2 DM and 23 IFG patients were included to the study after consent. In the study, biochemical analysis of blood tests were carried out to the patients at diagnosis and three months later after the treatment. The obtained data were analyzed by using and transferring to the SPSS-15 for Win.

**Results:** 48 Patients consisted of 22 (45,8%) female and 26 (54,2%) male were included in our study. The mean age were 54.77+/-7.59 in the group of receiving MET therapy, and were 53.45+/-9.15 in the group of receiving MET+Ca therapy. 25% (n=12) patients were DM and 29% (n=14) patients were IFG of MET treated group, while 27% (n=13) were DM and 19% (n=9) were IFG of the MET+Ca treated group. In both of the treatment regimens a statistically significant decrease were occurred in the vit-B12 levels. However, Vit-B12 deficiency was less common as a result of MET therapy in patients when treatment with calcium.

**Conclusions:** MET is shown to be the first choice in the treatment of DM in all treatment guidelines. However, serious side effects have been reported on the metabolism of Vit-B12 as a result of long-term use of MET. Follow-up and treatment of the large portion of patients with DM, are made in the primary health care services or site hospitals As a result , physicians should know the side effects of MET and should check periodically the patients to whom started MET treatment in terms of Vit-B12 deficiency.

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#### A primary medical care center survey to study the fill out degree of the sensivity test and fundusopic evaluation in a diabetic-type 2 population

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**Objectives:** The applications of quality criteria are fundamental to the evaluation protocol in patients with diabetes type 2. Since these criteria are implemented in our primary medical care center we analyze the fill out degree of the exploration in the feet sole sensitivity and the evaluation of the funduscopy.

**Material and method:** Descriptive cross-sectional study of a random sample with diabetes type 2 patients who were being followed up in 15 primary medical care center, during the period 2008-2010. Various parameters were analyzed: weight, age, sex, glycosylated hemoglobin, basal glycemia, eye exploration through Funduscopy and the feet sole sensitivity explored through monofilament. Were excluded those who had not collected data (except funduscopy and sensitivity test that were classified as normal, pathological or not listed), age less than 30 years or diabetes type 1 patients.

**Results:** Total sample was 161 patients, 57.14% women and 42,86 men. Pathological exploration in sensitivity test was found in 9, 32% (n = 15), normal exploration in 60,87% (n = 98), and were not listed 29,81% (n = 48).(Table 1.Figure1.) Funduscopy was normal in 24, 22%, N = 39, pathological exploration in 7.45%, N = 12, and were not listed in 68,32%, N = 110.(Table 2.Figure 2). Comparison groups between normal and pathological sensitivity test to the variables age, group, weight, basal blood glucose and hemoglobin glicosilada, revealed no significant differences in both groups, according to the analysis of two independent samples (T Student).

**Discussion:** It is necessary to implement corrective actions involving sensitivity and funduscopy explorations in diabetic type 2 patients of our primary medical care center.

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#### A primary medical care center survey to follow up and control the HbA1c in diabetic-type 2 patients

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**Objectives:** For patients with diabetic type 2 the HbA1c levels show a long time control. Our main survey objective it is to check if the control degree in our patients it is correct, characterizing patients treated with insulin (good control with HbA1c levels 7,5 or less) or only with oral antidiabetic medicaments (in this case we establish good control with 7 or less).

**Material and methods:** Descriptive cross-sectional study of a three random people by zone with all diabetes type 2 patients registers in DIRAYA. Total sample was 301 patients, but 140 patients were excluded due to several criteria, so the analyzed sample was 161. Exclusion criteria were: age less than 30 years, deads, change of address, patients without the survey parameters listed in the last two years.

**Results:** 161 patients with DM-II. 33% (n=53) treated with insulin; In a 36% (n=19) of patients HbA1c levels were higher than 7,5 and the 64% (n=34) show a good control with HbA1c levels 7,5 or less. 67% (n=108) treated only with oral antidiabetic medicaments; In 33% (n=36) of patients HbA1c levels were higher than 7 and the 67% (n=72) show a good control with HbA1c levels 7 or less .

**Conclusions:** In the primary medical care centers studied, diabetic type 2 patients present a good long time metabolic control, more than 65% had HbA1c levels so well controlled showing 7 or 7, 5 or less depending of treatment with ADO or insulin. That it is possible, due in part, thanks to the continuous follow up, so we have to continue doing this to improve the metabolic control in diabetic patients (Figure 1).

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#### Prescription levels of primary medical care doctors for diabetic type 2 patients and their prevalence

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**Objectives:** To study the main treatments and association medicaments prescribed by primary medical care doctors used for diabetic type 2 patients. To analyze the prevalence of these patients in our place.

**Material and methods:** Descriptive cross-sectional study involving all diabetes type 2 patients registers in DIRAYA in three random people by zone (of 15 different zones) during 2008-2010. Treatments and medicaments associations depending on pharmacology group were classified, and patients less than 30 years, gestational and type 1 diabetics patients, patients without the medical treatment listed for the prescription survey.

**Results:** Total patients attended in the primary medical care center were 4976, and 301 diabetic type 2 diagnosed, so the prevalence is 6,04% .Sample was 272 patients after some patients without criteria were excluded. Treatments were: 34,93% (n=95) treated with biaguanides, 15,81% (n=43) with different associations without insulin, 11,76% (n=32) with insulin, 8,82% (n=24) with biguanides and sulfonylureas, 7,35% (n=20) with sulfonylurea, 5,51% (n=15) with biguanide and DPP-4 inhibitors, 5,15% (n=14) with biguanide and insulin, 3,31% (n=9) with biguanide, sulfonylurea and DPP-4 inhibitors, 1,84% (n=5) with different associations with insulin, 1,84% (n=5) with glinides, 1,47% (n=4) with biguanide and glitazone, 0,74% (n=2) with GLP-1 analogous, 0,37% (n=1) with glitazones, 0,37% (n=1) with alfa-glucosidase (acarbose), 0,37% (n=1) with DPP-4 inhibitors, and 0,37% (n=1) with sulfonylurea and insulin. In 19,1% of patients (n=52) one of the treatment was insulin.

**Conclusions:** According with OMS diabetic type 2 prevalence is higher than 4%, in our region specifically 6%, that is in agreement with our survey, 6,04% Analyzing the treatment, more than 50% patients are treated with biguanide.

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#### The application of antioxidants for the prophylaxis of metabolic violations and cardio-vascular pathology in patients with diabetes 2

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The cardimore frequent cardio-vascular pathology (CVP) in patients with diabetes can be explained by the strengthening of lipids oxidization which results in the defeat of endothelia. The studying of risk factors and indexes of the lipid oxidization with the purpose of prophylaxis of the concomitant pathology in patients with diabetes is important part of family practice. Aims-to study the risk factors of CVP and indexes of lipids oxidization in patients with diabetes.

**Methods:** We examined 58 patients with diabetes 2 (women-32, men-26) by age 54+3,5 years, middle duration of disease 6,3+2,1 years. The patients were treated by metformin and diet. The next indexes were determined: common analyses, glucose, HbA1c, cholesterol, triglycerides, C-protein, fibrinogen, transaminases and electrolytes. These indexes represent metabolic violations in organism. Their determinations are possible on the stages of primary medical care. 20 healthy persons of the proper age were inspected as a control group.

**Results:** The diabetes in all patients was in the state of compensation, HbA1c – 6,7+0,2%. The increased blood pressure was marked in 72%, low physical activity – in 56%, the exceeded body mass index – in 82%, the prevalence of these risk factors was higher than in control. In addition, the increased levels of general cholesterol, triglycerides, c-protein and transaminases were marked in 78% patients in comparing to control. It is known, that the increase of these indexes correlates with the increase of activity of lipids' oxidization and results in endothelial dysfunction that is the risk factors of atherogenesis and fatty hepatosis. The addition to complex therapy of toctum acidum 600 mg per day during 2 months, correction of the life style, removing of the risk factors were prescribed. In 2 months we defined the diminishing of the mentioned indexes that can testify to diminishing of metabolic violations.

**Conclusions:** The application of antioxidants in complex therapy of patients with diabetes leads to normalization of metabolic violations, declines of processes of lipids oxidization that is the measure of prophylaxis of concomitant pathology at diabetes.

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#### Preventing renal failure in our diabetic

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**Aim:** It is known that sulfonylurea glipizide is recommended in patients with chronic kidney disease (CKD). Hypoglycemia remains a risk with glipizide. This study is aimed to determine the prevalence of diabetes type 2 patients treated with glipizide and CKD registered.

**Design and methods:** Cross-sectional study of a random sample of diabetic patients with filled renal stage by blood test assigned and visited in our Primary Care Centre during 2009-2011. Inclusion criteria: Subjects > 15 years with diabetes and treated with sulfonylurea. Exclusion criteria: terminal diseases, pregnancy, hyperglycemia, renal dialysis, not having results of analytics, obesity and exitus. Following variables are considered: age, sex, body mass index (BMI), CKD diagnosis, diabetes diagnosis, hypoglycemic treatments, systolic and diastolic blood pressure, Diagnosis of other cardiovascular risk factors. Evaluation indicators were calculated following International Guidelines.

**Results:** 31600 visited patients, 4108 have diabetes (13%). 60,5% were women and mean age was 65,1 (12,5). Mean BMI was 27,1 (11,7), 40,9% had been diagnosed of hypertension and 54,5% of dyslipemia. Only 173 patients (4,2 %) were diagnosed and registered CKD (blood test). 36,9% were diabetic only treated with hypoglycemic treatment. The main sulfonylurea were: 0,38% glypizida; 3,72% Glybencamida, 1,55 % glicmepiride; 2,14% glycazide. Other

oral treatments were 15,67% metformina. No hypoglycemic episodes were registered during these years.

**Conclusions:** We hope that our diabetic patients have a good control because they have a high risk of diabetic complications. In the same way we have to be careful with diabetes treatments we administer to our patients because they often are I for renal function. In this study we attempted to identify those diabetic patients treated with sulfonylureas that perhaps could benefit from alternative therapies with the aim to preserve renal function. We have observed a low prevalence of CKD.

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#### Evaluation of patients at a diabetic foot clinic

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Diabetic foot is one of the most important complications of Diabetes, a cause of discomfort and disability to patient.

**Aim:** To evaluate the characteristics of diabetic patients seen at a Diabetic foot multidisciplinary clinic in order to achieve better understanding and recognition of the disease, allowing the definition of strategies to minimize its impact.

**Material and methods:** An observational, cross sectional study was performed by analysing medical records of patients seen at a diabetic foot clinic along 2009. Recorded data included demographic variables characterization of diabetes evolution, treatment and complications, namely those involving the foot.

**Results:** 680 patients were included with a median age of 68 years (IQR: 59 – 76), 40,3% were females (CI95%: 36,6 – 44,0). 89,9% have diabetes mellitus type 2 (CI95%: 87,5 – 92,3). The median evolution time was 14 years (IQR: 8 – 20) and median HgbA1c on evaluation was 7,8 (IQR: 6,5 – 9,7). Microvascular complications were seen in 88,4% (CI95%, 85,8-91,0) diabetics, with 43,3% having documented retinopathy, 22,2% nephropathy and 75,6% neuropathy; while 83,0% (CI95%, 77,0 – 89,0) had macrovascular disease. Foot lesions were seen in 80,1% patients and almost half of them were infected. Lesions were seen significantly more frequently in patients taking insulin (p=0,015), with retinopathy (p=0,013) and with peripheral vascular disease (p<0,001). Patients with neuro-ischemic foot have more lesions compared to those who have neuropathic foot (p<0,001) and previous amputation history was positively associated with actual lesions (p=0,006). The presence of diabetic foot lesions was associated with longer disease duration, but not with age, gender or HbA1c levels on admission.

**Conclusions:** End-organ and longer disease are must prone to the presence of diabetic foot lesions. Using a multidisciplinary approach, could be a right strategy to a consistent improvement in rates of limb salvage and in quality of life.

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#### Depression in patients with Diabetes mellitus

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**Introduction and aims:** Depression is a disorder in which patients express gratuitous sorrow, helplessness, hopelessness, loss of interest and pleasure in activities which have previously caused it. Reduced energy and a sense of fatigue are key symptoms of depression. We determined the prevalence of depression that is left untreated in patients with Diabetes mellitus.

**Material and methods:** We used a self-assessment questionnaire PHQ9 to measure each of the 9 DSM IV criteria required for the diagnosis of depression in primary care.

**Results:** We examined 1811 patients between 7 to 18 February 2011, of which 116 have diabetes (6,4%). Among them 31% were men between 46 and 65 (52,8%). The rest are women over 66 years old (48,75%). Insulin addicted is 26,24% of respondents, while 73,26% is independent. From 70 patients (60,34%) who answered the questions from the questionnaire PHQ9 we obtained the score 0-4; from 19 patients (16,38%) the score was 5-9; from 20 patients (17,24%) score was 10-14, from 5 patients (4,31%) score of 15-19 and 2 patients (1,72%) of score greater than or equal to 20. Among all subjects with Diabetes only three patients (2,58%) were diagnosed, and they receive appropriate treatment. With 37,48% of patients depression is clinically manifested, not acknowledged. They are for doctors at the primary level of special significance. Depression is not recognized in 78,26% of diabetic patients who are not dependent on insulin, and it is recognized in 21,73% of diabetics.

**Conclusion:** By using a questionnaire PHQ9, which is fast and reliable, clinically manifested, and not only recognized depression can be treated with appropriate therapy on time.

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#### Cardiovascular risk factors among diabetic patients in family practice

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**Aims:** Epidemiological and pathological data documents that diabetes is an independent risk factor for cardiovascular disease. Identification of risk factors is a major first step for developing plan for risk reduction in diabetic patients in family practice.

**Material and method:** This trial was conducted in Family Medicine Teaching Centre (FMTC) Tuzla and included all patients with diabetes mellitus treated by family medicine team at FMTC Tuzla (139/1919). We evaluated presence of cardiovascular risk factors in 139 diabetic patients (49 men and 90 women).

**Results:** Prevalence of diabetes was 7,24%. Mean age of participants was 65,24 +/-11,65 years. Mean duration of diabetes was 7,51 +/-6,86 years. Significantly more women had diabetes than men (35,3%:64,7%; P<0,0001). Mean level of fasting glucose was 8,69 +/- 2,59 mmol/l and mean value of HbA1C was 7,04 +/- 1,13%. Only 33 (24,63%) patients had

good glucose control, while more than half patients (57,43%) had normal HbA1C. The most prevalent risk factors were hyperlipidemia (80,47%) and hypertension (73,04%). Only 39 (28,06%) participants were smokers, 15 (10,79%) were ex smokers, while 85 (61,16%) participants have never smoked. Normal body mass index had 22 (15,83%) patients; 42 (30,21%) were overweight, and 75 (53,96%) patients were obese. 40 (28,78%) diabetic patients had no physical activity. Positive family history for cardiovascular disease had more than half patients (51,08%).

**Conclusion:** Results of this study showed that modifiable cardiovascular risk factors were very prevalent in patients with diabetes. It indicates more effective strategies in primary health care in order to reduce cardiovascular morbidity and mortality in diabetic patients.

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#### Prediabetes and neuropathy: a review of literature

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**Introduction and aim:** Symmetric sensorimotor diabetic polyneuropathy (DPN) affects up to 50% of diabetic patients. This chronic and disabling disease contributes to one of the most feared diabetic complications: diabetic foot. Although tight glycemic control can reduce the occurrence of clinical neuropathy, a treatment for this problem, once established, has not been found yet. The purpose of this article is to review the literature concerning the association between prediabetes and DPN and to know if an early intervention, in the prediabetic state, can prevent and reduce these neuropathic alterations.

**Material and methods:** Systematic search in PubMed database with the terms ("prediabetic state" [Mesh] OR "prediabetes" [All Fields]) AND ("Diabetic Neuropathies" [Mesh] OR neuropathy [All Fields]) to identify review articles in English, French, Spanish and Portuguese. Nine articles found.

**Results:** Epidemiologic findings establish an association between prediabetes and neuropathy but cannot prove a causal relation between the two. Other lines of evidence support that neuropathy associated with prediabetes and with early diabetes are the same entity: clinically, both consist of a symmetric sensory distal neuropathy, with pain and autonomic dysfunction. They also seem to share similar pathogenic mechanisms. A structured program of diet and exercise, improves significantly some clinical and pathological features of the neuropathy.

**Conclusions:** Despite several arguments pointing to a causal relation between prediabetes and neuropathy, this couldn't be proven so far. In fact, the precise role of other aspects of the metabolic syndrome in this relation is not well established yet. However, the epidemiologic association between them highlights the need for searching disturbances in glucose metabolism in every patient with a sensory distal polyneuropathy. Furthermore, in patients with prediabetes and sensory polyneuropathy, evidence of improvement in neuropathic alterations through diet and exercise enhances the importance of the Family Physicians recommendations for a change in patient's lifestyle.

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**Prevalence of depressive symptoms and associated factors in patients with type 2 Diabetes Mellitus***Ribeiro L,*

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**Background:** Depressive symptoms are a major problem in patients with diabetes mellitus type 2 (DM 2), for its high prevalence and underdiagnosis.

**Aim:** This study aims to determine the prevalence of depressive symptoms in patients with type 2 diabetes and identify associated socio-demographic and clinical factors.

**Material and methods:** Observational, descriptive and cross sectional study of patients with type 2 diabetes. We used a questionnaire divided in two sections. Section A, related to the clinical data of patients, completed by the investigators. Section B, included socio-demographic variables and the Beck Depression Inventory, second edition (BDI-II) for quantification of depressive symptoms, self-fulfilling.

**Results:** Of the total of 238 patients evaluated, 145 (60.9%) had clinically significant depressive symptoms: 84 (35.3%) mild, 37 (15.5%) moderate and 24 (10.1%) severe depression. Of 145 patients, 77 (53.1%) were women, which showed higher values of the BDI ( $p = 0.002$ ). Regarding socio-demographic factors (age, socioeconomic status) and depressive symptoms, there were no statistically significant associations, while there was a tendency for patients with lower socioeconomic status present more depressive symptoms. Regarding the anthropometric and clinical factors, in females there was a higher level of depressive symptoms in women with overweight or obesity (73.9% vs. 64.7%). For the duration of the disease, in males was found that men with more years since diagnosis or complications of type 2 diabetes had a higher BDI (66.7% vs. 52.4,  $p = 0.031$  and 61.0% vs. 44.4%,  $p = 0.05$ , respectively). There were no statistically significant differences between depressive symptoms, the type of treatment for type 2 diabetes and the degree of disease control. However, patients treated with insulin and patients with HbA1c above the recommended values had higher BDI.

**Conclusion:** This study showed a higher prevalence of depressive symptoms in patients with type 2 diabetes, compared to that described for the general population, especially in females. Thus, it requires early diagnosis and treatment to minimize the impact of depression in these patients.

720

**Prevalence of insulin resistance syndrome in a primary health in Gastouni, Greece***Tzelepi M, Adraktas D, Papatheoxari M, Arvanitakis I, Vagianas P, Darras M, Katsanaki A, Mariolis A, Lentzas I*

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**Objectives and background:** Insulin resistance syndrome (IRS) which represents a group of atherogenic risk factors has caused much concern over the past few years. People

with IRS are at high risk of cardiovascular events. The aim of this study was to detect the prevalence of IRS in a primary health care center in Gastouni, Greece.

**Methods and subjects:** The study was conducted in 2008; subjects were Greek individuals, ages 30-60 years. According to the National Cholesterol Education Program, the diagnosis of IRS was based on the existence of three or more of the disorders that constitute the syndrome (insulin resistance, hypertension, low level of HDL-C, high levels of TG and central obesity). The screening included measurements of blood pressure, waist circumference, fasting plasma glucose, fasting triglycerides (TG) & high density lipoprotein cholesterol (HDL-C).

**Results:** Among 609 participants, 39,4% males and 60,6% females. The diabetic patients comprised 12% and the hypertensive 11,8%. Increased waist circumference was seen in 57,5%, IFG was detected in 13,6% and high TG and low HDL-C were found in 46,5% and 56,0% respectively. The prevalence of IRS was 32,8%. Our results concluded that IRS was affected by the age group it was 26% in the age 30-40 and 34,4% in the ages between 40 to 60.

**Conclusion:** IRS is highly prevalent among the Greek individuals attending our primary health center in Gastouni. General practitioners need to have the skills necessary to properly identify and manage this high risk condition.

734

**Prevalence of chronic kidney failure in patients with diabetes mellitus***Watson S, Laguna B, Orive C, Arbe G, Ledesma G, Gonzalez I, Marti N, Duaso I, Baena J, Garcia Navarro Y, Sarroca M, Garcia Lareo M*

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**Aims and background:** The prevalence of chronic kidney failure is frequently estimated by creatinine, but in some cases such as elderly people, it is calculated by the Glomerular filtration rate. The objective of this study was to study the prevalence of chronic kidney failure in diabetic patients using the MDRD equation.

**Methods:** A cross-over study was carried out in an urban primary health care center in Barcelona, Spain. The total of diabetic patients of the center ( $n=1085$ ) was studied (electronic database). Glomerular filtration rate was estimated by the MDRD equation. Cardiovascular risk factors, cardiovascular diseases (myocardial ischemia, ictus, chronic heart failure and peripheral artery disease) and chronic consumption of AINE and acetaminophen were studied.

**Results:** 173 diabetic patients had a MDRD  $<60$  ml/min (15.9%; 95% confidence interval 13.9% to 18.2%). We registered 21 cases of MDRD  $<30$  ml/min (1.9%, 95% confidence interval 1.3% to 2.9%). Prevalence of cardiovascular risk factors and cardiovascular diseases were high: 88.4% hypertension; 41.0% dyslipidemia; 7.5% smokers; and 51.4% cardiovascular disease. 9.2% taking AINE and 9.2% acetaminophen.

**Conclusions:** The prevalence of chronic kidney failure in patients with diabetes mellitus was relatively low, in despite of high prevalence of risk factors for kidney failure.

749

**Treatment satisfaction and overall satisfaction in type 2 diabetic patients**

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**Aims:** To evaluate treatment satisfaction in type 2 diabetic patients by DTSQ (Diabetes Treatment Satisfaction Questionnaire) and overall satisfaction, as assessed by DQOL subscale (Diabetes Quality of Life).

**Material and methods:** Cross-sectional study conducted in primary care setting. A total of 161 type 2 diabetic subjects were evaluated in their health centers through a personal interview. Computerized medical record was used as a source of information. Specific quality of life for diabetes (EsDQOL) was measured, as well as overall satisfaction with treatment (DTSQ) and other variables related to the health and lifestyle.

**Results:** Average score for DTSQ was 22.9  $\pm$  6.8 SD (median 22 points) and the average score for EsDQOL was 56.29  $\pm$  8.37 SD (median 55 points). There was a moderate correlation between scores on both questionnaires (intraclass correlation coefficient: 0.525, CI 95%: 0.403-0.628). Multiple linear regression showed that variables associated with greater satisfaction with treatment were self-monitoring, self-perception of good control, ability to make changes in meal times, lack of treatment side effects, longer disease progression and shorter duration of treatment. The explained variance was 51.8%.

**Conclusions:** Type 2 diabetic patients are satisfied with their treatment and highly appreciate the convenience of it. The level of satisfaction is lower when they appear frequently hypo or hyperglucemia. Overall satisfaction is significantly higher in patients without adverse effects, with more physical activity, that report a good control of the disease and that are capable of self-monitoring.

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**Do we achieve target levels of control for diabetic patients in primary health care?**

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**Aim:** To investigate the level of adopted recommendations of European Association for the Study of Diabetes (EASD) in patients with diabetes mellitus.

**Methods:** A retrospective study was conducted for diabetic patients, aged over 18 and taking insulin therapy, that regularly visited the diabetes counseling center in 2009-2010. Data on BMI, blood pressure, fasting glucose, HbA1c, smoking status, diabetic foot examination and pharmacologic therapy were analyzed in relation to EASD guidelines for prevention. Lipid status was not included because the data in patient files was incomplete.

**Results:** 421 diabetic patients (43.9% men, 56.1% women) came for regular follow-ups of HbA1c and counseling. HbA1c levels  $\leq$  6.5% were achieved in 56 (13.3%) patients, with the mean level of 6.2%. HbA1c levels  $>$  6.5% were present in 365 (86.7%) patients, with the mean level of 8.6%. Fasting glucose levels  $<$  6 mmol/l were reached in 34 (8.1%) patients, with the mean level of 4.9 mmol/l. Fasting glucose levels  $\geq$  6 mmol/l were found in 387 (91.9%) patients, with the mean level of 9.7 mmol/l. Well-controlled blood pressure levels  $<$  130/80mmHg were present in 173 (41.1%) patients (mean level 122/79), 49 (28.3%) of them taking antihypertensive therapy. 248 (58.9%) patients had blood pressure  $\geq$  130/80mmHg (mean level 152/91), among them 166 (66.9%) are taking antihypertensive therapy. 103 (24.5%) patients had normal body mass index (BMI) ranging from 18.5 to 24.9 (mean level 22.8), while 318 (75.5%) patients were overweight with BMI  $>$  25 (mean level 30.2). There were 201 (47.7%) patients with all elevated parameters (blood pressure  $>$  130/80mmHg, BMI  $\geq$  25, HbA1c  $\geq$  6.5% and fasting glucose  $>$  6). Each of the 421 patients has at least one unregulated parameter. Out of the 421 patients, 46 (10.9%) were smokers, 52 (12.4%) had numbness and 4 (1.0%) amputated foot as the complication of diabetes.

**Conclusion:** Great majority of patients has not achieved target levels recommended in EASD guidelines. It is necessary to educate both doctors and patients about lifestyle, risk factors and therapy in order to minimize cardiovascular risk in diabetic patients as well as to achieve better glycemic control.

769

**Effects of metformin therapy in diabetic overweight patients**

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**Aims:** Diabetes Mellitus (DM) type 2 is an important risk factor for cardiovascular disease (CVD). The incidence of DM type 2 and obesity is rising rapidly in Serbian population. We wanted to determine DM type 2 and obesity and evaluate the efficiency of the metformin therapy and treatment of overweight by lifestyle modification.

**Material and methods:** Prospective research, lasted 6 months, included 230 patients, aged 25-75 years (average age being 62,5  $\pm$  8,7), with DM, obesity, smoking habit, chosen by random selection. The treatment of DM was based on metformin. Intervention steps were presented by application of non-pharmacological measures based on educational and psychotherapeutic approaches for treatment of overweight. Over a period of 6 months, glucoses, HbA1C and BMI were measured at check ups (n=6). Statistical analysis was performed using the SPSS program.

**Results:** Overall prevalence of diabetes was 90,61% being dominant in women 64,48%. Prevalence of obesity was 76,70%, mean BMI was 35,3  $\pm$  3,8, glucoses in blood 10,3  $\pm$  2,3 mmol/l and HbA1C (%) 8,03  $\pm$  0,53. 6 months treatment with metformin and dietary measures based on lifestyle modification and moderate physical activity shows a reduction in glucoses levels and BMI. Plasma glucose (10,3  $\pm$  2,3) was 7,2  $\pm$  1,66 (p<0,01), HbA1C (8,3  $\pm$  0,53) was 7,34  $\pm$  0,35 p<0,01 and BMI (35,2  $\pm$  3,8) also was statistically reduced 32,4  $\pm$  3,7 p<0,05.

**Conclusions:** The incidence of DM and obesity is rising and high rate suggests that the risk factors are not well controlled.



A special attention should be paid to improvement the care of the DM type 2 patients and to educating the general practitioners how to treat cardiovascular risk factors in order to reduce the morbidity and mortality in the high risk population.

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#### DM prevention. Are we doing well?

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**Aims:** Evaluate whether the clinical practice of our health center is made adequate primary prevention of type 2 diabetic patients, according to ADA criteria

**Material and methods:** It is a descriptive, observational, retrospective study. We selected type 2 diabetic patients over 40 years. We studied whether they took aspirin or not. If they met the ADA criteria of antiplatelet

**Results:** We studied 123 patients: 52% were women and 48% were male, with an average age of 71 years. 58 patients were treated with antiplatelet agents (47.15%) and 60 no (48.78%). In 5 patients no data. Of the 58 patients took aspirin, 100% are correct. Of the 60 patients not treated with antiplatelet agents: 13 were incorrect (10,6%), 47 should be treated with antiplatelet agents (38,21)

**Conclusions:** Of all patients should be treated with antiplatelet agents, according to ADA criteria, only has the correct primary prevention in 57, 75%. We have a 38, 21% of patients successfully treated with antiplatelet agents representing a large number for how little is the cost of 100 mg of aspirin daily, and the many proven benefits in preventing cardiovascular disease

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#### The Diabetic Foot goes to the doctor

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**Introduction:** The Diabetic Foot(DF) is one of the most severe complications of Mellitus Diabetes being the main reason for prolonged hospitalizations among diabetics and responsible for about 70% of all amputations due to non-traumatic causes. It is estimated that 25% of diabetics have favorable conditions for the appearance of feet lesions, particularly due to the existence of sensory-motor neuropathy and atherosclerotic vascular disease. The differential diagnosis of Neuropathic or a Neuroischemic Foot is crucial for the correct approach. As one of the objectives of the St. Vincent's Declaration – of which Portugal was a signatory – and of the PNPCD implementation is the decrease of lower limb amputations in diabetics, GPs should offer an organized and systematized consultation, so that their correct action, as well as all the foreseen preventive measures, contributes to this reduction.

**Methods:** Review the medical literature and schematically

systemize the clinical approach and the correct guidance of the DF.

**Results:** All diabetics will be evaluated annually with the objective of identifying conditioning risk factors of feet lesions. Then, the risk of ulceration should be stratified, which will allow to define the surveillance frequency. At all levels of health care there should be, mandatorily, multidisciplinary units for DF care being, therefore, essential that at the primary health care level, professionals are organized, allowing that every step is completed, effectively preventing the dramatic fate of the Diabetic Foot – the amputation.

**Discussion:** The Healthcare Team – consisting of GPs, nurses and, if possible, chiropodists – is responsible for the education, prevention and identification of the foot at risk of ulceration, or with active ulcer, of the diabetics under its surveillance. The organization and systematization of the consultation are the essential weapons for a good performance and achievement of excellent evaluation and monitoring indicators.

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#### Quality of monitoring of diabetics based on four files

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**Introduction and aims:** Diabetes Mellitus (DM) is a debilitating, chronic, and costly disease that presents a global threat IDF's 2007 estimates indicate that the prevalence of DM will increase from 8.2% to 9.8% in 2025 in Portugal. Due to this increased risk diagnosis and adequate monitoring are essential in order to prevent subsequent complications and limit resulting incapacity and death. The aim of this study was to evaluate the quality of monitoring of diabetics based on four files and the parameters of follow up.

**Materials and methods:** Retrospective technical-scientific evaluation and effectiveness; using as unit of study Diabetics monitoring programs of four files, observed in April and May 2010. Type and source of data were clinical process. The type of evaluation was internal inter pares. Aleatory sample of clinical process of the four files in study was used.

**Results and conclusions:** 120 diabetics were studied, of which 54,17% are male with an average age of 67,6 years old. The trimestral evaluation of glycemic fasting and HbA1c were measured in 100% of patients. Of those 88,3% achieved Microalbuminuria annual evaluation. Only 16,7% had glicemic fasting inferior to 108 mg/dL and 45,8% with HbA1c < 6,5%. This data revealed that the majority of diabetic patients are not well controlled, justifying the importance of proposing corrective measures.

905

**Prevalence of atrial fibrillation in diabetic patients in primary care***Agapakis D, Hatzithanasiadou C, Kasimiadou A, Satsoglou E*

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**Objective:** Atrial fibrillation (AF) and Diabetes Mellitus (DM) share common antecedents, such as hypertension, atherosclerosis and obesity, while coexistence of the two morbidities increases dramatically the risk of stroke.

**Background:** The aim of our study was to assess the prevalence of AF in diabetic patients in a community-based study in primary care.

**Material and method:** A total of 375 diabetic patients (mean age, 57.3 years; 237 women) who were admitted in Outclinic Department or were hospitalized, were included in the study. The control group was 79, age- and sex-matched, non-diabetic subjects. The follow-up period was 30 months. We compared the baseline prevalence of AF at the beginning and end of study in both groups. Other known risk factors for development AF were under appropriate control.

**Results:** We found that AF prevalence was significantly greater among diabetic patients compared with non-diabetic individuals (9.1% vs. 6.3%,  $p < 0.001$ ). Also, during the study-period, diabetic patients without AF at baseline, had 27% greater risk to developed AF compared with the non-diabetes subjects (13%),  $p < 0.05$ . Indeed, among diabetic patients, women had significant greater risk for AF compared with diabetic men (47% vs. 31%,  $p < 0.05$ ), while no significant sex-related differences observed in non-diabetic subjects.

**Conclusions:** Glucose and insulin disturbance can affect the atrial myocardium, leading to AF. In this observational study, the incidence of AF was higher than in controls.

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**Correlation of diabetes and glycosylated hemoglobin in institutionalized elderly in our environment***Garcia Ruiz E, Atienza Gaona J, Gutierrez J, Almarcha Riquelme M, Atienza Almarcha T*

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**Aims:** To determinate the value of HgbA1C in institutionalized elderly people in Almansa.

**Material and methods:** Spectrophotometer to determinate the level of hemoglobine HBA1C.

**Results:** Show that the HbA1c concentration significantly predicts overall mortality, The gradient was apparent from less than 5% to 6.9%.

**Conclusions:** Older patients surveyed in this study are well controlled according to the estimate provided by the hemoglobin glycosylated hemoglobin. The subsample of Almansa had a value of glycosylated hemoglobin somewhat higher but not significant. Some of them needed a change of treatment advertising insulin in these cases. We know that the hemoglobin glycosylated hemoglobin is useful to

characterize disorders in the levels of blood glucose in population studies because it is easier to perform the test of oral tolerance. In a preliminary investigation in males, the authors found that HbA1c is correlated with the prevalence of cardiovascular disease and overall mortality. Its determination can be a reasonable approach to monitoring the oral glucose intolerance and hyperglycemia and to identify cases that progress to diabetes and are still diagnosed in basal glycemia. It is useful to assess stress hyperglycemia after stroke or myocardial infarction or drug and discern whether it might be the result of undiagnosed pre-existing diabetes. We know that glycated hemoglobin is useful for characterizing disorders of glucose levels in population studies because it is easier to perform than the oral tolerance test. In previous research on men, the authors found that HbA1c correlated with the prevalence of cardiovascular disease and overall mortality.

**Education in FM/GP**

3

**Researching comorbid diseases of patients with end stage renal failure***Ozenc S, Celiktepe M, Yilmaz M, Aydoğan Ü, Sari O, Acikel C, Saglam K*

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**Aim:** Chronic renal failure (CRF) is an important health problem caused by various diseases like glomerulonephritis, diabetes mellitus, hypertension, urolithiasis and tumor. Patients in CRF process develop end stage renal disease (ESRD) after a period of time and require dialysis treatment.

**Material and method:** This study was carried out retrospectively on the records of kidney transplant recipient or undergoing hemodialysis the patients followed in Gulhane Military Medical Academy and Medicine Faculty, Department of Nephrology. Data of patients were recorded from files, categorized and transferred to the statistical program in this retrospective study. Statistical analysis was carried out using SPSS-15.0 database.

**Results:** The most common comorbid disease was hypertension in patients with renal failure (45%). The second most common comorbid diseases were other diseases (16%), third was hypertension and diabetes mellitus association (14.7%), fourth was diabetes mellitus (10.7%). According to the results that we found there was a statistically significant difference in the distribution of additional diseases in respect of gender ( $p < 0.005$ ).

**Conclusions:** The most common comorbidities in ESRD patients such as hypertension and diabetes mellitus are at the same time the most common cause of renal failure. Family Medicine Specialists should struggle effectively with hypertension and diabetes mellitus which have increasing incidence in society. Hypertension which has an increasing incidence in society is the leading cause of renal failure. Family medicine physicians should measure arterial blood pressure on first visit of the patients.

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### Importance of the doctor of family in the prevention of toxic habits in adolescents

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**Aims:** To determine the extent of substance abuse in young people between 15 and 19 years of our basic zone of health, with the purpose of to orient the Preventive Activities in Medicine Consultation of Primary Attention.

**Material and methods:** The authors realized a applied cross-sectional descriptive study to a selection of patients (n= 50) selected by consecutive no probabilistic sampling, between the patients between 15 and 19 years that went to our Medicine Doctor's office of Family and were including in the Service Attention and Education to the young person of the Portfolio of Services of Primary Attention in Castillo and Leon (Scaly). Answered a survey that included data on sex, age, alcohol consumption, snuff, cannabis and cocaine. Data were collected in an Excel spreadsheet and were analyzed using SPSS 9.0 for Windows.

**Results:** We collected data from 29 men and 21 women, with the following results: Smoke 6 males, 20.6% of them. Smoke 7 women, 24.1% of them. Drink alcohol 4 men, 19% of them. Drink alcohol 3 women, 14.2% of them. Cannabis consumption: 3.4%(1) of the men, 0% (0) for women. Cocaine use: 0% (0) of men and women. Average consumption of cigarettes in men: 9.5 per day, compared to 7.6 per day in women. Average alcohol consumption in men: 84.2 g / week compared to 78.6 g / week in women with predominant consumption of both sexes at the weekend. Consumption of both sexes, snuff and alcohol: 40%. Cannabis linked to snuff and alcohol 100%.

**Conclusions:** After analyzing the results, we concluded that there is a substantial consumption of alcohol and snuff. A substantial alcohol on weekends and that cannabis is linked to the consumption of alcohol and snuff. Adolescents are a population that often goes to the Health Center, Primary Care Consultation is a great place to learn habits and attitudes towards drugs and to perform preventive activities Health Education to promote activities, knowledge and healthy habits.

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### Efficacy of the training for family doctors on the management of metabolic syndrome

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**Aim:** to assess the influence of the cardiovascular prevention training on the knowledge, skills and attitudes of family doctors on the management of patients with metabolic syndrome.

**Material and Methods:** It was included 165 family doctors. Training group (TG) contains 85 doctors who participated in the modules of the cardiovascular prevention training for family physicians. Control group (CG) contains 85 doctors that work in the same facilities who didn't participate in the training. The groups are gender-balanced with different age, length of the years of work. All doctors completed the special

designed questionnaire with the selected quality criteria recommended in the international and national guidelines.

**Results:** It has been shown significant statistic differences between TG and CG for the followed criteria: recommended levels of blood pressure (76.2% from TG and 41.8% from CG,  $p<0.05$ ), blood glucose (76.9% of TG consider it as standard procedure and only 49.4% of CG,  $p<0.05$ ), full physical examination (77.1% from TG and 53% from CG,  $p<0.05$ ), using the complete set of laboratory tests (completely used by 83.8% of the doctors from TG compared with 42.6% from CG,  $p<0.01$ ). Most of the parameters about knowledge level, diet and exercise attitude of the training group have been improved after this training.

**Conclusions:** The family doctors who participated in the modules of the cardiovascular prevention training have the greatest progress in implementation the recommended standards for patients with metabolic syndrome. Structured education program improves attitude, practice, knowledge level and results in family doctors.

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### Effects of smoking and Body Mass Index in pregnancy on fetal weight in Primary Health Center Banja Luka , B&H

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**Introduction:** Smoking can seriously endanger the health of fetus with reduction of oxygen in the blood vessels of the placenta. Goal To examine effect of smoking and body mass index in pregnancy on newborn weight.

**Methods:** The survey was conducted in rural clinics BoDac, at the Health Center Banjaluka, from 01.01.2006. – 01.08.2009. Data were collected from medical records and with using of poll.

**Results:** The survey included 94 respondents in age of 15-19 ( 2.12 % ), age of 20-24 (29.78 % ), age of 25-29 (40.42 % ), age of 30-34 (19.16 % ) and in age of 35-39 (8.52 % ). In the study 63.83 % of subjects were nonsmokers, 8.51% stopped smoking before pregnancy, and 27.66% were active smokers. Average weight of newborns of nonsmoking mothers and mothers who stopped smoking before pregnancy was 3695 gr. And of mother's smokers was 3495 gr. Compared to the period of smoking status newborn weight was 3733 gr. With mothers who smoked less than 5 years, 3652 gr. With smoking from 5 to 10 years and 3200.7 gr. With smoking above 10 years. Average body weight of newborn for mother's BMI of 18.5 – 25 was 3495.25 gr. BMI of 25- 30 was 3960 gr. And BMI of 30 – 40 was 4565 gr.

**Conclusion:** Smoking and body mass index in pregnancy have effect on birth weight of newborn. Pregnancy is a great opportunity to advice cessation of smoking, because the most important for a mother is the health of her child.

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### Does the selection process for general practice training measure individual differences in ability and personality or situational behaviour and does it matter?

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**Aim:** The aim of this study is to explore cognitive and personality correlates of selection centre ratings with a view to better understanding how the selection process works. Of particular interest is the extent to which selection measures stable individual differences or situationally elicited behaviours.

**Material and methods:** Applicants for entry to GP training attending selection across three years voluntarily undertook one of two validated measures of individual difference. These were a cognitive test known as Ravens Progressive Matrices (n= 192, 2007) or NEO PI personality profiler (n=198, 2009, 2010). The results did not contribute to the selection decision.

**Results:** A correlation matrix revealed significant correlations between the results of Ravens Progressive Matrices and both exercise and competency ratings. In contrast, the only correlations between NEO PI and the selection ratings were modest and found between a personality "trait" known as "extraversion" and the group discussion exercise as well as "extraversion" and the competencies known as "professional integrity" and "communication skills".

**Conclusions:** The results confirming a positive correlation for cognitive ability and better scores from selection methods reflect findings in many other professional fields. Individual differences in general mental ability appear to explain selection centre performance. The results from comparing NEO-PI with selection centre performance suggest that individual differences in personality are less able to explain differences in performance at selection. Possible reasons for the results are explored as directions for future research and design of selection are highlighted.

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#### Comprehensive training program for family medicine trainees : improvement of professional skills

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**Aims:** Curriculum development of GP residents includes the rotation in a paramedic emergency device (DCCU), to acquire necessary skills for the further development of its activity in primary care

**Material and methods:** Development of a comprehensive training program including: Opening session explaining the functional structure of DCCU, objectives of the rotation, reminder of life support algorithms, communication channels and a survey of their expectations Programming the rotary agreed with the resident Sessions on emergency medicine, adapted to the health centers, evaluating the effectiveness of existing protocols Training workshops in schools on the activation of the emergency system

**Results:** After implementation of this program results were obtained in three areas: HEALTH CARE CENTERS: Optimizing care for medical emergency, suggesting areas for improvement, conducting joint clinical sessions SCHOOLS: The students got an adequate knowledge of emergency telephones, structure of the Emergency System, guidelines for

action in an emergency TRAINEES: Acquisition of knowledge to conduct their work in a paramedic emergency device in the primary care setting, creating the habit of evaluation as a tool, acquisition of skills to develop their health education work in the community, increasing resident satisfaction for the rotational

**Conclusions:** To ensure the achievement of appropriate professional skills of the trainee in his stint with the community, both for attention and in promoting health education The trainee should be scheduled in a comprehensive way in all places to develop their daily work His involvement in community education increases knowledge of citizenship and encourages the habit of interaction

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#### Increasing interest in General Practice Career in the Czech Republic

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**Introduction and aim:** The Czech Republic is facing the lack of primary care physicians as other countries in Europe. There are 5200 general practitioners serving a population of 10,5 million. The average age is 53 and 25% of physicians are over 60. The training in general practice [GP] has been in function since 1978, but the reforms in nineties has contributed rather to decrease of interest in primary care. The number of physicians who qualified for GP dropped to 32 in year 2008. The effort of Czech Society of GP and academic departments of GP in medical schools aimed in the increase of attractiveness of general practice among other medical disciplines.

**Methods:** Following interventions were applied: - improvement of pregraduate curriculum in GP and introduction of the discipline using the best examples - changes in length and content of postgraduate curriculum in GP in order to make it attractive and effective - the governmental support for postgraduate training, both for trainees and trainers - information campaign about the discipline and career possibilities - providing GP trainers with methodological support

**Results:** The academic departments succeeded to raise the interest in primary care among medical students. The website of GP Society providing the information campaign has been frequently visited. The curriculum has been shortened to 36 months and has become more community oriented. The Ministry of Health covers the 3 year salary of the resident, fee for the trainer and cost of training in other departments through. 155 resident posts for GP have been established in 2009, 122 in 2010 and 150 posts have been offered for 2011. In 2010 130 physicians passed the qualification examination.

**Conclusion:** The demographic situation in general practice has not been solved yet. But the critical measures have been successfully adopted. The interest in postgraduate training and GP career has considerably increased during the last two years.

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**Formation of the residents of family medicine in skin cancer prevention***Sean Sanz M, Gilaberte Calzada Y, Olivé Ferré F, Magayon Botaya R, Haro Iniesta L, Areny Ribera T*

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**Aims and background:** Skin cancer (SC) is the most common cancer in humans. In Europe the incidence has exponentially increased in last 20 years. Primary care doctors (PCD) are in a privileged position to make prevention actions in order to reduce its morbidity, mortality. Objectives: to know the level of training and knowledge about SC prevention (SCP) of DPC tutors and which of these concepts are transmitted to their residents.

**Material and methods:** Cross-sectional descriptive study using a survey sent by e-mail to PCD of urban and rural primary health centers (N=2.100). 110 of them were tutors. Study period: March 2010 to July 2010. Variables measured: demographic data, knowledge in prevention of SC, habits in consultation, training provided to resident doctors in 1<sup>st</sup>, 2<sup>nd</sup> SCP, detection of risk groups.

**Results:** From 784 answered surveys (rate of answer 37.3%), 84 (76.3%) were from tutors. 27(33%) men, 57(67%) women. There weren't differences in SCP actions performed during consultation regarding non tutors: 58 (69%)tutors offer photoprotection advise in consultation (p 0,95); 43(51.2%) perform SC screening (p 0,18) and 5 (6%)have worked in community prevention campaigns (p 0,81). Not differences were found either in 2<sup>nd</sup> SCP between tutors and non tutors (p 0,19). 37(44.1%) tutors admitted to train in 1<sup>st</sup> and 2<sup>nd</sup> SCP to their residents. Basic primary SCP was the most explained action by 42 (85.7%) tutors, followed by training in risk groups (36 (76.6%)), basic training in 2<sup>nd</sup> SCP 26(30, 3.8%), ABCD rules 26 (61.9%) and how to make a self-examination in 23(28.9%) cases.

**Conclusions:** Training in SCP isn't well implemented by PCD. Family medicine tutor's SC knowledge and prevention actions do not differ from other PCD's. Physicians involved in prevention activities usually give more training about this subject to their residents than those who don't do it in their clinical practice. SCP training programs are necessary both for residents as tutors.

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**Last year medical students opinions about the evidence based medicine***Artiran Igde F, Yener OF, Dikici M, Yaris F*

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**Aim:** Evidence-based medicine (EBM) should be integrated into the undergraduate medical education curriculum with the goals of developing critical assessment skills and establishing lifelong learning habits. In this study we expected to assess the last year medical students thoughts about their own EBM skills.

**Material and Method:** From July 2009 to June 2010, 269 last

year students who were studying at four different medical faculties of Turkey and who accepted to participate in the study completed a structured questionnaire.

**Results:** The total number of students who participated in the study was 269 and their ages varied between 22-28 years. 186 students (69,1%) were male while 83 (30,9%) were female. Participants were faced with the typical 5 response choices in a Likert scale and they gave the following answers; 1.I have enough learning about the EBM 108 (40,6 % ) not agree, 100 (37,6 % ) agree, 58 (21,8 % ) no idea 2. EBM is extremely important in patient care 14 (5,3 % ) not agree, 121 (83,1 % ) agree, 31 (11,7 % ) no idea 3. I can use EBM in making decisions about the care of patients 113 (43,1 % ) not agree, 95 (36,3 % ) agree, 54 (20,6 % ) no idea 4. EBM is the basis of my daily medical practice 72 (27,2 % ) not agree, 118 (44,5 % ) agree, 75 (28,3 % ) no idea

**Conclusion:** The evidence-based medicine practice comprises skills and clinical experience that is important for clinical decision making. Undergraduate medical curriculum should provide students an opportunity to practice EBM skills and reinforces them to use of evidence in making patient-care decision.

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**Last year medical students opinions concerning the reasons of career choices***Yener OF, Artiran Igde F, Dikici M, Yaris F*

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**Aim:** Many factors may affect specialization choices. In this study, we aimed to determine the opinions of final year students concerning the reasons why they wish to specialize in medicine.

**Material and method:** Last year students who were attending four different medicine faculties in Turkey in the academic year 2009-2010 and approved to participate in the study were asked whether they wish to specialize and the reasons why they wish to specialize. Students were told that they could give more than one reasons and the following choices were given; job satisfaction, financial gain, title, social status, parental and environmental pressure. They were also asked to write down other reasons.

**Results:** 269 students participated in the study and responded the questionnaire. Of the participants, 69.1% were male and 30.9 were female. The number of students who wish to work as a general practitioner in the rest of his/her life was 21 (7.9 %) whereas the number of students who wish to specialize was 246 (92.1 %). Students specified more than one reasons concerning the reasons why they wish to specialize. 94 (34.9%) "job satisfaction", 76 (28.3%) "title", 125 (46.5%) "financial gain", 129 (48.0%) "social status", 28 (10.4%) "parental and environmental pressure", 19 (7.1%) "to realize his/her dream", 5 (1.9%) "unconscious choice" and 3 (1.1%) "to have an academic career".

**Conclusion:** Medical schools should integrate primary health care approach into their undergraduate curriculum and newly graduates should be encouraged to build a career in primary care. Accordingly, there should be fundamental changes to achieve a more qualified medical education.

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**A practice policy for mirena insertion. A retrospective**

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**Introduction:** A practice policy for mirena insertion. A retrospective audit in an urban GP practice.

**Aims:** My main aim in doing this audit was to establish a policy for mirena insertion within the Practice.

**Material and methods:** Following a Literature Search of data regarding intrauterine contraception, a practice policy for mirena insertion was drafted. It was compiled from recommendations from the RCOG Faculty of Sexual and Reproductive Healthcare Clinical Guidance Intrauterine Contraception Clinical Effectiveness Unit 2007 and the Mirena Summary of Product Characteristics. I then performed a retrospective audit on mirena insertions within the practice over a six month period between 01/03/10 to 31/08/10. The outcomes measured were the age profile, number of women that were patients of the practice, the number of women that had a pre-consultation, swabs, an up-to date smear, bimanual exam documented, consent documented and a six week check.

**Results:** 40 mirenas were inserted between 01/03/2010 to 31/08/2010. 25 women (62%) were patients of our practice and 15 women (38%) were referred from local practices. 39 women (97%) had a pre-mirena consultation. 39 women (97%) had no indication for swabs. 22 women (55%) had an up-to date smear. 18 women (45%) had no up-to date smear. 2 women (5%) had the results of their bimanual exam recorded. 4 women (10%) had consent documented. 36 women (90%) had no consent documented. 29 women (72%) attended for their 6 week check. 11 women (28%) did not attend for a six week check.

**Conclusions:** The Audit highlighted the need for a practice protocol for mirena insertion and also a recall system for the six week check following insertion. The results were presented at the December practice meeting and a mirena check list and consent have been drafted and entered into the consultation notes to improve documentation.

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**Neuropathic Pain – Review Of Theme**Conceicao C

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**Summary introduction:** Neuropathic pain is chronic pain conditions more difficult to recognize and treat, and is at present a significant challenge to clinicians. Patients with neuropathic pain usually communicate their symptoms to the GP (doctor), and then followed for consultation in primary health care, not necessarily requiring referral to secondary care. It is often under-diagnosed and under-treated. Therefore, a comprehensive and synthetic approach will give the doctor and the wearer a greater likelihood of success on the recognition of this entity. Objective: To review systematically and simultaneously updated on neuropathic pain, highlighting key characteristics and treatment first-line perspective geared to specialists in family medicine.

**Methods:** The literature review is based on consultation of

publications in the journal Pain, research articles in the PubMed database from 2003 through the introduction of the following keywords: neuropathic pain, diagnosis and treatment algorithm, and the site of the Directorate General Health Body of Review: We analyze both the current definition of neuropathic pain, its setting and the epidemiological and etiological aspects most important pathophysiological. Outlines of a proposal for diagnosis and treatment of neuropathic pain, emphasizing the role of specialist family medicine in the care of patients. Finally sets out the criteria for referral to secondary care.

**Conclusion:** The diverse etiology of neuropathic pain and increasing knowledge of it became increasingly common to be identified at the level of Primary Health Care. Therefore, it is imperative to constantly updated on the successive developments concerning pathophysiological mechanisms and diagnostic and therapeutic approach.

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**Custom Query smoking cessation in a primary care health center**Besa M, Font A, Alsina M, Vila M, Rams F, De La Poza M

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**Aim:** Evaluate the personal attention effectiveness for a smoking session consultation in a primary care urban health center to achieve stop smoking

**Material and methods:** Descriptive study. Subjects: Visited patients of a urban health center in the "Outpatient smoking cessation Consultation" between May'08-February'09 Variables: Gender, age, consultation attempts, reasons to quit smoking, start smoking, average age consumption, cigarettes/day, previous attempts, use of others substances. Fagerstrom and Richmond tests. Smoking cessation, time of cessation.

**Results:** We studied 63 patients, 39,7% males, average age 50.5 (47.6-53.5). The 28.6% stopped smoking (55.6% females). Time cessation < 3 months: 44.4%, 3-6 months: 16.7%, > 6m: 38.9% Of those who stopped smoking, 50% continued treatment with varenicline versus 23,5% who has not stopped smoking

**Conclusions:** Despite the low patient involvement on the following up treatment, we found a high percentage of cessation, compared with the 5% achieved with basic health attention

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**Overview of general practitioner trainee committee in the United Kingdom**Begg S, Anwar M, Uddin S

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**Aim:** To give an overview of the remit, functioning and work undertaken by the Associates in Training (AiT) Committee in the United Kingdom (UK). Thus demonstrating the benefits of

a General Practitioner Trainee committee to other European colleagues. Additionally to allow replication in other countries by highlighting categories of responsibilities of the committee.

**Method:** An overview is given of the composition of the committee, including the trainees and other organisations represented. The various remits of the committee are summarized and examples of work undertaken/ contributed to are outlined. The primary remit is to provide a focal point for AiTs wishing to comment on college activities in relation to training and services for trainees

**Conclusion:** The AiT committee helps to improve GP training in the UK. It also enables a greater sense of belonging within the College and promoting membership. The committee helps to influence national health policy and provides opportunity for networking, mentoring and peer support among GP trainees. Most importantly it champions the trainee voice to help raise standards of Primary Care Training.

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### First5 – a UK initiative to support new GP's from qualification through the first five years of independent practice

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**Aims:** To introduce the concept of First5. To describe the educational resources being developed to meet the needs of First5 GPs.

**Methods:** First5 is a new concept being developed by the Royal College of General Practitioners (RCGP) in the UK to support GPs from when they finish GP training through the first five years of independent practice. There are five pillars which describe the key aims of the First5 initiative: 1. Connecting with College – Promoting a sense of belonging and appropriate representation for the First5 cohort within the college. 2. Facilitating networks – Encouraging peer support and mentoring through the development of local networks using the RCGP faculty structure. 3. Supporting revalidation – Offering support through revalidation for those in the first five years. 4. Career mentorship – Highlighting the opportunities a career in general practice offers and helping new GPs get the most out of being a GP. 5. Continuing professional development (CPD) – Identifying areas of CPD which members in the first five years feel are not well provided and developing materials which will be address their learning needs. We surveyed First5 members to find out their educational needs and we have developed a suite of courses specifically tailored to First5 GPs.

**Results:** The 'First5 Practice Management' course allows delegates to understand the key elements of practice management and how to effect change within the practice and the 'First5 Leadership' course combines the theory of leadership with practical ways to apply it in the everyday practice of First5 GPs. We have also developed a First5 Advanced Consulting course to allow First5 GPs to enhance and develop their existing consulting style and have successfully piloted a 'First5 Commissioning' course which introduces the key elements of commissioning in an accessible way. We also have a network of First5 Local Leads who organize events for First5 GPs in each RCGP region of the UK.

**Conclusions:** First5 is a new concept which allows the RCGP to support new GPs and is providing tailored educational support which will help new GPs to grow and

develop as professionals.

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### Education in family medicine

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**Introduction:** Education is important and constantly present in medicine in general, especially in family medicine. According to these facts, about several years ago a project called Continuing professional development in the family medicine (CPD) started in the whole area of our country. The Training of trainers (TOT) is the part of that project that provides further educated trainers for CPD. TOT participants are mostly doctors and nurses from the family medicine and also from other branches of medicine.

**Aim:** Investigate opinion of TOT participants about the most important elements of the adult learning process.

**Method:** In 2010 four two-day long TOTs with 83 participants were organized in various towns of Bosnia and Herzegovina. In one unit participants were asked about main elements that have impact on learning process. Metaplan method was used answering the question: Which of the following would be the most important for making an education unit successful and useful: choice of subject, good educators, motivated participants, appropriate equipment and good working conditions or interactivity. Participants could choose only one answer.

**Results:** Among 83 participants, 5% found that the most important for making an education unit successful and useful are appropriate equipment and good working conditions; 16% - choice of subject; 18% - motivated participants. Most of them considered that interactivity (32%) and good educators (29%) are crucial.

**Conclusion:** CPD trainers need to know the basic adult learning principles. Interactivity is one of the most important of them. Our experience also confirms that the interactive part should cover more than 50% of content of an education unit, whenever possible, leaving a half or less to the theoretical part.

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### Measuring the body temperature of children in your own home

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**Aims:** Body temperature is the first proof of a change in child's health that parents notice. Almost every family possesses the device to measure body temperature-thermometer. The technical correction of a thermometer is relevant for obtaining the right results - the right body temperature. This research shows that it is important to check the technical condition of instruments, but also the ways of usage as the instruments are commonly miss used which

leads to miss interpretation of results itself.

**Materials and methods:** 108 parents were chosen, from 62 families (46 couples: 12 mothers and 4 fathers) and were educated about the right thermometers and how to properly use them with children. The chosen children were aged 0-7. Parents were questioned before and after the education. We gathered statistical data on the type of the thermometer, their condition and how well the parents use them. We have analyzed the data based on gender as well as the differences between single and both parented families.

**Results:** Before the education, we found 212 thermometers in 62 families: 128 were mercury filled glass thermometers, 58 electrical thermometers and 26 sticker thermometers. There were 121 technically correct devices – 57,7%. Parents which used mercury thermometers used them right in 62,5%, ones used electronic thermometers 71,12 %, and ones used sticker thermometer 51,26%. After education, the number of instruments per family dropped to 138, which gives the average of 2,26 thermometers per family. There were 93 mercury thermometers which all were correct, 26 electronic ones, and 9 sticker thermometers. Before education, 63,12 % of parents used thermometers correctly, mostly women, and the best instruments were used by single parents. After education, 84,16 of parents used thermometers correctly.

**Conclusion:** In order to successfully measure children's body temperature, the instruments for the measurement should be technically correct and should be used with proper knowledge. Educating the parents, both of the segments could be improved and by that make every family is able to successfully measure children's body temperature.

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#### How medical education affects the career plans of medical students: from first year to last year

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**Aims:** We aimed to investigate the occupational expectations and career plans of medical faculty students during the first and last years of their education.

**Background:** Developing technology and changing health requirements and health systems have changed the traditional image of physicians and, as a result, the reasons for young students choosing the medical profession and their expectations are differentiated.

**Material & method:** The impact of the education process on student's vocational expectations and career plans was investigated during the first year and in the last year of their vocational education by providing them a survey to fill out. Both descriptive and inferential statistics were used for data analysis.

**Results:** At the end of seven years, 90.3% of the students who filled out the survey in the first year were reached. In the first survey, 89.2% were started medical education willingly and during graduation, 11.9% of the students stated that they regretted their choice and if they had the chance again they would choose another profession. When the factors influenced their professional choice were asked, the score they received in the university exam, the fact that being a doctor leads to a more certain future and due to their affection for humanity constituted the majority of answers. Regarding the career plan they made, the most preferred areas of specialty were chosen as pediatrics, ophthalmology and gynecology/obstetrics. Although there were no students

stating they would like to become family physician in the first year; 2.2% of the last year students stated that they would like to become a family physician.

**Conclusion:** In Turkey, most of the time various different factors are influential over students choosing to have an education in the medical profession, and the expectations regarding the profession and the process they undergo during their education affects the expectations they have regarding the profession.

740

#### Introducing general practice to undergraduate medical students in a primary care unit

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**Aim:** It seems that there is a trend in undergraduate medical education towards including clinical attachments in primary health care (PHC) worldwide. The benefits of such initiatives are already well described. The aim of this study was to educate and familiarize students with general practice and Primary Care, in order to redress the lack of a relevant compulsory undergraduate course.

**Material and methods:** The study was undertaken during 2005-2009. A non-mandatory 1-week clinical attachment in PHC/general practice was organized in an urban PHC unit by general practitioners with educational experience in collaboration with the Department of Physiology of the medical school of Athens. The participants were a prospective cohort of medical students in the 2<sup>nd</sup> year of undergraduate studies. The courses offered medical students a first-time contact with real patients and physical examination, along with exposure to the objectives and principles of PHC. The fact that the students were at the early stages of their education and lacked any clinical experience was also considered. In addition, the students rated the whole process.

**Results:** The response ratio was 77.06%. The proportion of students who might choose to specialize in general practice almost doubled (18.71%, as opposed to 10.92% before the intervention). This increase was significant in both genders. The students impression of the study was rather positive (4.39/5). The mean score on objective structured clinical examination of participants increased from 30.70/100 to 62.28/100 ( $p < 0.001$ ). The students impression of the study was rather positive (4.39/5).

**Conclusions:** The educational intervention of including a clinical attachment in an undergraduate curriculum seems to have encouraging results, in terms of both stimulating and familiarizing medical students with General Practice, considering the peculiarity of inexistence of academic departments of PHC or General Practice in the national medical schools should also be considered.

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#### Learning from PROBLEMS!

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**Summary:** In our primary health care centre postgraduate family doctors are being trained. We have been using the PBE (Problem-Based Education) methodology for the past three years.

**Description:** Tutors prepare a case about an issue, taking in the basic curriculum skills which have to be acquired as well as the objectives required to achieve it. Through the discussion of the case, their approach and resolution suggests the questions to be answered, both by studying and by doing some literary research based on scientific evidence which they shall defend and discuss with colleagues in a second meeting. The discussion concludes with the solving of the case or the raising of new issues that must be resolved. Tutors are surprised by the response of residents towards their guidance task during the session. The tutor's task is not to guide their thoughts, only accompany it with a summary and encourage them to seek solutions. Residents in the group are the people who choose where to start developing their research, which interesting part of the problem needs to be addressed and what questions they believe must be resolved to solve the case. At the end of each topic the tutor's evaluation guides us on how residents have responded in group work, respecting different opinions and getting involved in the case resolution, as well as in individual research. Residents evaluation consider the relevance of the matter, the guidance task and their colleagues participation. All of them must evaluate their own work during the session.

**Conclusions:** During three courses this assessment work has been rated very positively because a) it teaches general practitioners in training to use this same methodology in other stages of their learning, b) it is beneficial for both group work and individual work, based on problems which are the common way of dealing with clinical situations.

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#### Aims of the experience

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**Summary:** Encourage and stimulate the exchange and mobility of medical doctors specialising in Family Medicine among countries to provide both professional and personal higher knowledge.

**Description of the experience:** Since the creation in 2000 of the Hippocrates programme, and later the Vasco Da Gama Movement, the mobility among young doctors between European countries has experienced a big progress. In November 2009, our center received a medical doctor from El Salvador, extending the experience to other countries outside Europe. We planned the stay in a basic program using the Hippocrates criteria: a short stay while participating in most of the activities of the center. We showed the functioning of our national health system by participating in general practice, home care visits, minor surgery, prevention nurse activities, and also meeting local trainees and joining their training program during that time. We could also learn about her own

country national health system. The knowledge of the language facilitated the learning and participation.

**Conclusions:** The experience was considered highly positive by all participants. These exchanges promote the acquisition and improvement of knowledge and skills both in the medical field and outside it, improving communication and language skills and the ability to make friends. We believe that this type of experience should be encouraged.

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#### Sharing experiences of academic primary care in Europe: report of a workshop at the UK Society for Academic Primary Care (SAPC) conference

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**Aims and background:** Training for academic primary care varies greatly across Europe. In July 2011 the UK Society for Academic Primary Care (SAPC) will undertake its first international exchange; inviting young GP researchers from across Europe to attend the annual SAPC conference in Bristol. As part of the exchange a workshop will be held on the topic of 'sharing experiences of academic primary care in Europe'. At the time of abstract submission participants confirmed as attending include junior researchers from Austria, Denmark, Germany, Portugal, Spain, Sweden, Turkey and the UK.

**Material and methods:** The group will perform a SWOT analysis of the current situation for academic primary care in their countries; in particular focusing on the training opportunities for doctors wishing to pursue a career as GP researchers. Subsequent discussions will centre around how those countries with a robust research infrastructure and well developed training pathways, might offer assistance and collaboration with those nations where it is a more fledgling discipline. This poster summarizes the process of the workshop, the themes and issues raised and the conclusions.

**Results:** At the time of abstract submission results of the workshop are pending.

**Conclusions:** The results will give insights into a range of experiences amongst young GP researchers across Europe, and the benefits of international collaboration.

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#### Educational study for evaluation visceral fat levels by bioviscan in metabolic syndrome

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In Metabolic Syndrome (MS) General Practitioner (GP) provides preventive care and health education to patients with risk of cardiovascular disease and diabetes through Education Strategies. Viscan AB140 is a bioimpedance analysis instrument (BIA).

**Aim:** to estimate three pre-defined visceral fat levels (VFL) to track changes over the long term for effective health management and prevention cardiometabolic risk related to the enlargement of visceral fat stores.

**Material and methods:** Investigated cohort: 65 participants (35 females and 30 males) were recruited with metabolic syndrome according to 2007 IDF criteria (Age: 58,8 (19-83) years, body weight: 80,3 (51,8-138,6) kg., BMI 28,4 (19-41,6) kg/m<sup>2</sup>. Analysis of visceral fat by BIA 16,3 (3,5-47,5) is measured using a cleverly designed electrode belt placed on the midriff of the subject. The belt uses Tanita dual frequency BIA Technology to take the measurement in just 30 seconds. The company manufacturing viscan declares significant correlation between the visceral fat measured by BIA and that obtained by CT that it considered average from 1 to 12.5 high from 13.0 to 17.5 very high from 18.0 to 25.5 or more.

**Results:** 22 participants (33,84%) average VFL GP advice is no need for concern at present and continue with a balanced diet and an appropriate amount of exercise. 25 participants (38,46%) high VFL GP advice is to ensure that a appropriate amount of exercise is done and calorie intake is limited to reduce weight to an appropriate level. 18 participants (27,69%) very high VFL GP advice is weight loss through actively engaging in exercise and food restrictions, is useful SF 12 Health Survey Questionnaire and Disease Management Program with Care Manager to support GP.

**Conclusions:** BIA Viscan method estimating visceral fat level is simple and immediate to use encourage the education of patients with increased cardiometabolic risk and represent a solution where CT and MRI cannot be applied in a routine clinical practice. However further studies in larger groups validation will be required especially in obese with subcutaneous abdominal adiposity.

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#### Continuous medical education in primary care: posteroanterior chest-x ray

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**Aim:** Posteroanterior (PA) chest radiography is a common and valuable diagnostic technique. A training program was implemented to advance skills of primary care physicians of using this tool.

**Material and method:** The study was conducted in the four cities of Turkey, between December 2006 and April 2007. A half-day training program on PA chest radiography evaluation for primary health care physicians was designed. A test of ten questions was given to the participants before and after the training. A total of 169 primary care physicians participated in four separate trainings in the provinces of Elazig, Adiyaman, Gumushane and Samsun with 48, 42, 17 and 62 participants respectively.

**Results:** The median age was 35. The participants were 39.3% female and 60.7% male. 28.5% stated that no formal training on PA chest radiography was included in their medical school curriculum. 63.3% of the participants found their chest-x ray skills insufficient while 35.3% and 1.3% found them fair and good respectively. A comparison of post-training to pre-training test scores showed statistically significant improvements in all of the four groups. They were 79.0% and 32.0% ( $X^2=91.513$ ,  $p<0.001$ ), 86.0% and 28.0% ( $X^2=35.381$ ;  $p<0.001$ ), 95.3% and 32.9% ( $X^2=4.124$ ,  $p<0.001$ ), and 95.64% and 30.96% ( $X^2=12.664$ ,  $p<0.001$ ) in

Elazig, Adiyaman, Gumushane and Samsun groups respectively.

**Conclusion:** Although PA chest radiography is one of the most utilized diagnostic tools, the participants PA chest radiography evaluation skills were found insufficient. A comparison of post-training to pre-training test scores shows statistically significant improvements in all of the four groups. These findings emphasize the need for continuing education for the primary care physicians.

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#### Framework For Continuing Educational Development Of Trainers In General Practice In Europe –Leonardo Da Vinci Project

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**Aims and background:** The Leonardo da Vinci project Framework for Continuing Educational Development of Trainers in General Practice in Europe has been running since 2010. The idea of the project is a result of an observation of urgent needs related to development of common European framework of educational expertise in GP/FM. The aim of the project is to develop, implement and sustain in a long-term perspective Framework for Continuing Educational Development of Trainers in General Practice in Europe which will provide the basis for the development of educational courses for GP/FM teachers on 3 different levels.

**Material and method:** The objective of the project is to propose, develop and implement an educational framework for Family Medicine teachers in Europe. The realization of the project will lead to the construction of a European Network of GP/FM teachers supported by an innovative Internet based educational platform. The consortium of 8 institutions from 6 countries was established. The Promoter of the project is the College of Family Physicians in Poland. Four other European Colleges of Family Physicians and two research and consulting institutions are involved. The last partner is EURACT, which through its rich capacities plays pivotal role in development, dissemination and exploitation of the project results.

**Results:** The tangible outcomes of the project will be The Framework for Continuing Educational Development of Trainers in General Practice in Europe and educational courses: for competent educators in GP/FM (level1), for proficient educators (level2) and for educational experts (level3). Project results will be available on the EURACT website [www.euract.org](http://www.euract.org)

**Conclusions:** The project results can only be achieved by joining the current knowledge of GP/FM training, current approaches and existing expertise within European countries, in order to develop the new high quality conceptual framework. The framework will have a continuous and multilateral character, leading to setting basis standards and harmonization of the European vocational training of GPs.

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#### Implementation of a Municipal Residency Program In Family Medicine Without The Support From The

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**Background:** Primary Health Care (PHC) is a macro-tendency in health systems worldwide. Brazil adopted the Family Health Strategy (FHS) as a state policy for the organization of PHC, with growing support from Ministry of Health. Medical residency in Brazil is the only post-graduation modality that does not need the academic structure. Family physicians are expected to teach in the Academy, specialization courses, residencies preceptorship and lato sensu or stricto sensu post-graduation programs of Family Medicine.

**Aims:** To describe the process of deploying a Family Medicine Residency Program (FMRP) without the support from a university.

**Methods:** Case report describing structure of an FMRP without academic support in Betim, Brazil.

**Results:** Betim has a population of 422,159 inhabitants and 41 Family Health Teams, 40% of which are occupied by preceptors and residents of Family Medicine, in a network that includes all levels of care. The FMRP of Betim, accredited by the Ministry of Education / National Commission of Medical Residence, has fields of practice in all of the city services, individual tutoring and residents receive regular scholarships and an extra fee from the municipality. All tutors are specialists in Family Medicine, trained for tutoring in PHC. In a complementary way, the residency program makes use of virtual environments of learning. Its educational project includes elaboration of portfolios and a final paper. Over the past four years there was an expansion of hours dedicated to internships and turns, increasing scientific production and growth of interested candidates. Some challenges however, remains: lack of mentors, the absence of the supporting academic structure for the theoretical load time.

**Conclusion:** FMRP of Betim represents a great opportunity to train professionals to join labor market with quality and excellence. It is important to share the challenges and barriers faced by FMRP to increase the chances of success of similar projects.

**Gastrointestinal problems**

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**Early diagnosing of gerd and dyspepsia by general practice doctors***Jelisijevic G, Vujovic G, Nikolic R*

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The dynamics of everyday life, civilization, psychical sensitivity are the causes of a great growth of functional and organic abdominal diseases. Also, the irregular way of feeding and other lousy personal habits significantly contribute diseases causing.

**Aim** is to explore, recognize and analyze the frequency of GERD and dyspepsia diagnosing.

**Material and methods** In the cooperation of Serbian Medical Society and General practice section, the inquiry was made for patients with pain in upper abdominal part of the body. The research was done in Healthcare center "Vozdovac" in Belgrade, Serbia in the end of year 2010. Totally 200 random people participated in the inquiry, and the data was statistically processed.

**Results:** The inquiry like a research instrument is simple, available, contains explicit questions which detect symptoms and make fast diagnosing possible. 55% (110) of all examinees had some abdominal pains. 29% of 110 patients (31) had nausea in the last week. 26% had pyrosis, 26% had regurgitation and 19% had abdominal pains. All of the four symptoms had 14% (of 110 patients), 21% had three symptoms, 36% had two symptoms, and 29% had one symptom. Most of them used H2 blockaders and IPP, and 26% haven't used any medications. 50% used meds longer than 6 months, and 13% used for less than a week.

**Conclusions:** It has been proved that some of GERD and dyspepsia symptoms appear in 20-40% of population. Inquiry showed that recognizing symptoms in time and early diagnosing led to efficient treatment and better life of patients.

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**Flavonoids for the treatment of acute haemorrhoidal episodes***Garrido Oliveira A, Pinto Ferreira C, Almeida Santos C, Castro R*

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**Aims:** The hemorrhoidal disease is a common gastrointestinal disorder that results from prolapse through the anal canal, causing bleeding, pain and itching. Several treatments are available: conservative, pharmacological and surgical. Flavonoids increase the venous tone and lymphatic drainage, reducing capillary hypermeability. Despite widely used in chronic venous insufficiency, their efficacy in acute haemorrhoids is a matter of debate. The aim of this study was to evaluate the efficacy of flavonoids in the treatment of acute haemorrhoidal episodes.

**Material and methods:** Search for articles in Medline, UpToDate, National Guideline Clearinghouse, Cochrane Library, DARE, Bandolier, and TRIP Database, using the MeSH terms haemorrhoids and flavonoids. The search was limited to articles published between January 2000 and September 2010, in English, Portuguese and Spanish. The SORT (Strength of Recommendation Taxonomy) scale of the American Family Physician was applied to evaluate the level of evidence.

**Results:** Studies found that flavonoids in high doses for short periods decrease the duration and intensity of symptoms (bleeding, pain and itching) by 60%, as well the risk of complications. Prevention of relapse is shown in the short term, but is inconsistent in the long term. The use of topical and systemic anesthetics is lower in patients treated with flavonoids. They are well tolerated and safe in the treatment of acute hemorrhoidal disease.

**Conclusions:** Medical treatment with flavonoids is considered first-line treatment to control symptoms of acute hemorrhoids, allowing to optimize the resources available and to reserve instrumental therapies for recurrent or complicated situations. The available evidence indicates that flavonoids have a beneficial effect on acute haemorrhoidal episodes (Strength of Recommendation B). This is a useful therapy in

daily practice of family physicians.

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### Gastrointestinal Tract Perforation in Primary Health Care according to the Evaluation with CT

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**Aim and background:** To assess the value of computed tomography (CT), in the diagnosis of perforation of the gastrointestinal tract (GT).

**Material and methods:** Review of our records over a three year period showed that 35 patients with GT perforation had undergone CT with one week of surgery or endoscopy. There were 19 men and 16 women. The CT diagnosis of perforation was based on a) Direct findings: extraluminal air or gastrographin and b) Indirect findings: phlegmon around an appendicolith or bowel-related phlegmon centered on a radiopaque or foreign body.

**Results:** The level of perforation, in order according to organ system and number of patients was the a) Esophagus: 1. b) Stomach: 3. c) Duodenum: 6. d) Jejunum: 4. e) Ileum: 3. f) Appendix: 4. g) Colon: 14. In order of the causes of disease were a) Peptic ulcer: 5. b) Trauma: 2. c) Iatrogenic: 5. d) Foreign body: 3. e) Carcinoma: 6. f) Chron disease: 3. g) Appendicitis: 4. h) Diverticulitis: 7. There were 27 true positive and 8 false negative CT diagnosis.

**Conclusions:** CT is a valuable method in the diagnosis of GT perforation. The diagnosis can be established rapidly, without patient preparation and with a high degree of specificity.

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### An ultrasound approach to acute appendicitis

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**Objectives:** Aim of this study is to show the contribution and the reliability of sonography in the diagnosis of acute appendicitis in the emergency department of hospital Laiko.

**Materials and methods:** Eighty seven (87) patients (41 men and 46 women) from 14 to 86 years of age (mean age: 31.2) came to the emergency department of Laiko Hospital in the years 2008 and 2009 with a clinical suspicion of appendicitis.

**Results:** A final diagnosis was confirmed in 38 patients (24 men and 14 women), by surgical and histological examination, while a conservative treatment and follow up were recommended to 39 patients. Eight patients were diagnosed with a different medical condition, while reevaluation was recommended to two patients who were diagnosed with appendicitis through the clinical examination and the imaging methods (ultrasound and CT). Sonography enabled the visualization of the inflamed appendix in 35 patients (37.1% of the positive examined patients). The diagnosis was confirmed for 25 of them surgically and by

histological examination (75% of the positive ultrasound examinations). Out of the 10 false positive ultrasound examinations for appendicitis (25% of the positive examinations) four concerned inflammatory bowel disease and two concerned diverticulitis. Forty patients were negative for appendicitis through the ultrasound test (46.6% of the patients tested). Seven of those had a false negative result (11.3% of the negative examinations). Eight patients were diagnosed with a different medical condition (9% of the patients tested). In four of them free fluid in the pouch of Douglas was detected while the inflamed appendix could not be visualized through the ultrasound. Three of them had a surgically confirmed appendicitis.

**Results:** Sonography is a reliable and sensitive method in the diagnosis of acute appendicitis, as long as the body structure of the patients and their ability to cooperate with the doctor who performs the ultrasound are taken into consideration. Ultrasound examination can be a significant tool in the procedure of the differential diagnosis of abdominal pain; proper training of GPs is highly desirable.

### Health promotion and disease prevention

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#### Influenza vaccination coverage in primary health center personnel in La Rioja (Spain) during the 2009/10 Double Vaccine Campaign

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**Aims:** Prior to the 2009/2010 influenza vaccination campaign health authorities recommended double vaccination against the conventional influenza and the new pandemic influenza viruses. There was strong reluctance among health professionals and personnel about its convenience. To know the influenza vaccination coverage of both vaccines in Primary Health Center personnel in the La Rioja Autonomous Community during the 2009/10 campaign To find out the motives of their attitudes.

**Material and methods:** Collection of data through an anonymous questionnaire presented to each of the Primary Health Centers included in the study population, grouped in different categories. The descriptive analysis of variables was done by estimating means and proportions with their corresponding confidence intervals. Relationships between variables were evaluated using Chi-square tests.

**Results:** 69% of the staff took part in the study, 66.3% chose to receive the Conventional Influenza Vaccine, a higher rate than recorded in previous campaigns. However, only 34.7% got the vaccine against Pandemic Influenza. One third of the study population chose to receive both vaccines, one third only the conventional flu vaccine, and one third admitted that they had not received neither. As to the reasons for not being vaccinated, 14.3% do not consider Influenza a serious illness, 39.7% have doubts about the vaccine's safety and effectiveness, 46% do not know. Finally, 9.6% suffered ILI.

**Conclusions:** There is a lot of confusion among professionals. It is necessary to offer reliable information about the convenience of influenza vaccination in health care professionals based on solid scientific evidence. Once that information is available, the following questions should be addressed: Is Influenza a serious illness? Is the influenza

vaccination useful, sufficient, and appropriate? Does the previous flu vaccination protect against infection by new viral types and subtypes?

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### Sociodemographic characteristics and risk factors of patients admitted to the emergency service because of suicidal attempt

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**Aims:** Aim of this study is identify sociodemographic characteristics, suicidal substance and reasons of suicidal attempt.

**Material and methods:** Patients admitted to the emergency department were included in the study, 2004-2009. The files of 180 patients diagnosed suicid, were performed retrospectively

**Result:** The mean age of suicide attempters were 24.51 +/- 8.26 (14-66) years. While 43.9% (n = 79) of the patients were female, 56.1% (n = 101) were male. When marital status was evaluated; 58.3% (n = 105) of patients was single, 32.2% (n = 58) was married and 1.1% (n = 2) was widow. most of the patients were high school graduated (%41.7). Fortunately, all the patients, only 1 person had died (%0.6). Methyl alcohol(43.9%), drugs(26.1%), cologne (15%) were commonly used as substances abuse. Level of consciousness in 78.9 % (n=142) of the patients was good, 14.4% (n=26) was moderate and only 5.6% (n=10) of the patients was bad, after suicidal procedure. Although there was no psychological discomfort in the history of most patients (%53.9, n=97); depressive disorder, antisocial personality and psychotic disorder was found in others.

**Conclusion:** In recent datas, suicidal tendencies are increased in society. Physicians have to investigate the underlying causes of this situation and increase their attempts for the treatment. In this study; single, young, male, high school graduates are the most important risk factors for suicidal attempts. Although a small percentage of attempt suicides resulted with death, we must raise the awareness of public about suicid, as a family physicians.

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### Smoking habits in patients treated in family medicine teaching center Banja Luka, B&H

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**Aim:** To investigate frequency of current smokers, former smokers and non-smokers in patients treated in Family Medicine Educational Center (FMED) in Primary Health Care Center Banja Luka. To investigate the level of change of smoking status in a group of current smokers, to confirm a presence of associated chronic diseases in the group of total participants.

**Methods:** The study was conducted in FMED in Primary Health Care Center Banja Luka during the period November 15th - December 15th 2009. The patients were randomly surveyed in waiting-rooms every Monday and Wednesday in surveyed period. Information about smoking status, level of change of smoking status for current smokers, reasons for quit smoking for former smokers and presence of chronic diseases in group of total participants were collected in a self-created questionnaire.

**Results:** In the study participated 792 patients, 335(42.30%) male, and 457(57.70%) female, 118(14.90%) patients age 18-25, 573(72.35%) age 25-64 and 101(12.75%) patients older than 65 years. In the study group were 361(45.58%) current smokers, 191(24.12%) former smokers and 240 (30.30%) non-smokers. The majority of current smokers (51.80%) don't think to stop smoke, 35.73% think to stop with smoking during 6th month period, and only 12.47% patients were ready to stop smoke immediately. The most frequent reasons to quit smoking in the group of former smokers were: disease in 22.51% cases, doctors advice in 12.57% cases, advices by other persons in 10.47% cases and other reasons in 54.45% cases. The most frequent associated chronic diseases in the whole group were coronary artery disease, diabetes, COPD and malignant diseases.

**Conclusion/Discussion:** In the surveyed group about half of patients were current smokers and in this group even 54.45% don't think to stop smoke. The most important reasons for quit smoking in group of former smokers were disease and other personal reasons.

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### Oinez bizi-live walking: physical activity program for chronic patients in the Basque country

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**Aims:** Oinez-Bizi is a Program for the Promotion of Physical Activity for chronic patients in the Basque Country, using pedometers as motivation and follow-up tool and training Primary Care Health Professionals for the prescription of physical activity.

**Design and methods:** 1. Phase I: Diffusion , Recruitment and Health Professional Training - Training Plan: A 6 hour training workshop (1 doctor, 1nurse) in each Health Area (7 areas) , followed by a 3 hour workshop given by the couple to Health Professionals (600). 2. Phase II: Recruitment of the target population - Study Population: Sedentary and Chronic Patients - Recruitment: Patients were included in the program by doctors or nurses in the Health Centres - Intervention: Each patient had an EVALUATION on his practice of physical activity and their CAPACITY, PREFERENCES AND ATTITUDES towards the change using Prochaska-Di Clemente model . Patients in Preparation Attitude received a BRIEF ADVICE, a Pedometer and a LEAFLET with information about healthy physical activity. 3. - Phase III: Monitoring - Revisions in 3rd, 6th and 12th month to evaluate the progression and steps achieved.

**Results:** -Divulgative campaign: The program started in 2007 with a Popular Healthy Walk where more than 5.000 people participated, being 8.000 in 2008. -Adherence: Of the patients, 67.5% keep in the program within 3 months, 41%

within 6 months, 23.6% within a year. -Step by step:1620 patients started the program with an average of 4850 steps, in 3 months 7439 steps, in 6 months 8533 steps, after a year 9791steps.

**Conclusions:** -High participation of professionals and patients. -High acceptance of the pedometers by the patients. -Pedometers: good motivational tool. -High increase of the physical activity levels -Need of reinforcement of behaviour

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### An evidence-based clinical audit on the process of management of smoking cessation in a Public Primary Care Clinic in Hong Kong

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**Aim:** To evaluate the process performance of smoking cessation in a public primary care clinic. Design: Clinical audit. Subjects: All patients aged  $\geq 12$  attending the clinic within a 6-month period.

**Method:** A randomly selected sample of patients attended the clinic during the 6-month period were recruited. All smokers who were identified were recruited for further audit. 7 audit criteria were adopted after literature review [criterion 1- annual documentation of (a)smoking status and (b)no. of cigarettes smoked daily; criterion 2- annual assessment of smoker's motivation to quit; criterion 3- advice on smoking cessation annually; criterion 4- assistance on smoking cessation for (a)motivated and (b)non-motivated smokers; criterion 5- arrange follow up for motivated smokers; criterion 6- recommendation of nicotine replacement therapy for motivated adult smokers who smoke  $\geq 10$  cigarettes daily; criterion 7- correct ICPC coding of P17 Tobacco abuse]. Phase 1 data were collected from medical record review. Reasons for deficiencies of care were identified and changes were implemented. In phase 2 (6 months after implementation of changes), medical records were reviewed again. Performance of the 2 phases was compared.

**Results:** 3212 records were reviewed in both phases. There were 365 smokers in phase 1 and 385 smokers in phase 2. The majority of them were male (77.3% and 79.0 % respectively) and their mean age was 50. The performance of the 7 criteria was unsatisfactory and only criterion 1a reached the standard in phase 1. After implementation of changes, criteria 1a, 1b, 4a, 4b and 5 attained the set standards. There were improvements in all the criteria and the changes were statistically significant ( $p$ -value  $< 0.05$ ).

**Conclusion:** The audit facilitated our staff to identify the deficiencies of the clinic and to find methods to tackle. It is effective in improving the process of care in smoking cessation and there is significant positive impact on patient care.

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### Influenza vaccination campaign in a health center

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**Purpose:** We have started Influenza vaccination campaign, following the criteria and protocols of the Health Department of the Valencia Health Agency and World Health Organization. It is an analytical observational study.

**Design and methods:** We have in our charge a community of 7.324 patients. We started the vaccination in October and finished on late December. For it we had an assistance circuit in which are involved 2 guards, 2 administrative, 6 nurses, 5 Family doctors and 2 pediatricians. The citation mode was: 1) A patient's own request checking if they were included in the list of people at risk facilitated by the Valencia Health Agency. 2) According to the judgment of the physician in question, scoring the convenience of vaccination in the Abucasis software.

**Results:** During the campaign were administrated 1.308 doses of influenza vaccine, reaching vaccination coverage of 67% of the population at risk, the remaining 33% had refused to be vaccinated.

**Conclusions:** The vaccinated risk groups are distributed as follows: - Group of cardiovascular/ respiratory chronic patients: 727. - Chronic patients in closed institution (Geriatric): 32. - Renal patients, immunosuppressed, obese: 144. - Patients over 60 years not included in other risk groups: 199. - Children in chronic treatment with salicylates: 0 - Pregnant: 4. - Health professionals: 21 - Professionals that care of risk groups: 26 - People of special public service: 3. - People not included in any risk group: 151. - Poultry workers: 1 - In the under 15 years, vaccines were 17 men and 5 women. - In the group from 15 to 60 years, vaccines were 136 men and 171 women. - In the group from 60-64 years, vaccines were 54 men and 78 women. - In the group of over 65 years, vaccines were 354 men and 493 women. In summary, this center is one of the Health Centers of Valencia Community where better coverage rate of immunization was obtained.

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### Malaria prophylaxis of travellers to endemic areas

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**Aim:** Giving a recommendation of malaria prophylaxis for travellers and reducing importation risk.

**Method:** Includes research data available on the Network and systematization.

**Results:** Problems in chemoprophylaxis: parasite resistance to antimalarials, mosquitoes resistance to antimalarials, there is no vaccine, there are no antimalarials which guarantee that you will not get sick, there is no any without side effects (incidence of side effects increases with length of use). Prophylaxis protocols: ATOVAQUONE+PROGUANIL 250mg+100mg a day, started two days before departure, during their stay and after their return. Recommendations in the areas of falciparum malaria who is resistance to chloroquine. Contraindications: pregnancy, lactation. CHLOROQUINE 300mg a week in a single dose or 600mg per week divided into 6 daily doses and the day break; the area without resistance. Contraindications: epilepsy, psoriasis. CHLOROQUINE+PROGUANIL 100mg +200mg one tablet per day, started two days before departure, during their stay and four weeks after return; for area with a range of resistance to chloroquine. Contraindication: epilepsy,

psoriasis. DOXYCYCLINE 100mg per day, started two days before departure, during their stay and four weeks after return; for falciparum malaria resistant to chloroquine. Contraindications: pregnancy, lactation. MEFLOQUINE 250mg per week, two or three weeks before departure, during their stay and four weeks after return; for area of falciparum malaria resistant to chloroquine. Contraindications: epilepsy, the first trimester of pregnancy, lactation, diving. PROGUANIL Use only in combination with chloroquine.

**Conclusion:** There are various antimalarial drugs and prophylaxis protocols, and which one will be chosen, depends on: - the target area (endemic area), there are lists of countries and territories - the most common type of malaria in the target area - the level of resistance to antimalarials in the target area - the health status of passengers.

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### Challenges in prevention of mental disorders

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**Aims:** To analyze representation and structure of mental disorders so that prevention can be planned.

**Material and methods:** Retrospective analytical study of examined patients in four months period at my ambulance.

**Results:** 12116 patients were examined. 4,7% has some kind of mental health disorder : 1,75% - dementia, 2,1% - addiction disease, 6,8% - affective disorder, 15% - schizophrenic disorders, 21,6% - psychosis, 36% - depressive disorders, 15% - anxious disorders, 1,2% - mental retardation. Mental disorders are significantly present along with depression which takes up highest percent ( around 36% ). High percent of heavy disorders is troublesome : psychosis and schizophrenia. Dementia is very complex problem as well as addiction diseases. Full responsibility of doctor is needed to :plan prevention, ease the suffering of patient, prevent tragically events for patient, family or society and to cure and rehabilitate patient.

**Conclusion:** Depressive disorders are priority of prevention because of their representation. Variety of mental disorders requests singular approach in prevention ( young people, work active, old people). Plan continuous education of doctors and teamwork. Spend more time communicating with patient. Engage broader society - media in prevention.

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### The role of the flushing response in the relationship between alcohol consumption and insulin resistance

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**Aims:** Facial flushing responses to drinking, due to intolerance to alcohol, are observed in some people, especially Asians. This study examined the role of flushing responses in the relationship between alcohol consumption and insulin resistance (IR).

**Material and methods:** Participants in this cross-sectional analysis included 624 Korean men (80 non-drinkers, 306 non-flushing drinkers, and 238 flushing drinkers) who were free of cardiovascular disease and diabetes. Data on the flushing response to drinking and alcohol consumption were collected from medical records. IR was estimated using the Homeostasis Model Assessment (HOMAIR). On the basis of comparisons with non-drinkers, the risk of IR according to the quantity of alcohol consumed per week was analyzed among non-flushers and flushers.

**Results:** After adjusting for age, exercise status, smoking status, BMI, waist circumference, blood pressure, high-density lipoprotein cholesterol, and triglycerides using a logistic regression model, we found a low risk of IR among non-flushers who consumed less than 4 drinks (1 drink = 14 g of alcohol) per week (OR 0.3). In contrast, a higher risk of IR was associated with non-flushers who consumed > 20 drinks per week (OR 3.5). On the other hand, only a higher risk of IR was associated with flushers who consumed > 12 drinks per week (> 12 to 20 drinks: OR 4.7; > 20 drinks: OR 3.5).

**Conclusions:** The amount of drinking associated with the development of IR in flushers was lower than in non-flushers. Additionally, no positive effect of moderate drinking on IR was observed in flushers. The findings support acetaldehyde-derived mechanisms in the development of alcohol-related IR.

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### Relationship between risk factors for cervical cancer and pap smear testing in women attended in a health center

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**Aims:** To calculate the percentage of women with risk factors for cervical cancer. To determine how many women had a papanicolaou smear test and differences among women with risk factors and who didn't have. To know whether there is relationship between the degree of women's knowledge and their screening.

**Material and methods:** Observational, descriptive and transversal study. Random sample of 181 women aged 18 to 65 years old attended in metropolitan health center. By anonymous and self-completed survey, epidemiological data and risk factors for cervical cancer were collected (age at first intercourse, number of vaginal deliveries, number of sexual partners, smoking, oral contraceptive use, immunosuppressive diseases or treatments). Women were also asked if they knew what was papanicolaou test and their explanation. Medical records were reviewed to find out when they had made the most recent test. Statistical analysis: X2 test.

**Results:** Most of women attended in Primary Care had done a pap testing (92.8%), with no significant differences between women with risk factors (94%) and women without them (91,9%); resulting  $p > 0,05$ . The 32% of women had one or more risk factors. Surprising that the 5,2% of women at high risk had never done a pap test and a 12.1% had it done for over five years. Regard to knowledge, the 20.4% didn't know what is a pap test, with no significant differences between women who had a pap test (54,5% answered correctly) and women who didn't have it (40% answered correctly); with

p>0,05.

**Conclusions:** Primary Care Physicians would detect women with risk factors for cervical cancer to ensure that they are done a pap test. It is also our duty improving women's knowledge about prevention activities for women health that have demonstrated scientific evidence in daily practice.

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#### Inscar pratexpert - Comunitary intervention in chronic cardiac failure on a network expert patients

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**Aims:** Heart failure is the leading cause of hospitalization in people over 65 years and the third leading cause of cardiovascular death in Spain, causing 5% of hospital admissions. The Institut Catala Salut, as a starting point towards a new model of clinical management, project promotes the implementation of expert patients in chronic diseases such as heart failure. El Prat geographical organization facilitates networking. Objective: To reduce the morbimortality for acute exacerbation of chronic cardiac failure by improving understanding of the disease by patients by transmitting the knowledge of expert patients to other patients by promoting changes in habits that improve their quality of life and coping with the disease.

**Material and methods:** Community Intervention Project network (multidisciplinary and multicentric). Selecting volunteers to be trained as expert patients in groups (maximum 10), giving 30-minute sessions for 2.5 months. This will transmit information to other patients. Will conduct quarterly reviews at the completion evaluating indicators of clinical improvement (relapses, reconsultations emergency hospitalizations).

**Applicability of the expected results:** Relevance in terms of improved quality of life and reduced direct and indirect costs of implementing clinical management resources on a network. Ethical considerations: Voluntary informed consent was obtained. Ensuring the confidentiality of data, work with databases decoupled computer sending data containing sensitive data be encrypted and password. The information available is declared the Catalan Registry Database declaring people have access to confidential material and the degree of access. This study does not represent any risk to patients. Patient is informed of the results for their own benefit.

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#### Ankle-Brachial Index as a potential screening tool for lower Extremity Arterial Disease in asymptomatic patients with Diabetes Mellitus. A year study.

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**Aim:** Lower Extremity Arterial Disease (LEAD) is common and under diagnosed in patients with Diabetes Mellitus (DM) and is associated with higher total mortality. The aim of the study is to screen LEAD in primary care patients using Ankle-Brachial Index (ABI).

**Material and method:** We studied specific population group visited Semolina Private Practice during 2010. 68 male patients aged between 50-60 years old with no previous history of LEAD make up the above population group. 44 patients with Diabetes Mellitus resemble group A. 24 patients with no medical history resemble group B. ABI was calculated in both groups.

**Results:** Concerning group A 42 patients were screened with ABI < 0,9 and only 2 patients were found to have ABI > 0,9. Every patient of group B were found to have ABI > 0,9. Both groups then scanned with Vascular ultrasound in order to assess a possible LEAD. 40 patients of group A revealed findings of Lower Extremity Arterial Disease, all the rest patients in both groups were free of Lower Extremity Arterial Disease.

**Conclusion:** The use of Ankle-Brachial Index is useful as screening tool for Lower Extremity Arterial Disease in asymptomatic patients with Diabetes Mellitus, despite the fact that ABI can be falsely elevated in diabetic patients. All primary care physicians should be familiar with the use of ABI as screening tool since their clinical efficiency will be improved.

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#### Ankle-brachial index as a potential screening tool for Diabetic Retinopathy in patients with Diabetes Mellitus type 2. a year study

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**Aim:** The aim of the study is to screen Diabetic Retinopathy in primary care patients using Ankle-Brachial Index (ABI).

**Material and method:** We studied specific population group visited Sepolia Private Practice during 2010. 68 male patients aged between 50-60 years old make up the above population group. 44 patients with Diabetes Mellitus type 2 and no clinical finding in routine retinoscopy (1 " year ago) resemble group A.

**Results:** 24 patients with no medical history resemble group B. ABI was calculated in both groups. Concerning group A 42 patients were screened with ABI < 0,9 and only 2 patients were found to have ABI > 0,9. Every patient of group B were



found to have ABI > 0,9. In both groups was performed retinoscopy with indirect ophthalmoscope. 18 patients of group A revealed findings of Early Nonproliferative Diabetic Retinopathy, all the rest patients in both groups were free of clinical findings in retinoscopy.

**Conclusion:** The use of Ankle-Brachial Index is not useful as screening tool for Diabetic Retinopathy. It is well known that the progress of Diabetic Retinopathy is associated with the intensity of glycemic control and the time course of Diabetes Mellitus type 2, as the DCCT, EDIC and UKPDS studies have revealed.

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### The influence of smoking on incidence of the cardiovascular and malignant diseases

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**Objective:** To assess the prevalence of smokers and the influence of smoking on occurrence of the cardiovascular and malignant diseases in patients of one Family Health Team during a five-year period.

**Methods:** The study was carried out on the basis of analysis of the data collected among 2720 citizens registered with one Family Health Team in the Primary Health Care Center in Laktasi (Bosnia & Herzegovina) during the period 2005 - 2010. Data were collected from the patients Electronic Medical Records, Registry of Patients with Risk Factors for the Mass Non-infectious and Malignant Diseases and through voluntary questionnaire.

**Results:** During the survey period 466 (17.2) examinees had the status of the current smokers -269 (57.7%) of the male gender and 197 (42.3%) of the female gender. The majority of the active smokers were between 31 and 50 years old and 88 (18.8%) smoked 30-40 cigarettes per day for 20 or more years. More than a half of the active smokers - 254 (54.5%) had university degree. During the study period 87 (18.6%) of the smokers quit smoking while most of them (41.3%) stated that the reason for quitting smoking was disease. The analysis of the acquired results showed that 43.9% of the persons with cardiovascular diseases and 65.2% of the person with malignant diseases were exposed to tobacco smoke over a long period of time as active smokers or non-smokers exposed to passive smoking.

**Conclusion:** The results of this study indicated the significant correlation between the exposure to tobacco smoke and incidence of the cardiovascular and malignant diseases. There are no significant differences between the smoker prevalence in our study and the results of the other similar studies. The evident correlation between smoking and incidence of the cardiovascular and malignant diseases indicates the importance of prevention and everyday work on counseling how to break the smoking habit in the family physicians work.

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### Evaluation and management of patients with urinary incontinence in a rural area of Crete- an attempt for intervention by the primary care physicians

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**Aim:** Urinary incontinence (UI) is a prevalent cross-cultural condition which leads to embarrassment and impaired social and occupational functioning. Patients hide UI from their families and their physicians. The aim was to detect patients with UI in a rural population, try to rule out transient reversible causes, and draw the GPs attention to this issue.

**Material and methods:** 87 patients (25 M, 62 F) aged 50-80 years old consisted the population of our study that lasted a year. 14% presented complaining of UI, the rest were detected with a screening question "How often do you leak urine". Reversible causes that are extrinsic to the bladder, sphincter, and neurogenic regulation were considered, like Drugs (diuretics, medications with autonomic effects), Infections (urinary tract), Atrophic vaginitis, Psychiatric/central nervous system (depression, dementia) Endocrine/metabolic (hyperglycemia, hypercalcemia), Restricted mobility (neurologic or musculoskeletal problems), Stool impaction ("DIAPERS"). Simple interventions were made such as bladder training and anticholinergic treatment.

**Results:** Diuretics accounted for 71% M and 56% F. Infections were accused for UI mostly in women aged >58. 22% M had atrophic vaginitis, 59% of patients had a psychiatric disorder, while 19% suffered from hyperglycemia. 78% of patients with a fairly high frequency of UI did not view UI as abnormal or a serious medical condition. Treatment with anticholinergic drugs relieved symptoms and enhanced the quality of everyday life. 12% were advised for surgical management.

**Conclusions:** UI is a common condition, especially in women, and affects the well-being of affected individuals and their families. Attempts should be made aiming at increasing screening and management of UI by primary care physicians. The lack of information and education keep patients far from seeking medical advice, especially in rural and remote areas. GPs must be alert to detect and treat UI, since there are causes fully reversible.

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### Constitutional-biological and genealogical cardiovascular risk factors in patients with biliary dysfunction.

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Research aim was to explore the diagnostic and prognostic value of cardiovascular risk (CVR) factors in biliary dysfunctions (BD).

**Materials and methods.** Were examined 84 adults (32,6 +/- 3,9) with (BD): 42 patients with CVR (group I) determined by "SCORE" method and 42 patients without CVR (group II). Among the constitutional-biological factors of CVR were investigated: patient's constitutional type, the presence of anomalies in somatotype, the height-weight Kettle index, the waist and hip circumference by defining the waist/hip ratio. The influence of heredity burdened by cardio-vascular

disease (CVD), chronic disease of gastrointestinal tract (CDGIT) and the reduction of a non-specific resistance (frequent acute respiratory viral diseases). The distribution of factors allowed to determine the diagnostic value, prognostic significance and impact force of factors.

**Results:** According to data received while studying the frequency of certain factors the CVR prediction algorithm in patients with BD was determined. The algorithm has the form of a table that includes assessment indicators, prognostic factors and the scale of assessment result prediction. Relevant patometric factors should be identified for each indicator. After reaching the threshold sum of coefficients CVR should be determined. The algorithm not only takes into account existing indicators, but also minimizes the number of predictive technology steps by applying the most informative CVR criteria.

**Conclusion:** To monitor CVR at the level of a family doctor an algorithm was worked out that takes into account possible indicators identified in patients with BD. The most informative risk indicators are: the index ratio waist/hip, the height-weight index Kettle, the heredity burdened by CDGIT and CVD. Prospects for further research relate to the necessity of a further study of clinical, anamnestic, personal, behavioral factors of CVR in patients with BD and to the study of common mechanisms of this risk realization.

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#### How do French GP's deliver the FOBT : a qualitative study

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**Aims:** Colorectal cancer has the third frequency rate in France with 38 250 cases every year, and is also the second cause of mortality by cancer. As in many European countries, a gait fecal occult blood test (gFOBT) is used for the screening. Mass screening was gradually extended to the whole country from 2002 to 2008. Patients from 50 to 74 receive an invitation every two years, urging them to ask their GP for the test. During this consultation, GPs first identify high risk patients and exclude them from mass screening. For others, GPs deliver the gFOBT and explain how to perform it. They are also supposed to explain the meanings and consequences of the results. The low rate of participation allows us to ask questions about the real content of this consultation and its consequences on the patients adherence to achieve the test. Research question: What is the core content of the consultation when French GPs deliver the FOBT?

**Method:** Fifteen GPs were asked to audiorecord the four next consultations while delivering the FOBT. A purposeful sampling of the GPs was done to reach as much diversity as possible about age, sex, place of practice and experience of the mass screening. The analysis was done by two researchers with Nvivo 8 and explored content, conversation and communication between the GP and his patient. The categorization was done with a predefined framework.

**Results:** Only nine GPs took part at the study. The content analysis identified that GPs had stereotyped consultations. Explanations were mostly about technical aspects of the test. Only a few GPs had a patient centered approach asking patients about their knowledge and their understanding.

**Conclusions:** The analysis of the screening consultation

could deliver relevant information to improve and build a trial, using this information, and assessing its influence on GPs performance.

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#### Vitamin D: knowledge of its beneficial actions, deficiency risk groups and management in primary health care.

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**Aims and background:** Vitamin D(VD) is essential for bone metabolism. It has an important immunoregulatory action implicated in prevention of some types of cancer, cardiovascular, autoimmune diseases. Hypovitaminosis D(HVD) is a common problem in Europe. Objective: to determine the degree of knowledge about VD in primary health care sanitary workers(SW).

**Material and methods:** Design: Cross-sectional observational study through surveys sent by e-mail. Scope: rural and urban Primary Health Centers (PHC) in two regions. Subjects: SW from all PHC of these areas. Variables of the study: demographic, health care variables; degree of knowledge about VD: groups of population at risk of HVD, preventive actions to avoid HVD.

**Results:** From 2100 surveys, 784 answered (37.1%). 158(20.1%) men, 627(79.9) women. Average age: 47(SD 9,7). Main phototype III: 523 (66.6%). 393 (50%) with 1500 to 2000 patients. 511 (66%) knew the role of VD in bone metabolism; 19 (2,4%), its immunomodulatory effect and protective role against tumors; 6 (0,8%) knew effect on metabolic syndrome. 431(54.9%) believed that photoprotection produces no HVD, 270 (34.4%) didn't know it. 577(73.6%) checked blood VD levels to patients never or almost never; 112(14.3%) in patients with osteoporosis (OP). 490(62.4%) didn't know if HVD is common in population, 187(23.8%) answered no, 8.5% yes. Among these, consider that HVD occurs in elderly people(60%), 21% in general population, 14% in young people, 9% in institutionalized people, 8% in immigrants, 3% in poor people. 23% give advice to avoid HVD, 42% give advice only to patients with OP and 35% never. Main councils: sun exposure 132(16,8%); consume of foods rich in VD 67(8,5%), 1.9%(15) VD supplements.

**Conclusions:** Knowledge of SW about VD effects is limited. Level detection is very low. Actions for avoiding HVD are poor and inadequate. Training strategies are needed to update VD knowledge in SW, in order to guarantee a healthy VD status in population.

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#### Incidence of obesity of the young and registration of the progression of BMI over time

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**Aim:** Registration of incidence of obesity of the young and

study of BMI in correlation to demographic and socioeconomic factors over time.

**Material and method:** The study involved 465 young adults (218 men, 247 women) aged 18-29 years. Their anthropometric parameters were registered (height, BW, waist circumference etc.), demographic data were recorded (occupational history, educational, social and economic status) and their biochemical and lipid panel were investigated (Glu, TG, HDL-cholesterol, LDL-cholesterol, total cholesterol etc.). The first registration was done in 1999 (164 subjects), the second in 2003 (155 subjects) and the third in 2007 (146 subjects).

**Results:** In 1999 median BMI was 24.4 Kg/m<sup>2</sup>, in 2003 24.9 Kg/m<sup>2</sup>, in 2007 25.2 Kg/m<sup>2</sup>. The incidence of overweight and obese according to WHO classification was 26% and 8% respectively in 1999, 29% and 12% in 2003 and 31% and 13% in 2007. Hypercholesterolemia (200mg/dl) and hypertriglyceridemia (>150mg/dl) were diagnosed in 13.2% and 6.2% respectively in 1999 and in 14.8% and 7.6% in 2007. Although in the last two surveys a negative correlation between obesity and educational status came up, there was no relevant statistical correlation between obesity and place of residence or socio-economic status, in neither of the three clinical trials.

**Conclusion:** It is demonstrated that the last few years there is a significant progressive increase at BMI and a high incidence of overweight and obese young adults. The only parameter that influences the expansion of the problem of obesity is the educational status which emphasizes the need for continuous and intense preventing campaign.

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#### Free smoking cessation: a new opportunity for smoking

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**Objective:** To analyze the characteristics of the smoker who leaves the tobacco to a free treatment program in primary care.

**Material and method:** Design: Cross sectional study. SUBJECTS: All patients included in the free smoking cessation program in a health center (N=61). EXCLUSION CRITERIA: not wanting to participate in the study included in the agenda least 15 days. MATERIAL AND METHODS: Data obtained from electronic medical history and collection sheet designed for the study. Variables: Age, sex, year-start, neglect, attempts, reason and result, pack-years, Fagestrom Test, Test Richmond, prescribed treatment and side effects. Statistical analysis: Description variables. Chi-square, t-test, ANOVA.

**Results:** 55% men. Age: 43.52 (+/- 9.78) years. 76.4% had attempted quitting 3 times and do it for health (75%). Age of onset: 17.5 (+/- 4.87) years and a consumption of 30.32 packs/year, while women consumed less (p = 0.041) Fagestrom Test: 6.19 (moderate dependence). Richmond Test: 8.94 (high motivation). 68.4% in oral treatment. 5% only counseling. If the nicotine-patch treatment are the main reason is neglect of health (p = 0.0001) and low dependency (p = 0.006). 58.1% have left the consumer. Relapse of 11.7% for digestive problems (p = 0.026), especially with bupropion (p = 0.005), but do not leave the consumer if the treatment is varenicline (p = 0.001).

**Conclusions:** 1.- The patient who wants to leave the

tobacco is middle-aged man with many years of consumption, average nicotine dependence and high motivation. 2.- The main reason is health. 3.- The most common treatment varenicline. 4.- More than half have abandoned the use.

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#### The relationship between the levels of folate, vitamin B-12, B-6 and homocysteine among young women who are smokers and never smokers

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**Aim and background:** We aimed to evaluate the relation between the smoking status and the serum levels of folate, vitamin B12, vitamin B6 and homocysteine (tHcy) in smoker and never smoker women in fertile period in this study.

**Material and method:** A cross-sectional study of 125 smoker and 125 non-smoker healthy women who were 18-29 years old was performed and two groups were similar for age, height and weight. Serum folate, vitamin B12, vitamin B6 and homocysteine levels were measured with chemiluminescent method by commercially available reagents. The information about exposure to tobacco smoke and socio-demographic status was obtained by a questionnaire. Independent t-test (mean, +/- Std error), ANOVA and chi-squared tests (Chi<sup>2</sup>) were used for statistical evaluation of the data. The results are presented as mean +/- SD, and p<0.05 is considered as statistically significant.

**Results:** Serum folate and vitamin B12 concentrations were measured as 11.11 +/- 4.15 and 11.75 +/- 5.00 nmol/L in smoker and never smoker women and vitamin B12 levels were 317.13 +/- 9.91, 337.28 +/- 9.99 pmol/L, respectively. They were similar in both groups (p>0.05). Vitamin B6 levels were significantly lower in smoker women compared to the never smokers and 10.31 +/- 0.78 and 13.09 +/- 0.71 ng/mL (p=0.009). Homocysteine concentrations were measured as 11.29 +/- 0.29 and 11.09 +/- 0.31 L/mol/L in smoker and never smoker women respectively (p>0.05). Folate and vitamin B12 levels were inversely correlated with smoking amount in smokers (1-10 cigarettes/day) (n=69) and (>=11 cigarettes/day) (n=56) (p>0.05), however tHcy levels were positively correlated with smoking status (p>0.05). Vitamin B6 concentrations were significantly lower in smokers with >=11 cigarettes/day compared to the never smokers and were measured as 8.77 +/- 0.40 ng/mL and 13.09 +/- 0.71 ng/mL, respectively (p=0.004).

**Conclusions:** We suggest that smoking has unfavorable effects on folate, vitamin B12, vitamin B6 and homocysteine and the related metabolic pathways on women in fertile period due to our findings indicating the significant relation between smoking status and their concentrations. Although vitamin B6 seems to be more prone to smoking because its concentrations are significantly lower in smokers than never smokers.

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#### The frequency of risk factors for cardiovascular disease in working population

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**Background:** Cardiovascular diseases, such as myocardial infarction, angina pectoris, atherosclerosis and stroke, are the major causes of mortality worldwide. Their consequences affect also younger, working population, thus impoverishing the individual and the community. The main risk factors for cardiovascular diseases are high blood pressure, cholesterol, diabetes, obesity, smoking, age and gender. The secondary risk factors include depression and excessive alcohol consumption.

**Aim:** Define the presence of risk factors in working population and the importance of preventing them.

**Methods:** Randomly selected 150 persons (79 males and 71 females), aged 22-64 y., were interviewed at their working places. The questionnaire consists of questions about smoking, height, weight, physical activity, AUDIT C test of alcohol consumption and presence of diseases such as hypertension, diabetes mellitus and depression. Results Out of 150 interviewed persons, 133 (89%) had risk factors. There were 52 persons (39%) with one risk factor, 56 (42.1%) with two and 25 (18.8%) with three and more. Overweight was found in 78 persons (52%), and among them 18 (12%) had obesity. There were 51 smokers (34%), while hazardous and harmful alcohol consumption was detected in 45 persons (30%). Hypertension was found in 20 interviewees (13%), among them 15 (75%) were taking antihypertensive drugs. Diabetes mellitus was registered in 6 (4%) and depression in 4 (3%) persons. 80 (53%) of interviewees reported physical activity of some kind.

**Conclusion:** According to the results of the survey, risk factors are present in high percentages among the investigated population. It is necessary to intensify prevention activities and improve the level of health knowledge among working population.

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#### Premenstrual Syndrome and Depressive Symptoms among Fertile Age Young Women who are Smokers and Never Smokers

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**Aim:** We aimed to investigate the relation between premenstrual period and symptoms of depression and smoking status among fertile age young women.

**Material and method:** A cross-sectional study of 125 smoker and 125 never smoker healthy women aged 18-29 years. Both groups were similar for age, height and weight. The information about exposure to tobacco smoke and socio-demographic status was established by a questionnaire. Beck Depression Inventory (BDI) was performed to assess depression level. Additionally, these girls completed the premenstrual syndrome evaluation form (PMSEF). Statistical analysis was performed for evaluation of the data. Chi-square test was used and Odds ratio was calculated.

**Results:** The mean age of the participants was 22.03 +/- 1.93 years. Mean amount of smoking was 13.06 +/- 7.01 (cigarettes/day). Premenstrual syndrome score was significantly higher in smokers than never smokers (2.59 +/- 7.40, 2.13 +/- 6.71, respectively) (p=0.000). BDI score of

smokers was significantly higher than never smokers (14.31+/-0.90, 8.52+/-0.55, respectively) (p=0.000). PMS prevalence was higher in smokers compared to the never smokers (78.4% to 55.2%) (p=0.000). Depression symptoms are more frequent in smokers compared to the never smokers (36.8% to 11.2%) (p=0.000). Although prevalence of PMS among current smokers was approximately three times higher than never smokers (OR, 95% CI; 2.946 (1.695-5.121) (p=0.000). Depressive symptoms among the smoker women were approximately five times higher than never smokers (OR, 95% CI; 4.617 (2.376-8.970) (p=0.000).

**Conclusions:** Smoking is a major risk factor for premenstrual period and depression symptoms among fertile age young women. Approaches for prevention against beginning to smoke and motivation to give up smoking should be carried on especially in young women.

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#### FRAX: Assessment of risk of fracture in General Practice

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**Aims:** To predict the risk of vertebral fracture of our patients in order to valorate the suitability of treatment.

**Material and methods:** It is a descriptive, transversal, observational and retrospective study. Randomly selected 140 patients that came to our office for any other reason. The FRAX values the following risk factors: age, gender, weight, height, previous fracture, fathers hip fracture, smoker, steroids treatment, rheumatoid arthritis, secondary osteoporosis, alcohol consumption and femoral neck densitometry.

**Results:** 94, 14% are women and the 50, 0% is older than 70 years. 17, 74% of the subjects weight between 50-60 kilos, up to 53, 57% subjects weight more than 70 kilos. 77, 14% height between 150-160 cm. Only 26, 23% have a previous fracture but 90, 71 of their parents had none. Only 6, 43% of the subjects were smokers and 15, 72% had a continuous use of steroids for other reasons (for example 4, 29% had rheumatoid arthritis). Up to 9, 29 % were said to have secondary osteoporosis. 98, 57% were abstemious. 48, 57% had femoral neck densitometry done. The 48, 57% had a risk of mayor fracture in the next 10 years under 10% but 14, 28% had a risk over 20%. 47, 86% of the subjects have a risk hip fracture in the next 10 years according to the FRAX.

**Conclusions:** The FRAX test is an useful method in General Practice to assess the risk of fracture in 10 years time combining clinical risk factors with or without the densitometry.

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#### Adequate nutrition principles for the prevention of chronic diseases

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**Aim:** Fifteen years ago, diets rich in complex carbohydrates, dietary fibres and monounsaturated fats, and poor in saturated fats of animal origin were elaborated in the Nutrition and Diabetes Prevention Unit.

**Material and method:** The diets were tested through their satisfactory application during many years in obese persons and patients with metabolic syndrome, prediabetes, diabetes and other chronic complications. Diets were fundamentally based on Mediterranean diet for its cardioprotective properties. There are eight individually adjusted diets, different in caloric intake: from low-caloric for weight reduction to high-caloric for children and sportsmen. Food substitution tables were added for the replacement and combined with food. More than half of calories from fats belong to monounsaturated fats, reduces triglycerides, cholesterol, decreases blood pressure, insulin resistance, thrombotic and inflammatory disorders. Abundant intake of fruits, vegetables and cereals rich in complex carbohydrates and dietary fibres contributes to reduction of body weight, regulation of lipids and blood glucose and prevents atherosclerosis and vascular complications. Meals should be variable and composed of plenty of fruits, vegetables, soups, salads, fresh herbs, garlic. Butter and margarine should be replaced with cold pressed olive oil. Low-fat cheeses and yogurt should be consumed. Whole-wheat bread, rye bread, corn bread, durum flour pastas, integral rice, lentils, beans, full grain cereals should be reduced, while fish and poultry should be consumed twice a week.

**Results:** Personal experience resulting from endocrinological practice shows that an individually adjustment to Mediterranean diet has statistically significant positive effects on body mass index, reduction of visceral obesity, insulin resistance, level of lipids in blood, LDL/HDL cholesterol ratio and blood pressure.

**Conclusion:** By correcting those factors, we highly contribute to prevention of cardiovascular diseases, in the first place angina pectoris, myocardial infarction, stroke and gangrene.

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#### Knowledge, habits and attitudes of primary care health sanitary workers in the prevention of skin cancer

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**Aims:** To determine the degree of knowledge, habits and attitudes of primary care health sanitary workers (SW) in the prevention of skin cancer (CK).

**Material and methods:** Design: Cross-sectional observational study through surveys sent by e-mail. Scope of study: rural and urban Primary Health Centers. Subjects: SW of 2 main capitals and towns from 2 regions. Actions and interventions: There were collected demographic, health care variables and the habits, degree of knowledge and attitudes in the prevention of SK.

**Results:** There were sent 2100 surveys, a total of 784 responses. 158 (20.1%) men, 627 (79.9%) women. Mean age: 47 + -9.7 years. 320 (40, 8%) were family physicians, 352 (44, 8%) family nurses, 45 (5.7%) pediatricians, 67

(8.5%) pediatric nurses. Most of them (393, 50%) with 1500 to 2000 patients. 84(10.7%) were tutors in medicine. 523 (66.6%) with phototype III. 23 (2.9%) didn't know it. 400 (51%) had burns in childhood and youth, 287 (36.6%) occasionally. Use of sunscreen (SC): 345 (42.9%) when they go to beach or pool, 50 (6.4%) each time they leave home. Protection index: 15 to 30 in 358 cases (45.6%) and <30 in 345 (43.9%). 587 (74.8%) don't know what oral SC are, 137 (17.5%) know but don't use. 459 (58.5%) like to be brown, the rest doesn't care (296, 37.7%) or dislike (27, 3.4%). 111 (14.1%) don't use SC when they are brown. 604 (76.9%) were intentionally exposed to the sun in summer. 471 (60.6%) have not made any session of UVA, 193 (24.6%) less than 10 sessions. 86.6% have no family history of SK. 371 (47.3%) perform skin self-exam. 60% have 5 to 10 minutes of consultation. 536 (68%) give tips of SK prevention, 243 (32%) do not. Most (87, 11.1%) due to lack of knowledge, of time (67, 8.5%), because it doesn't appear in clinical guidelines (53, 6.8%) or because it doesn't seem important (3, 0.2%). 37% of those who make screening, do it in patient at high risk, 8.8% when patients ask for it or 19.9% usually, with other preventive activities. 94.4% (741) have not helped in community-based prevention campaigns.

**Conclusions:** Habits of SW in the prevention of SK should be improved. Training strategies are needed to improve both knowledge and the activities of primary and secondary prevention of SK.

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#### Influenza vaccination coverage in patients at risk

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Flu vaccination is directed, among others, persons with conditions that increase the risk of suffering flu complications. Usually coverage cannot be calculated in these groups because they lack adequate denominators. The aim of this study is to analyze the vaccination coverage against seasonal influenza in the 2010/11 season in disease risk groups under 60 year We have been estimated vaccine coverage (and the confidence interval 95%) in patients with cardiovascular or respiratory disease (A1) and in patients with kidney disease, diabetics, immunosuppressed or morbid obesity (B1). The analysis was performed by gender and two age groups (0-14 and 15-59). The data of vaccinated individuals were obtained from the Vaccine Information System. The denominators were obtained from coded diagnoses recorded in the Ambulatory Information System in primary care. The coverage estimated (CI 95%) in group A1 was 22,3 % (21,8-22,7) for male and 21,7 (21,2-22,2) in female in 0-14 years; 31,1 (30,8-31,4) in male and 33,1 (32,8-33,5) in female in 15-59 years. In group B1 de overages were for the same groups 4,8 (4,4-5,2), 5,6 (5,1-6,1), 11,9 (11,7-12,1) and 7,0 (6,9-7,2) All results are low, being more elevated in A1 than in B1 and in adults than in children. Gender differences are significant only in B1 adults, where fewer women are vaccinated. The results show that flu vaccination associated with risk factors is not usually recommended by professionals. The highest coverage in patients with cardiorespiratory disease can be explained by the fact that these diseases have traditionally been viewed as a risk factor. Not found an explanation for the lower vaccination of children or of adult women in the group B1. It should be noted that the method overestimates the coverage, since it is possible that some patients diagnosed

has not been carried to record codified, which would be called underrated. It is necessary to raise awareness health professionals to improve coverage in these populations

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### Effect of acute exercise on lipid and carbohydrate metabolism in healthy men

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**Aim:** To investigate the influence of acute physical exercise of moderate and high intensity on lipid and carbohydrate metabolism in clinically healthy middle-aged men.

**Methods:** 53 non-obese, non-smoking clinically healthy men aged 30-45 years (mean age 35.7±0.7) were enrolled in the study. Two separate single bouts of aerobic exercise (moderate intensity: cycling for 20 minutes at heart rate (HR) 60-70% of H<sub>max</sub>; and high intensity: cycling for 20 minutes at HR>70% of HR max) were performed with intervals of 3-7 days in each patient. Fasting triglycerides (TG), total cholesterol (TCh), high density lipoproteins (HDLP), plasma glucose and insulin were measured before each bout of exercise and immediately after it. The upper quarter of insulin level was classified as insulin resistance (IR; n=13).

**Results:** Significant increase of TCh level was found in total group (p=0.001 for moderate and p<0.0005 for high-intensity exercise). The main part of such enhancement was for increased HDLP level (p<0.0005 and p=0.001, respectively). Sufficient decrease of fasting glucose level was demonstrated after high-intensity exercise only (p=0.009). TG and insulin levels were not changed significantly. Parameters of lipid and carbohydrate metabolism were not changed significantly after acute exercise in IR patients.

**Conclusions:** Results demonstrated improvement of lipid metabolism after acute exercise in healthy middle-aged men. Sufficient decrease fasting glucose level was revealed after high-intensity exercise only. Acute exercise did not cause any significant changes of lipid and carbohydrate metabolism in IR patients.

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### Increased levels of oxidative stress markers in the blood of insulin-resistant central obese persons

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**Background:** Obesity is an increasing worldwide problem, preceding type 2 diabetes and cardiovascular disease. The oxidative stress may join the metabolic events in these disorders. The aim of the study was to estimate some blood oxidative stress markers in central obese persons due to their insulin resistance.

**Methods:** White central obese Europeans (IDF 2005 criteria) were studied. Persons with no acute disease or severe chronic disorder were assessed waist, BMI, % of body fat, blood pressure. During OGTT fasting (GO) and 2h-glycemia (G<sub>120</sub>) were determined then type 2 diabetes were excluded. After overnight fast subjects were estimated: serum insulin, Ins, plasma lipids; T-C, HDL-C, LDL-C, TAG, plasma apoB, plasma total antioxidant status, TAS, serum oxidized LDL, oxLDL. Insulin resistance (IR) was calculated as Ins/G<sub>0</sub> ratio and also expressed as HOMA. IR ratio was used to show non-insulin resistant, non-IR group, IR<0,3 (n=28, age 49±10) and insulin resistant, IR group, IR>0,3 (n=24 age 47±11).

**Results:** 1. Increased oxLDL (p=0,0015) and TAS (p=0,012) were found in IR group versus non-IR group. 2. In IR group the positive correlations oxLDL&Ins (R=0,48;p=0,025), oxLDL&TAS (R=0,73;p=0,0009) and oxLDL&HOMA (R=0,46;p=0,031), oxLDL&IR ratio (R=0,47;p=0,037) were calculated.

**Conclusions:** From among metabolic parameters the markers of insulin resistance are related to elevated oxLDL in central obese persons. Increased oxLDL may mobilize plasma antioxidant defense

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### Low-fat, low-calorie, Mediterranean-style diet improves endothelial dysfunction in patients with the metabolic syndrome

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**Aim:** To compare the effects of a Mediterranean-type, low-calorie, low-fat diet and a conventional weight maintenance prudent diet on brachial artery FMD, insulin resistance and markers of oxidative stress in patients with MS.

**Methods:** Forty patients with MS were randomly assigned to either a Mediterranean-type, low-calorie (600 calories/day negative energy balance), low-fat, high-carbohydrate diet (<30% of energy from fat, <10% from saturated fat and 55% from carbohydrate) or to a weight maintenance prudent diet (approximately 55% to 60% of energy from carbohydrate, 25% to 30% from fat, 15% to 20% from protein) for six months.

**Results:** Patients in the intervention group showed remarkable decreases of body weight (-7,1%), BMI (-7,8%), waist circumference (-5,0%), HOMA-IR score (-21,0%), plasma glucose, glycosylated haemoglobin, total and LDL-cholesterol, 8-hydroxy-2-deoxyguanosine (-8,1%), 8-iso-Prostaglandin F<sub>2a</sub> (-9,2%) and arterial blood pressure and an increase of HDL-cholesterol. A statistically significant increase in FMD was observed in patients assigned to the intervention diet (+29,0%; p<0,0001), while no relevant changes were present in the control group. Percent variations of FMD in the intervention group were statistically and negatively correlated with percent changes of BMI (<0,02). Dietary randomization status was the only independent predictors of FMD improvement.

**Conclusions:** Treatment of MS patients with a moderately calorie-restricted, low-saturated fat, high-carbohydrate diet is able to improve brachial arterial dysfunction. A decrease of two reliable markers of oxidative stress, plasma 8-hydroxy-2-deoxyguanosine and 8-iso-Prostaglandin F<sub>2a</sub> was observed in the intervention group.

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**Using predictive scores in general practice: data from a French General Practice network survey***Sarasin M, Gonzales Chapped S, Kasprysck M, Lasserre A*

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**Background:** The general practitioner (GP) is the gateway to the healthcare system in France, and predictive scores could be a useful tool with which to target a complex systems approach. The prevalence of their use in general practice in France is currently unknown. It therefore seemed appropriate to study these scores in general practice.

**Methods:** A transversal epidemiological survey was conducted electronically with GPs working within the French 'Sentinelles' network. The GPs were asked about their use of scores, the context in which they were used and about profit.

**Results:** In total, 358 GPs participated, of which 75% used clinical scores with no statistical differences with regard to age or sex. Among the scoring systems proposed in the study, the most cited one by GP's, the frequency of use was: MMSE (97%), FRAGERSTRÖM (90%), MAC ISAAC (62%), HAMILTON (66%), DETA (46%), SCORE (35%) and CHADS2 (29%). The GPs rated the usefulness of these tests, which led to three categories being identified: very useful (MMSE), not useful (SCORE) and poorly defined (DETA FRAGERSTRÖM, MAC ISAAC). The scores were used in cases where elderly people were involved (77.4%) and in cases where the diagnosis was in doubt (62.8%).

**Conclusion:** For the first time in France, this study demonstrates GPs' approach towards predictive scores and the main systems which they use. The GPs in question felt that some scoring systems were incomprehensible or inappropriate for their practices. As, The construction of the scores is complex and has limitations which are often explained to an insufficient extent in the medical curriculum, it is difficult to criticize predictive scores objectively. Thus, a good training could be useful to include adequately this explicit medicine in an implicit medicine possibly biased by emotion or memory. Other results will be provided by 'focus group' method, on a second part, in order to complete those first results.

511

**A strategy to improve the care of smoking in health area***Pedreño Planes J*

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**Aim:** Smoking is the main cause of morbidity and mortality in the western world. Due to its high prevalence, the most efficient way to improve it, seems to be the approach to the community, through primary healthcare network, but the absence of Drug financing avoid progress in this direction. We describe a strategy to improve the approach to smoking, from a Health Area with integral management services.

**Material and methods:** The statement is made in a

southeast health-area in Spain, with 14 teams of primary healthcare<sup>1</sup> and a hospital, to serve 240.900 inhabitants. The first session takes place before starting the strategy and the second one, is to solve problems and practical cases, a month after implementation. It includes all patients, which declare them smokers and agree with non- smoking. The intervention foresees a first capture visit to measure motivation and a second, after 15 days, to complete the medical history of smoker and to plan the treatment. Drug treatment, when needed, is free of charges, from the hospital pharmacy service. A computer program was designed for this purpose, in order to control the consumption and to replace the containers to be delivered in the health center. Patients are revised monthly by their family doctor for three months, and then by their primary care nurse to prevent relapse, until the year of cessation.

**Results:** The first sessions have been started in March 2010, in the 14 health centers, with attendance and acceptance to participate in 90% of the experts. We hope to attend 5% of estimated target population; it is about 7.000 patients during 2010. We expected, that before October 2010 came, to have finished the second session in all centres and to have got data collection about population capture and population acceptance, as well as about the percentage of success and recurrence.

**Conclusions:** Implementation of community strategies based on the work of the professionals of Primary Health Care, are essential for the approaching of smoking. The protocol activities, the free supply and the co-operation of the hospital area services are helping factors.

553

**Teachers and Prevention of Sexually Transmitted Diseases***Nazarem I, Santos P*

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**Introduction:** Teachers have an important role on education of teenagers about sexual life and STD. Purpose: To characterize preventive attitudes and misconceptions about STD on teachers population.

**Methods:** A cross-sectional study was conducted based on answers to a structured questionnaire applied to teachers of a basic school in Fi-es, a semi-rural area in North of Portugal, in order to prepare an Health Education Action about STD, as it was required by School Directive Council. Questions addressed misconceptions and preventive attitudes about STD, and inquiry took place on May/2010.

**Results:** We had 22 teachers answering to questionnaire (95% of females) with a mean age of 43,5 years (CI95%: 38,1 - 49,0). The overall perception of self-knowledge about STD was 3,7 in a scale from 1 to 5 (CI95%: 3,1 - 4,3). The main information source was mass media (68%) just followed by attending physician (55%) and by academic (36%) and self-information (32%). 100% identified condoms use as preventive, 81% identified abstinence of sexual intercourse and 59% identified faithfulness to a sexual partner. The characteristics defined as important or very important were the degree of knowledge about partner, actual availability of condoms and to verify the existence of lesions or abnormalities on genital area.

**Conclusions:** Teachers are aware of importance of condoms utilization on STD prevention and try to obtain their information on reliable sources. Other preventive measures

as reducing number of sexual partners and avoiding or delaying sexual intercourse, although not statistically significant seems to be less understood.

630

### The risk factors of nephropathy associated with type 2 diabetes mellitus

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**Aim:** The incidence and the prevalence of diabetic nephropathy is gradually increasing because of the increasing of Type 2 Diabetes worldwide. The majority of the patients who appealed to Level I are Type 2 Diabetes and prediabetic patients. To investigate the risk factors of nephropathy related to Type 2 Diabetes Mellitus.

**Method:** 923 patients' follow-up files between 2000-2008 were retrospectively investigated in clinics of "istanbul Vak" Gureba Training and Research Hospital. 378 of them were included into the study and classified into three groups; diabetic patients with normoalbuminuria, diabetic patients with microalbuminuria, diabetic patients with macroalbuminuria. Groups were compared in terms of some parameters. The results obtained were assessed with appropriate statistical methods.

**Results:** At the end of the study, we found the proportion of subjects with microalbuminuria was %21, the proportion of subjects with macroalbuminuria was %5. We compared age, gender, duration of the disease (diabetes), body mass index, blood pressure, HbA1c, fasting blood glucose, postprandial glucose, cholesterol and triglyceride levels, family history between the study (diabetic patients with nephropathy) and control groups (diabetic patients without nephropathy). The most significant factors that are associated with nephropathy in diabetic patients are highness of HbA1c and Hypertension. It was seen that HbA1c was significantly high in the study group ( $p < 0.05$ ). Fasting blood glucose and postprandial glucose levels were also high in the study group. A mild highness was found out in the study group when compared in terms of systolic and diastolic blood pressures. It was thought that it may be because of usage of antihypertensive agents in the study group.

**Conclusions:** Family physicians may have the main role in managing patients with type 2 diabetes mellitus with early nephropathy. As family physicians we regard that it is necessary to control blood pressure and blood glucose level to prevent diabetic nephropathy that aggravates ESRD (End Stage Renal Disease) and cardiovascular mortality and morbidity and also the patients should be informed about the importance of this fact.

633

### Awareness of cervical cancer among female health carers

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**Aim:** The aim of this study is to examine the awareness of female health carers working at the Tepecik Training and Research Hospital (TERH) about cervical cancer and its risk factors. Additionally we tried to explain the attitude and behavior about gynecological examination and pap smear screening which is vitally important in early diagnosis and routine advice to prevent these kinds of cancers.

**Method:** This study is planned as cross sectional, descriptive and realized among the female health carers working at TERH, during January 2010. Recently or at any time previously sexually active 316 participants who had not have hysterectomy and accepted to join this research were detected.

**Results:** Nearly one third of the 316 female health carer participants 110 (%34,8) had at least once have a pap smear screening, the rest 206 (%65,2) had none. Overall, 73 (%23,1) of the respondents had routinely have gynecologically examined and the 243 female (%76,9) had not have gynecological examination in any time. Higher rates of pap smear receipt is detected among the participants which requested gynecological examination and had a knowledge about pap smear, cervix cancer and its risk factors or human papilloma virus and its vaccine.

**Conclusions:** According to their role in preventive health service specialized educations for the health carers should be organized to alter the gaps in their knowledge but also the gaps and levels of acknowledgements might be explained by epidemiological studies.

651

### Characteristics of the population served in a personal consultation to stop smoking

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**Aim:** Describe the socio-demographic and clinical characteristics of the attended patients and related with stop success figures

**Material and methods:** Descriptive study in a Urban Health Center Subjects: Visited patients in a personal query created to assist patients who want stop smoking between May 2008 and February 2009 We studied: gender, age, reasons to quit smoking, start smoking, average age consumption, cigarettes/day. Fagerstrom and Richmond tests and smoking cessation.

**Results:** We visited 63 patients, 60.3% females with a average age of 50.5 (47.6-53.5). Of those 33.3% haven't returned after first visit The results of Fagerstrom test was: 22.2% low, 33.3% moderate and 44.4% high The results of Richmond test was: 36.3% low, 50.8% moderate and 12.7% high The 28.6% stopped smoking, 55.6% females: - 25% had strong dependence, 38.1% moderate, and 21.4% low dependence. - 50% had high motivation, 28.1% moderate and 21.7% low. - Average age:54.7 versus 48.9,  $p = 0.075$  - Average age start consumption:20.6 versus 16.3,  $p = 0.125$  - Cigarettes per day similar: 24.2 vs 24.3 - Average weight:79.8kg vs 70.6,  $p = 0.37$

**Conclusions:** More women joined this personal query and especially in middle age of life. Patients who came to the consultation had moderate motivation and high dependence. Patients who have quit smoking were older with a higher average weight and began the consumption later and had a moderate dependence and a high motivation.



687

**Why do women come in for the mammogram screening?***Pribic S, Gmajnic R, Lukic M, Cupic N, Ebling B, Krlic A*

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KEY TERMS: Mammogram screening, prevention

**Aims:** Women aged 50-60 are called to participate in the National campaign for early breast cancer detection. They are given a form with which they are granted a free screening in specific term and date. Even though the campaign was advertised on the national radio, there were only 60-65% women who took the usage of the free screening. There are many reasons why women were not responsive to the campaign, but it is more important to actually find out why they actually did accept the invite and were willing to use the free mammogram screening.

**Material and methods:** We have questioned a group of 768 women which used the free mammogram screening. Reasons for undertaking the screening were qualified from 1 as the least important reason up to 6 as the most significant reason. Answers were gathered based on the age of women (aged 50 and 51 and 68 and 69) and based on their environment (country side or city).

**Results:** On the given questions, women gave these answers: The least important reasons were; Free mammogram screening, graded 2,16. The media campaign graded 3,21. The pressure of the family, graded 3,42. The activity of the family doctor, grade 4,01. Opinion that it is a duty of every patient, grade 4,12. The fear of being ill, graded 4,24. Younger patients were more positive about the campaign, and older ones were more under the pressure of the family doctors. Women who lived on the country sides had bigger notion of importance of the screening while also showing bigger fear of the illness. They were also more reflective on the fact that it was a free screening than women living in the city.

**Conclusion:** If we estimate the reasons why some women took advantage of a free mammogram screening, we can create activities and ways to increase the number of women attending the campaign. Activities should be conducted towards aims and goals according to the age of women and place of living. Our research shows that undertaking those kind of steps in new upcoming campaigns, we could get about 80% of women taking the screening, specially if we include family doctors in the campaign and less of the advertising via media.

726

**The use of computer cardiovascular risk SCORE visualisations for preventive advice in individual GP practices***Tomiak E, Lukas W*

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**Aim:** To conduct a cardiovascular risk SCORE (CRS) analysis prior to, and one year after, the provision of

preventive advice, using a computer as a tool for depicting the threat of cardiovascular system diseases.

**Material and method:** The research subjects were men and women aged between 35 and 55. The subjects comprised 87 (9%) people from 1012 patients of age 35-55; no cardiovascular disease had previously been diagnosed amongst the members of the study group. They were provided with between 2 (1 group) to three (2 groups) points of preventive advice. The CRS evaluations conducted when the study began, and after a one-year period, were carried out using a computer, as was the risk prognosis for the subjects 60th year of life. The computer was used as a means of providing the patients with visual information as to the scale at which he or she was personally at risk from cardiovascular disease.

**Results:** 87 people were provided with advice; 51 women and 36 men. 50 (98.04%) of the women had an initial CRS falling within the 1-4% risk category and 49 (96.08%) had a prognosis for the age of 60 within the 1-4% risk category. 34 (94%) of the men has a CRS within the 1-4% risk category, but the prognosis for the age of 60 put 16 (44.44%) within the 1-4% risk category and 20 (55.56%) in the 5% risk category and higher. For the final assessment, 60 (68.9%) of the subjects turned up from the two groups, divided in line with the amount of preventive advice provided. The total cardiovascular risk were statistically significant lower for Group 2 ( $p=0.0478$ ).

**Conclusions:** Men have a higher total CRS than women. Over the course of a year's observation, there was a significant reduction in the total CRS among the subjects benefiting from more frequent preventive advice. The computer is a good tool for both the rapid calculation of the CRS and for depicting the changes thereto, depending upon varying parameters such as age and other risk factors.

763

**Health promotion life-style profile associated with obesity in high school students' ages 15-17 in Izmir, Turkey***Limnili G, Erdem Ozcakar N, Kartal M*

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**Aims:** Obesity is defined as abnormal or excessive fat accumulation that presents a risk to health and it is an epidemic public-health problem in the world. The prevalence of obesity in adolescence is high and increasing. Health promoting lifestyle activities are part of individual's life which maintain or improve their health and adolescence is a transition period from childhood to adulthood that many habits and life style chances are configured. The aim of this study was to determine the prevalence of overweight and obesity among adolescents and the relation between obesity and health promoting behaviors.

**Material and methods:** This is a cross-sectional study including whole high school students ages 15-17 in 2008-2009 in Balcova-Izmir, Turkey. From 1224 students 1089 (77.9%) had participated. All students administered a questionnaire including the Health Promotion Life-Style Profile Scale (HPLPS). Weight and height were measured and body mass index (BMI) was calculated. Descriptive analysis, mean, median, standard derivation, chi-square, Kruskal Wallis and Mann-Whitney U tests is used for data

evaluation.  $p < 0.05$  was considered statistically significant.

**Results:** 80.8% had normal ranges of BMI, 10.1% were overweight and 9.1% were obese. Obesity was 5.9% in girls, 13.6% in boys. Adolescents were found to be obese significantly if their mother ( $p=0.014$ ) and father ( $p=0.005$ ) are obese. HPLPS average score was found to be 126.68±20.38. Cronbach's Alpha for the scale was found 0.926. The HPLPS and obesity was not significant ( $p > 0.05$ ).

**Conclusions:** Adolescence is an era of development which individuals start to implement their own features to life. In our study students does not perform health promoting life style whether they are obese or not. To advance the development of the adolescent in the healthy direction it is important to gain health promoting behaviors. Family physicians have an important role in preventing, detecting, and managing obesity and should encourage adolescents to gain health promoting behaviors.

766

#### A questionnaire-based study for the utilization of Ca-125 as a tumor marker in ovarian cancer screening

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**Aims:** The aim of the study was to assess the level of understanding of the role of the tumor marker CA-125 in ovarian cancer among doctors of different grades specializing in obstetrics and gynecology (O&G), medicine, surgery, and primary care (general practitioners [GPs]).

**Material and methods:** A questionnaire-based survey was performed. A total of one hundred and thirty questionnaires were distributed to physicians specializing in obstetrics and gynecology (O&G), medicine, surgery, and primary care (general practitioners [GPs]). All grades of doctors were enrolled (Consultants, registrars, senior house officers and staff grades).

**Results:** The overall respond rate was 47 %. All specialties and grades were included. There was a significant difference in the level of self-reported CA125 ordering between the medical specialties, O&G being the most frequent users and primary care the least ( $P < 0.001$ ), and between the grade of doctors, senior house officers/preregistration house officers and GPs less than consultants and middle grade doctors ( $P < 0.001$ ). The knowledge of false-positive causes for a raised CA125 was low in medicine, surgery, and general practice. The awareness was low in specialties other than Obstetrics and Gynecology for the sensitivity and specificity of Ca-125 in different histological types of ovarian cancer (Epithelial, non-Epithelial).

**Conclusions:** The role of CA125 in ovarian cancer is poorly understood, especially among doctors working outside Obstetrics and Gynecology. Guidelines should be developed to aid clinicians from all specialties in the most appropriate application of CA-125 in their practice. These should inform clinicians from all the specialties about the use of tumor markers in practice and the percentage of false positive results.

830

#### Screening program for cervical cancer in rural area

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**Aim:** Aim of the study was to explore the characteristics of women attending a screening program for cervical cancer with Papanicolaou test and to assess the results

**Materials and methods:** Subjects of the study were women attending a screening program in three villages around N.Moudania health center in Halkidiki, Greece. Smears were sent for examination at Ippokration General Hospital in Thessaloniki. Women were informed through posters at the health center and by contacting the local authorities. The results were analyzed with Mann-Whitney or Kruskal Wallis test.

**Results:** A) 51 women, median age 57 years (range: 30-67), attended the program. B) All women were unemployed. C) 88.2% were married, 9.8% were widows and 2% were divorced. D) 37.3% of the women had a family history of cancer. E) 47.1% of the women had an abortion, while 1 woman had an abortion for 13 times, and 96.1% of the women had at least one labor. F) The median age of the women that did not had an abortion was 52 years, of the women that had one abortion 60 years and more than one 61.5 years ( $p=0,044$ ). Cervical carcinoma was found in no cases whereas in two cases cervical dysplasia was found.

**Conclusions:** Test Pap is a powerful screening tool against cervical cancer. Unfortunately, the organized screening programs need to be more advertised, so that more women can benefit, especially women in high risk of developing the disease.

848

#### Gender comparison of health status and lifestyle among 500 couples aged 40-75 years in primary care

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**Aims:** Nowadays many studies based on family have been performed for proving that family is an important factor of one person's health and disease. In order to compare gender differences in health status and lifestyle habits among middle-aged and elderly couples, a multi-center cross-sectional study was carried out.

**Material and methods:** A total of 568 couples aged 40-75 years were consecutively enrolled from 30 primary care physicians between August 2009 and October 2010. We investigated demographic characteristics, lifestyle, dietary life, family function, sleep disorders, quality of life, male sexual problem, female sexual problem, patterns of health screening, co-morbidity and medication. Finally, we analyzed 500 couples, who completed questionnaires, for gender differences by the chi-square test, student T-test and logistic regression.

**Results:** The mean age for men (59.2 years) was higher than that of women (55.8 years). Men's level of education was higher than women's too. About healthy habits, physical activity for men was higher than those of women but smoking, drinking and eating habits of men were inferior than those of women. The men received more the screening program of colon cancer. Hypertension, diabetes and metabolic syndrome prevalence rates were higher in males. Otherwise prevalence rates of depression and insomnia corresponding to mental health were higher in women and all sectors that represent the quality of life as physical function, general health, vitality, pain, social function, mental health women's levels were lower than men's.

**Conclusions:** Among couples of middle and elderly, husbands have to pay more attention to improving cardiovascular risk factors and lifestyle habits, meanwhile for wives, more attention is required to improve depression, insomnia, mental health and quality of life.

884

### Smoke at home. Parents protect their children from the smoke at home?

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**Aims:** We studied an adolescent population of our area and we want to know the smoking habit of family in their homes. Looking for differences between smokers families (sf) and others families in which only parents smoke (ps).

**Design and method:** 3 High school of Primary Care Areas. Cross observational study. Student participation was voluntary. Questionnaire includes specific questions of smokers habits, it was carried meanwhile the official week without smoke. Data base of access and statistics program spss 15.0, making descriptive statistics and chi-test.

**Results:** n=279. We analysed the smoke-free zones in the home smoking families (sf) towards families with only parents smoke (ps) and no significant differences ( $p=0.053$ ) as to have a smoke-free zone. If we find statistically significant differences  $p=0.032$  regarding the most respected being in 1st place the dining room, followed by the rooms. You look at the smoke-free zone in the house (sf) \_ (ps), analysed by the number of smoking brothers, also by the number of cigarettes consumed and no significant differences ( $p=0.4$ ) ( $p=0.8$ ) as to have a smoke-free zone. There are a tendency to smoke at home proportionately more mothers than fathers, but not statistically significant  $p=0.07$ .

**Conclusion:** Although there is no smoke-free enclosed area, some common areas (such as the dining room) remain mostly free of smoke. If you enter the tobacco at home, regardless of the number of smokers and the number of cigarettes, installed at home. We must do interventions to parents to change their smoking habit at home.

922

### Malaria prophylaxis in travelers in endemic area

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**Aim:** Giving a recommendation of malaria prophylaxis for travellers and reducing importation risk. Method Includes research data available on the Network and sistematization.

**Results:** Problems in chemoprophylaxis: parasite resistance to antimalarials, mosquitoes resistance to antimalarials, there is no vaccine, there are no antimalarials which guarantee that you will not get sick, there is no any without side effects (incidence of side effects increases with length of use). Prophylaxis protocols: ATOVAQUONE+PROGUANIL 250mg+100mg a day, started two days before departure, during their stay and after their return. Recommendations in the areas of falciparum malaria who is resistance to chloroquine. Contraindications: pregnancy, lactation. CHLOROQUINE 300mg a week in a single dose or 600mg per week divided into 6 daily doses and the day break; the area without resistance. Contraindications: epilepsy, psoriasis. CHLOROQUINE+PROGUANIL 100mg +200mg one tablet per day, started two days before departure, during their stay and four weeks after return; for area with a range of resistance to chloroquine. Contraindication: epilepsy, psoriasis. DOXYCYCLINE 100mg per day, started two days before departure, during their stay and four weeks after return; for falciparum malaria resistant to chloroquine. Contraindications: pregnancy, lactation. MEFLOQUINE 250mg per week, two or three weeks before departure, during their stay and four weeks after return; for area of falciparum malaria resistant to chloroquine. Contraindications: epilepsy, the first trimester of pregnancy, lactation, diving. PROGUANIL Use only in combination with chloroquine.

**Conclusion:** There are various antimalarial drugs and prophylaxis protocols, and which one will be chosen, depends on: - the target area (endemic area), there are lists of countries and territories - the most common type of malaria in the target area - the level of resistance to antimalarials in the target area - the health status of passengers

## Information and technology

6

### Telecommunication-services in use to inform female population in general practice

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**Aims:** Knowing the patient is part of the art of family medicine. Sympathy, tact, gentleness and permanent communication with patient are important in family doctor practice. Breast cancer is growing problem in family doctors practice nowadays. In Serbia each year 4000 new breast cancer cases are diagnosed. The fight against breast cancer used systematic medical records for whole female population. The success of our family campaign depends on the scope of application of modern two-way audiovisual communications which are familiar to almost all populations: television, telephone calls, mobile-services, web-services.

**Material and methods:** The use of modern telecommunication services: SMS, MMS, e-mail-Internet in the period of 12 months for information and education women-aged 25-45, about the life discipline and to encourage

them for medical records. In our Department of Primary care there are 465 (100%) women aged 25-45 and they are familiar with modern communication technologies, that means communication services are understandable and acceptable to this target group.

**Results:** We sent 3 SMS, or 3 MMS or 3 e-mail monthly to 465 (100%) women aged 25-45 in period of one year continuously. Those age believe in the medical recommendations obtained by telecommunication-services. Thanks to information and warnings by SMS, MMS or e-mail they had been encouraged for medical records. The results are 388 (83,44%) of 465 (100%) women had come to medical records and 61 (13,12%) had been diagnosed breast cancer. 77(16,56%) were not come for medical recording.

**Conclusions:** Our results indicate that women healthcare family system in Serbia identify potential patient much better by telecommunication-services, urge women to protect themselves by medical records. In our case the women group was 465 (100%) and 388 (83,44%) women were medical recorded and 61 (13,12%) were successfully treated.

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#### Arterial hipertensión, measure with clinical blood pressure and specific ambulatory blood pressure monitoring

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**Objectives:** Analyze arterial hypertension measure with clinical blood pressure (CBP) and specific ambulatory blood pressure monitoring (ABPM), method and genus, as well as measure CBP for medical or nurse.

**Design and methods:** Cross descriptive study. We include derived patients during three years from different consultations of primary health; compile data of 541 patients (306 men) in hypertension programs due to white coat hypertension blood pressure (HBP). Principal measurements: analytical general with lipid profile, circadian pattern and cardiovascular risk (CVR), weight, height, body mass index (BMI), waist circumference (WC), stratification CVR. Means and/or percentages: clinical consultation systolic blood pressure (SBP) and diastolic blood pressure (DBP) two measures for medical and two for nurse; ABPM means SBP and DBP; means for men and women CBP and ABPM, SBP and DBP.

**Results:** To include 541 patients for ABPM and fronts measure and 80 patients seconds measure. Average age of 61±11.8 years (56,5% male) and 5 years of evolution of their HBP. The 11.8% had associate clinical disease, after stratification 23.5% had high risk, 22.1% very high. Control grade consultation 16.7%, ABPM 24 hours 28.2%, activity 45.5% , repose 40.9%. The prevalence 4.58% mask HBP and 21.67% white coat HBP. Circadian pattern: 42.7% Dipper, 7.5% Extra Dipper, 40% Non-Dipper, 9.8% Riser. BMI is 28.87±4.29. WC 97.89±11.5. Central obesity 50%. Statistically significant difference for CBP and ABPM means, fronts measure (SBP 154,6-129,5 and DBP 89,2-76,2) and seconds measure (SBP 145,3-129,5 y DBP 87,9-76,2) with p=0,00001. Medical and nurse with p=0,00001 SBP and P=0,002 DBP. Means sex statistically significant difference ABPM for SBP (p=0,001) and DBP (p=0,00001). Means 1§ two takings for DBP (p=0,01) and 2§ two takings for SBP(p=0,04).

**Conclusions:** The ABPM but trustworthy what CBP, measure nurse and medical. Women to present less HBP that man with ABPM and CBP.

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#### Anxiety and exposure to media in adolescence

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**Introduction and aims:** There is a strong relationship between exposure to media and health diseases in adolescents, the average hours of exposure is 45 hours compared with 30 of the parents, there are few studies on the impact of TV and movies but none studied the exhibition of new technologies: internet, videogames and social networks. The clinical implications of these findings are discussed ,emphasizing the importante of the parents and teachers rol to prevent health diseases. The aims of this Project is identify the raltionship between anxiety and the excees exposure to medias and dangerous behavior. For this study we will use the Hamilton Anxiety Scale adapted.

**Material and methods:** Study desing: Observational , cross-sectional descriptive. Study Scope: Primary Care health. Subject of the study: Spanish adolescents between 12-16 years old. Variables to measure : Hamilton Scale , Sociodemographics: Age, Sex, Marital status, Tobacco use, Alcohol use, obesity (IMC), Drugs use, Internet use, videogame use, social network use. Simple size: It's Calculated by accepting a signification levelof 95%. A trial of 100 patientes is estimated ,includin losses.

**Result:** We will do an univariate analysis of qualitative variables by frequency and quantity by the mean, median and standard deviation. We will do a bivariate analysis using chi-square for qualitative variables and t test and ANOVA for qualitative as quantitative. Logistic regression will assess the factors that are associated with anxiety.

**Conclusions:** This study will allow us to early identification of factors that could affect the health of adolescences and make a plan of preventive measures for Minimizing the adolescent health diseases and the dangerous behavior.

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#### Improving the medical visit's management using existing tools

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**Aim and background:** The primary care waiting rooms are very overcrowded. The purpose of this study is to present several formulas for optimizing daily visits to the family doctor.

**Material, methods and results:** Thanks to the software and adequate work planning it is possible to achieve a more efficient pattern of visits. 1) Planning patient visits under

different headings: Pre-arranged appointments, spontaneous or emergency, home visits, and telephone bureaucratic and online consultations. 2) Using the software resources patient's records: annual electronic prescriptions for chronic patients including automatic renewal before expiring date, obtaining lists of patients with poorly controlled chronic illness in order to improve their treatment, clinical guidelines, prior notice of impending procedures according to pathology and age, etc.

**Conclusions:** planning the most appropriate type of visit and making full use of the new software tools, we can improve and optimize medical visits. There are numerous advantages: improvement in the quality of the visit (greater empathy in the doctor-patient relationship, less bureaucracy, more prevention and screening, fewer physical visits, closer adherence to clinical guidelines) and in the medical professional's quality of life (preparation of the visit, less stress, more security in decision making, less bureaucracy).

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### Computer program "automated workplace of general practitioners" (AWGP)

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AWGP was developed in the National Research Center of Medical Technologies on the Ministry of Health of the Republic of Belarus initiation to improve the quality of health care delivery to the Belarusian people. Requirements specification, pilot testing of the program was carried out on the base of Krupki outpatient clinic, Minsk district. Automated program functions on the base of Windows operation system. The programming process was carried out under the guidance of the NIVEL experts (the Netherlands). AWGP was designed to automate work places of general practitioners (e.g. data collection and processing based on computer management of patients medical cards, medical, clinical documents and appointment cards). AWGP solves the following objectives: patient's card and referenced data managing; laboratory and functional researches; medical examination; x-ray examination; temporal disability; immunization; documentation; reporting. One of the advantages of the program is the presence of the module which makes possible for the patients to print informative booklets. The program contains clinical protocols, standards of patients care in accordance with the active normative documents of the Ministry of Health, recommendations on the drugs choice and first aid delivery. Physicians and nurses took short courses on the usage of the computer program at their work places. Nearly 60% of the Belarusian general practitioners use the program at work every day. AWGP makes it possible for the outpatient clinics to simplify the history screening. It is important to introduce the amendments to the legislation and guarantee confidentiality of the information about patients in order to use electronic medical record instead of paper cards.

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### Videoconference, an evaluation in teaching

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**Aims:** Use new technologies in medical teaching. -Make easier the assessment to students. -Reduce in cost.

**Material and methods:** Study design: Teaching experience. -Description: The final evaluation date of my "Master of Medical Sciences applied to physical activity" was the same day as the Congress WONCA Basel, 2009. So, I got in touch with my University in Spain to explain them that we could do my evaluation by videoconference. I came to an agreement with the professors of the University on date (and hour) of the presentation of the thesis (evaluation). We used skype and powerpoint programs to performance.

**Results:** On the evaluation date I tested the videoconference from Basel to Spain with the informatic department of the University. I performed my thesis from my hotel room in Basel to a classroom at the university in Spain where the professors (evaluators) were.

**Conclusions:** We used new technologies in medical teaching. -The videoconference made easier the assessment. -We reduced in cost because I didn't have to travel. -The degree of satisfaction of the evaluated and evaluators was high. -Videoconferences can be useful for evaluating masters, thesis and so on. -Videoconferences can be useful to do distance educational programs and help to improve competences and knowledges of the students and trainees. -New technologies help to reduce in cost of travelling and they might be useful for choosing different evaluators in different parts of the world.

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### Lessons learnt from the implementation of a web-based diabetes tool in Switzerland

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**Background:** Type 2 diabetes is estimated to affect approximately 5% of the Swiss population. There is widespread evidence that complications are preventable, e.g., screening interventions can prevent visual loss and serious foot lesions, and control of glycemia, blood pressure and lipid levels reduces microvascular and CVD complications. Studies show a huge discrepancy between established evidence-based standards and current diabetes care. The advantage of computerized decision support systems and automatically generated reminders for physician care improvements has well been established. In Switzerland's primary care landscape, such systems are widely underused while detailed information about barriers of implementation are largely unknown.

**Design:** Our intervention therefore featured and analyzed the development and introduction of a web-based decision tool (permitting the registration of clinical parameters, early detection of complications and integrating automatic reminding and coordination) in different primary care practices in Switzerland. Additionally, interviews and questionnaires were conducted to collect physicians' experiences with the use of such a clinical information system.

**Results:** A multiplatform web-based decision tool has been designed and introduced in 37 physician practices which

participated actively in the project over a period of three years. Continuous physician support and evaluation has been provided. We will be able to discuss issues about development and implementation problems, motivational concerns and preferences among the participating physicians.

**Conclusions:** We reflect on our experience about the deployment and implementation of a web-based diabetes support tool in a primary care network in Switzerland and the associated challenges concerning organisational, technological and motivational aspects. We will be able to make recommendations on possible methods for improving the implementation process in similar projects.

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#### Vaccine information system of the Valencian community

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Valencia Community (Spain) (VC) was on January 1, 2010 5,111,706 inhabitants. During that year were given, about 1,800,000 doses of vaccine, half of which are given to adults, especially flu vaccine. Mostly, the vaccines are administered free of charge for different target populations for vaccination centers. The estimated cost of these vaccines amounted to more than 26 million. For all these reasons is necessary to develop a registration system and information to respond to information needs related to the management of immunization programs and also provides healthcare professionals the information necessary for appropriate clinical decision making. The aim of this paper is to present the Vaccine Information System (SIV) of the VC that allows the integrated management of immunization programs. The SIV consists of the following modules: - RVN: allows the declaration of the vaccine acts from any center. It also allows us to obtain list of vaccinations, reporting adverse reactions and issuance of certificates of vaccination - RVA: manages the logistics of vaccine (control of stores, distribution, billing ...) including the control of cold chain breaks - Indicators: Provides monitoring indicators (coverage) loops from CV to key medical. - International Vaccination, where queries are handled traveler - Back office, where it will maintain the application and the active uptake of the target population through letters or phone messages. The SIV is integrated into the primary care electronic record and facilitates online information systems to epidemiological surveillance and pharmacovigilance. It also provide information to economic and poblational records. SIV can be accessed through internet or through the electronic record At December 31, 2010 had 23.662.143 records, 41.278 users (34.115 from primary care) and 1.592 vaccination centers (402 private)

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#### Tabulation of the most common visits in a rural primary care setting in northern Greece

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**Aims:** The use of electronic medical records systems for data collection in primary care, may improve the clinical practice through the reorganization of the health services based on the local needs. The aim of this study was the tabulation of the most common diagnoses and reasons of visit in a rural primary care population without previous recorded medical data.

**Material and methods:** A total of 1084 patients registered at the electronic medical records of a primary care setting of Alonakia region, a rural area in Western Macedonia, Greece, between June 2008 and January 2011. The registry of the electronic medical records was analysed and age, sex, clinical diagnosis and reason of visit were tabulated. Diagnoses were coded according to both International Classification of Diseases in Primary Care (ICPC-2), and International Classification of Diseases (ICD-10).

**Results:** The male to female ratio was 0,7:1. The median age for females was 62,3 years and for males was 59,0 years. The number of the total visits in the study period was 17125. Hypertension observed in 375 patients representing the most common reason of visit (29,5% of visits) followed by lipids metabolism disorders (358 patients, 25,5% of visits) and ischemic heart disease (224 patients, 22,6% of visits). Type 2 diabetes mellitus was accounted for 153 patients (14% of visits). Osteoporosis was detected in 149 patients (10% of visits) and vertigo and dizziness in 111 patients (4,7% of visits). Furthermore, gastroesophageal reflux disease (4,6% of visits), depression (3,6% of visits) and knee osteoarthritis (3,4% of visits) composed the rest of consultation themes with high frequency.

**Conclusions:** The analysis of the results can provide information about the health status of a rural population group. Similar efforts from different locations may help practitioners to focus on the most common disorders met and work on health promotion initiatives.

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#### Educational study for evaluation visceral fat levels by Bia Viscan in metabolic syndrome

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**Introduction and aim:** In Metabolic Syndrome (MS) General Practitioner (GP) provides preventive care and health education to patients with risk of cardiovascular disease and diabetes through Education Strategies. Viscan AB140 is a bioimpedance analysis instrument (BIA). The AIM of the study is to estimate three pre-defined visceral fat levels (VFL) to track changes over the long term for effective health management and prevention cardiometabolic risk related to the enlargement of visceral fat stores.

**Material and methods:** Investigated cohort: 65 participants (35 females and 30 males) were recruited with metabolic syndrome according to 2007 IDF criteria (Age: 58,8 (19-83), body weight: 80,3 (51,8-138,6), BMI 28,4 (19-41,6). Analysis of visceral fat by BIA 16,3 (3,5-47,5) is measured using a cleverly designed electrode belt placed on the midriff of the subject. The belt uses Tanita dual frequency BIA Technology to take the measurement in just 30 seconds. The company manufacturing viscan declares significant correlation between the visceral fat measured by BIA and that obtained by CT that it considered average from 1 to 12.5 high from 13.0 to 17.5 very high from 18.0 to 25.5 or more.

**Results:** 22 participants (33,84%) with average fat level GP advice is no need for concert at present and continue with a balanced diet and an appropriate amount of exercise. 25 participants (38,46%) high with VFL GP advice is to ensure that an appropriate amount of exercise is done and calorie intake is limited to reduce weight to an appropriate level. 18 participants (27,69%) GP advice is weight loss through actively engaging in exercise and food restrictions, is useful SF 12 Health Survey Questionnaire and Disease Management Program with Care Manager to support GP.

**Conclusions:** BIA Viscan method estimating visceral fat level is simple and immediate to use encourage the education of patients with increased cardiometabolic risk and represent a solution where CT and MRI cannot be applied in a routine clinical practice. However further studies in larger groups validation will be required especially in obese with subcutaneous abdominal adiposity.

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#### Use and abuse of new Information and Communication Technologies among young people attending High School. A pilot study

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**Introduction and aim:** The advent of Information and Communication Technologies (ICT) -the Internet, mobile phones, videogames and social networks- is leading us to new ways of leisure and human relationships. Their misuse may cause maladaptive behaviours with dramatic consequences at all levels. We are a multidisciplinary study group including physicians, nurses, teachers and methodologists. We expect to estimate the prevalence of ICT use and abuse (different studies showed 9-40%) among teenagers currently studying at the public and semi-private High Schools of our area. The aim of this pilot test is to detect problems concerning the questionnaire, before starting the main study.

**Material and method:** The main study is cross-sectional, being its population the students of about 30 centres. An Ethic Committee has approved the design of the study. Data are gathered from self-administered questionnaires: socio-demographic information and tests for assessing abnormal use of the Internet, mobile phones and videogames, validated on our target population. Primary healthcare nurses participating in the Health and School Programme are already in contact with the schools. They deliver and collect the questionnaires after completion carried out under teacher supervision. Students from 3 classes in a High School were

selected as a sample for the assessment of the questionnaire. The parents/tutors and students accepted to participate.

**Results:** 35 teenagers completed the different questionnaires, 13-15 years old, 16 males and 19 females. About 50% take extracurricular activities. 57% use videogames (8% more than 5 hours/week) and 50% of them use videogames alone. 89% use computers out of school (36% more than 2 hours/day in the internet, chats and social networks). Only 6% of participants have no mobile phones.

**Conclusion:** General understanding of the questionnaire was good. Some modifications to improve it will be used in the project that will include about 5,000 students, and will begin soon.

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#### Can we improve the management of the consultations?

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**Aims:** To quantify and to determine the characteristics of the patient who have an appointment and do not go to the consultations of an urban center of health. As well to observe strategies of self resolution, to be able to make improvement actions.

**Material and methods:** Descriptive study from the data collected in computerized clinical history. It is evaluated during a month of year 2010, randomly chosen, the nonattendance of the patients mentioned in 3 general medicine consultations.

**Results:** Total absences: 180. Percentage absences Monday 25% and Friday 14%. Average age: 51 years, without significant differences by sex. Proportion absence by man/woman: 33%/66%. The patient youngest (16-35 years) (N=60) solve requesting new previous appointment a 33% and a 56% do not return to request any visit independently of the days of delay for the initial visit. The 35-65 patient years (N=59) solve requesting new previous appointment a 30% and a 49% do not return to request any visit independently of the days of delay for the initial visit. The patient > 65 years (N=61) solve requesting new previous appointment a 37.7% and a 46% do not return to request any visit independently of the days of delay for the initial visit. Percentage of patient who solves requesting visit urgent 15%.

**Conclusions:** The absences in women are duplicated. A low percentage decides to be visited by urgencies. The percentage of absences is independent of the days of delay of previous appointment. Although they request visit few days before, the greatest percentage of the absences do not return to request a new visit. We propose the use of the new technologies (sms, mails) to remember visits and to improve therefore the management of the same ones.

## Musculoskeletal problems

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### Evaluation strategy branch ap-cot in knee osteoarthritis: a study of the utility of applying the records of the activities of care in the computerized medical history

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**Aims:** Using the Electronic Medical Record (EMR) for the analysis of the Strategy in Primary Health Care Referral (AP) Specialist of Orthopedics and Trauma (COT) of patients with knee osteoarthritis to plan activities for improvement.

**Material and methods:** Since musculoskeletal diseases are a major cause of the cases handled by primary care physicians of which almost half are by osteoarthritis. Osteoarthritis of the knee is the most common etiologic within this group, consuming significant resources in the process of diagnosis and treatment. Authors conducted a descriptive cross-sectional study of patients with osteoarthritis of the knee who were referred to the COT are recorded in the Computerized Medical Records of the Health Center.

**Results:** Referral of patients with AP-COT: 45% of patients did not undergo radiography prior. 53% were not conservative treatment was prescribed more than 6 months

**Conclusions:** Strategy Assessment Referral AP-COT, through Computerized Medical Records has revealed that almost half of patients with knee osteoarthritis are referred to radiology or COT without prior medical treatment, justifying the planning of training activities to increase the efficiency of the referral system and subsequently AP-COT a reassessment of these parameters in the present study.

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### Ankle sprains: proper diagnosis leads to proper management

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**Background:** Ankle sprains are the most common muscle skeletal injuries in the clinical practice and are frequently oriented by family physicians (FP). Although they are usually not complicated, an additional care is necessary to ensure an effective treatment and the exclusion of serious complications. Aim: To alert FP to the importance of the correct diagnosis of ankle injuries.

**Material and methods:** Article research in PubMed, Medscape, UpToDate and reference text books. Results: Ankle stability is vital for its appropriate function of support and mobility. The ankle is a complex structure, involving the talocrural, subtalar, and inferior tibiofibular joints. Understanding its functional anatomy and biomechanics, the risk factors, the mechanism of lesion are very important for obtaining the correct diagnosis and treatment and adoption of preventive measures. The diagnosis is achieved after an adequate clinical history, thorough physical examination and, if necessary, complementary exams. Exclusion of serious

complications, such as fractures, should be priority in this initial approach. In most cases, conventional radiology is sufficient - the need for its realization is defined by the Ottawa Rules - but other imagiologic techniques may be necessary, in selected patients, to evaluate the severity of damage. Treatment is dependent on the severity of the injury. Most acute lateral ligament injuries are best treated nonsurgically and will recover satisfactory ankle stability after functional treatment.

**Conclusion:** There should be an increasing preoccupation in adopting the best diagnostic and therapeutic procedures, in order to improve ligament healing and to prevent chronic joint instability. Therefore, it is crucial for the FP to diagnose ankle injuries properly in order to offer the most adequate treatment and to be able to decide which patients should be evaluated and oriented by other medical or surgical specialties.

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### Osteoporosis: are we doing a good job?

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**Aims:** First sign of osteoporosis is usually bone fracture. Diagnosis and treatment is important to prevent it. For diagnosis confirmation we quantify bone mineral density (BMD) with the Dual-emission X-ray absorptiometry (DXA). In this study we try to know if patients with a registered osteoporosis diagnostic in the computerized medical record, also have DXA result registered and which kind of medication take.

**Material and methods:** It is a retrospective descriptive study. We have 150 computerized medical record with osteoporosis diagnostic and we collected if DXA was done, its result and medication taken in any case.

**Results:** Our sample is formed by a 95% of women and 4.6% of men. The range of age is from 49 to 89 years old. DXA results were osteoporosis 50%, osteopenia 26.31%, normal 2.6% and no result registered in a 21%. Patients taken medication for osteoporosis 78.6% and the different treatments are calcium 5.9%, calcium and vitamin D 8.6%, bisphosphonates 62.25%, strontium ralenate 5.9%, selective estrogenic receptor modulators (SERMs) 6.7%, calcitonin 0.84% and recombinant parathyroid hormone 2.5%.

**Conclusions:** Majority of the sample are women so that, we can assume osteoporosis is a mostly feminine illness. Only half of osteoporosis patients have a registered DXA result, and between them, only 50% accomplish DXA criteria to receive pharmacological treatment. That shows we over treat patients. We should pay attention to prescribe and register diagnostic tests because as in this case DXA is a designed useful test and also important for evolutionary control. However, this result may be affected by several agents like low DXA registration in the computerized medical record because different specialists could deal with osteoporosis such as rheumatologists, orthopaedic surgeon and also general practitioners, and we use different carrier medium which are not connected. It would be an important improvement to be able to consult specialist medical records.



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**Osteoporosis (osteopenia) and serum lipids in postmenopausal women***Miceta A*

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**Aims:** The aging of the general population leads to the increasing prevalence of osteoporosis and cardiovascular diseases. Many studies have shown that the low bone mineral density correlated with increased risk for cardiovascular disease, but there is no definitive proof. Aim was to examine the relationship between serum lipid levels and osteoporosis (osteopenia) in postmenopausal women.

**Methods:** Postmenopausal women, randomly selected, have been examined by a doctor during first months of 2009. In addition to medical history, physical examination data were taken, to determine the number of risk factors for osteoporosis, based on which was recommended DEXA osteodensitometry and laboratory analysis. Then the first 40 were classified into two groups. The first group consisted of 20 patients, with confirmed osteopenia or osteoporosis. The other group consisted of 20 patients who did not meet the criteria for increased risk for osteoporosis or after osteodensitometry had confirmed normal results of bone density. Laboratory tests included the measurement of serum lipids.

**Results:** Mean age is constant (63.7 vs. 60.7 years) in both groups, mean BMI is approximate and is 28.6 kg/m<sup>2</sup> vs. 28.1 kg/m<sup>2</sup>, and 75% of participants in both groups were overweight. The measured laboratory values were also very approximate: the average value of total serum cholesterol in the group with osteoporosis and osteopenia is increased and is 6.4 mmol / l, and in the other group is 6.3 mmol / l. The average values of high-density lipoprotein cholesterol and low-density lipoprotein cholesterol, triglycerides and glucose were almost identical in both groups. The measured laboratory values of serum lipids showed no statistically significant difference between the two groups.

**Conclusions:** In this study, significant correlation of elevated serum cholesterol and osteoporosis (osteopenia), is not noticed. Difficulty makes their mutual high frequency in the postmenopause.

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**Approach to Fibromyalgia in Primary Care***Faria R, Ribeiro A*

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**Introduction and aim:** Fibromyalgia (FM) has a prevalence of 2%. Consensus indicates that majority of FM patients should be diagnosed, treated and followed by Primary Health Care (PHC). Since in most cases FM is "forever", prevention is desirable, especially by Family Medicine Physicians (FMP) who are those that establish the first contact with patient and are in a privileged position to know the factors that preceded and/or accompany FM. The aim is to present an algorithm to approach FM in the context of PHC.

**Method:** Research in Pubmed and Evidence Based Medicine sites, of articles published between 2000 and 2010, written in Portuguese and English.

**Results:** The FM is a rheumatic disease of unknown cause and functional nature, which causes widespread pain in soft tissues and is accompanied by other variable quantitative/qualitative symptoms, such as sleep disturbances, fatigue and morning stiffness. A key feature of FM is the dissociation between the subjective elements prominent, often referred as severe and disabling, and the objective findings, virtually non-existent, apart from hypersensitivity pain that patients have when pressured by the doctor. The diagnosis is essentially clinical. There is no diagnostic testing and all results are normal. If any changes occur, it is due to other associated pathology. The patient and relatives education is an important therapeutic element. This shall transmit that there are 3 vicious cycles, started in pain, which must be broken for the better relief. The chronic pain state (CPS) results from: physical desconditioning, depression and sleep disturbance. Drug therapy is vast and it is all within reach of FMP. Other forms of treatment such as thermal therapy are moderately effective.

**Conclusions:** Knowledge of risk factors associated with CPS, characteristics of pro-pain personality, warning signs for development of FM and main criteria for referral are essential for a correct and timely approach of FM by PHC.

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**Primary health care impact on osteoporosis' risk factors assessment***Hatzimarkakis G, Protopapa M, Christodoulou E, Papageorgiou E, Aivaliotis I*

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**Aims:** Emphasize upon the need to move towards a primary approach on neglected or mal-controlled cases of osteoporotic patients in order to prevent fragility fractures.

**Material and methods:** We retrospectively studied emergency ward registries, clinical and out-patient based records between years 2006 to 2010. The survey was based upon 127 (110/127 female, 86.6% and 17/127 male, 13.3%) patients seeking medical advice and therapy initiation after voluntary cease of previously undertaken therapy (31/127, 24.4%) or after motivated hospital visit (55/127, 43.3%) or because of inappropriate therapy taken for a long time (41/127, 32.2%). All patients were assessed based on modifiable (smoking, excessive alcohol consumption, low calcium intake, eating disorders, sedentary lifestyle, various medications) and not modifiable (sex, family history, race, medical conditions and procedures that affect bone health, frame size, thyroid hormone disorders, getting older, previous fracture, rheumatoid arthritis, glucocorticoid medications) risk factors to determine the probability to develop a fragility fracture and on the use of FRAX tool (Fracture Risk Assessment questionnaire). They were then referenced to the osteoporosis centre for further investigation and therapy assignment.

**Results:** Based on FRAX tool 85% (108/127, 98 female and 10 male) of patients presented a significantly high risk of developing a major osteoporotic fracture (> 25%), while the rest 15% (19/127, 12 female and 7 male) of them was in lower risk (< 17%).

**Conclusions:** Many of the patients who have been given anti-osteoporotic therapy sometime in the past are not

followed up adequately for various reasons. The use of a simple questionnaire such as the FRAX tool and a brief personalized interview upon patients way of life and associated risk factors can give valuable information on the need to reference patients to specialized medical personnel for further evaluation and eventual therapy reassessment.

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### Pin tract infection. A common complication and how a family doctor can deal with it

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**Aims:** The aim of this study is to find the incidence of this complication during the treatment of fractures with external fixators (ring fixators, unilateral and hybrid fixators).

**Material and methods:** 164 fractures (152 patients) were treated with an external fixator between April 2007 and February 2008. The mean age was 39.5 years old (range 21 to 66). We treated 64 fractures of the upper limb, 94 lower limb fractures and 6 pelvic fractures. The mean follow up was 5.6 months.

**Results:** 24 (14.6%) fractures were complicated with pin tract infection. The highest incidence was found at the unilateral fixator's group (19%), followed closely of the hybrid fixator's group (17%) and finally at the ring fixators group there was only a 6% incidence of pin tract infection. We also noticed a significant difference on the incidence according to the anatomical site of application (4 out of 6 pelvic fractures were complicated with pin tract infection).

**Conclusions:** There is a significant difference between the unilateral and the ring fixators. The anatomical site, the Intensive Care Unit admission and the patient's cooperation seems to be also factors that influence the final incidence of pin tract infection. A Family doctor most of the times can deal successfully with this complication.

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### The significance of primary care on compound fractures of long bones with severe soft tissue envelope injuries

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**Aims:** To determine the significance of the initial measurements undertaken from accident scene to operating theatre contributing to the final outcome of compound long bones fractures.

**Material and methods:** We retrospectively analyzed ambulance delivery records, emergency ward registries, medical clinical and out-patient follow up records between years 2006 to 2010. The survey was based upon 235 patients delivered to the emergency ward having sustained an open brachial, antebrachial, femoral and tibial fracture. The

patients were divided in 3 subgroups, decision made upon the adequacy of the measurements taken by primary trauma care givers and hospital personnel before the admission in the operating table. Group 1 - Adequate 41.7% (98/235), Group 2 - Moderate 30.6% (72/235), Group 3 -Insufficient 27.7% (65/235). Measurements taken in consideration were fracture reduction on the scene, sterile dressing over the wound, rapid transport to hospital, prophylactic administration of antibiotics, anti-tetanus prophylaxis.

**Results:** Rapid transport to hospital and immediate treatment are essential. The infection rate of open fractures delivered to hospital within 30 min of the accident having experienced sufficient care was 4.2% (10/235), while that of fractures presenting after 10 hours correlated to poor care-giving was 25.4% (59/235). The remaining group of 70.4% (166/235) presented 14.8% (35/235) of infection rate. Finally 55.7% (131/235) presented no infection signs at all.

**Conclusions:** It is of crucial importance for patients suffering from compound fractures to be given the best medical care from primary health providers since the very first moments and to be transferred as soon as possible to a medical trauma structure for definite treatment since subsequent chronic osteitis and/or non-union still represent today a major source of disability and decreased quality of life for the individual patient as well as a socio-economic problem for public health systems.

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### Corticosteroid injection for lateral epicondylitis is effective, but do patients favour it?

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**Introduction and aims:** Studies have shown that corticosteroid injection (CI) for lateral epicondylitis (LE) is effective, but no studies were found to show if patients favour CI to other treatments. Current medical practice is geared towards patient-centred care where clinical decisions are shared with patients. When advising patients about the effectiveness of CI for LE, it is helpful to advise them about the experience of LE patients with CI compared to other treatments. This study aims to explore the experience of LE patients with CI and whether they favour it to other treatments.

**Material and methods:** The study was conducted on any patients who received CI for their LE at our general practice surgery. There were no exclusion criteria. The patients were each posted with a standard questionnaire and a prepaid return envelope. The information required in the questionnaire were treatments used before CI, pain improvement after CI, side effects from CI, whether CI was better than previous treatments used, overall experience with CI and the preferred location to have CI.

**Results:** 17 patients (56% male, 44% female, mean age 54, range 37-73 years old) responded. Oral analgesia is the most frequently used initial treatment (88%), followed by topical analgesia (29%), before having CI for their LE. Almost all the patients (94%) had pain improvement after CI. More than half (59%) graded their pain improvement  $\geq 4$  out of 5, where 5 is more improvement. The duration of the pain improvement ranged from weeks to a year, but most patients (65%) experienced pain improvement for months. Few patients (18%) experienced side effects where half of them had their LE flared up after CI. Most patients (82%) favoured CI to their previously used treatments. 71% of patients were happy with

their overall experience with CI. All the patients preferred to have CI done at the surgery compared to it being done in the hospital.

**Conclusions:** Establishing patient-orientated outcomes that matter is crucial in today's evidence-based medical practice. This study demonstrates that CI is an effective and a more favourable treatment for LE compared to other commonly used treatments.

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#### Evaluation of the quality of life in patients with osteoarthritis in a rural area of Crete with the use of WOMAC index

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**Aim and background:** Osteoarthritis(OA) is the most common arthritis, inducing pain, functional restriction, reduced quality of life and limitation of the everyday activities. The aim of the study is to evaluate the pain, the stiffness and the physical function in patients with OA of the hip and/or knee, who presented at the health center of a rural area of Crete.

**Method and population:** 186 patients (96 - male, 90 - female) aged>50 years who presented at the health center with symptoms of osteoarthritis of the hip and/or knee, excluding those who had surgical treatment for it, consisted the population of the study, which lasted a year. The patients were evaluated with the use of Western Ontario MacMaster (WOMAC) Osteoarthritis Index which is a disease-specific, self-administered, health status measure that probes clinically-important symptoms in the areas of pain, stiffness and physical function in patients with osteoarthritis of the hip and/or knee. Higher scores on the WOMAC indicate worse pain, stiffness, and functional limitations. Patients were also questioned about their emotional status concerning their problem.

**Results:** 46% female - 28% male referred pain while walking, 69% female - 42% male while ascending stairs. 69,2% female - 42,8% male complained of first waking stiffness, while 30% female - 57% male of stiffness later in the day. 23%female referred difficulty in light domestic duties due to OA . 53,8 % female - 42,8% male reported that they feel depressed because of OA, 23%female - 14,2%male feel irritable, while 15,3%female - 28,5% male reported insomnia.

**Conclusions:** The study displays the use of simple index to evaluate the extent and the gravity of OA. OA impairs quality of life, reduces functional capacity and causes psychological upset. It is important for the patients that the General Practitioners (GPs) render effective and opportune interventions and services for improving OA-related outcomes.

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#### Calcium pyrophosphate dehydrated crystals deposition disease in a young male patient: a case report

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**Aims:** Chondrocalcinosis (CC) is caused by the deposition of calcium pyrophosphate dihydrated (CPPD) crystals in the cartilage matrix, therefore inducing inflammatory response. Aging is the major risk factor (7-10% at the age of 60). Most cases are idiopathic but familiar predisposition or primary metabolic disorder should be considered in young-onset polyarticular CC. Case report A 47-yr-old male patient belonging to a nuclear family, phase VI of the Duvall cycle index and stage III of Graffar, presents a progressive ten-year history of migratory and inflammatory-like polyarthralgia, recurrent swelling and stiffness involving elbows, wrists, knees, ankles and hips. Acute attacks of arthritis were self-limiting and occurred 3-4 times a year, resolving usually within 1-2 weeks with nonsteroid anti-inflammatory drugs (NSAIDs). All over the years, the patient experienced a progressive clinical worsening of the episodic events. Constitutional symptoms and family history of joints diseases were unremarkable. Physical examination showed erythema, swelling, warmth and tenderness on the left elbow, limited flexion of right knee with coarse crackles. Radiographic studies revealed spur in the postero-superior contour of the left ulna and bursitis, calcification of the right greater trochanter, joint effusion and synovial reaction of both knees, with menisci and cruciate ligaments calcification suggesting chondrocalcinosis. Relevant laboratory finding were: ESR 56 mm/hr, CRP 16 mg/L and uric acid 9,8 mg/dL. The patient was treated successfully with NSAIDs and is now on follow-up.

**Conclusions:** Although frequent symptoms and diseases, namely osteoarticular, represent the majority of daily work, the primary care physician should be alert for possible unexpected differential diagnosis (including CPPD) in order to provide the proper treatment.

445

#### The Effects of Oxygen-Ozone Therapy on the Knee Functional Test Score in Recreational Athletes with Patellofemoral Pain Syndrome

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**Aim:** Recently, oxygen-ozone therapy has started to use in the treatment of musculoskeletal injuries. The purpose of this study was to evaluate the effectiveness of periarticular injection of ozone-oxygen mixture for the treatment of patellofemoral pain syndrome.

**Material and methods:** 10 recreational athletes with unilateral patellofemoral pain syndrome participated in this study, aged between 25 and 35 years (mean age: 29 +/- 3.8 years). All participants underwent clinical and instrumental diagnosis (X-rays and magnetic resonance imaging). They had been previously treated with physical therapy, local injections, and other conservative procedures for at least 6 months. Oxygen-ozone therapy was assigned to 3 treatments, 1 application per week for 3 weeks. Oxygen-ozone mixture was used at a concentration of 5 mcg/ml. In each session, 10 ml of oxygen-ozone mixture was injected around the patella. Overall knee pain visual analog score (VAS) and knee functional test score (KFTS) were used to evaluate each subject before the treatment and at 4 weeks after the treatment. Results After the treatment; VAS and KFTS in the injured knees were decreased significantly from 5.9+/-1.37 to 2.9+/-1.19 and from 8.1+/-2.18 to 5.5 +/-1.64

respectively ( $p < 0.05$ ).

**Conclusions:** Patellofemoral pain syndrome (PFPS) is a common, painful musculoskeletal condition that affects physically active young adults and adolescents. Physical and isokinetic exercise, electrotherapy and hyaluronic acid injection have been used to treat this syndrome. In this study, oxygen-ozone therapy has been investigated to determine effectiveness in this syndrome. Our study appeared to be an effective treatment for patellofemoral pain syndrome. The future researches need to be done in this area.

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521

#### Efficiency of technologies of relaxation, yoga and physical exercise in patients with chronic benign pain

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**Aims:** Valuing the efficiency of the employment of technologies as the relaxation, the yoga, and the physical exercise in the medical treatment of women at the climacteric stage with non-malignant chronic pain and its repercussions on the quality of life.

**Material and methods:** It is about a prospective intervention study. The sample is formed by 45 women aged between 50-74 with osteo-muscular pain of more than six months of evolution. We conducted a survey at the beginning and end of the workshop. The analysed variants were the following ones: age, level of studies, ache intensity, treatment, sleep, mobility, self-concept and quality of life. It has been found normal distribution of variables by Kolmogorov Smirnov test. For the quantitative variants, mean and standard deviation (SD) were calculated. For comparison of means has been used the Student test for paired data and Wilcoxon test for nonparametric, and for the qualitative variants the ratio with their respective credibility gaps. For the comparison of proportions with matched data, McNemar's test has been used.

**Results:** The mean of the values obtained by applying the Visual Analogical Scale for pain at the beginning of the workshop it was of 6,82 (SD = 1,749), being the end of 5.36 (SD = 1,885). With regard to the values obtained when applying Rosenberg's Test to value the self-esteem, the mean at the beginning of the workshop was 29,11 (SD = 4,88), and the mean at the end of 30,78 (SD = 4,29). In these two variables the differences were significant with a P (0,000) and P (0,0021) respectively. In the rest of the variables also have improvement.

**Conclusions:** The employment of technologies as the relaxation, the yoga, and the physical exercise in women at the climacteric stage with non-malignant chronic pain has decreased the perception in the pain intensity and it has increased the quality of life. In the treatment of non malignant chronic pain the multidisciplinary task is essential, because of the huge complexity that these patients usually have. In this way, it is necessary to consider along with doctors, other professionals, like nurses, psychologists and social workers.

538

#### Evaluation of osteoporosis treatment in male population

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Drug exposure osteoporosis pharmacotherapy medication adherence prescription-based database.

**Background:** Osteoporosis is an undertreated health concern. Men are much less likely to receive the treatment for this disease or after a fracture than women. It is evident that communication between patients and general practitioners (GPs) can improve management of osteoporosis, however GPs are not allowed to prescribe specific anti-osteoporosis medication in the Czech Republic. The aim of this study was to evaluate the exposure to osteoporosis medication (OPM) in men based on data from a health insurance company database.

**Methods:** We assessed data from 2002-2006 in a retrospective observational study of the male population in the Czech Republic. The prescription-based database of the largest health insurance company in the Czech Republic (VZP CR) that covers about 65 % of the Czech population was used as a source of data. Health insurance is compulsory under the Czech law. An insured male person with a recorded prescription for OPM (alendronate, risedronate, calcitonin, strontium ranelate, teriparatide) in the year of interest was defined as a patient. An insured male person with a recorded prescription for OPM in the years bordering the year of interest was defined as a chronically treated patient.

**Results:** Five thousand four hundred male patients were analyzed within years 2002-2006. Men comprised only 5 % of OPM consumers and only 3 % of all patients tested in bone mineral density. The total OPM consumption rate was 0.6 DDD/1000 insured male persons/day from which one-half was accounted for alendronate consumption. In 2003-2005 was observed slow increase of patients as well as chronically treated patients. As many as 52 % and 64 % of the chronically treated patients fell into the adequate medication adherence group in 2004 and 2005, respectively.

**Conclusion:** The osteoporosis treatment in the Czech male population has been found insufficient. The increasing adequate medication adherence among the chronically treated patients could be considered as a positive trend. GPs' role in anti-osteoporosis prescribing should be therefore discussed and reevaluated.

565

#### Are infiltrations useful in Primary Health Care?

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Pain is one of the most frequent causes in the loss of the life quality of our patients. The origin of pain often lies in the acute osteoarticular process or in the relapse of a chronic process. The infiltration is a rather simple technique, with very few risks and which until soon, was reserved only to the specialists, traumathologists and rheumatologists .

**Aims:** Rate the initials result in order to implement in our centre a schedule of infiltrations in tendinitis and osteoarticular pathology. Describe the therapeutic effectiveness of performing infiltrations in Primary Health Care.

**Material and methods:** Descriptive observational study of 94

patients, on a consultation day of a Primary Health Care general practitioner (during scheduled/spontaneous visits), in a ABS city in 2010 (between May 2010 to December 2010). Variables: Age, sex, infiltration location, number of infiltrations per patient, duration of the evolution until the infiltration, complications, referred to Traumatology/Rehabilitation.

**Results:** There are analyzed 94 patients infiltrated in 2010. Sex: 69,1 % women, average age 60,9 years old. 30,9 % men, average age 57,8 years old. Patients with diabetes: 12,8 %. Infiltrations per anatomical parts: 50% male patients, epicondylitis: 13,8%, trochanteritis 11,7%, tendinitis anserina 9,5%. Evolution duration until infiltration: men - 3,9 months, epicondylitis: 3,4 months, trochanteritis: 1,6 months. Number of infiltrations per patient (average: 1,29): men: 1,17, Capián tunnel syndrome 1,67, De Quervain tendinitis: 1. Complications: none important (3 cases of second skin hyperpigmentation and 1 case of cutaneous atrophy); in 93,7% doesn't worsen the diabetes. Traumatology/Rehabilitation: only 14,9 % are referred.

**Conclusions:** Infiltrations in Primary Health Care are effective, economical and with little complications. They diminish the number of patients referred to Traumatology/Rehabilitation. Infiltrations in Primary Health Care aren't an overload of a general practitioner's work, they increase patient's satisfaction and also the doctor's, who increases his problem solving capacity and deepens his patient's trust.

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#### Clinical features and attendance of fibromyalgia patients in primary care centers

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**Aims:** Describe clinical features, treatment and attendance in primary care and rheumatologist of fibromyalgia patients.

**Material and methods:** Cross sectional study. Urban health center. We analyzed data of all patients with a fibromyalgia diagnosis from 5 general practitioners (GP) with an average 1500 patients aged >15 years. We recorded age, gender, year of diagnosis, referral to rheumatologist (R), associated pathology, attendance and treatment prescribed in 2010. We excluded patients with severe organic or psychiatric disease and musculoskeletal disabling.

**Results:** We reviewed 92 patients medical records with fibromyalgia. 9 were excluded. Fibromyalgia's prevalence: 1.2%. Mean age 58.4 years (SD 11.5). 98.8% women. Average age at diagnosis: 52.2 years (SD 11.5). 69% of patients were referred to R for diagnosis. During 2010 control was at: 84% GP, 22% R and 10% fibromyalgia hospital unit. Average GP visits were 6.5 and 0.3 at R. Most common associated disease were: 63% depression, 53% anxiety, 41% insomnia, 34% functional gastrointestinal disease, 25% headache, 13% dizziness and 13% restless legs/acroparesthesias. Depression was diagnosed 2 years before fibromyalgia. 59% of patients were prescribed paracetamol, 52% systemic NSAIDs, 11% topical NSAIDs, 23% weak opioids, 2% morphine, 17% tricyclic antidepressants, 46% SSRIs, 58% anxiolytics and 21% anticonvulsants. Patients with >7 years of fibromyalgia were using more anxiolytics and SAIDs than the rest (p=0.020 and p=0.005 respectively). No differences in other treatments or attendance were found.

**Conclusions:** 1. Fibromyalgia's prevalence in our patients was lower than in general population. 2. Diagnosis of depression precedes in time fibromyalgia, which would support affective component of the pathology. 3. Although most patients were referred to a R for diagnostic confirmation, GP does patient follow up. 4. Attendance frequency of fibromyalgia patients to GP (6,5) was similar that seen in general population patients (5,95).

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#### An ultrasound diagnostic approach of the anatomical structures of the wrist

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**Objectives:** Ultrasonography is a well known, safe, non-invasive diagnostic method that can be conducted by general practitioners. Aim of this study is to present the ultrasound approach of the anatomical structures of the wrist as well as the ultrasound imaging of the possible clinical signs of this area. The patients included in this study were examined in the x-ray department of Laikon General Hospital of the University of Athens.

**Materials and methods:** We applied ultrasound examination in 38 patients (25 women and 13 men) who presented with symptoms from the area of the wrist, aged from 22-63 years of age, in the years 2008 and 2009. All cases were examined with a linear probe of 12 MHz. An x-ray test was also performed on there wrist. The healthy wrist of the same patients was used as a control area. We recorded the normal structures, the best imaging position and the ways of fast and easy access. The ultrasound findings that concerned tendons, muscles, neurons, ligaments, bone structures and vessels of all 38 patients were recorded. All were compared and correlated with the clinical symptoms.

**Results:** The following findings were recorded: 8/38 tenosynovitis of flexors and extensors, 4/38 ruptures of tendons, 7/38 carpal tunnel syndrome, 5/38 ganglions, 3/38 inflammations, 3/38 tumors, 2/38 scaphoid fractures, 3/38 TFCC ruptures and 3/38 degenerative diseases. In the control group we recorded the echo anatomy, the best-imaging positions and the orientation key-points of the area.

**Conclusion:** The ultrasound study of the anatomical structures of the wrist can be considered of high reliability and sensitivity, providing the ability of a dynamic examination of the patient as well as significant information to the general practitioner that contribute to the proper management.

626

**Shoulder Pain Management in Primary Care***Tomaz D. Bastos C*

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**Aims:** Shoulder pain is the third most common musculoskeletal complaint in primary care, with an estimated prevalence rate between 16 to 26%. Primary care physicians have the opportunity to deal with shoulder pain complaints early in its presentation, when the prognosis is favourable. If left untreated, shoulder ailments can lead to considerable disability, poor quality of life and absence from work. The purpose of this study is to review the basic approach to diagnosis and management of shoulder pain.

**Methods:** Research for articles in the English, Spanish and Portuguese languages published within 2001-2011 in the databases Pubmed, Cochrane, DARE, TRIP, CKS and National Guideline Clearinghouse using the Mesh key-words shoulder pain, impingement syndrome and primary health care.

**Results:** Although shoulder pain may have either extrinsic or intrinsic aetiologies, the latter make up the majority of cases. In primary care rotator cuff disorders, glenohumeral disorders and acromioclavicular joint disease are the most common causes. A detailed history and an appropriate physical examination are essential to establish a diagnosis, which can be done mostly without further workup. Blood tests and radiology are only necessary if there are red flag symptoms/signs. Ultrasonography and MRI modalities provide more accurate results than plain films. Nonetheless, radiology is best reserved for additional investigation in secondary care. Initial treatment should comprise activity modification and analgesic medications. A trial of physical therapy may improve short term outcomes and reduce repeat primary care consultations. Steroid injections may help offering a short term pain relief. Referral to an orthopaedic specialist is recommended if pain and disability remain after six months of appropriate treatment, when there is a history of instability or if the diagnosis is unknown.

**Conclusion:** Shoulder pain is a frequent and important musculoskeletal problem. A careful history and physical examination are usually enough to establish the diagnosis. The majority of shoulder ailments can be managed with conservative treatment within primary care settings, reserving referral to refractory cases.

676

**Rare manifestation of a common disease***Ribeiro L.*

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**Background:** Osteoarthritis is the most common joint disease and a major reason for consultation in Primary Health Care (PHC). The hip is one of the most affected joints and is often associated with birth defects or previous arthritis. Coxarthrosis is clinically manifested by referred pain to the groin, buttocks, thighs and more rarely to the knee. Lameness and stiffness of the hip may be associated with a defective position and especially with painful limitation of

movements. The coxarthrosis is strongly associated with age, and has a very high impact since Portugal has one of the older populations of Europe. Besides being a major cause of absenteeism, is closely linked to disability and dependence registered after 60 years. Aim: To demonstrate the role of the family physician (FP) in recognising rare symptoms of common diseases.

**Material and methods:** Familiar interview, medical record and articles research in UpToDate, Pubmed, Medscape. Case Description: Male, 68 years old, history of smoking, overweight, chronic obstructive pulmonary disease and peptic ulcer. Appealed to the FP with right knee pain with 5 months of evolution and no other symptoms. He was treated with analgesics and was ordered a radiograph of the knee, which revealed no abnormalities. A month later, refers back to the FP presenting, in addition to pain, claudication of the right leg. On examination stands amyotrophy of the right thigh. The patient was referred to Physical Medicine and Rehabilitation and was ordered a radiograph of the pelvis, which revealed coxarthrosis as probable sequel of aseptic necrosis. Given the clinic, together with the imaging findings, we chose to maintain symptomatic treatment and refer to orthopedist consultation.

**Discussion:** Patients with this disease rely largely to the PHC that have the competence to diagnose, treat and monitor. The correlation between the complaints of the patient, proper implementation of the physical examination and high suspicion of FD were crucial weapons for an appropriate diagnosis and therapeutic orientation. FD is also responsible for proper referral of patients to secondary care according to symptoms.

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**Analysis of bone mineral density, life style and diet of men in the north of Gyeonggi-Do***Rho J, Kim E, Chung J, Yum K*

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**Objective:** Osteoporosis is the most common metabolic disease of bone and constitutes one of the most important major public health problems not only in women but also in men. This cross-sectional study examined the association of lifestyle and Diet with bone mineral density (BMD) in 386 Korean men.

**Methods:** Analysis of anthropometric parameters, smoking habits, alcohol consumption, physical activity and diet were assessed from an physical examination and interview. BMD was measured at the lumbar spine and proximal femur using dual-energy X-ray absorptiometry.

**Results:** Patients' age range from 22 to 83. Mean age, height (cm), weight (kg), BMI (kg/m<sup>2</sup>), waist circumference (cm), calory intake of patients are 54.8 +/- 10.8, 167.6 +/- 5.7, 68.7 +/- 10.1, 24.4 +/- 3.0, 85.9 +/- 7.5, 2351.1 +/- 300. Weight and calory intake were correlated with BMD. Smoking, alcohol and exercise were not correlated BMD.

**Conclusion:** Although alcohol, smoking, low BMI, immobility, poor nutrition are known to be correlate with BMD, this study showed no relationship between them. It is not statistically significant but smoking and lumbar 1, 3 and 4 as well as the femur show negative correlation considering alcohols all parts of lumbar spine, they show negative correlations while exercise and all parts of the lumbar and femur show positive correlation. Thus to prevent male osteoporosis subjects should quit smoking and exercise adequately.

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**Gout, evaluation of clinical practice in primary care**

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**Aims:** The prevalence of gout has doubled in recent decades, we must optimize its management and treatment. We studied the clinical and demographic characteristics of a sample of patients with gout in different disease stages and we quantified the number of patients who have associated pathologies with gout or that are taking drugs that could alter their uricemia values.

**Materials and methods:** A retrospective study of gout diagnosed patients on the computer files of three doctors in a family health unit. Variables used: gender, age, patient age at diagnosis of gout, and uricemia year follow-up in three stages: initial uricemia (T0), after initiation of therapy hipouricemia within less than 6 months (T1) and last value of recorded uricemia (T2). Uricemia levels were divided into three ranges, below 6 mg/dl, between 6 and 8 mg/dl and above 8 mg/dl, as well as relevant pathologies and therapies that can influence the levels of uricemia.

**Results:** From 5713 patients, 80 patients (72 men) were diagnosed gout. The average age of patients with gout was 63.1 years. The average follow up of the men was 8.44 years and 7.25 for women. The uricemia at T0 was 72.5% above 8mg/dl and the ones with values between 6 and 8 mg/dl. The values of T1 uricemia were 27.5% below 6 mg/dl and 7.5% with values above 8 mg/dl. There was a significant drop in uricemia values from T0 to T1 ( $p < 0.001$ ) and from T0 to T2 ( $p < 0.001$ ). Between the time T1 and T2 there was a significant increase in the values of uricemia ( $p = 0.039$ ), this could be due to less continuity in the treatment of chronic gout. Comorbidities: 25% of patients with type 2 diabetes mellitus, 70% hypertension, 15% had renal calculi and no patient had chronic renal failure. With regards to body weight 7.5% were normal-weighted, 37.5% over weighted, 45% had grade I obesity and the remaining 5% had grade II obesity. Lipid profile of the sample should be noted: 37.5% mixed dyslipidemia, 35% hypertriglyceridemia and 7,5% hypercholesterolemia. Gout therapy used: NSAIDs in 95% of patients, allopurinol in 95% (2.5% had allergy to allopurinol), colchicine in 42.5% (not known whether simultaneously with allopurinol). Of the remaining chronic medication, 47.5% of patients were treated with diuretics and 50% with a statin, both drugs with hiperuricemic potential.

**Conclusions:** Sample characterization allowed the identification of potential improvements in monitoring and treatment for gout and its comorbidities. Vigilance and continuous call therapy adherence are fundamental to achieving the therapeutic goals, i.e. uricemia below 6 mg/dl. Illnesses such as hypertension and dyslipidemia should be treated mainly with drugs such as fenofibrate, losartan and amlodipine, because of their hipouricemic effect.

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**Sjogren syndrome in the paediatric age: a case report***Chinarro Martínez P, Rando Najera E, Caballero Morales MA*

**Introduction:** Sjogren syndrome (SS) is a chronic autoimmune disease characterized by lymphocytic cell infiltration of the exocrine glands, predominantly salivary and lacrimal leading to xerostomia and keratoconjunctivitis sicca (sicca symptoms). The disease occurs more frequently in woman at 40-50 years old. SS is very rare in childhood. At the onset of the disease, the clinical manifestations can be different as in adults, since they are often characterised by recurrent parotid swelling and non-specific signs and symptoms. Oral and ocular affections are observed in a minority of children, specially at the onset of the disease. The purpose of this study is to report a case of SS in a 13-year-old girl.

**Case report:** A 13 years old girl with articulate pain of several months, indicator that concerns hands, neck and back and in occasions knees, accompanied of morning inflexibility. In the last year he presents pruritus and sensation of ocular foreign body and photosensitivity. Personal precedents: muscular frequent Contractions for 2-3 years. Mouth aphthas of repetition. Mouth intermittent dryness. Vulvovaginitis. Findings laboratory: Evaluation for antibodies against cytomegalovirus, Epstein-Barr virus, and HIV rendered negative results. Laboratory immunological abnormalities include the presence of ANA, anti ENA, antiSSA. And increase IgG. Before SS's suspicion one derives Rheumatology. EVOLUTION Nowadays constant controls in Rheumatology's unit, the alteration is confirmed in the immunological tests. Associated with IgG's discreet increase. The Schirmer test and sublingual biopsies positive.

**Conclusions:** Though the SS is a rare disease in the paediatric age, we must think about it in a patient with clinical history and positive antibodies. It will be the follow-up of these patients throughout the time the one that will determine the course of the disease and his possible association with other autoimmune diseases.

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**Evaluating the introduction of a rheumatological consultancy in primary care***Pou-Giménez MA, Díaz Torné C, González-Saavedra I, Garaikoetxea Iturriria A, Gayarre Aguado R, López-Pareja N*

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A space to consult cases with a rheumatologist was created in a Primary Care in order to improve the relationship between Primary Care and the Hospital, filtered referrals and promote professional training. GPs had the opportunity to consult patient's cases. The created space also enabled them to perform supervised infiltrations by the consultant rheumatologist. Aim of the study: to describe and evaluate patients and consultations made by GP's during the October 2009 to the October 2010 period.

**Material and methods:** computerized medical records of patients referred to the Consultancy space were reviewed.

**Results:** 86 consultations of 72 patients were made. The average age of the patients was 61,4 years old (22-93), 59% of them were female. 44,3% of the consultations were regarding diagnoses and 55,7% of them regarding treatment of a condition. The most frequent consultations were regarding soft tissue diseases 46,6%, 20,1% regarding

systemic inflammatory diseases, 12,3% were regarding mechanic pathology and 9,8% were regarding bone metabolism. With the consultancy 44 hospital referrals were avoided and 25 infiltrations were performed: 13 shoulder tendinitis, 5 trochanteric bursitis, 3 plantar fasciitis, 2 elbow tendinitis and 2 Knee infiltrations. 16 of them ( 64%) were successful and the patient reported an improvement.

**Conclusions:** consultancy spaces and supervised infiltrations are a good way of improving the relationship between primary and secondary care as well as learning and avoiding unneeded referrals to hospitals. 2/3 of the patients improved with the supervised infiltrations.

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#### Optimizing osteoporosis management in a primary care setting

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**Aims:** Osteoporosis-related fractures are a significant public health concern. Interventions that increase detection and treatment of osteoporosis are needed. This study evaluated the impact of a multifaceted program aimed at optimizing evidence-based management in patients at risk for osteoporosis and fractures.

**Materials and methods:** This study was performed during April 2009-April 2010 in Vyronas Health Center. Eligible patients were  $\geq 55$  years, identified to be at risk for osteoporosis-related fractures (had a non-pathological fracture of the vertebrae, hip or wrist or a BMD in the past year with a T-score of  $\leq -2.5$  or attended the Emergency Department with a fall and found to be at high risk for falls as defined by a Timed Up and Go result  $>14$  seconds). 103 patients were enrolled to the study. The intervention included facilitated bone mineral density testing, patient education and patient-specific recommendations for osteoporosis treatment. The outcome was the implementation of appropriate osteoporosis management.

**Results:** Mean age of participants was 72  $\pm$  9.1 years and 91% were women. 12 months after the intervention, the use of appropriate treatments for osteoporosis (biphosphonates with BMD T-score  $\leq -2.5$ ) reached 67%. 69% of the patients were taking calcium and vitamin D 55%.

**Conclusions:** A multi-faceted intervention program in a primary care setting can facilitate the management of osteoporosis in high risk patients.

916

#### Fibromyalgia symptoms may mimic adverse effects of statin use: the role of SSRI agents in primary care

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**Aim:** Statins are of the most prescribed drugs in primary care. Symptoms such as muscle aches, fatigue, during the

treatment are sometimes referred by patients, often forcing physicians to stop statin use. However, such symptoms may indicate the presence of fibromyalgia. The aim of our study is to present our experience of SSRI use in accessing such cases.

**Material and method:** Our study included 357 dyslipidemic patients who were visited the outpatient of lipids disorders in the last two years. 21 (5.9%) patients of them (mean age 53.4 years, 17 women) were complained for pain and fatigue in muscles and tendons, mild depression, chest and back pain, within first 6 weeks of treatment, while laboratory findings were negative for rhabdomyolysis. None of them had history of musculoskeletal problems or had receiving antidepressants. Clinical examination revealed the possibility of development of fibromyalgia and citalopram 20 mg/per day was administrated to all while advised to continue taking the statins. Patients were followed in 3 weeks

**Results:** 9 patients (42%), all women, reported that they were free of symptoms and diagnosis of fibromyalgia was confirmed. 7 patients (33%) correlated their symptoms with physical activity they did. In 5 patients (24%) the persistence of symptoms forced the discontinuation of statin treatment.

**Conclusions:** Our study showed that a large proportion of patients presenting atypical musculoskeletal symptoms while taking statins may be suffering from concomitant fibromyalgia. The role of SSRI is particularly useful in the treatment of these cases

1000

#### Effectiveness of hydrotherapy to treat low back pain

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**Aim and background:** Low back pain (LBP) is a prominent health and socioeconomic problem causing disability and work absences. Back complains constitute one of the most common symptoms presented in general practice. Nearly 70-85% of adults will suffer from LBP at some point in their lives. LBP consists of acute or chronic pain in the lumbar and sacral regions due to musculo-ligamentous or osteoarticular conditions. Hydrotherapy is the external application of water for therapeutic purposes. It has developed validity as the ideal environment in which to train for endurance, power, flexibility and general mobility. The aim of this systematic review is to evaluate the effectiveness of hydrotherapy for the treatment of LBP.

**Material and methods:** A search was performed using the MeSH keywords "hydrotherapy" and "low back pain" published between 2001 and 2011 on the health medical databases Medline, Trip database, DARE, the Cochrane Library and Bandolier. We excluded articles concerning pregnancy, post-operative and chronic neurological diseases. The SORT taxonomy of the American Academy of Family Physicians was used to evaluate the level of evidence and strength of recommendation. Intervention: All types of aquatic exercise. Outcomes: Patient's pain relief.

**Results:** Thirty-nine studies were found and five were accepted into the review: 3 systematic reviews and 2 cohort studies. From the analysis of the articles it was verified that hydrotherapy is effective in the relief of LBP, especially in chronic conditions. Evidence was conflicting concerning the type and intensity of therapy that would give the most beneficial outcome, but some reports expressed that hydrotherapy is more efficient than land exercise. No



negative effects were reported with the application of this therapy.

**Conclusions:** There was evidence to suggest that hydrotherapy has a potentially beneficial effect for patients with LBP. However further methodologically robust research is needed to support the therapeutic effect of hydrotherapy in LBP.

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## Other

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### Is hyperbaric oxygenotherapy really safe?

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**Aim:** HBO therapy can be valuable for treating selected cases of hypoxic diabetic foot ulcers and chronic venous insufficiency. Exposure to high concentration of oxygen is known to induce damage to cells, possibly due to an increased oxygen radical production. Reactive oxygen species also cause DNA damage. The aim of this study was evaluation of HBO treatment safety in regards to oxidative stress induced by repeated hyperbaric oxygenation.

**Material and methods:** In a study 27 patients were investigated, in 15 of them was diagnosed diabetes mellitus and in 12 chronic venous insufficiency. They were exposed average 27 time in hyperbaric chamber at a pressure 2,5-3ATA to 100% oxygen. The method comet assay has been used to determine DNA damage. Number of DNA strand breaks obtained by the single cell gel electrophoresis in nucleus of lymphocytes were isolated from venous blood also with bacterial repair endonuclease FPG detection of oxidised purines, ENDO specific for oxidised pyrimidines, Alca detects alkylation damage, sensitivity of lymphocyte DNA in vitro H<sub>2</sub>O<sub>2</sub>. Lymphocytes were isolated from venous blood before treatment and at different time after treatment (0, 24 hours, 7, 14 days, 6 weeks). We determined marker levels of antioxidant status TAS, homocysteine, malondialdehyde and other parameters in relation to healing of ulcers in patients.

**Results:** Results of DNA damage evaluation at different time periods suggest there are no significant changes if compared to initial DNA damage values. HBO treatment can be used as adjuvant treatment because no significant risk is manifested with this therapy.

**Conclusion:** Improvement of cross-domain coordination and mutuality of certain medicinal specialties, dealing with treatment of chronic defects, such as surgeons, angiologists, diabetologists, dermatologists, HBO - specialists, and finally general practitioners should lead to establish centers for consulting and common policy in treatment of these patients.

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### ACC INHIBITORS IN THERAPY diabetic nephropathy

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**Objective:** Clinical trials have to show that early involvement of ACC inhibitors, to patients with Diabetic nephropathy is leading to the improvement in GFR VALUES AND OTHER PARAMETERS AS INDICATORS OF BASIC STAGES OF CHRONIC RENAL DISEASE-HBB

**Methods:** The study included 50 patients of both sexes, aged over 45 years. They have all had diabetes for over 10 years. They all had complete biochemical analysis, the HbA1c, the value of GFR, the urine test, abdominal echo, microalbuminuria.

**Results:** of the study-the total number of four patients had Diabetes Type 1, while 46 had Diabetes type 2. At 20% was introduced ACC inhibitor, 50% were on monotherapy (ACC), while 30% took the ACC and some CA Antagonist. Blood pressure > 130/80mmHg had 70%, HbA1c > 7% , 30% protein in the urine 30%, GFR values <50 had 80% A microalbuminuria 10%. After a year since the introduction of ACC inhibitors in 60% of GFR were higher by 15% at 25% to 10% while 15% of GFR values remained unchanged.

**Conclusion:** a major cause for the occurrence of HBB is Diabetic Nephropathy. Earlier it was higher in the people with Diabetes type 1, but since life is extended, it is very common at patients with Diabetic type 2. Task of physicians in primary health care is to detect on time and slow down further progression as well as diabetic nephropathy as HBB. It is very important to start early with ACC inhibitor in minimum dosage regardless of the level blood. ACC inhibitors reduce not only hyperfiltration but also Glomerulosclerosis of remaining Glomeruli.

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### A study on the referrals in a secondary care.

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**Purpose:** We population of 7.394 habitants. It is an analytic cases and controls study. The medical-care disposition is integrated by 5 Family Physician and 2 Pediatrics Physician. Also we have 6 Nurses, 2 Physical Therapist, 1 Social Worker, 1 Matron, 1 Psychologist, 2 Guards and 2 Administrative Assistants, as well as 4 Physicians and 6 Nurses assigned to the Emergency Service.

**Design and methods:** We studied the referrals that request Specialized Attention (Secondary Care), both in the External Consultations as in a Hospital, during 1 year.

**Results:** We total of 101.877 consultation contacts made to the Health Center were recorded. 2.658 interconsultations have been completed. They are distributed as follows:

-Allergology: 45 interconsultations

-Cardiology: 59.

-Surgery: 145.

-Dermatology: 233.

-Digestive Medicine: 73.

-Endocrinology: 66. Due to a more professional experience, there had been a lower number of referrals to this specialty, because a better control of the 2 most prevalent diseases in this field: Diabetes Mellitus and Hypothyroidism is possible.

-Gynecology: 156.

-Hematology: 6.

-Internal Medicine: 6.  
 -Nephrology: 23.  
 -Pneumology: 30.  
 -Dentistry: 19.  
 -Ophthalmology: 246.  
 -Otolaryngology: 186.  
 -Mental Health: 86. Due to a more implication of the professionals, there had been a lower number of referrals to this specialty, because a better control of the 2 most prevalent diseases in this field: Mood Disorders and Anxiety is possible.  
 -Rehabilitation: 19.  
 -Rheumatology: 103.  
 -Sexual Health: 6 interconsultations.  
 -Traumatology: 305.  
 -Knee Unit: 39.  
 -Retina Unit: 62. Only one professional requests 46 retinographies, due to an optimal adherence of Clinical Guidelines.  
 -Urology: 60.  
 -Pediatric Hospital Service: 18.  
 -Radiology: 504.

**CONCLUSIONS:** Dermatology, Gynecology, Ophthalmology, and Traumatology were the most consulted specialty. Instead of this Internal Medicine, Hematology and Sexual Health are the less claimed specialty.

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#### The treatment of the actinic keratosis in primary care

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**Introduction:** Actinic keratosis (AK) is a squamous cell carcinoma of the epidermis in situ. About 10 % of the patients with AK can develop an invasive squamous cell carcinoma of the skin. For all the therapies the aim is to cure lesions both clinically and histologically with the minimum pain, scarring and recurrence. Aim(s) and background: To describe Actinic Keratosis treatment of Primary Care. To determine the optimization of resources and the adequacy of the treatment from the first welfare level.

**Material and methods:** Study design: population of study: on 405 individuals diagnosed of AK, we select a random simple, sample with a size of 232, prevailing 50 % and accuracy of 5 %. Area of study: Health Center of Primary Care. Period of study: 10 years, January 2000-2011. Main Records: Age of the patient, therapy used in the treatment of the injuries, location, malignancy, derivation to Hospital Center. Data Treatment: Univariate analysis (frequencies and measures of central trend and dispersion). Bivariate analysis.

**Results:** Average age of the population 73.69(72.36-75.02). Location: 139/69.5 % face-ear, 23/11.5 % scalp. Therapy: 127/69 % of people were treated by just cryotherapy or associated to salicylic vaseline, 37/20.1 % just salicylic vaseline and 2/1.1 desiccation. Consequence: 162/69.8 of the lesions did not stem, 51/22 % there was consequence before the treatment and 19/8.2 % after therapy. They presented malignancy 8/3.5 %. 5/62.5 % out of the malignancy cases were consequence before the treatment ( $p < 0.01$ ).

**Conclusions:** In Primary Care, effectively and efficiently the lesions type actinic keratoses are treated: The main locations

of the treated injuries are given in face and scalp. The main used technique is the just cryotherapy or associated to salicylic Vaseline. Most of the AK are treated in Primary Care existing scanty consequence to the following level. The diagnostic and therapeutic approach is correct enough with consequence to Dermatology of the malignant injuries before the treatment in Primary Care.

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#### Hiding behind severe hypertriglyceridemia- a case report

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**Aims:** Hypertriglyceridemia may be the result of either genetic defects (primary causes) or, more commonly, acquired factors (secondary causes). Severe hypertriglyceridemia (fasting triglyceride level greater than 1000 mg/dl) occurs in about 1 in 1000 adults. The purpose of this work is to enhance the role of the family physician in proceeding with the investigation to find out what's behind this finding.

**Material and methods:** We report a case of PAMM, male, 41 years old, who in April 2010 came to his family physician complaining of cough with yellow sputum and headache for the last 14 days.

**Results:** In April 2010, when PAMM was first evaluated in the consult, our examination revealed right basal crackles with no other relevant features. We started him on amoxicillin and clavulanic acid for a 7 day period, after which he reported feeling better. Laboratory tests performed were remarkable for a severe hypertriglyceridemia 1027 mg/dL and otherwise normal. His medical history is unremarkable and he had no family history of premature coronary artery disease. He has moderate alcohol consumption habits and is a nonsmoker. We started him on fenofibrate, and advised on total fat and alcohol intake restriction and exercise practice. Other tests were performed to rule out secondary causes of hypertriglyceridemia such as diabetes, hypothyroidism and nephrotic syndrome. A month later he came again to his family physician complaining of painless swelling in both legs, physical exam also revealed a blood pressure of 148/98 mmHg. His previous laboratory test revealed proteinuria in the nephrotic range and hypoalbuminemia. Our next step was to refer the patient to the hospital Nephrology specialist who started him on steroids. Renal biopsy performed was consistent with membranous glomerulonephritis.

**Conclusions:** This case highlights the importance of addressing severe hypertriglyceridemia and early recognition/evaluation of its secondary causes in the primary care setting.

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#### Experience in screening for glaucoma in Primary Health Care

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**Aims:** Glaucoma is characterized by ocular disorders in Intraocular Pressure (IOP) to reach levels of irreversible damage to the optic nerve fibers, with gradual loss of vision that can lead to blindness. Glaucoma is asymptomatic, so a proper monitoring of glaucoma requires a periodic inspection of both the state of the optic nerve and nerve fiber layer and visual fields. -Provide the primary care experience and outcomes when using the tonometer and retinograph for detection of ocular lesions. -Reduce the waiting list at the service of ophthalmology, as well as reduce the time to advance the diagnosis of glaucoma and its treatment.

**Materials and methods:** Last year, the consulting unit of the camera Retinography non-mydratic (CRNM) in Primary Care, has begun to record IOP. They have been reviewed 1920 patients from eight teams included in the screening of diabetes and/or glaucoma. The consultation carried out tonometry (measurement of intraocular pressure) and retinography (vision of fundus). Patients with elevated intraocular pressure (>21 mmHg) and alterations in the optic nerve are referred to another center to complete the study with perimetry (visual field) and pachymetry (corneal thickness).

**Results:** From 1920 patient, we studied 146 patients (8%) with elevated IOP: glaucoma diagnosis in 18 (12%), ocular hypertension in 52 patients (36%) and 56 patients to new control (38%). They were derived 17 patients (12%) with glaucoma and 32 patients (22%) with ocular hypertension to referral hospital for treatment.

**Conclusions:** We achieved an internal circuit very accessible to the attention of patients derived from the Primary Health Care for CRNM unity, and this implies a rapid diagnosis of glaucoma screening by being carried out IOP and the corresponding retinographies. Likewise, we could reduce waiting lists and possible diagnosis delays.

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#### The risk of unwanted side-effects when using analgetics

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Analgetics are the most frequently used single group of drugs. Among them non-steroid antirheumatic drugs are used most frequently, which have many and numerous unwanted side-effects beside wanted effects. Therefore, their usage brings the risk of serious unwanted side-effects.

**Aim:** Estimate of the risk of serious unwanted side-effects when using analgetics

**Material and methods:** Every patient was tested during the four week period and the level of the risk was set for those using analgetics, according to the Questionnaire, gotten with the Stanford University (SAD) permit.

**Results:** 5.4% (172) of 3160 examined patients use analgetics. 5.2% of patients who drink analgetics have the level of risk I, 60% from the 51-55 age group. They don't drink corticosteroids, don't have RA, didn't have bleeding from the gastrointestinal tract, and 33% had heartburn. 37.2% of patients who drink analgetics have the level of risk II, 66.7% of them is among the 55-65 age group. 2% of them have RA, 6.2% drink corticosteroids, 63.2% had the sensation of acid juice in their mouth, nobody had previous bleeding from the gastrointestinal tract. 32.0% of patients who use analgetics have the level of risk III, among who 68% are older than 65 years. 4.9% have RA, 17% drink corticosteroids longer than

three months in a year. 63% have heartburn, nobody had bleeding from the gastrointestinal tract. 25.6% of patients who use analgetics have the level of risk IV, 50% are older than 75. 21.8% have RA, 28% drink corticosteroids longer than three months in a year. 13.5% had bleeding from the gastrointestinal tract, 83.6% felt gastric pain.

**Conclusion:** The level of unwanted side-effects risk when using analgetics increases with growing old, previous bleeding from the gastrointestinal tract, corticosteroids usage, RA suffering, which is an important signpost for a correct, rational therapy.

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#### Smoking habits of the population in the town of Valjevo

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**Background:** Smoking is the cause of 90% of deaths from lung cancer, over 50% of chronic respiratory diseases and over 20% of cardiovascular.

**Aim:** Examine smoking habits in a stratified sample regarding gender, age, education

**Method:** The survey population sample was conducted in the period from 2.4.2009. to 8.12.2009. The sample of 2000 inhabitants of Valjevo aged from 25 to 74 The sample are doubly stratified by sex and place of residence (urban / rural) and evenly divided into five age groups

**Results:** Differences in smoking is not statistically significant ( $p = 0.191$ ) neither in relation to sex, nor in relation to the place of residence ( $p = 0.076$ ). The highest percentage of smokers in the age group 65-74 years of age where 79.9%, and the lowest in the age group 45-54 years (46.9%). There was a statistically significant difference between the percentage of smokers in relation to level of education, at least blowing the respondents with the highest level of education ( $p < 0.001$ ). The average number of cigarettes smoked per day is 19.1. In men 21.5, women 16.4. The greatest number of cigarettes smoked per day in the age group 45-54 years (19.6) and lowest in age group 65-74 years (18.6). The difference in the number of smoked cigarettes per day was statistically significant in relation to sex ( $p < 0.001$ ) and no significant according to age ( $p = 0.927$ ), compared to the level of education ( $p = 0.186$ ), and according to place of residence (0.203) is most often smoke industrial cigarettes 97.6%.

**Conclusion:** The percentage of daily smokers decreases with age. Highest in the age group 45-54 years (43.3%) and lowest in the age group 65-74 years (16.3%). There is a high degree of correlation ( $R^2 = 0.9731$ ) between percentage of respondents who smoke every day and age. The risk of death from chronic obstructive disease in smokers is 5-8 times higher than those who never smoked. Smoking affects the shortening of life (about 7 years) and the quality of life.

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#### Patterns of impairment in a frail elderly cohort

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**Objective:** To describe the evolutionary patterns of change in functional ability in people over 65 years and identify related factors.

**Design and methods:** Longitudinal Design. Dynamic cohort without control group. Study subjects: Frail elderly, seen in consultation and / or registered between 2003-2010 (N = 235). Inclusion criteria: physical problem that causes psychological or social risk of dependency. Exclusion criteria: exitus, change address, institutionalization. Monitoring annual average 80 patients. MEASURES: Age, sex, disability at home, a pathology that causes loss of function, successive scores of Barthel Index (ability to perform basic daily activities.) Dependent variable: Barthel evolutionary pattern (down / no down) in patients with at least three determinations (n = 134). Univariate analysis by Chi2-test of qualitative variables, the t test to compare means for quantitative variables. 0.05 significance level. Multivariate logistic regression analysis.

**Results:** Mean age was 88 years current cohort, sex: male 32,8%, women 67,2%, 51,1% disabled at home, a pathology that causes loss of function: musculoskeletal 26,83%, dyspnea 21,7%, 14,5% dementia, neurological 13,2%, cancer 3,8%, 1,3% mental disorder. 77 dead. Mean baseline Barthel 79, in ninth measurement 56. mean before death Barthel 35,96%. Pattern: down 14%, oscillating 38,3%, stable 4,7%. Multivariate analysis identified younger age as the only factor associated with downward trend (Exp B 0.98).

**Conclusions:** The pattern of deterioration of functional capacity in frail older people is the most common swing. The progressive deterioration measured as decline in functional ability was associated with younger age.

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#### Multiple endocrine neoplasia type 1 (MEN I)

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**Aims:** Multiple endocrine neoplasia 1 (MEN I) is an autosomal dominant disease characterised by tumors and hyperplasia of two or more endocrine glands and the polymorph clinical picture. Our purpose was to assess the aspects of this rare disease in order to know more about the clinical signs and the certain diagnostic procedures that help us to reach the proper diagnosis and to start with appropriate treatment.

**Material and methods:** We did an exhaustive and deep researching following the clinical signs observed in general practice and the certain diagnostic procedures performed in the Institute of Endocrinology and Institute of Lung Diseases, complemented by histopathology and genetic analyzes.

**Results:** We present a case of a 51-year old female, coming with high temperature, chest pain and general weakness. SE was 94; the chest x-ray show the both side tumors of the lungs. She was put on antibiotics and hospitalized for further examinations ;bronchoscopy with PH examination, somatostatin-receptor scintigraphy (SRS), MSCT of chest and abdomen as well a colonoscopy, MRI, MIBI scintigraphy of parathyroid glands, numeral laboratory analyzes. She was found to have carcinoid tumor atypicus and well defined neuroendocrine tumor as well as an additional tumor in ileum, pituitary adenoma and inappropriately increased levels of the hormones of pituitary, thyroid and parathyroid glands.

Successive bilateral resection of both lungs was done. Genetic analyzes confirmed the mutation of genes. Acromegaly and some cutaneous tumors consisting with lipomas were helping to establish the diagnostic of MEN I. Medical therapy was directed toward the specific endocrine syndromes: a low dose of L-thyroxin was administrated.

**Conclusion:** MEN 1 is a rare disease that requires extensive and deep researching by the clinicians especially the endocrinologists.

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#### How the young who are physically healthy as well as those with chronic diseases estimate their self-respect and life quality outside school

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**Aims:** Accumulation of risk factors in the society which is going through the process of transition and is approaching the European life quality standards, without a parallel accumulation of possibility factors, causes the sensitivity of the young concerning their self-respect and life quality outside school. The research background is that the young and their parents, living in a high-risk environment with negative stimulants, recognize their life quality, with the stress on the estimate of their self-respect and quality of life outside school.

**Material and methods:** Microresearch work through an anonymous questionnaire for the 15-year olds and their parents.

**Results:** The questionnaire analysis shows that the young give positive estimates of their self-respect and quality of life outside school. They estimate that their emotional and physical health is jeopardized. Children suffering from chronic diseases (asthma, diabetes, epilepsy, haemophilia, kidney illnesses) express their attitudes exactly the same as their healthy peers do. It is confirmed that the family represents a stable and irreplaceable factor for forming personality security and self-respect.

**Conclusion:** The young (both healthy and with chronic diseases) estimate that their self-respect and quality of life outside school /friends and family/ is not jeopardized, regardless the life conditions they grow up in. Parents have less insight of the real state of their children's life quality.

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#### Prevalence of menstrual disorders in nursing school students

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**Aim:** Menstrual abnormalities are the most common gynecological problems in women. Menstrual disorders include menstrual irregularity, menorrhagia, dysmenorrhea and other related symptoms.

**Material and methods:** 353 female students participated the study. 57-items questionnaire about menstruation and personal demographic characteristics was performed. Participants of age at menarche were classified as early (12 years and under), intermediate (13 to 14 years) and late (14 years and older). According to menstrual cycle interval; 21-35 days were normal, less than 21 days were short and over 35 days were classified as prolonged menstrual cycle.

**Results:** The mean age at menarche was 13.21+/-1.08 (10-16) years. 23,8% (n=84) of 346 participants were as early menarche and 37.1%(n=131) as intermediate menarche and 37.1% (n=131) as late menarche. The frequency of severe dysmenorrhea was more common in late menarche groups than middle and early menarche groups (p=0.111). Menstrual cycle length, 3.7% (n=13) of participants was under 21 days, 12.5% (n=44) longer than 35 days, and 83.5% (n=294) in among 21-35 days. There was no significant relation between dysmenorrhea and menstrual cycles (p=0.564). 83.3% (n=293) of the girls have complaints of dysmenorrhea . 16,7% (n=59) had no symptoms of dysmenorrhea. Mild dysmenorrhea was 31.4% (n=111), moderate dysmenorrhea was 34.3% (n=121) and severe dysmenorrhea was 17.6% (n=62), respectively. there was a statistically significant differences between menarche and menstrual cycles (p=0.006). According to these results,we found that age at menarche increases the duration of menstrual cycle prolonged (oligomenorrhea).

**Conclusions:** Early detection of abnormal changes in menstrual problems may help determining some health problems. The community should be informed about the menstrual period and having professional help if needed. family medicine centers may have an effective role about this situation.

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#### Prevalence of hirsutism in nursing school students

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**Aims:** Hirsutism may be related with polycystic ovarian syndrome, ovarian tumors, cushing syndrome, adrenal tumors and disorders such as menstrual irregularities or idiopathic. Hirsutism may cause psychologic disorders such as anxiety, depression, social phobia for women. In our study, we aimed to investigate menstrual cycle patterns of women, the frequency of menstrual disturbances and hirsutism and the factors that affecting them.

**Material and methods:** Hirsutism were graded using the Ferriman-Gallwey (FG) score. Upper lip, chin, chest, upper abdomen, lower abdomen, thighs, upper back, lower back and upper arms were examined according to hair length, density and hardness. FG score of 8 or more were evaluated as hirsutism.

**Results:** A questionnaire including menstrual cycle and socio-demographic characteristics was applied to 353 female students. There was no significant relation between hirsutism and age at menarche in 280 girl students (p=0.207). However hirsutism was more less in early menarche groups (15.4%), than middle and late menarche groups (42,3% ve 42,3%). There was a statistically significant difference between hirsutism and irregular menstrual cycles including oligomenorrhea (27,5%) and polimenorrhea (7,8%)

(p=0,001). 17.33 % of 300 girls (n=52) had a complaint of hirsutism. However, we determined hirsutism in 37 of these 52 girls (71.15%). There was hirsutism 6.04% (n=15) of 248 girls that without complaints of hirsutism.

**Conclusion:** Hirsutism is affected by ethnic and genetic features, however it may be a symptom of a pathologic situation. It is important using Ferriman-Gallwey scores, for early detection of diseases associated with hair growth particularly as polycystic ovary syndrome, in women that applied the family medicine centers.

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#### Five-year experience in a Unit Of Primary Care Attention to the traveller.

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**Aim:** To describe the five-year experience in a Unit of Primary Care attention to the international traveller.

**Materials and methods:** The team was formed by four doctors and five nurses, coming and shared by Primary Care Units and especially trained in Tropical and placed in two different outpatient offices. All travellers are visited by one doctor and one nurse simultaneously. The Unit offers careful counselling before travelling depending on the country, means of transport and accommodation. Vaccines required are prescribed and administered, as well as malaria chemoprophylaxis if needed and sanitary counselling about water, food and dressing. Moreover, electronic accessibility during the travel is always feasible, some visits for light and mild pathology has been performed, at the same time that support is given to general practitioners in terms of International Health.

**Results:** 10643 visits have been carried out, 19839 vaccines have been administered and 3510 malaria chemoprophylaxis have been prescribed. Twelve questions have been answered through electronic mail.

**Conclusions:** The increasing number of travellers to the tropical and subtropical region has raised the risk of suffering from cosmopolitan and tropical illnesses. In that sense, it is essential an specialized medical counselling which may decrease the consequences of that kind of trips. As a whole, specialized visits for the international traveller are feasible from Primary Care Units whenever physicians and nurses are correctly trained. Besides, these units play an important role when counselling immigrants at their time of coming back to their origin countries for personal reasons. At the end, specialized units may also stand as a strong relief for hospital units, nearing Primary Care to the people when International Health Counselling needed.

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#### Serum adiponectin level has association with insulin resistance and lipid metabolism in the women with polycystic ovary syndrome

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**Aims:** The relationship between adiponectin level and insulin resistance in women with polycystic ovary syndrome(PCOS) has been studied but still controversial. The aim of this study is to evaluate the adiponectin level in the women with PCOS and control groups which were constituted age- and body mass index- matched subjects.

**Material and methods:** Sixty women with PCOS and eighty women with healthy control, age- and BMI matched, were enrolled in this study. We measured the serum concentration of adiponectin level, hormonal and metabolic parameters. We estimated insulin resistance as the quantitative insulin sensitivity check index (QUICKI) in each subjects.

**Results:** PCOS had significantly lower( $P<0.002$ ) level of adiponectin after adjustment for age, BMI, mean blood pressure, fasting glucose, fasting insulin, triglyceride, high-density lipoprotein, low-density lipoprotein, LH/FSH, total testosterone and SHBG levels. QUICKI had significant association with adiponectin level in both PCOS and control group( $P<0.001$  in the PCOS group;  $P=0.03$  in the control group). However, after step-wise multiple regression analysis, adiponectin levels were positively correlated with QUICKI in control group only and the relationship between adiponectin level and QUICKI in PCOS disappeared. Also adiponectin was found to be independently associated with HDL cholesterol levels and BMI in PCOS group and independently associated with HDL cholesterol levels, BMI, QUICKI, SHBG, LH levels in control group.

**Conclusions:** In conclusion, adiponectin is independently mediated with insulin resistance in normal control group, but in PCOS group, adiponectin is associated with lipid metabolism and obesity, which is indirectly related with insulin resistance.

Key word: adiponectin, polycystic ovary syndrome, insulin resistance

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#### Opioid use in the management of chronic pain

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**Aim:** Chronic pain is a leading cause of primary care office consultation. The prevalence in Europe is estimated at 19% and there is evidence that chronic pain is not adequately treated. Several different studies have investigated the clinical efficacy and safety of opioid use in the management of chronic pain. The purpose of this study is to organize and update the published literature in the use of opioid for the management of chronic pain.

**Material and methods:** Bibliographic review of articles (systematic reviews and random clinical trials) published in the Medline resource, Pub med platform, between 2000 and 2010, with keywords "chronic pain" and "chronic pain management".

**Results:** Three systematic reviews about the use of strong opioids in the management of chronic pain considering the controversy of the safety and efficacy of these drugs were analyzed. The majority of patients interrupt the opioid treatment due to side effects or persistence of the pain. However, some studies show that a significant percentage of

patients that kept the treatment were able to reach significant pain relief. When side effects are present, most of them are minor (nausea and headaches), while the major side effects (dependence) are rare. A better knowledge of the pathophysiological mechanism of the pain as well as a better communication between doctor and patient are necessary for the improvement of results in clinical practice.

**Conclusion:** The knowledge of chronic pain as well as its management based on the specific needs of each patient is essential for the improvement of medical decisions and the possibility of a more efficient treatment in an earlier stage of pain. The pharmacological treatment is usually limited by side effects, especially with the use of strong opioids.

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#### Alcohol drinking behavior of students in a Southern City of Turkey

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**Aims:** Adolescence is a risky period in person's life. Alcohol consumption is an important contributor to the global burden of disease, responsible for 4% of disability-adjusted life years. The alcohol consumption prevalence in adolescents varies 4.4% to 24.3% in Turkey. The aim of the study was to find out the prevalence of alcohol drinking behavior and related factors in high school students.

**Material and methods:** The population comprised 2640 randomly selected students from 119 high schools among 89,884 students in Adana. The response rate was 96.0% ( $n=2535$ ). Data was collected in March 2010. A self-completed and anonymous Turkish version of the Youth Risk Behavior Survey Questionnaire was completed at school. Data was analyzed using statistical pocket program.

**Results:** Mean age was 16.68  $\pm$  4.19 years (range=14-20), 53.9% ( $n=1525$ ) were female, 95.8% ( $n=2105$ ) were living with their families. Of student's parents, 39.6% were primary school graduates. The majority of mothers were housewives (67.5%) and 35.4% of fathers were freelance, 41.2% had minimum wage. Of students, 42.8% ( $n=1084$ ) were drinking alcohol and this was significantly related to gender, age, parental education, occupation, income, and alcohol drinking behavior of family members ( $p=0.0001$  for each).

**Conclusions:** Knowing about related factors in alcohol use may be helpful in developing effective policies to reduce youth alcohol drinking.

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#### Inappropriate use of the cardiological emergency department-the role of urban primary care

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**Aim and background:** The aim of this study is to measure the overuse of the cardiological Emergency Department(ED) in an urban area as well as the role Primary Health Care has

in this field. Our country is considered to be a country in which Primary Health Care services are in development and the majority of the patients with urgent or nonurgent health problems attend the emergency departments of hospitals.

**Material and methods:** The database of the cardiological emergency department in our hospital has been reviewed for 1 month during 2010. The classification of the cases was based on gender, age and final diagnosis.

**Results:** During the study period 88 patients were admitted to the Cardiological Emergency Department from our city. It was found that a small percentage of them were under the need of hospitalization. The rest of the patients were under the need of primary medical assessment and left with pharmaceutical directives.

**Conclusions:** The big number of patients who left with pharmaceutical directives from the Cardiological Emergency Department of the hospital emphasizes the beneficial role of Primary Care in an urban area. It seems that the patients in such areas use the Emergency Department as a Primary Health Care structure. Furthermore this phenomenon should change in order to have efficient use of health care personnel, infrastructure and financial resources of the Emergency Department in a hospital. General Practitioner should be characterized by multiple skills, easy access to patients so as to assess the health needs of the population and finally decrease health inequalities. Finally the promotion and development of urban Primary Health Care is a necessity which will improve the quality and secure of health services in our country.

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#### Evaluation of patients who underwent ultrasound imaging due to breast-related complaints

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**Aim:** Breast cancer is the most common cancer type among women, and also is the second most frequent cause of death among women. Mastalgia is the most common breast-related complaint. Resorts to polyclinics due to breast lumps have recently increased in parallel with awareness of monthly self-examination. In this study we investigated the ultrasound results obtained from patients having breast-related complaints.

**Material and methods:** 228 patients who have been examined by a radiologist and had ultrasound imaging due to breast-related complaints was included in this study. Patients have been informed about the research, written consent forms were obtained and data were recorded.

**Results:** Mean age for 228 attendants was 44.5 (19-84). The most frequent cause of consulting was mastalgia and 24.5% (n=56) of all patients had it. Palpable mass followed it by 19.2% (n=44). Examining patients who had mastalgia, 58.9% (n=33) founded no pathology while 41.1% (n=23) had a pathology. Pathologic results were fibrocystic disease (n=15), solid hypoechoic lesions consistent with fibroadenoma (n=4), fibroglandular breast tissue (n=2) and 36.3% (n=16) of patients who underwent ultrasound imaging due to palpable mass had no pathology while 63.7% (n=28) had a pathology. Abnormal signs we detected lipoma (n=2), fibroadenoma (n=2), microcysts+solid lesions (n=5), microcysts+adenosis areas (n=2), microcysts (n=8), cystic adenosis (n=3), solid lesions (n=2). Also 23.6% (n=54) of all patients who

underwent ultrasound imaging had previously been diagnosed with fibrocystic disease.

**Conclusions:** In our study, mastalgia is the leading breast-related complaint and it's less likely to detect a pathology in women with mastalgia complaints than it's in women with other complaints. Especially breast pain increase associated with cyclic menstruation is more of a hormonal situation than of a pathology. The possibility of detecting a pathology in women who consult due to palpable mass is higher. In this case even though detecting a malignancy is not very likely, patients should be referred to a higher level facility.

574

#### Wellcoming first year students to primary care

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**Aims:** In the last 10 years medical students have gradually been increasingly exposed to primary care (PC) settings during their medical education. This exposure has changed from the previous scheme where they only rotated in PC in their 6th year to the new one where they come also in their 2nd and 1st course. During 2009-2010 and at the 3rd course; while studying general pathology as their main subject, they were also invited to participate in a PC setting. Our objective is to describe the organization of that rotation as well as the students perception of it

**Material and methods:** The organization of a rotation carried out at PC by 3rd year medical students is described and the results of a self administered questionnaire that they answered is analyzed. The questionnaire included 10 items valued from 1 to 5

**Results:** Between the 8th and the 17th of march 2010, 45 third year medical students attended 8 urban PC centers. Each student spent 25 hours with a General Practitioner (GP). 5 lecturers as well as 40 GPs participated in the scheme. The main learning target designed for them was basic medical interviewing skills, physical examination and the manage of multimorbidity patients with multiple prescribed drugs. A self administered questionnaire was given to students from 6 of the 8th PC centers and 36 of the 38th students answered them (95%). 4 out of 5 was the average score the rotation was given. 4,2 was the item regarding their expectations; 4,2 the pedagogical side; 4,5 to practical application; 4,6 to the teaching methodology; 4,2 for the curriculum; 2,8 necessity to extend the duration; 4 for the timetable and settings; 4,9 the welcoming; 3,8 necessity to continue the rotation in PC; 3,4 to extend it to the fourth course

**Conclusions:** 1-Students were satisfied with their PC rotation (average score 4/5) 2-The items with highest scores were the welcoming, pedagogical methods and practical application. The expectations were fulfilled. 3-The average punctuation was good but they did not seem to think a rotation was needed in their next year.

614

#### Study of work satisfaction among the employees in primary health care of the Health Center Novi Sad, Serbia

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**Aim and background:** Routine statistics can hardly provide data about the workload of physicians and nurses in primary health care. The aim of this study was to show that the increasing workload can cause the overload syndrome and stress, and render the work in primary/family medicine more difficult.

**Materials and method:** Polling was based on a questionnaire designed by the Ministry of Health of the Government of Serbia encompassing 237 employees (94 doctors and 143 nurses).

**Results:** The results showed that 33.8% of the participants were unsatisfied by the time available for their work with patients. Concerning potential emotional exhaustion, 35.0% of respondents said "yes, often" and 33.8% "yes, sometimes". As for physical exhaustion, 31.6% declared that they felt it "often" and 33.3% "sometimes". Only 22.8% of respondents had no feeling of tiredness at the very thought of going to the work, while 32.5% were unsatisfied with financial remuneration, and only 4.2% were very satisfied. Concerning satisfaction with their jobs, more than 40% of respondents answered that they were indifferent (neither satisfied nor unsatisfied). On the other hand, to the question on the difference in satisfaction now and five years ago, 53.0% of the respondents declared that they are presently less satisfied.

**Conclusions:** It is possible to conclude that it is increasingly more difficult to work in primary/family medicine because of the increased expectations of patients, requirements of the Ministry of Health and officials, along with financial limitations and pressure exerted by the pharmaceutical industry. The process of medicalization and ethical dilemmas are increasingly more pronounced, which leads to increased physical and psychical loads, exhaustion and dissatisfaction of the employees in primary health care.

632

#### Differential diagnosis of acute chest pain

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**Introduction:** There are many types of acute chest pain and diagnosis is often quite complex. It is important to observe both the patient's physical appearance and medical history. The most common symptoms are shortness of breath, irregular heartbeat, dysphagia (swallowing difficulties), and sternal pain. This research aims at showing frequency of one symptom in various illnesses.

**Method:** We have interviewed 56 patients with acute chest pain in the general practitioner's office. The patients were divided into several groups according to their illness as follows: (1) stable angina pectoris; (2) unstable angina pectoris; (3) Pulmonary edema; (4) esophageal and gastro duodenal pain; (5) neurological illness; (6) musculoskeletal chest pain; (7) psychogenic pain; and 8) breast pathology.

**Results:** Firstly, the analysis of electrocardiogram and the tests for concentrations of CK, LDH and AST enzymes is used to eliminate a heart attack. Out of 56 patients interviewed we have found as follows: 15 patients presented cardiac etiology; 20 presented musculoskeletal and

neurological etiology; 14 presented gastro duodenal etiology; 6 psychogenic etiology and 1 breast cancer.

**Conclusion:** Because chest pain is a symptom common for many different pathologies, there is more than one way to treat it. It appears that the most important is that the medical professional has an experienced and humane approach as well as various possibilities of clinical diagnosis.

658

#### Satisfaction of medical staff

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**Introduction:** What is the quality of our daily work? The answer is, at least partially, satisfaction of medical staff regarding interpersonal relationships, working conditions and personal life quality. The goal: to determine the level of that satisfaction and to compare the present status with that of the five years ago.

**Method:** Analyses of data collected using the questionnaire (created by the Institute for public Health of Serbia) relating to satisfaction of medical staff employed in Primary Health Care Center Zemun.

**Results:** Within 582 anonymously examined persons satisfaction confirmed with: available equipment 61.3%; interpersonal relationships and education opportunities, both by ; with autonomy and with support of superiors, both by 85%; but with wages 28.6% only. Emotional exhaustion feels even 58.3% (frequently or permanently 27.3%, occasionally 31%), physical exhaustion 59.8% (32.7% occasionally, the other permanently). The tiredness at the very thought of work feels 23.3% occasionally, 16.6% frequently. In the following five year almost half of examined plan to stay in the public sector; 6.8% plan to move to the private sector and 6.5% consider job out of medical profession; 37.1% do not consider changing job at all. About 74.5% are satisfied with general status, not satisfied 1.5% only, 24% are indecisive. Satisfaction comparison with the status of five years ago: for a half there is no differences; more satisfied with previous status are almost 1/3.

**Conclusion:** Despite of high level of satisfaction with interpersonal relationships, education opportunities and support of superiors, high proportion of emotionally and physically exhausted examinees is alarmant. Still remains contradictory that even of examined express the satisfaction regarding the general status. Possible answer: reflection of patience and hope for better tomorrow.

677

#### Management of Red Eye in Primary Care

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**Introduction:** Eye related symptoms account for 1.8 to 5% of patient visits in Primary Health Care and Red Eye (RE) is the



most common cause of patient referral to the Emergency Department. RE is a term generically used that covers a large spectrum of diseases: primary ocular problems or eye manifestations of systemic diseases. Aims: To address the management of RE in Primary Health Care.

**Material and methods:** We conducted a search of revision articles and clinical guidelines published in the last 5 years, in PubMed, using key-words: 'eye' and 'primary health care'. Of the 44 articles found, 2 were selected.

**Results:** A medical history and physical examination should be performed in order to diagnose the cause of RE. If the patient presents with alarming signals, such as moderate to severe pain, vision impairment, corneal involvement, headache, nausea or vomiting, foreign body, or if he is a contact lens wearer, proper referral is advised. Other conditions, such as episcleritis, viral, allergic or bacterial conjunctivitis, dry eye and subconjunctival hemorrhage, can be treated within the Primary Health Care. They can be diagnosed and properly treated using an algorithm based on the presence and characteristics of hyperemia, itching and discharge.

**Conclusions:** A patient presenting without alarming signals can be treated by the general practitioner. We present a diagnosis and treatment algorithm for RE in primary health care.

705

### Thyroid Nodules - How should they be managed by the primary care physician?

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**Aims:** Thyroid nodules are a common clinical problem, with a prevalence of palpable nodules ranging from 3-7%. The main purpose in investigating thyroid nodules is to differentiate malignant from benign lesions, the former occurring in 5-15% of the cases. Given the high frequency and potential importance of thyroid nodules, primary care physicians must be able to conduct a cost-effective evaluation. This study intends to develop an approach to the management of nodular thyroid disease in primary care settings.

**Methods:** Research for articles in the English, Spanish and Portuguese languages published within 2006-2011 in the databases Pubmed, Cochrane, DARE, TRIP, CKS, National Guideline Clearinghouse and Google Scholar using the Mesh key-words thyroid nodule and primary health care.

**Results:** When a thyroid nodule is found, a careful history and physical examination along with measurement of serum TSH level should be performed. Hyperthyroidism or hypothyroidism coupled with a nodular goitre should be referred routinely to an endocrinologist. Initiation of other investigations, such as ultrasound scanning or autoantibodies, by the general practitioner is unnecessary and may cause delay in making malignancy diagnosis. Patients with a history of sudden onset of pain in a thyroid lump or with a thyroid lump which has appeared recently or has been increasing in size over months should be referred non-urgently. Patients with an associated stridor should be referred immediately to secondary care. The presence of unexplained hoarseness or voice change, of cervical lymphadenopathy or of a rapidly enlarging painless thyroid mass over a period of weeks should be referred urgently. A family history of thyroid cancer and a history of irradiation of the neck also put the patient at increased risk and are

indications for urgent referral, as are thyroid nodules occurring in children.

**Conclusions:** Thyroid nodules are commonly encountered in general practice. The majority are benign and can be managed in primary care settings. The family doctor should be able to correctly evaluate patients with thyroid nodules and make their prompt referral to secondary care in order to contribute to an earlier cancer diagnosis.

721

### Reviewing Topical Therapies for Treating Psoriasis

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**Aims:** Psoriasis is a common chronic skin disease characterized by cutaneous inflammation and epidermal hyper proliferation. Our aim was to review the current available topical treatments for psoriasis suitable for use in primary care.

**Material and methods:** Systematic reviews research on Pubmed and Cochrane, undertaken in articles published between January 2000 and December 2010, in English and Portuguese.

**Results:** Topical therapies used appropriately provide a safe and effective option for the management of psoriasis. The mainstay of scalp psoriasis treatment should be topical corticosteroids, adapted to disease severity and patient preferences. Alternatively, topical retinoid, vitamin D topical therapy, and salicylic acid preparations may be tried. Palmoplantar psoriasis often is resistant to potent topical treatments and may require other therapies. Patients must use a skin-softening agent or a steroid ointment and a barrier hand cream during the day. Up to 80% of psoriasis patients may have nail involvement. Topical steroids often are used as first-line treatment, but their efficacy is limited. Intertriginous (inverse) psoriasis should be treated with low to mild-potency topical steroids. In addition, topical vitamin D and calcineurin inhibitors are efficacious and safe for maintenance. There are few evidence-based guidelines for the treatment of pediatric patients. Recent recommendations include first-line treatment with a vitamin D therapy with or without a topical steroid. Psoriasis runs a variable course during pregnancy and topical steroids are the mainstay of topical treatment. In older patients, steroids should be used with caution and we must also be aware of concurrent health problems.

**Conclusions:** Topical therapies play an important role in the treatment of psoriasis. Frequently, primary care physicians are the first ones to diagnose and treat these patients and it is imperative that they familiarize themselves with the topical treatment options.

745

**General practice remains an "inferior" medical specialty to the eyes of other specialized doctors in Greece***Domeyer F, Mariolis A, Lentzas I, Arapaki A, Vassileiadou S, Kanelias N, Mihos C*

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**Aim:** It's only 25 years since the essential establishment of the medical specialty of General Practice/Family Medicine (GP/FM) in Greece. In addition, Primary Health Care (PHC) is still under reform. As the number of new General Practitioners increases, the aim of this study was to record the opinion of doctors of other medical specialties for GP.

**Material and methods:** The sample of our study consisted of 183 specialized doctors (104 men, 79 women, mean age 43.2±5.1 years) working in various clinics and laboratories of two national health system (NHS) public hospitals in Athens, Greece and two NHS public hospital in two rural areas of the same country. The doctors filled in anonymous multiple choice (closed format) validated questionnaires.

**Results:** A significant 73.8% answered that they considered the scientific level of General Practitioners (GPs) to be low. One hundred-sixty one participants (88.0%) of the participants were rather or very satisfied of the cooperation with GPs during residency. On the other hand, 57.4% of the respondents and 87.5% of the internists thought that the benefit of a tenured post in the NHS for GPs is unfair and must be changed. The 59.6% believed that the educational system of their colleagues should be upgraded, while only 24.0% declared that it would want to collaborate with GPs after accreditation as a specialist.

**Conclusions:** Based on the results of our study, it seems that GP/FM seems to have a low status, in terms of respect and recognition from the doctors of other medical specialties. The results are in line with a previous work of ours, 4 years ago and are rather disappointing, given the increasing numbers of new GPs. GP/FM scientific committees and GPs themselves have a lot of work in order to change this attitude.

757

**Evaluation of work related stress symptoms of a teaching hospital's medical personnel***Ronganaki A, Papadopoulos C, Vorvolakos T, Semen T*

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**Aim:** this is an era of major reforms in our country. one of the most important is the national health system reform. in order to have a perspective about how this could affect the work related stress we thought of setting a point of reference before the reforms and repeat the survey after that. our proxy was the burn out syndrome and related symptoms of medical personnel in this general hospital.

**Method:** a random sample of 50 doctors from various specialties both residents and consultants were interviewed using the maslach burnout inventory (mbi). during a certain month that is usually busy. mbi is translated and standardized in our population. T-test was used for statistical analysis.

**Results:** Statistically significant differences between men and women were found in two MBI subscales : frequency of emotional exhaustion (t=-2.038, p=0.048) and intensity of emotional exhaustion (t=-2.267, p=0.029), with higher scores for women in both, no other differences occurred.

**Conclusions:** women score more in two mbi subscales, frequency of emotional exhaustion, intensity of emotional exhaustion in this hospital. This must be taken in to account especially in specialties where the majority of doctors are women. more research with bigger sample for a longer period of time as well as considering other factors like family status is needed in order to draw firmer conclusions.

762

**F.A.S.T. ultrasound in the Emergency Room and the role of general practitioner***Felesaki E, Generalis G, Katsakoulas J, Perrakis E, Marinos G, Papageorgiou E*

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**Aim:** Open and close injuries of the abdomen are usually accompanied by wounds of the abdominal organs. The aim of this report is to analyze the use of FAST ultrasound (FOCUSED ABDOMINAL SONOGRAPHY FOR TRAUMA) as method of examination in the initial evaluation of patients with abdominal injuries, and to present the results and conclusions in equivalent incidents of our hospital.

**Material and method:** During years 2008 and 2009, 786 patients were examined with F.A.S.T ultrasound, according to the protocol of Radiology Department and the General Medicine Unit of <Laiko> Hospital, who arrived in the Emergency Room with reported injuries of abdominal area.

**Results:** In 79 (10,12%) patients the main finding was free peritoneal fluid. Ultrasound findings pointing to internal organ injuries (fracture, haematoma, rupture), were observed in a much lower number of patients (2,5%). In certain patients the above findings co-existed. In most patients ultrasounds proved negative. The patients were also controlled with a general blood test (100%), biochemical control 100%, general urine test 97%, abdominal x-ray 96%, chest x-ray 74%, computed tomography (CT) Scan of the Abdomen 72%, and the utility of diagnostic laparoscopy for abdominal disorders 21%.

**Conclusion:** For general practitioners FAST may be a rapid examination of very high sensitivity, convenience and low cost. This non-invasive method has replaced the classical diagnostic peritoneal washout for an initial evaluation of patients with suspicion of abdominal injuries. The recovery of free peritoneal fluid constitutes absolute evidence for further imaging control.

764

**Acute Pyelonephritis. The contribution of the ultrasound during the initial acute phase.***Felesaki E, Generalis G, Papageorgiou E, Maniatis K, Korompelis P, Marinou G*

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**Aim:** Acute pyelonephritis is a serious inflammatory disease of renal parenchyma, which is often difficult to be diagnosed by any imaging method. Ultrasound is usually the one and only diagnostic imaging method that may easily be carried out in patients with a clinical suspicion of pyelonephritis. Aim of this study is to present the range of ultrasound findings in adult patients with a clinical suspicion of acute pyelonephritis.

**Material - methods:** Between July 2009 and July 2010, a retrospective study was held for the ultrasound findings of 121 patients, who were examined by the Radiology Department and the Unit of General Medicine of <Laiko> Hospital with a clinical and/or laboratory diagnosis of acute pyelonephritis.

**Results:** Ultrasound pathology was present in 29 cases (23,9%). The range of ultrasound findings included: inflation of kidney 21%, focal, multifocal or diffuse damages 11%, increase or decrease of the cortex echogenicity because of bleeding or edema respectively 14%, reduction of medullary/cortex differentiation 17%, small size of pelvicalicea 21%, perirenal fluid 2% and regions with low vascularity as well 11% and as air in the renal parenchyma 3%. The treatment at all cases included antibiotics per os or intravenous according to the antibiogram. 96% of the cases with positive ultrasound findings had to be treated with a pig tail and at a 10% of them with a nephrostomy.

**Conclusions:** In our study, pathological ultrasound findings were present only in the 23,9% of patients with clinically diagnosed pyelonephritis. Diagnostic sensitivity may seem rather low but ultrasound examination has the advantages of low cost, and lack of exposure to radiation. As a result it can be repeated frequently. Therefore, it can be considered among the first diagnostic tools for evaluation of symptoms of acute pyelonephritis, by the general practitioner.

790

**Reasons for using herba medicine in the population of a health center***Sandru A, Mendivil J, Iglesias C, Gil I, Rams F, Amatller M, Vila M, Deixens B, de la Poza M*

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**Aim:** Describe the reasons for using phytotherapy of our population, health problems by taking it, and who prescribed it.

**Material and methods:** Cross-sectional descriptive study Urban health center Patients treated in primary care for any health reason that having served its application were asked by the consumption of medicinal plants It asked 131 patients who were treated in 5 family medicine consultations during two days of February 2011 The variables: gender, age,

medical conditions (ICD-10), consumption of medicinal plants, the source of your prescription and consumer time

**Results:** The herbal medicine was used by 60 people (46%) within which 70% were women. The reasons for use of herbal medicine were symptoms of anxiety (11), insomnia (8), stimulant (7), constipation (7), gastric symptoms (6), dyslipidemia (3), abdominal pain (3), weight decrease (3), menopause (2) and diuretics (2). When asked about the abandonment of conventional therapy for their disease, 3 people confirmed the abandonment of this and the rest is used as complementary. Patients taking herbal confirmed advised by the doctor in three cases, alternative medicine practitioners in 12 cases and the remaining 45, by friends, relatives or neighbors.

**Conclusions:** In most cases the person who uses medicinal plants does so without the advice of a professional What most prompted the use of herbal medicine was the mental health-related anxiety, insomnia, improve mood, followed by digestive problems. Only three cases replaced the usual treatment by the use of medicinal plants

836

**Approach to childhood bullying in primary care setting***Sousa L, Maciel-Barbosa R*

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**Aim:** Bullying is a pattern of aggression and use of power to cause distress or control another. It involves an imbalance of physical and psychological power between peers and is characterized by repeated attacks. In our practice we contact with several patients that are bullies or victims. Due to its undeniable psychosomatic, psychological and social consequences family doctors should provide an early screening and correct guidance of this situations. They play important roles in decreasing and preventing bullying behaviors. Our aim is to review the approach of this problem in the primary care setting.

**Material and methods:** A systematic review was conducted in Cochrane Library, Bandolier, TRIP, DARE, Pubmed and NGC using the MESH terms: bullying and primary health care. The research was limited to articles published in the last ten years in Portuguese and English.

**Results:** Family doctors should be alert to this problem and have a suspicious attitude in order to overcome the covert nature of bullying and the shame and fear that come within. Repeated physical (headaches, stomachaches), psychosomatic symptoms (sleeping problems), anxiety, depressive disorders and school eviction are some of the signs that should include bullying victimization as a differential diagnosis. Bullies have similar characteristics but are more prone to engage in risk behaviors and to drop-out of school. If there's a suspicion about bullying doctors must attempt to obtain more information from the child and family with questions asked directly. Management of bullying is a multidisciplinary effort involving parents, teachers and primary care physicians and should address peer relationships: interventions to stop aggressiveness in bullies and promote assertive strategies and relationship skills in victims.

**Conclusions:** Physicians should be aware of the destructive effects that bullying can cause on both bullies and victims in order to identify at-risk patients, screen for psychiatric comorbidities, counsel families, advocate for bullying prevention in the community and give children the support they need. All these interventions promote health, well-being

and healthy relationships.

845

### Onychomycosis – what to do?

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**Aims:** Onychomycosis is an infection of the nail apparatus by fungi that include dermatophytes, nondermatophyte moulds and yeasts, mainly *Candida* species. It is the most prevalent nail disease, accounting for up to 50-60% of all abnormal appearing nails. The prevalence of Onychomycosis increases with age, reaching nearly 20% in patients >60 years of age. The family doctor should be acquainted with the management of onychomycosis, as it is a matter of public health concern that may produce considerable physical, functional, psychological and social impact. This study intends to review the approach to diagnosis and management of fungal nail disease.

**Methods:** Research for articles in the English, Spanish and Portuguese languages published within 2001-2011 in the databases Pubmed, Cochrane, DARE, TRIP, CKS and National Guideline Clearinghouse using the Mesh key-word onychomycosis.

**Results:** There are four clinical types of onychomycosis: distal-lateral subungual, superficial white, proximal subungual and candida. The diagnosis is based on clinical history, physical examination and microscopy and culture of the nail specimens. Drug therapy should be considered if walking is uncomfortable, the affected nails are causing psychological distress or are thought to be the source of fungal skin infection, if the patient has a higher risk of secondary bacterial infections or is immunocompromised. Systemic therapy is more successful than topical treatment. Terbinafine is considered first-line treatment in dermatophyte infections, being itraconazole the next best alternative. The latter is the most effective agent for candidal onychomycosis. Experts recommend monitoring liver function at baseline and 4-6 weeks later. Combined topical and systemic therapy may further improve cure rates. In severe or refractory cases nail removal may be used. Relapse is frequent and should be prevented by maintaining appropriate foot/hand care.

**Conclusions:** Onychomycosis is a common and important problem. Being aware of its potential physical and emotional consequences and that systemic therapy is the most effective treatment, the general practitioner must weigh the risks and benefits of therapy before taking any measures.

860

### Stop smoking and keep walking

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**Aims:** To assess the general characteristics of patient-smokers that have been at the outpatient consultation for smoking cessation during the year 2010.

**Material and methods:** Descriptive study. Patients treated for tobacco cessation in a specialised consult from a urban Primary Health Care Centre (PHCC) during 2010. Daily attention. We registered data in the computerized clinical history PHCC (ecap): age, sex, habit characteristics, Test of Fagerström, CO measurer (smokerlizer), weight and blood pressure. We used structured interviews, technical cognitive-behavioural treatments and pharmacological treatments. Follow-up onsite, individualized plan following Guides of Clinical Practice and bidirectional Telephone Monitoring support.

**Results:** N=60, average age 47+/-11, men 55%, average of starting smoking age 16+/- 3, number of cig/day: 24.8+/-11; average of attempts to quit the habit: 2-months; maximum abstinence time: 4 months; 90% have tried to quit without therapist, and 77% without drugs; Nicotine dependence was light in 13.3%, moderate in 48.3% and high in 38.3%. A 37.5% have a smoker family environment, and 30% a smoker working environment.

**Conclusions:** Most of the patients that came to our consultation were around 47 years old without differences by sex. Starting age of consumption in adolescence, smokers of more than 1 package/day, with a moderate/high dependence to nicotine and two previous attempts of deshabitation without therapist. More than a third still live in smokers environment, family and work; Therefore, we are proposing to structure strategies to encourage and facilitate attempts to give up the habit, inform and educate our target population.

914

### What is the perception of Moroccan immigrants on our health system?

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**Aims:** To know the perception and the needs on the health and the sanitary Catalan system on the part of the Salt's Moroccan immigrants.

**Methodology design:** a qualitative study using focus groups. Scope: Primary Care. Sample: Moroccan population from 15 to 50 years.

**Method:** We obtained 8 focus groups of 6-8 people, males and females separately. The themes are general, accessibility to the center, communication, satisfaction, economic and socio-cultural and medical issues.

**Results:** The regularization leads to be able to work, get access to home, be able to register to vote and have rights, have access to basic health and education. They know how to use the health system circuits. For women, it's related to the medical indication, severity of the problem, while for men, the criterion is immediacy, proximity and employment status. Young women have superficial knowledge of risk behaviors. Expectations about health education in other agents as the school. There's no longer adherence to treatment once symptoms disappear. Often, the language barrier is the main of the assistance instead of the disease itself, and it means an obstacle to access to sanitary attention. The problems of professionals are based on linguistic questions and cultural competence. There is no consensus on the figure of the cultural mediator.

**Conclusions:** We need to analyze the characteristics of the health system and the collective. This will allow us to adapt services to work, promote health education in terms of their expectations and cultural characteristics by applying the

community methodology.

937

### Influence of nonsurgical periodontal therapy on serum and gingival crevicular fluid IgG subclasses levels on smoking and non-smoking patients

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**Aims:** The objective of this study was to evaluate the effect of nonsurgical periodontal therapy on serum and gingival crevicular fluid (GCF) IgG subclasses (IgG1, IgG2, IgG3 and IgG4) on smoking and non-smoking chronic periodontitis patients.

**Material and methods:** Study included 28 patients with chronic periodontitis, non-smoking and smoking were divided into two groups. At baseline, probing depths, clinical attachment level, plaque index and gingival index were recorded. GCF and blood samples were obtained from patients. Following baseline measurements and sampling, non-surgical periodontal treatment including scaling and root planning was performed to all participants. At 1rd and 3rd month, clinical measurements and GCF and serum sampling were repeated. GCF and serum IgG1, IgG2, IgG3, IgG4 levels were determined by ELISA method.

**Results:** After non-surgical periodontal treatment all clinical periodontal parameters were improved in two groups. At baseline, serum IgG1S and IgG2S levels were significantly lower in smoker periodontitis patients compared to non-smoker periodontitis patients ( $p < 0.05$ ). At baseline, the mean serum IgG3S, IgG4S levels were not significantly different between in these two study groups. Baseline DOS IgG3S, IgG4S levels were not significantly different between in these two study groups. Non-surgical periodontal treatment had no effect on serum IgG subclasses parameters. After than non-surgical periodontal treatment at 1rd month, non-smoking patients GCF IgG2DOS total amounts were significantly decreased ( $p < 0.05$ ). Smoking patients GCF IgG3DOS total amounts were decreased significantly after 1rd month treatment ( $p < 0.05$ ). Non-surgical periodontal treatment had no effect on total amounts IgG1DOS, IgG4DOS subclasses parameters.

**Conclusions:** Within the limits of this study; systemic effects of smoking, were found to be more than local effects. Non-surgical periodontal treatment had no effect on serum IgG subclasses parameters. IgG2 is the major immunoglobulin subclass that reacts with bacterial carbohydrates and lipopolysaccharides. After treatment non-smoking patients IgG2DOS total amounts were decreased. This decrease may be due to the reduction of microorganisms and improvement in clinical parameters

1003

### Prevalence of active Tuberculosis Infection Among Immigrant and Refugees

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**Background:** Without rapid scale-up of Tuberculosis (TB) prevention and diagnosis, some 10 million people will die of this curable disease by 2015. Addressing TB is also critical for meeting other development goals on poverty, HIV, women & children's health. Without investment on the diagnostic research, discovering the most powerful anti-TB drugs will not achieve the goal of eliminating the disease as a public health problem by 2050.

**Research question:** What is the prevalence of clinically suspected TB cases among a refugee/immigrant population from Iran and what is the rate of active TB among them.

**Method:** The specific immigrant data set of our practice ( $n=4160$ ) for the year 2010 was analysed. Base screening for an adult included a physician-administered signs and symptoms questionnaire, physical examination and Chest X-Ray. Those younger than 15 years and older than 2 years are screened by TB Skin test and, for those who were test positive, two sided chest x-ray was ordered. Any Chest X-ray finding (evaluated by radiology specialist) or physical examination finding indicating a TB sign were asked for 3 sputum samples both for smears and cultures. A positive smear and/or culture result was the only diagnostic criteria for an active TB infection. Prevalence of active TB for the whole screening population in the 12 months was the outcome.

**Results:** All of the applicants were tested for TB and the prevalence of findings indicative for TB infection was 2.5%. The Active TB diagnosis rate among the suspected cases were 1.92%. The prevalence of active TB was found to be 48/100 000 for the year 2010.

**Conclusions:** TB should not be underestimated. Published TB prevalence rates are 10-47/100000 for the region. As nearly 2 million people die yearly, this pandemic airborne transmittable disease is worth to get a priority as a paneuropean research target for European FP/GPs. As more than 9 million people still develop active TB each year and nearly 2 million die. These figures should not inspire hopelessness, but rather an acknowledgment that TB is a unique pandemic. A third of the world's population harbours latent TB infection, which can emerge at any time as an airborne and transmittable disease. Reducing this human reservoir of infection will require many years of steady and untiring effort – plus more effective tools than we have at our disposal today.

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### Dairy intake with the diet and total calcium intake

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Dairy products constitutes the main source of dietary calcium. Usually in order to find which is the calcium intake is necessary to analyze the entire intake. We want to know if we can simplify the survey with evaluating dairy only.

**Aim:** to know which is the intake of dairy products in the study population and whether we can infer what is the total consumption of milk from this knowledge.

**Design:** Observational, transversal. Subjects: population attending for any reason the health care center, older than 15 years and both sexes, for 1 week in January 2011. Scope: primary care offices in Barcelona, Spain. We have excluded patients diagnosed with osteoporosis or received any antiresorptive drug or other pathology of bone

metabolism, also pregnant women and those who had history of renal stones.

**Method:** We selected all patients who agreed to participate in the lists of the daily office schedule.

**Measuring instrument:** Questionnaire frequency of food consumption during 7 days. We registered sex, age, previous pathology, and education level.

**Results:** we included 520 patients, 35,8% were men and 64,5% women. 26,5% had hypertension. 75,8% had secondary level of education or higher. Mean age 52.3(18SD) and range from 15 to 91 years. Medium calcium total intake was 907,66 mg/day (347,6SD) and dairy was 600,7 gr/day (306SD). In patients whose dairy intake is very low or absent, we have to ask them for the all the products of the diet. When dairy are 2 or 3 servings, is enough to recall dairy in order to know total calcium intake. The regression line between dairy and calcium is good ( $r=0,88$ ).

**Conclusion:** The dairy represent 66,10 % of total calcium intake in our study. We can ask only for dairy and if intake of dairy are >400 mg of calcium daily we can add 66% to obtain the total intake.

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#### Do our patients meet the requirements of calcium from the diet ?

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Calcium is an important mineral for bone formation and the cellular activity as second messenger with specific roles. During the pregnancy and the adolescence the physiological calcium requirements are increased. Also in older people with malnutrition and risk of osteoporosis it is important the supplementation with preventive purposes.

**Aims:** Determine the percentage of people who meet an adequate intake of calcium in their diet (> 800 mg/day). Others: Analyze whether there are differences by the sex, the age, the education level and previous pathology. Design: Observational, transversal.

**Subjects:** population attending for any reason the primary health care center, older than 15 years and both sexes, for 1 week in January 2011. We have excluded patients diagnosed with osteoporosis or received any antiresorptive drug or other pathology of bone metabolism, also pregnant women and those who had history of renal stones.

**Method:** We selected all patients who agreed to participate from the lists of the daily office program. Measuring instrument: Questionnaire frequency of food consumption during 7 days. We registered age, sex, previous pathology, education level and nationality.

**Results:** 545 patients were recruited, 25 excluded due to excessive consumption and we included 520: 186 males (35.8%) and 334 women (64.2%) by age groups: 229 were between 15 and 50, 152 between 51 and 65 and 139 over 65 years. Mean age 52.3 (18SD). Calcium intake was adequate to the recommendations ( $> = 800$  mg /day in 56.9% of patients and low or very low at 6% (<400mg/day). The percentage of people who got adequate intake increased with age (52.4%, 58.6% and 62.6%) and were higher in women (58.4% vs 54.3%) but not statistically significant. There were no differences according to educational level or nationality.

**Conclusion:** Only a half of patients attending a health center for any reason, excluding the pathology associated with osteoporosis and bone metabolism met with recommendations for adequate calcium intake through diet.

## Other clinical problems

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### Is useful to determine the calcium in a routine analysis?

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**Introduction:** The clinical presentation of hypercalcemia varies from a mild, asymptomatic, biochemical abnormality detected during routine screening to a life-threatening medical emergency. Detection of an elevated serum calcium requires that the etiology be established. The prevalence of hyperparathyroidism is among 0,1 and 0,5, more common in people over 40 years and in women, and the indices of age-adjusted rate is 3/10000. Among the endocrine diseases, only diabetes mellitus and hyperthyroidism are seen more frequently.

**Material and methods:** We have reviewed the diagnoses of hyperparathyroidism in one year, in the Primary Care Centre, with the software OMI. We have collected the epidemiological and clinical data of patients in descriptive tables.

**Results:** We report 4 clinical cases of 4 female with mean age of 56 years. We describe the reasons for consultation, diagnostic tests (analysis, cervical ecography, parathyroid scintigraphy...) and differential diagnosis of hypercalcemia (The most common are Primary hyperparathyroidism, Malignant disease, Thiazide diuretics, acute and chronic Renal failure). The reasons for consultation were: -Mild pain in both hands, without inflammation and distal interphalangeal nodule in finger. -Chronic depression. -Routine analysis in two patients with hypertension. Analysis: hypercalcemia. (Is important to determine the Corrected calcium =  $4,0 \text{ g/dl} - [\text{plasma albumin}] \times 0,8 + [\text{serum calcium}]$ . PTH increased.

**Conclusions:** 1-Primary hyperparathyroidism is a relatively common endocrine disease. 2-They are often asymptomatic. Classical primary hyperparathyroidism is associated with skeletal and renal complications but, hyperparathyroid bone disease is now seen in very few patients. 3-They usually have been discovered accidentally in the course of a routine multichannel screening test. So, we think that the determination of calcium must be done usually in routine analysis.

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### Treatment of patients with esrd

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**Aim:** End stage renal disease (ESRD) is irreversible deterioration in renal functions so that survival will be impossible without dialysis or transplant treatment.

**Material and methods:** This study was carried out retrospectively on the records of 489 kidney transplant

recipient or undergoing hemodialysis patients with ESRD followed in Gulhane Military Medical Academy and Medicine Faculty, Department of Nephrology between the years 2005-2010. The records of 20 patient could not be obtained and these patients were excluded; so the study was conducted over 469 patients. Data of patients were recorded from files, categorized and transferred to the statistical program in this retrospective study. Statistical analysis was carried out using SPSS-15.0 database.

**Results:** Patients with renal transplantation was made up a rate of 28.8 %. One hundred and five of the 135 the kidney transplant recipient patients were male and 30 were female. The number of ESRD patients underwent dialysis treatment was 334 with a rate of 71.2 %.

**Conclusion:** The number of male patients received renal transplantation was three times higher than number of female patients. Transplantation was at most performed to the patients between 20-44 years old.

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### Telephonic attention optimizes the resolution of the demand of domiciliary sharp visits

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**Aims:** Analysis of the implementation of the telephonic resolution program (TRP) of the demand of domiciliary sharp visit (DDSV).

**Material and methods:** Transversal study in an urban primary care area (population assigned :23212) .Review of a random sample of 288 DDSV(26,4 % of the total DDSV during 2009).TRP: The DDSV was valued by the doctor on call and his resolution was tried by telephone. Description of the DDSV and its valuation. Later review of the iteration.

**Results:** 71,9 %women.47,9 >80years.89,2 % was valued(9% by their usual doctor).60,8%were presenting factors of cardiovascular risk and/or diabetes;37,5 % bone pathology ;32,6 % affective pathology;26,4 % neurological pathology; 28,8 % cardiac pathology;17,7 % respiratory pathology ;11,8 kidney pathology % and 9,7 % oncology.35,8 % included in the program of domiciliary attention. Day of the week:23,6% on Monday;22,9 % on Tuesday;20,8 %on Wednesday; 17,7 %on Thursday. Time slot: 76,4 %: morning (8-14h).Principal motives of consultation: 29,5 % fever; 20,1 % pain; 16,7% diarrhea and/or vomit; 12,5 % cough and/or difficulty in breathing. 21,2% DDSV requested for control of chronic pathology. More frequent diagnoses: respiratory pathology: 23,96%; Gastroenteritis : 18,06 %; chronic pathology: 17,36 %; bone pathology 12,85 % . 106 (36,8 %) DDSV was solved by TRP. Of these, only 7,5% returned for consultation on the same motive, needing home attention only 1,9 %. The control of the chronic pathology was occupying the fourth place (14,15 %) of the final diagnoses of the DDSV solved by the TRP, behind gastroenteritis (24,53 %), respiratory pathology (18,87 %) and bone pathology (16,98 %).

**Conclusions:** The TRP is a useful tool in the resolution of the DDSV. The management of the DDSV might be optimized by educating the population with regards to their chronic pathology and on the use of the sanitary resources as well as by adapting the daily planning of visits of the professional for the telephonic attention.

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### Differential diagnosis of patients presenting with headache in general practice: a qualitative study of GP's approaches

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**Aims and background:** In patients with headache, general practitioners (GPs) face a broad range of possible underlying conditions. Especially for the diagnosis of primary headache, patient history and physical examination remain the main diagnostic tools. We aimed to analyse how GPs approach patients presenting with headache.

**Material and methods:** In semi-structured interviews, 15 GPs were asked to describe their personal diagnostic approaches in 2-3 of their patients with headache they had prospectively identified. Interviews were taped, transcribed and analysed qualitatively by two independent raters.

**Results:** GPs used the information gained very early during the patient encounter to form an initial hypothesis. Most GPs used classical text book descriptions as reference criteria for the most common types of headache. GPs applied different strategies when managing headache patients who fear to have a brain tumour. Prior information of individual patients, nonverbal information and "gut feelings" all played an important role in the diagnostic process. Management of uncertainty in the diagnostic process played an important role for both patients and GPs and influenced the demand for further technical investigations (CT, MRT).

**Conclusions:** GPs used mainly the classical textbook knowledge as reference picture for different types of headaches. When the initial hypothesis matched these reference criteria, most diagnoses could be made with the help of the patient's history and findings from the physical examination. Non verbal information, "gut feelings" and the management of different aspects of uncertainty all influenced the diagnostic process.

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### Lipid profile parameters in the patients underwent surgery with diagnosis of carpal tunnel syndrome

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**Aim:** Carpal Tunnel Syndrome(CTS), caused by compression of the median nerve within the carpal tunnel anatomically, is

one of most common entrapment neuropathies. In this study, we evaluated lipid profile parameters in the patients underwent surgery with diagnosis of CTS.

**Material and method:** In this cross sectional study, we studied 44 patients who have attended to Gulhane Military Medical Faculty Neurosurgery outpatient clinic between August 2009 and July 2010 and diagnosed CTS. After physical examination and electrophysiological tests were performed to patients, it is decided to apply surgical treatment. We have made use of preoperative laboratory tests for researched blood parameters in the study.

**Results:** 44 patients( 40 female-%90,9, 4 male-%9,1 ) were enrolled in this study. The mean age of patients was 54,93+/-11,53 (min:30,max:80) years, and the mean interval from diagnosis to surgery was 29,39 +/- 46,68(min:1,max:216 ) months. According to laboratory test results; values of total cholesterol was higher in %22,72(n=10), triglyserid was higher in %31,81 (n=14) and VLDL was higher in %27,27(n=12) of patients. Since we use LDL value( 160 mg/dl ) for no cardiovascular risk group as a base,%20,45( n=9 ) of patients exceeded upper limit. Body Mass Index( BMI ) were over 25 kg/m<sup>2</sup> in %93,18( n=41 )of patients. %4,5( n=2 ) of patients had HDL values below lower limit.

**Conclusions:** Etiopathogenesis of CTS is unknown but, hypercholesterolemia can be thought as an independent risk factor. One of the hypothesis about this subject is that, hypercholesterolemia causes proliferation at the connective tissue of median nevre segment in tunnel and nevre volume increases. In our study, higher BMI rates of participants with higher parameters of lipid profile support literature. At the primary care centers, if numbness and pain in hands are determined in patients with hypercholesterolemia, CTS must be thought of.

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#### Medicine interaction in polymedicated patients

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**Aims:** To determine the prevalence of relevant medicine interactions in a sample of patients with multiple complex chronic diseases(polypathological patients) receiving multiple drug therapy.

**Material and methods:** A cross-sectional study performed in primary care centre in Murciano Service of Health from april of 2009 to December 2010. All patients older 75 years, with chronic pathology and treated simultaneously with 4 or more drugs (at least one year) were recruited in the study. Medicine interactions were detected by the internet using i-medicinas Systems Stockley:Alertas program, offered by Public network of Health in the region of Murcia .Each interaction according to the program,was classified, required any intervention was considered relevant. Acceptance of the reported medicine interactions recommendations wasstudied by primary care physicians ("acceptable," pertinent recommendation to modify treatment).

**Results:** A total of 100 polypathological polymedicated patients were included. Older 75 years (range 75-100 years). Every patient was included in the long treatment for chronic disease Out of a total of 443 Drug prescriptions, 93 medicine interactions in 160 patients Of these, 32% were ltered as relevant medicine interactions.

**Conclusions:** 23% polypathological polymedicated patients

are exposed to at least one medicine interaction and about a 30% would require any intervention.

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#### Effectiveness of community disease management using nurse practitioners for management of chronic diseases

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**Background:** Community Clinics are very busy and the doctors have difficulty coping with the increasing number of patients with chronic diseases. In an attempt to lighten the workload of doctors, a Disease Management Programme comprising well-trained nurse practitioners following well-defined clinical protocols was implemented as a pilot in one community clinic. AIM A study was done to evaluate the effectiveness of the nurse-led disease management programme, compared to the usual management in the clinic, in managing diabetic patients with hypertension.

**Materials and methods:** Control of hypertension in 44 diabetic patients in a disease management programme was compared with 91 diabetic patients not in the programme after a 6-month follow-up.

**Results:** In the disease management group, there was an average decrease of systolic blood pressure of 7.9mmHg and an average decrease of diastolic pressure of 2.4mmHg. Those not in the programme had an average decrease in systolic blood pressure of 2.1mmHg and an average decrease in diastolic blood pressure of 1.7mmHg. The difference in hypertension control between the 2 groups is not statistically significant though.

**Conclusions:** Nurse practitioners following well-defined clinical protocols are effective in managing diabetic patients with hypertension.

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#### Pharmacological treatment of benign prostatic hyperplasia efficiency

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**Introduction and aim:** Benign prostatic hyperplasia (BPH) is a nonmalignant, excessive growth of prostate cells, which leads to a narrowing of the urethra and a number of unpleasant and distressing symptoms. To compare the efficiency of combined application of tamsulosin and finasteride compared to mono therapy with tamsulosin in patients with benign prostatic hyperplasia (BPH).

**Material and method:** In this prospective study, which lasted three months, 104 male patients, aged 60-84 with lower urinary tract symptoms (LUTS), participated. All patients had digital rectal prostate exam, urinalysis, urine culture, basic laboratory analysis, prostate specific antigen (PSA), abdominal ECHO, International Prostate Symptom Score (IPSS) and an urologist exam in order to eliminate other causes of LUTS. All patients were divided into two groups:



the first group was treated with tamsulosin and finasteride, and the other with tamsulosin only. IPSS was determined at the beginning of the study and three months after based on which the effectiveness of the therapy was estimated.

**Results:** 56 (53.84%) patients belonged to the first group and their IPSS average before treatment was 19 and 48 (46.15%) patients belonged to the second group with IPSS average before treatment 17. After three months the average IPSS in the first group reduced by 63.16%, average was 7, while in the second group it was reduced by 47.06%, the average IPSS score was 9.

**Conclusion:** Parallel administration of tamsulosin and finasteride leads to significantly greater reduction of IPSS score compared to tamsulosin mono therapy, and thus improve the quality of life, reduce subjective symptoms and prevent complications.

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### Headaches

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A headache appears in 75-90% of a population, but only 5% visit a doctor.

**Aim:** The presence and characteristics of headaches in adults.

**Design and method:** All the examinees with the headache problems, who visited a practising doctor, were questioned during the six weeks period. Facts from anamnesis, a check-up, diagnosis and therapy were noted.

**Results:** The whole number of examinees is 85 (2%), and most of them are in the age group above 50 years (62.3%). In 92% headaches are chronically present. Primary headaches are present in 15%, and secondary in 85% of the examinees, mostly as a result of: degenerative changes of cervical spine (50%) and high blood pressure (33%). 48% often have headaches (every day and weekly), and in 67% headaches influence the life quality significantly. Drugs that are used are: analgetics (35%) and NSAID (35%). The most frequent additional diagnostics are: laboratory in 55%, X-rays in 51%. Specific procedures (CT, MR, EEG) are present in small percentage (11%, 8%, 15%).

**Conclusion:** In the population of grown-ups secondary headaches are more frequent than primary and need additional examination. Frequent causes are: cervical vertebrae degenerative changes, high blood pressure, metabolic changes, as well as many antihypertensive drugs and tranquillizers, which are frequently used. It is necessary to examine all the mentioned factors in therapy, especially when the headaches are frequent and when they get worse. Well taken anamnesis is a prerequisite for rational diagnostics and correct treatment.

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### Screening of age related macular degeneration in a risk population

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**Aim and background:** Age related macular degeneration (ARMD) is a painless eye condition that leads to the gradual loss of central vision. The present study tries to prevent this pathology by screening risk population.

**Material and methods:** This was a descriptive study performed in general practice surgery in a city. We included all patients who attended the surgery in the last week of January 2011. We included patients that were over 50 years of age and have never been diagnosed of ARMD. We collected data for age, gender, date of their last eye test, presence of endogenous risk factors for ARMD (family history of ARMD, hypermetropia or cataracts) or exogenous (smoking, diabetes, obesity, alcohol intake, vascular diseases) and record of having had an Amsler grid vision test in the last visit. We performed this test on all these individuals and referred to secondary care accordingly.

**Results:** We collected 234 cases from what 55.1% were women. Median age was 67.9 (range 50-90). 61.9% of patients have not had an eye test in more than a year. Only 5% of those who had an eye test had an Amsler grid vision test. In this visit 13 patients (5.5% of the total) had an Amsler positive test and were referred to the specialist centre for macular degeneration.

**Conclusions:** Risk factors for ARMD are present in more than half of the population. Despite this, most people do not have regular eye tests. Furthermore these examinations often do not include the pertinent test to exclude ARMD

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### Approach to the treatment of cough associated with infection of the upper airways

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**Aims:** The Cough, one of the most common symptoms of the respiratory system, is a very frequent complaint in Clinical Primary Health Care, particularly when associated with Infection of the Upper Airways (UAI). It is a symptom that affects quality of life and therefore it usually leads to self-medication with cough suppressants, expectorants or antihistaminics. Nevertheless there are still doubts about the utility and effectiveness of medical prescription. The objective of this paper is to review the existent treatment approaches of cough in the context of Upper Respiratory Infections in otherwise healthy people.

**Material and method:** Research databases SUMSearch, Cochrane, TrypDatabase, Medline / Pubmed articles with the keywords: "Acute cough" and "Treatment", for the past 5 years.

**Results:** In most studies, antihistaminics have no recommendation for treatment of cough both in adults and children. In adults, some studies have shown that dextromethorphan can moderately decrease the cough compared to placebo. Antihistaminics and decongestants associations with antihistaminics showed no efficacy. In children, antihistaminics, decongestants, dextromethorphan, or an association with both, have no better results than placebo. Honey may reduce moderately the frequency and

severity of cough. Other studies show that there is little evidence on the use of bromehehidina and acetylcysteine for the treatment of acute cough associated with Upper Respiratory Infections.

**Conclusions:** Studies results show that pharmacological treatments had little antitussive action when compared to placebo. The exception are dextromethorphan in adults and honey in children, although there is weak evidence. The placebo effect may be related to the formation of central neurotransmitters such as endogenous opioids. It is also important to note that very often these drugs have side effects.

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#### Which health conditions bring patients to family medicine department during weekends?

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**Aim:** In primary care department family physicians work five days a week, and during two non-working days (weekend), there are doctors on duty that take care of approximately 120000 people. The concept of that care is visiting doctor only in the case of emergency. The aim is to investigate main health conditions that bring patients to visit the doctor on duty.

**Methods:** During medical documentation investigation of 12 non-working days in November and December 2010, there were 399 patients that had visited doctor on duty. We wanted to interpret main health conditions and whether they were urgent for medical treatment.

**Results:** Out of 399 patients, 194 (48.62%) were male and 205 (51.38%) were female. Children 1-15 years old were 92 (23.06%), among them was 60 (15.04%) 1-6 years old. Main reasons for doctors examination was acute infection in 55.88% of patients, followed by fever 26.06% acute abdominal pain 6.77%, injures 6.52%, musculoskeletal problems 6.27%, allergic reactions 3.26%, chest pain 2.25 %, headaches 2 % and vertigo 1.75%. Out of 399 patients, only 47 (11.78%) needed further hospital treatment. The majority of infections was respiratory tract infections (69.50% of all infections).

**Conclusion:** Family physicians should do more to educate patients about their health, especially about dealing with fever and respiratory tract infection in children, which are mostly viral and there are no need for antibiotics. Other causes are unpredictable and do need further medical treatment.

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#### Lower limb ulcers

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**Introduction and aims:** Despite the high incidence and morbidity, Lower Limb (LL) Ulcer importance is often

underestimated and incorrectly diagnosed. Therefore, it is imperative to clarify the type of ulcer - venous, arterial or neuropathic - in order to provide proper treatment and improve prognosis. With this poster the author's pretend to clarify the diagnosis and treatment of these conditions.

**Methods:** Systematic reviews research on Medline/Pubmed and Portuguese Medical journals, limited to articles published between January 2000 and April 2010, in English, Spanish and Portuguese. Results The majority of LL ulcers are venous. Its main cause is trauma in limbs with chronic venous insufficiency. It is characterized by pain (improved with LL elevation), evening oedema, heaviness and itching. Ulcer in the Gaiter's area, presence of peripheral pulses and ankle-brachial pressure index (ABPI) > 0.9 excludes other types of ulcers. Treatment consists on debridement, dressings, compression and LL elevation. Ischemic ulcer is associated with peripheral arterial disease. Physical examination denotes absent pulse, LL pale and cold, and atrophic skin, muscle and nail. The ulcer is difficult to heal and rapidly evolves, with risk of gangrene. Treatment involves the avoidance of risk factors, pentoxifylline and revascularization if ABPI <0.5. The major cause for neuropathic ulcer is diabetes, affecting 25% of these patients. It may be manifested as sensory disturbances, flushing, Charcot arthropathy and claw toes. The ulcer is usually located at the hyper-pressure points, with hyperkeratotic edges and granulation bottom. There is chance of cure when therapy is instituted in time.

**Discussion:** Given the high frequency of this pathology is fundamental to the GP to be aware of its correct diagnosis and treatment. With these review, the authors describe the different types of LL ulcers, resulting in a useful working tool which can improve GP cares to these patients.

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#### Medicament treatment of benign prostatic hyperplasia

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The treatment of the benign prostatic hyperplasia, which affects half of men up to 60 years old and at least 80% of those up to 80 years old, aims to set men free of symptoms related to urination and prevent complications.

**Aims:** This study aims to compare the efficiency of two groups of drugs: alpha adrenergic blockers and inhibitors of 5-alpha reductase in the treatment of benign prostatic hyperplasia.

**Methods:** This was a prospective study that included 30 men, aged 50 years and more, treated for benign prostatic hyperplasia in the Health Center Krusevac. Depending on the type of therapy, subjects were divided into two groups of 15 patients. The first group was provided with alpha adrenergic blocker -Tamsulosin, at a dose of 0.4mg per day, while the other group was provided with an inhibitor of 5-alpha reductase -Finasterid at a dose of 5mg per day. The efficiency of this therapy is monitored by comparing the score values on the International Simple Questionnaire Score (IPSS) before the therapy in the second and the sixth month.

**Results:** By comparing the values of the score questionnaire (IPSS), between the first and second set of respondents, before and after two months of therapy, we note that in the first group there is a statistically significant decrease from 23.93 to 16.4, while in the other group there is a less pronounced decrease from 24.47 to 20.2. In the next four months, there is a significant drop in scores in the first group

from 16.04 to 10.40, and in the second from 20.2 to 10.67, but there aren't any statistically significant differences in drug efficiency between these two groups.

**Conclusion:** This study, on a small number of respondents showed that the treatment of benign prostatic hyperplasia with Tamsulosin, quickly and effectively improves symptoms referred to by patients and improves their quality of life after two months, while the effect of Finasterid seems slower, but there are no statistically significant differences in efficiency after the six-month therapy.

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#### Thyroid pathology in a semi-urban health center

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**Aims:** To know thyroid pathology data in our Health Center and to analyse possible interventions to improve our daily practice, due to the high prevalence of thyroid pathology.

**Material and methods:** It is a descriptive, transversal, observational and retrospective study. It is applied to all the patients of our Health Center older than 14 years (N=11.300) that between the months of January to June 2010 had been diagnosed from thyroid pathology (N=95). We collected data from OMI-AP program such as: anthropometrics, functional pathology, structural pathology, benign other malign process, why they consult us, do they have a physical exploration done, yearly blood sample and if they were sent to Endocrin Department.

**Results:** 74, 74% of the subjects were women. The most prevalent functional pathology was subclinical hypothyroidism (56, 8%), followed by hyperthyroidism (16, 8%), the 9, 5% of the subjects had clinical hypothyroidism. 10, 5% of the subjects didn't have any confirmed pathology.

**Conclusions:** In most of the cases thyroid pathology is an incidental finding. There are still many data to collect in our medical files to improve the diagnosis and treatment of thyroid pathology, such as examination and whereas there is or not structural pathology.

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#### Metabolic syndrome in dyslipidemia consultants in adult Greek population

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**Background:** To evaluate the prevalence of the metabolic syndrome (MS) in dyslipidemia consultations in Greece and to classify subjects according to the modified-criteria of the NCEP(ATP III), we analyzed 215 enrolled subjects in Greek Metabolic Syndrome Research Initiatives (GMSRI), randomized in respect to the age and sex distribution of the general population. Males were 78,6% and mean age was 43,9±9,1 yrs. Physical activity of the subjects was hyper (39%),

moderate (47%), and lower (13%). Based on the risk categories by modified-ATPIII, MS was widespread in any middle ages in Greece (31 to 36%). The most prevalent anomaly was waist circumference (48,4%), followed by hypertriglyceridemia (47,4%), blood pressure (43,7%) and fasting glycemia (42,3%), HDL cholesterol (34,9%). MS-/Dys+ was diagnosed in 19,1%, MS+/Dys- (26,5%), MS-/Dys+ (6,5%), MS-/Dys- (47,9%) of the subjects. Serum TG was highly associated with MS criteria, significantly in female (p<0,01), whereas criteria of dyslipidemia was not accordance with MS criteria. Most male (63%) was under MS+/Dys+ and most female (42%) was under MS-/Dys+ classified by 1st quartile level of HDL (male 29-39 mg/dl/female 34-46 mg/dl). Serum HDL level was important risk factor of dyslipidemia without gender difference in Greece. These primary observations of GMSRI identified that the criteria of MS including BMI, WC, BP and HDL-C. Further detailed analysis should be set for appropriate criteria of dyslipidemia and MS in Greece.

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#### The use of evidence based medicine after myocardial infarction in patients treated by GP'S in the Czech Republic.

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**Aims:** Cardiovascular diseases continue to represent a major cause of morbidity and mortality in adult population in the European Union countries. A patient after myocardial infarction faces a high cardiovascular risk. Pharmacological prevention (based on evidence based medicine - EBM), is defined as an anti-platelet treatment, statin treatment, the use of beta blockers and the use of ACE-inhibitors. The main aim of the study is to carry out an analysis of prescription of EBM drugs in patients after myocardial infarction (MI) and to determine the proportion of patients using individual EBM drugs and their combinations.

**Material and methods:** Data of this prospective study are being collected from January to February 2011. General practitioner's (GPs') medical software is being used. Patients' and GPs' demographic characteristics and patients' drug anamnesis, the prescription of anti-platelet agents, beta blockers, ACE inhibitors, angiotensin II receptor blockers, statins, and the combinations of all of the above are being recorded. We would like to include about 700 patients and 15 general practitioners. Data will be processed by descriptive statistics and Pearson's and Kendall's correlation.

**Results:** This study should bring relevant and exclusive data about GPs medication in patients after myocardial infarction in the Czech Republic. Correlation between patients' and GPs' characteristics and prescription EBM medicine and their combinations will be analyzed. In addition, possible differences in prescription of EBM drugs and their combinations versus sex and age of patients will be investigated. These results will be discussed and analyzed.

**Conclusions:** Treatment with EBM decreases patient mortality after myocardial infarction. The results of this study will enable us to evaluate the therapy of these patients. The results can contribute to the improvement of medication in patients after myocardial infarction.

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**Paraffinoma, an unknown disease**

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**Introduction:** paraffinoma is a granulomatous reaction by foreign body occurred after injection of mineral oils such as paraffin into the subcutaneous tissue. Clinically presents with painful erections, plaques or indurated nodules, painless, firm and find ulceraciones. We can find necrosis on histology. From paraffin injection until the appearance of paraffinoma may be weeks or years (40-50). In some countries of Eastern Europe, so often, males inject yourself liquid paraffin into the subcutaneous tissue of the penis for cosmetic and pleasant, without any sanitary control. Over time, this substance is inoculated with a liquid consistency, solidify, producing paraffinoma, which can become necrotic and even migrate to suprapubic area. Treatment is always surgical, requiring grafts. In some cases there is loss of function. Aims: To understand this disease for early detection and proper management, referrals to specialists for further treatment.

**Material and methods:** In our health center, within 4 months we have found 4 cases. After locating the first case by chance, there was a clinic session and the service for disseminate information and make an early diagnosis before patients with complications. The reason for consultation was always pain, progressive, several months of development, increasing with sex.

**Results:** In all cases, in the physical examination (palpation of penis), we find areas of induration and elastic consistency like nodules to plaques. All patients have their origins in Eastern countries (in our series, two are from Ukraine and two in Bulgaria).

**Conclusions:** It is important to detect early cases for definitive treatment before the onset of complications. This custom is rooted in men of Eastern European countries reflects the lack of information and control in Public Health

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**Investigation of transaminase levels of obese children**

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**Aim:** Obesity is important public health problem for whole world and has an increasing incidence today. According to the World Health Organization, depending on the increase prevalence of obesity in children; increasing the frequency of health problems are expected on the individuals at chronic period. AST and ALT are the two important parameters to show the liver function. In this study, transaminase levels of

obesity diagnosed children were investigated.

**Material and methods:** 60 obese children and 40 healthy children, whose are 6-16 year old group, were included to the study. Body weight and height of 100 children who were included to the study were measured. Body mass index (BMI) of patients was calculated using the formula kg/m<sup>2</sup>. Fasting venous blood samples were studied. The obtained data were compared with SPSS-15 program.

**Results:** While pubertal ALT levels were found higher (p=0.001) in patients, there was no statistically significant difference in AST levels (p=0.885). The GGT levels were higher in the group of patients between both the prepubertal and pubertal patients and control group (respectively, p<0.001, p=0.015). After 6 months of diet and exercise, in patients showing significantly (p<0.05) decrease of BMI, when we compare the values of before and after ALT and GGT in itself; while prepubertal ALT and GGT values were significantly decreased (respectively, p=0.028, p=0.004), a statistically significant reduction in pubertal levels of ALT and GGT (respectively, p=0.268, p=0.121) could not be determined.

**Conclusions:** As a result of the study, ALT and AST values was significantly decreased in patients whom the longer exercise and diet program is implemented. In family medicine centers, obese children are commonly encountered condition that is an important to be monitored carefully by physicians. appropriate advice, given much of weight through diet and exercise will be given to obese children; is very important in terms of health and life comfort for the individual.

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**Community opioid maintenance treatment and benzodiazepine prescribing practice**

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**Aims:** To assess in this reaudit whether opioid maintenance treatment and diazepam was prescribed according to Department of Health (DH) 2007 and NICE guidelines.

**Methods:** Medication prescribed, dose and frequency of collection from electronic prescription record. Patient case-notes reviewed when on greater than daily supervised opioid maintenance collection to assess concordance with guidelines and whether dose prescribed adequate (60-120mg methadone or 12-16mg buprenorphine daily). Time in treatment, attendance, urine drug screen results and evidence of employment assessed. Audit results of November 2010 are compared with results one year previously.

**Results:** The 2009 audit demonstrated: of 194 scripts, 169 were for methadone, 15 for buprenorphine, 11 for suboxone (buprenorphine/naloxone) and 5 for diazepam. 58% of prescriptions were daily supervised consumption. Less than 1% of patients were prescribed higher than 120mg methadone and 49% lower than 60mg methadone daily. Of those on < daily supervised consumption, 1 had been in treatment with us less than 3 months. Most attended an appointment in the previous 3 months. 82% had a urine drug screen documented in the previous 6 months of which 72% were for positive for illicit substances. 21% on weekly pick-up of medication had documented evidence of employment

**Conclusions:** The majority of patients in our service are prescribed methadone but in a large proportion of cases, the dose is less than recommended. We are good at supervising

prescribed opioid maintenance for new patients. Of those on less frequent supervision, attendance to the service is reasonable but there is a high level of illicit drug use. Improved practice is required when deciding upon reducing frequency of supervision of opioid maintenance treatment. There was a low frequency of diazepam prescriptions. 2010 data analysis is currently being conducted, results will be presented at conference.

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#### Incidence of hemodialysis and risk factors in hospitalized patients with acute renal failure

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**Aims and background:** Acute renal failure (ARF) is a common condition in critical illness, with a reported incidence of 1-25%. Primary objective of this study is to estimate the probability of hemodialysis in hospitalized patients with ARF and previous normal renal function. As secondary objective is to assess which factors, like co-existing diseases, are associated with the necessity for hemodialysis.

**Material and method:** A prospective study was performed in a Hospital of Piraeus over a 12 month-period. Eligible subjects for our study were hospitalized patients with ARF at admission and proved previous normal renal function. The following fields were recorded and analyzed: age, gender, biochemical and hematological tests at admission, necessity for hemodialysis and past history for arterial hypertension, diabetes mellitus and coronary heart disease. Continuous data were categorized after their median. It was used univariable and multivariable logistic regression for the statistical analysis of our data.

**Results:** Participants were 212 patients (115 males and 97 females). Mean age was 75+/-12 years. 23 patients (10.8%, 95%CI 7,1;16,0) needed hemodialysis. Statistical significant factors associated with necessity for hemodialysis in univariable analysis were the serum creatinine (Scr) level over 3.3mg/dL (p=0.03), the age over 80 years (p=0.001) and the male gender (p=0,045). In multivariable analysis the only independent factor for hemodialysis was the Scr level over 3.3mg/dL (p=0.045).

**Conclusions:** The incidence of hemodialysis in hospitalized patients with ARF was relative low. The evidence from our study supports that the co-existing diseases does not predict the necessity for hemodialysis. The only factor which may predict the necessity was the Scr level at admission. Both primary care physician and specialist, must contribute to a better supporting of ARF in hospitalized patients.

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#### Assessment of accidents in a remote Greek island

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**Aims:** To record and analyze the accidents which took place on the island of Kalymnos, a remote Greek island of the Aegean sea, during 2010.

**Material and method:** It was carried out a retrospective study. We recorded the accidents which were faced at the emergency ward of the community hospital of Kalymnos. We used as source for our data the record book for the year 2010. The following fields were recorded and analyzed: gender, age, month, time, type of injury, mechanism of accident, results of radiological test and the need for admission. The accidents were classified according to the International Classification of Diseases, 10th revision. Statistical analysis was performed using t-test, chi-squared test and logistic regression analysis.

**Results:** We recorded 1766 accidents (1105 males and 661 females). The mean age was 33 +/- 21 (SD) years. The greater frequency of the accidents was observed during summer months (p<0.001). The most common injuries were the accidents of the upper limbs (35.6%), of the lower limbs (31.7%) and of the head and neck (22.1%). Despite the fact that the majority of the mechanisms of the accidents were not described in the record book the most common recorded mechanisms were the transport accidents (13.1%) and the falls (11.8%). Radiological examination was performed in 520 cases of which 192 had positive findings (36.9%). The need for admission was associated with head and neck injuries (p<0.001), the age over 60 years (p<0.001), the transport accidents (p<0.001) and the falls (p<0.001).

**Conclusions:** Our results showed that males were prone to accidents than females. A positive radiological test was a relative common finding in accidents. Independent factors for admission were revealed the head and neck injuries, the greater age and the violence of the accident.

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#### Hepatobiliary system pathology and lipid metabolism in rheumatoid arthritis patients

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**Introduction and aim:** Rheumatoid arthritis (RA) is one of the most common rheumatic diseases. Chronic course of RA and long-term use of medications lead to the hepatobiliary (HBS) pathology development. The aim of this study: to determine the frequency of HBS pathology and lipid metabolism disorders in RA patients.

**Material and method:** 48 patients with RA (42 women and 6 men), average age 44.3 +/- 5.6 years, average disease duration - 6.2 years were included in present study. The control group (CG) consisted of 20 subjects of the appropriate age and gender without any chronic diseases or chronic medication use. Persons with positive viral B, C hepatitis markers were excluded. All enrolled patients have underwent the general and specific rheumatological examination; anthropometric examination with calculation of body mass index (BMI), waist circumference measurement (WC). Level of plasma lipids: total cholesterol -TC, high density lipoproteins -HDL, low density lipoproteins -LDL, very low density lipoproteins -VLDL, triglycerides -TG, was also determined and (TC-HDL)/HDL ratio was calculated. HBS was examined by ultrasound method using the transducer C2-5MHz.

**Results:** BMI>30 kg/m<sup>2</sup> was found in 33.3% of RA group and in 6.2% of CG (p<0.05). Abdominal obesity was determined in 43.7% RA patients and in 20.0% persons of CG (p<0.05). The proatherogenic lipid metabolism disorders were found in 64.5% RA patients and in 10% of CG. The (TC-HDL)/HDL ratio >3.0 and increased TG was found in 15% of RA patients and in 5% of CG. HBS pathology was found by abdomen ultrasound examination in 42 RA patients (87.5%). Hepatosis was diagnosed in 69%, fatty liver in 14.3%, chronic hepatitis in 28.6%, cholesterosis of the gallbladder in 17%, cholelithiasis in 7.14%, chronic cholecystitis in 64.3%. In the CG HBS pathology was diagnosed in 4 subjects (20%). Hepatosis in 15%, cholesterosis gallbladder in 5%, chronic cholecystitis in 10% of persons (p<0.05).

**Conclusions:** Patients with RA have a higher prevalence of HBS pathology, abdominal obesity, proatherogenic dislipidemia than individuals of the same age without RA. Ultrasound method has significant value as informative and non-invasive diagnostic method of HBS pathology.

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#### Are first-level ultrasound examinations feasible in Italian General Practice?

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**Background and aim:** Italian GPs worked in single-handed surgeries in the past, but nowadays a new system is promoted, according to which GPs can cooperate in the same practice and carry out basic, first-level diagnostic examinations, such as ultrasounds (US). Although this can be beneficial to both the patients and the country's National Health System, only very few GPs perform such diagnostic exams. The aim of this study was to explore the feasibility of the first-level US exams conducted by GPs in a practice.

**Material and method:** In a primary care practice, during the past 4 years, nearly 4000 first-level US were carried out for a more comprehensive clinical evaluation by 2 specially trained GPs. We identified 157 patients (mean age=59.44, sd=16.91), for whom a second-level in-depth US exam was necessary and was conducted by a radiologist for a more thorough diagnosis. Referrals to specialists and further exams were also registered for these cases.

**Results:** Among the 157 patients, 28.0% underwent a thyroid US, 24.2% a complete abdomen one, 20.4% a muscle one and 15.9% an upper abdomen one. More than a third of these exams (38.2%) were follow-up controls of previously diagnosed cases. Of the remaining 97 (61.2%) first-time US, the diagnosis that was made by the GPs was correct in 84 cases. The patients that were misdiagnosed were significantly older (mean age = 69.38 vs. 55.10 years; r=0.31, p=0.005) and the majority of them underwent a complete or upper abdomen US (9 out of 13 misdiagnosis). A referral to a specialist or a further diagnostic exam after the second-level US was necessary only for 16.6% of the cases. Likewise, the misdiagnosed cases were not associated with the referral requests (OR=0.56, 95%CI=0.13-2.32).

**Conclusions:** Even in cases that a second-level US was required, GPs managed to diagnose correctly nearly 9 out of 10 cases. The findings suggest that US carried out by GPs may be valuable for the Italian primary care and further investments should be made.

#### The relationship between intraocular pressure and sex, blood pressure, glucose, cholesterol, obesity index in ocular hypertensive patients

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**Aims and background:** The elevated intraocular pressure is the main cause of glaucoma. diabetes, hypertension and age may cause changes in intraocular pressure. However, studies on the relationship of intraocular pressure and certain health parameters are not sufficient in Korea. Therefore, the authors attempt to analyze the relationship between intraocular pressure and health parameters in intraocular hypertensive patients.

**Material and methods:** A total of 4,507 subjects visited the health promotion survey of a general hospital in Cheonan province from January 1st, 2009 to December 31th, 2009 and they underwent automated multi-phasic tests including tonometry and fundus photography. Parameters of these patients including body mass index (BMI), waist circumference, blood pressure (BP), fasting blood glucose, total cholesterol, triglyceride and HDL (high-density lipoprotein) cholesterol were recorded. The subjects were divided into six age groups by decades ranging from 20 years to 70 years of age. Multiple regression analysis was used to examine the relationship between ocular hypertension and the parameters mentioned above.

**Results:** Ocular hypertension was presented in 112 of the 4,507 subjects, showing a prevalence rate of 2.48%. The mean intraocular pressure (IOP) was 21.72±1.72mmHg. T-testing showed a waist circumference, triglycerides and fasting blood glucose were all significantly higher in the ocular hypertension group. Chi-square testing showed that male, obesity, central obesity, systolic hypertension, diastolic hypertension, impaired glucose tolerance(IGT), diabetes mellitus(DM) and current smoker were more common in the ocular hypertension group. Logistic analysis showed that IGT, DM and current smoker were factors independently influencing the development of the ocular hypertension.

**Conclusions:** The prevalence rate of ocular hypertension was 2.48%, showing no difference with other Korean studies. IGT, DM and current smoking were independent risk factors of ocular hypertension.

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#### Long-term outcomes of multidisciplinary intervention in chronic non-malignant pain patients in primary care: QOL, anxiety and depression.

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**Aim:** To evaluate changes in QOL, anxiety and depression after multidisciplinary intervention in chronic non-malignant pain patients.

**Methods:** Patients treated in a primary care multidisciplinary pain clinic, between October 2006 and April 2008, were studied. At the first visit (baseline) the Short Form 36, Beck's Anxiety Inventory (BAI) and Beck's Depression Inventory scores (BDI) were recorded. Patients were offered treatment with one or more of the following individual interventions (II): medication, psychological treatment, physiotherapy, relaxation therapy and socio-economic intervention or group interventions (GI): pain school for 5 weeks, mindfulness based cognitive behavioral therapy for 8 weeks or a rehabilitation program for 13 weeks. After a period of 22 months (mean), SF36, BAI and BDI scores were recorded again. Treatment success was defined as improvement of 40+ points in SF36 physical health component score and/or mental health component score from baseline to follow-up. BAI and BDI at baseline and follow-up were compared using Wilcoxon's Signed Rank Test.

**Results:** 141 patients were treated with II only and 165 patients were offered GI as part of the treatment. Response rate in the follow-up study was 51% (II) and 73% (GI). Mean SF36 physical health component score at baseline was 103 and at follow-up 110, mean mental health component score was 152 at baseline and 174 at follow-up (II). Comparable figures in GI patients were: 117 / 150 and 169 / 225. Treatment success was obtained by 41% (II) and 58% (GI),  $p=0.03$ . For II mean BAI at baseline was 19 and at follow-up 17 ( $p=0.06$ ) and for GI 19 and 14, ( $p<0.001$ ), respectively. Comparable figures for BDI were: 19 and 17 ( $p=0.19$ ) and 19 and 15 ( $p=0.01$ ), respectively.

**Conclusions:** Patients allocated to GI according to individual tailored treatment plan, demonstrated better long-term outcomes in QOL, anxiety and depression, compared to patients who were offered II only.

18% versus 41% ( $p=0.0001$ ). The mean daily dose of opioids decreased from 102 mg to 83 mg of morphine equivalents ( $p=0.01$ ). Comparing use of medications at the end of treatment at the clinic with medication at follow-up demonstrated significant increase in use of non-opioids: 35% versus 30% ( $p=0.03$ ), and in weak opioids: 29% versus 42% ( $p=0.004$ ). The use of antidepressants, anticonvulsants and tranquilizers/ hypnotics was stable. The mean daily dose of opioids decreased from 83 mg to 79 mg of morphine equivalents ( $p=0.03$ ).

**Conclusion:** Referral to a multidisciplinary pain clinic resulted in significantly more patients treated with anticonvulsants and antidepressants, and significantly less patients treated with tranquilizers/hypnotics. This difference was maintained during an observation period of more than one year. The average dose of opioids decreased during specialized pain management and continued to decrease during the observation period.

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#### Use of pain-related medications before, during and after multidisciplinary pain management in patients with non-malignant pain conditions.

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**Aim:** To evaluate changes in use of pain medications and adherence to this change 12 months later.

**Methods:** Patients treated in a primary care multidisciplinary pain clinic, between October 2006 and April 2008 were evaluated at baseline and after 22 months. Medications recorded: non-opioids, weak opioids (tramadol and codeine), strong opioids, antidepressants, anticonvulsants, hypnotics / tranquilizers, and muscle relaxants. The average daily dose of opioids (including codeine and tramadol) was calculated as oral morphine equivalents.

**Results:** At baseline (BL) 78% of the patients were treated with one or more pain medication(s), during treatment in the clinic (CT) 73% and at follow up (FU) 83%. Comparing medications before referral to the clinic with treatment initiated at the clinic demonstrated significant decrease in the use of non-opioids: 53% versus 35% ( $p=0.0001$ ), in tranquilizers/hypnotics: 19% versus 4% ( $p=0.0001$ ). Significant increase was seen in the use of anticonvulsants:

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**Health status and prevalence of chronic widespread pain not oncological in primary care***Morales Espinoza M, Mas Heredia M, Cararach Salami D, Adriyanov Kostov B, Ramos-Casals M, Sisó Almirall A*

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**Aims:** Analyze prevalence of chronic widespread pain not oncologica (CWPNO) consulting population attending Primary Care by another cause, evaluating impact on general health status.

**Material and methodology:** Multicenter descriptive study convenience sampling from May to November 2010, which includes patients with WPNO (defined by the American College of Rheumatology). Pain intensity was assessed using a visual analogue scale (VAS). We administered questionnaires on quality of life (SF-36), general health (GH28), Brief Pain Inventory (BPI), anxiety and depression (HADS), functional capacity (HAQ), quality of sleep questionnaire, Fibromyalgia Impact Questionnaire (FIQ) and Spanish version of the McGill questionnaire (MPQ-SV). The results were standardized according to the population mean.

**Results:** 2522 patients were visited, 111 (4.4%) met criteria for CWPNO, with a mean age of 61.5 years (SD 12), 92.3% were women. NSAIDs (71%), simple analgesics (55%) and weak opioids (32%) were the most prescribed treatments for pain. 33% met criteria for inactivity. The dimensions "physical role", "bodily pain", "vitality", "social function", "role emotional" and "physical function" (SF-36) scored far below the global population. 87% reported that pain caused moderate to severe interference in daily activities (BPI). 40% sleep badly or very badly (ECS). 56% reported some degree of self-perceived physical difficulty, except for clothing (HAQ). 48% can be defined as cases of anxiety, and 20% depression (HADS). 44% were classified with a health bad or very bad (GH28).

**Conclusion:** The profile of patients with CWPNO is a sedentary women consuming NSAIDs and / or analgesics, anxiety, sleep disorders, interference in daily activities and self-perceived physical difficulties. Soon we are going to analyze in these cases, prevalence of chronic pain syndromes and associated health care costs compared to a control group.

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**Probiotics in the prophylaxis and treatment of bacterial vaginosis***Sousa L, Xavier R, Nunes M*

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**Aim:** Bacterial vaginosis (BV) is one of the main causes of genital discomfort in women. In its origin, there's a change in the vaginal flora, with the replacement of normally dominant and protector lactobacillus by other bacterial agents, especially anaerobic. Due to its possible severe gynecologic and obstetric complications, the adequate management of

this pathology is crucial. These factors associated to the high rate of treatment failure and recurrences with the antibiotics normally used, have promoted the study of probiotics as possible solutions for the prophylaxis and treatment of BV. Our goal is to evaluate the evidence available for the use of probiotics in the prevention and treatment of BV.

**Material and methods:** A search was conducted in Cochrane Library, Bandolier, TRIP, DARE, Pubmed and NGC using the MESH terms: probiotics and bacterial vaginosis. The research was limited to articles published in the last 10 years in Portuguese, English or Spanish. To evaluate the evidence we used the Strength Of Recommendation Taxonomy (SORT) scale of American Family Physician.

**Results:** Three systematic reviews, one evidence-based review, three clinical trials and two guidelines filled in the search criteria. The use of oral probiotics including Lactobacillus rhamnosus GR + Lactobacillus reuteri RC14 after treatment with nitroimidazoles (metronidazole, tinidazole) has a SOR C for the treatment of BV. We found multiple studies with different methodologies that evaluated several different strains of lactobacillus, therapeutic regimens, administration options, outcomes and associations, that didn't allow us to prove or unprove its efficiency in the prevention and treatment of bacterial vaginosis (SOR C).

**Conclusions:** The evidence supporting the use of probiotics in the prevention and treatment of BV is scarce, and more randomized controlled studies using standard methodologies and larger samples that evaluate strains and doses of probiotics with proven efficacy are advised.

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**Thyroiditis – a diagnostic trap (case report)***Silva J, Neves Â, Vicente C, Cardoso C*

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**Aims:** Thyroid pathologies are often presented as a diagnostic trap in Primary Care. Patients show up with generalized systemic symptoms, that can suggest endocrine, psychiatric or even oncological conditions. Thyroiditis is an example, since the main symptoms are fatigue, myalgia, tachycardia and neck pain, with a female preponderance (female-to-male ratio of 3-5/1) between the third and fifth decades of life.

**Material and methods:** Follow up of a 24 years old woman with unspecific systemic complaints.

**Results:** Female patient, 24 years old, with no relevant personal history, shows up for a women's health consultation at 18/11/10 complaining of symptoms of a sore throat, weakness and general fatigue. She was medicated with arginine aspartate and blood tests were requested. The patient returns one month later (15/12/10) maintaining complaints of fatigue and analytically showed a TSH of 10.47U/ml. New analytical control and a thyroid ultrasound were requested, which revealed positive anti-thyroid antibodies, TSH 2.4U/ml, and a slightly enlarged gland, without nodules, with hypoechogenic texture, that suggested thyroiditis. Once she already presented normal thyroid function and no symptoms there was no need for hormonal treatment, scheduling new blood tests or an ultrasound within 6 months.

**Conclusion:** The diagnosis of thyroiditis is a challenge in primary care, because of the nonspecific symptoms and the frequent delay in blood tests results. Although usually self-limited and with no need for hormone therapy, patients with



thyroiditis may develop chronic hypothyroidism, which justifies that it should be considered while investigating young women with fatigue.

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### Menopause-associated vasomotor symptoms- is nonhormonal therapy an option?

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**Aims:** Menopause-associated symptoms, particularly vasomotor symptoms (hot flashes, night sweats), are common complaints in primary care setting and hormone therapy (HT) is the most effective treatment. However a number of nonhormonal agents are available especially for those women in whom estrogen-based therapy is contraindicated, not well tolerated or ineffective. The purpose of this work is to review the evidence regarding the indication, safety and efficacy of the available nonhormonal treatments for menopause-associated vasomotor symptoms.

**Material and method:** Research of articles on TRIP, Clearinghouse, DARE, Guidelines Finder of British NHS, Bandolier and Medline/Pubmed databases using medical subject heading (MeSH) terms 'Menopause' AND 'therapeutics', published from January 2006 to January 2011 in English, Spanish and Portuguese.

**Results:** The assessment of vasomotor symptoms and their impact on quality of life is a key component of the menopausal evaluation. Currently, there are safe and effective nonhormonal modalities to reduce these symptoms. Centrally acting agents such as selective serotonin reuptake inhibitors (fluoxetine, paroxetine) and serotonin norepinephrine reuptake inhibitors antidepressants (venlafaxine), and anticonvulsivants (gabapentin, pregabalin) showed a decrease in the frequency of hot flashes compared with placebo. The safety and efficacy of complementary, alternative and behavioral therapies (phytoestrogens, black cohosh, vitamin E, other herbal remedies, acupuncture, exercise, yoga and relaxation techniques) have not yet been established.

**Conclusions:** There is evidence that some antidepressants (fluoxetine, paroxetine, venlafaxine) and anticonvulsivants (gabapentin, pregabalin) can be effective in menopause-associated symptoms, however, their effects are less than for HT. The impact of menopause symptoms on quality of life must be assessed and the risk-benefit of the available treatment options should be taken into account. This review highlights, among primary care setting, the nonhormonal therapies available for menopause-associated symptoms, their efficacy, safety and recommendation of use.

### Practice organization

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### How to treat arterial hypertension in non- diabetic patients in GP, based on the MAU

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**Background:** Microalbuminuria (MAU) is an independent predictor of increased risk of cardiovascular (CV) and renal morbidity and mortality. We wish to assess the prevalence of MAU in hypertensive patients and evaluate the impact of MAU measurement on the treatment of arterial hypertension. We assume that UAE control improves counselling and treatment of hypertensive subjects as well as patients' compliance with the recommended treatment.

**Methods:** In GP/FM practice a random sample of 100 hypertensive patients was selected, excluding those with diabetes mellitus, renal disease, trauma or recent operation. UAE was measured with the Micral-Test that detects albumin excretion from 20 - 200 mg/l in the urine sample. Patient's history was taken, blood pressure, pulse rate and UAE were measured in the first and 4 to 6 months later. Based on the presence of MAU, therapy modification was suggested.

**Results:** The prevalence of MAU was 38%. In hypertensive patients with MAU blood pressure was significantly higher: systolic for 10 mmHg ( $p=0,002$ ), diastolic 6 mmHg ( $p=0,010$ ). Aggressive therapeutic intervention followed. On the follow-up visit additional 12% of patients had normal systolic and 14.5% normal diastolic blood pressure. We did not find any relationship between MAU and age, sex, BMI, duration of hypertension and other CVD. At the first visit 38 subjects had MAU, MAU was 20 mg/l in 68.4% (26 subjects) and 50 mg/l in 31.6% (12 subjects). After 6 months treatment 21,0% of hypertensive patients still had MAU value of 20 mg/l (8 subject) and 5,3% had MAU value of 50 mg/l (2 subject). No MAU at the follow-up visit was found in 90,0% of participants and in 73.7% of those having MAU at the first visit.

**conclusions:** Aggressive treatment of hypertension lowers the prevalence and value of MAU. Due to small sample it was not possible to prove statistically significant relationship between MAU and therapy with different classes of blood pressure lowering agents.

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### Family and community medicine doctors in hospital emergency department

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**Aims:** Actually in Spain there is not a recognized formative time of resident formation for Emergency specialty like other specialties. The aims of this study were to describe the composition of the staffs of doctors in spanish hospital emergency departments (ED) and analyze the role of Family and Community Medicine (FCM) in hospital ED.

**Material and methods:** Descriptive and multicentre study performed in ED of several hospitals. Data were collected from physicians working in ED of five hospitals. The variables analyzed were specialty access via and type of specialty. Data analysis was performed using SPSS v17.

**Results:** A total of 119 cases were analyzed, 43 were general practitioners (36.1%), 51 were FCM (42.9%), 20 internists (16.8%), 1 Allergist (0.8%), 1 digestive (0.8%), 2 rheumatologists (1.7%), 1 Doctor of Sport (0.8%). In two ED the most prevalent type of doctors were General Practitioners, 64.28% and 66.66% of the staff. In three ED most prevalent specialty was FCM (60%, 58.33%, 66.66%) .

**Conclusion:** 1) FCM specialty was the most significant in the hospital Emergency Departments 2) Emergency Department medical staffs is compound by a variety of specialties.

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#### Belarusian Association of General Practitioners (BAGP) is 10 years old.

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Coordination meeting devoted to BAGP creation as a member of Belarusian Association of Physicians was held on the 9th of April 2001 during the international research-to-practice conference Topical Issues of General Practice in Vitebsk. The number of association members increased from 36 to 550 people. At the moment general practice covers more than 60% of the rural areas of the Republic of Belarus. The members of the Association work at 370 independent outpatient clinics of general practitioners and at 88 outpatient departments of district and nursing hospitals. BAGP is the partner of the Ministry of Health of the Republic of Belarus in the development and discussion of new practice guidelines and government programs in the sphere of general practice. General practitioners significantly contribute to the development of primary health care. The cooperation with the Dutch Institute for Health Services Research (NIVEL) within two Dutch projects MATRA in development of general practice in Minsk, Vitebsk and Minsk districts has lasted for several years. European Regional Bureau of the World Health Organization in cooperation with the Ministry of Health of the Republic of Belarus appraised the models of primary health care organization in Belarus and recommended the further development of general practice. In 2008 the 1st Congress of general practitioners was held. Physicians work using computer program Automated Workplace of General Practitioners. BAGP in cooperation with the General Practice department of the Belarusian Medical Academy of Post-Graduate Education holds annual research-to-practice conferences devoted to topical issues of primary health care. Members of the Association published more than 35 papers. From June 2004 BAGP is the national associate member of WONCA. BAGP continues work on the quality improvement of the health care delivery to the people and broadens international relations.

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#### Sex Workers: health care by General Practitioners in the Algarve

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**Aims:** Sexual promiscuity in prostitution constitutes a high-risk behaviour for STDs (sexual transmitted diseases). So, in 2009 it was established a partnership between the Regional Health Administration office of the Algarve and an NGO (non governmental organization) "MAPS - Movimento de Apoio a

Problematica da Sida". A family practice medical center called "As Madalenas" was created, orientated to assist sex workers and their families. People attending the center were integrated in national health programs, learned about contraception and health promotion. With this study we aim to analyse the data obtained from users of this health service and discuss the importance of family practice in this particular context.

**Methods:** Descriptive retrospective study of project "As Madalenas" between January 2009 and January 2011, based on medical questionnaire and medical data in consultation. Results: There were 329 users over this period, 94% women who were sex workers and 14 family members. 89% were originally from foreign countries and 40% of these said to be illegal in Portugal. 11% did not take the HIV test, and there were no positive HIV tests in those who did. There were 31 positive results for other STDs. As for the Cervical Cancer Screening it was identified in one woman a high-risk lesion and in 28 other low-risk lesions. Metabolic disease was identified in 58 people.

**Discussion:** The creation of a consultation that allows a global health evaluation was more comprehensive than concentrating preventive activities in HIV infection testing or counseling alone. This population had an accessible, private, non-judgemental opportunity to an holistic approach to health problems and safe referral without burocratic issues. Because of the other health problems found, besides STDs, at this center we feel strong to encourage a family practice orientation to work with this high-risk group of patients.

#### Primary health care organization

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#### Frequency of medication review in repeat prescribing, in polypharmacy patients

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**Introduction and aim:** Repeat prescribing is an increasing and necessary part of general practice. Prescriptions are often issued by the secretary and simply signed by the doctor, without ever seeing the patient. This may be time economical for the practice, however it less likely that the doctor will think critically about each prescription. Certain groups are at higher risk of medication complications, namely the elderly and patients on large number of medication. The purpose of this study was to ascertain whether patients with polypharmacy (four or more drugs) were having medications reviewed on a regular basis with a full face to face consultation. The findings were to be compared with a UK guideline that suggested these patients should have a full medication review every six months.

**Method:** A retrospective analysis was performed on a cohort of patients over a two week period. All patients with polypharmacy were selected and had their clinical notes were reviewed for any evidence of medication review in the preceding seven months. Results A total of 341 patients notes were reviewed in the 2 week period, with 116 having polypharmacy (34%). In this cohort, 50 (43%) had all of their prescriptions issued by secretary, without consultation in previous 6 month period. Of these only 9 had evidence of medication review at some stage, thus 41 (35%) had no

evidence at all of review.

**Conclusion:** The audit shows evidence that this high risk group of patients are not being reviewed regularly enough, or it is not being documented. A protocol for the practice has now been implemented. All polypharmacy patients will have the date of their last full medication review documented in their notes and reminder set. It will also prevent further prescriptions being issued beyond six months without review. These changes will lead to safer prescribing, more compliant patients and eventually a more cost effective service.

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The lack of funding for drugs to treat smoking cessation difficult by smokers. Subsidize this type of medication requires a strict dispensation. Grant out of control medication may hold a disproportionate cost. Detail a model anti-smoking medication dispensing in a single management.

**Material and methods:** The model is designed to dispense a health area southeast of Spanish which has 13 basic areas with 207 family physicians. The doctors have to handle the OMI-AP program. Within this program, the personal plan has been adapted by smoke screens that required fields, so information technology, professionals collect data enabling them, on the one hand, authorization to issue a prescription form that allows the patient to withdraw medication at the center itself and, moreover, that these data are automatically extracted from an Excel spreadsheet that comes every week to the charge of the pharmacy and address of the management area. This table is contrasted with the recipe printed each month refer smoke makers from each of the health centers that address. This will verify the number of anti-smoking drug packages were delivered at each site to patients. It also allows the packaging to know that each center will need to go replacing it from the pharmacy. The patient must be reviewed monthly. In each of these reviews is providing the medication is necessary until the next review. So three months. However, the patient, to prevent relapse, it will be reviewed both by your family doctor as his nurse until.

**Results:** In April 2010, gradually began smoking medication dispensing in the 13 health centers. The acceptance by professionals and users is very high. We estimate that a 32.2% of smokers who are in this area, between 5 and 10% can be addressed. In the third quarter of 2010 will produce a report on the percentage of smokers treated, stopping smoking and spending from medication.

**Conclusions:** Subsidize the anti-smoking medication to increase motivation to quit smoking. Dispensing controlled model allows the treatments to patients with adequate motivation and dependence. It also avoids the expense of control.

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### Guaranteed services in primary health-care in Poland, the Netherlands and England– a project of comparative study

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**Aims:** Primary health-care (PHC) is defined as essential health-care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-determination (Alma Ata International Conference definition). Polish Health Minister Decree on guaranteed services within PHC wasn't edited until 2009. It came into existence due to the earlier published document regarding to guaranteed services in health-care. The aim of our project is to show the need of Family Physicians involvement in evaluation of the practical use of the guaranteed services within PHC and to give practical solutions and following corrections.

**Material and methods:** To answer our research question we plan to use a systematic qualitative research as a constant comparative method called Grounded Theory. The first step in the process is data collection through a variety of methods. From all collected data, the key points are marked with series of codes extracted from the text. The codes are grouped into concepts, from which categories are formed. We will also use quantitative methods to analyse measurable aspects like that the average patient has to wait two hours in the waiting room of a certain doctor before being selected. We would like to compare effectiveness of screenings and education about risk factors on PHC level depending on differences between selected countries. We are going to compare all the data, both theoretical and practical between three countries (Poland, The Netherlands and England). Comparison will be made not only in regard to documents and decrees, but also in regard to experience. Results: The results of our project of a comparative study are yet to come.

**Conclusions:** We expect to draw conclusions on material gained from every available source and to show the essential role of Family Physician in PHC management and organisation and to give practical solutions and following corrections.

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### Free model for supply of medication management in a single smoking area

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### Inappropriate use of statins in primary prevention. the important role of cost-effective analysis.

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**Introduction:** Among the reforms needed to maintain sustainable healthcare systems, control of spending must be a priority. According to a Meta-analysis of 11 Randomized Controlled Trials published at Archives of Internal Medicine on June 2010, there is no evidence for the benefit of statins on all-cause mortality in a high-risk primary prevention.

**Aim:** Examine our prescription of statins to people who have never had a cardiovascular event as well as its impact in the change of cardiovascular risk level. Calculate the economic cost of this preventive action considered of low efficiency.

**Material and method:** In this retrospective study we analyzed our prescription of statins among patients recorded as hypercholesterolemics and without prior cardiovascular

event along year 2010. Hypercholesterolemia was defined as values superior to 250 mg/dl of total cholesterol on two different blood tests. We also calculated the economical cost for the National Health System. Changes on personal cardiovascular risk previously and after statin prescription, were calculated by applying REGICOR score, an adapted risk table for Spanish population but which is currently used in all Catalonia,

**Results:** From 10001 people included in the study, 3003 (30%) were taking statins along year 2010. From 600 individuals at high risk, only 144 (24%) achieved a moderate risk by reducing total cholesterol with statins, while of those 4004 at intermediate risk, 646 (16%) achieved a low risk. The economical cost was 200000 euro in year 2010.

**Conclusion:** It is of utmost importance that medical practitioners apply healthcare resources in a cost-effective manner. In our setting, overprescription of statins as primary prevention, represents an unwarranted economic burden with little impact on the individual cardiovascular risk.

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#### How to set up and manage a new primary health center

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**Aim:** to describe the process of organizing and solving problems we found during the 6 first months of a new primary health center (PHC) in Barcelona (Spain).

**Material and methods:** descriptive study demographic data of our recruitment area was gathered and analyzed as well as other variables such as the consequences of changing GPs, PHCs, creation of internal circuits, relationship with hospitals, emergency protocols, geriatric ward and physiotherapy services. Process: Recruitment of staff started 6 months prior to the opening. The management board calculated they needed 14 GPs, 14 nurses, 8 admin staff, 2 nurses' assistants, informatic support team, and a social worker. As a PHC our population was 25000 clients. The 24 hour on call team needed: 8 doctors, 8 nurses, 2 admin workers, 2 nurses' assistants attending 200000 people.

**Results:** We've run by a PHC, 24h on call center, a geriatric ward (with 200 beds for the convalescences of mild diseases) and a physiotherapy service will run by in the next months.

**Conclusions:** The referrals to other consultants have been complicated due to different financing sources of our team (it is a privately run PHC) and patients stick to the consultants they use to have before. In the next future some of them will be run by the same PHC management team. Patients show high expectations of the new PHC and sometimes meeting them is difficult. Some informatics needs are still deficient but after our 6 first months we can proudly say that hospitals receive less people in emergency services and our population's long demand for a new center is been answered.

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#### An outline of the basic assumptions of the theoretical model of rational health care system.

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**Aims:** Existing health care systems struggle in varying degree with financial deficiency and negative evaluation by the insured. Building a health care system based on realistic budget which implements the solidarity principle and at the same time is accessible from the patient's point of view still presents a big challenge.

**Materials and methods:** The presentation builds a theoretical model of rational healthcare system

**Results:** One can assume, that the most important theoretical principle which should be applied while creating systemic foundations is the promotion of solutions which are self-regulating and encourage rational behavior of all participants. Reasonable partnership between provider and recipient is one of the basic relationships present in modern health care. Designing a system which takes into account the aforementioned issues seems impossible without providing the insured with designated guides and advocates (physician). The choice of family doctor is the basic right of patient which enables him/her to enter the system. Taking advantage of higher levels of health care can be coordinated by internist or pediatrician who is chosen together by the patient and his family doctor. An equally important solution seems to be the separation of the following roles: function of the payer, fund collecting institution, data gathering and processing institution and the planning institution.

**Conclusions:** It seems that the presented vision of health care system, which contained a number of strategically important self-regulatory mechanisms, may be a foundation of strategic plan.

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