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## European General Practice Research Network

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## ABSTRACTS

### European General Practice Research Network

*Abstracts from the EGPRN meeting in Budapest, Hungary, 16–19 October 2008*

#### Friday, 17 October 2008

Location: Hotel Mercure Budapest Buda

Address: Krisztina Körút 41–43, H-1013 Budapest

**08.50–09.10 1st Keynote Speaker: Professor Carlos Brotons** Chair of Research Unit in Primary Care, Sardanya Primary Health Care Centre, Barcelona, Spain, and Chair of the Europrev network

**Theme: Research on the integrated management of cardiovascular diseases (mainly on the domain of prevention)**

National guidelines and most recent European guidelines on cardiovascular disease prevention in clinical practice (1) encourage priorities and implementation strategies that are adapted to suit local conditions, both medical and economic. The encouragement of total risk estimation as a crucial tool to guide patient management has been a cornerstone of the guidelines. It is recognized that cardiovascular disease (CVD) risk factors cluster and interact multiplicatively to promote vascular risk. This knowledge has led to the development of multivariable risk-prediction algorithms incorporating these risk factors, which can be used by primary care physicians to assess among individual patients the risk of developing all atherosclerotic CVD or specific components of CVD, i.e., coronary heart disease, stroke, peripheral vascular disease, or heart failure. In addition to reducing the number needed to treat to prevent a CVD event, multivariable risk assessment also avoids overlooking high-risk candidates with multiple marginal risks factors and avoids needlessly alarming patients with only one isolated risk factor. Despite the availability of several validated risk-prediction algorithms, their use has lagged in primary care and many high-risk patients are still not reaching lifestyle and risk-factor goals. The EUROACTION project showed that a nurse-led multidisciplinary team approach, coupled with the support and involvement of a patient's partner and family, can yield significant lifestyle improvements and risk-factor reductions in coronary patients and patients at risk of developing cardiovascular disease

(2). Also, the CHECK-UP study has demonstrated that discussing risk with the patients is associated with a small but measurable improvement in the efficacy of lipid therapy (3). However, it is unknown whether reducing the global risk of patients with an increased risk of CV disease—rather than decreasing isolated risk factors—also provides cardiovascular benefit in terms of morbidity and mortality.

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3. Grover SA, et al. Patient knowledge of coronary risks profile improves the effectiveness of dyslipidemia therapy. The Check-UP study: a randomized controlled trial. *Arch Intern Med* 2007;167:2296–303.

#### Friday, 17 October 2008

Location: Hotel Mercure Budapest Buda

Address: Krisztina Körút 41–43, H-1013 Budapest

**09.10–09.30 2nd Keynote Speaker: Professor Manfred Maier** Chairman, Department of General Practice and Family Medicine, and Head, Centre for Public Health, Medical University of Vienna, Austria

**Theme: Measuring the impact of family medicine research: Scientific citations or societal impact?**

The ultimate goal of biomedical research is to improve the health of the population. This requires both the generation of new knowledge and its transfer into clinical practice; this means translation and implementation of scientific discoveries, in order to

promote a change for the better in the practices of health professionals, in patient's behaviour, or at the level of society. Research should, therefore, be of the very best quality, and assessment of its impact is important.

Attempts to assess the impact of scientific research are always difficult and to a large extent depend on the method of measurement and its goal. For example, is the identification of molecular mechanisms of health and disease and the development of new pharmaceuticals of prime importance, or is it more important to find ways to change patients' lifestyles or to increase their compliance with a drug regimen? Traditionally, both research and scientists are evaluated by means of the "scientific impact" of research output, e.g., publications in biomedical journals. Increasingly, the "scientific impact factors" of these journals, a measure of citation frequency, are also used to evaluate academics nominated for promotion and to allocate research funds to scientists or institutions.

Ideally, the scientific output of biomedical research should be assessed in terms of its relevance for the health of the population. Applied health research, and in particular general practice/family medicine, has a dual mission of being both scientific and relevant to society. As a consequence, therefore, relevance to society could be assessed by the "societal impact (factor)", which should complement the "scientific impact" and its commonly used assessment instrument. Such an approach should be important, since it would provide an incentive for all investigators to improve their performance in this respect and would avoid societal impact being considered as merely an option.

#### **Friday, 17 October 2008**

Location: Hotel Mercure Budapest Buda

Address: Krisztina Körút 41–43, H-1013 Budapest

**09.30–09.50 3rd Keynote Speaker: Professor László Kalabay** Head of Department of Family Medicine, Semmelweis University, Budapest, Hungary

**Theme: GP research in Hungary: The state of the art**

#### **Introduction of primary care and research in Hungary**

The 10 million population of Hungary is served by 6834 practices, i.e., a mean of 1500 persons per praxis are registered. Half of the practices serve adults, a quarter is paediatric, and a quarter serves both. The number of unoccupied practices

varies between 130 and 160. Ninety-five per cent of practices are privatized and work in the single-office model. The mean age of general practitioners (GPs) is 57 years. The equipment and working conditions will also be briefly discussed.

Research in primary care has a long tradition in Hungary. The first scientific organization in primary care, the Scientific Society of Hungarian General Practitioners (MÁOTE), was established 41 years ago. With its more than 300 members, the Research Organization of Hungarian Family Physicians (CSA-KOSZ) is another dominant forum of GP research. The College of Hungarian Teaching Family Physicians (MOCSAK) plays a central role in education. Today, the departments of family medicine of the four medical universities (in Budapest, Debrecen, Pécs, and Szeged) and the National Institute for Primary Care (OALI) form the basis of research activity. Several large studies have been conceived and conducted in primary care. Most of them are epidemiologic and descriptive, and have been presented mainly at domestic conferences and publications. Somewhat fewer have been presented at international congresses or published in books and journals.

#### **Brief description of some representative studies**

- 2001, Department of Family Medicine, Semmelweis University. Stroke care in family practices. Physical status, stroke history, hospital treatment, and medication of 7346 patients with stroke from 750 practices were assessed and analysed. The study was repeated on 2305 patients in 300 practices in 2004. Treatment became more effective over these 3 years.
- 2002, Department of Family Medicine, Semmelweis University. Optimal hypertension care in family practices. Four thousand four hundred and two patients were involved and followed for 7–8 months. The usefulness of home blood pressure monitoring and implementation of current guidelines were tested in everyday practice.
- 2003, Department of Family Medicine, Debrecen University. The cardiovascular risk of 1320 patients was assessed. Another study on the effectiveness of treatment of risk factors indicated target values of blood pressure have been achieved fairly frequently, even in international comparison. Target values for diabetes and hyperlipidaemia, however, were reached at an insufficient rate.
- 2005, OALI. Assessment of the cardiovascular risk factors of the Hungarian population, involving 41 111 study participants.

- 2005, Department of Family Medicine, Semmelweis University and OALI. The usefulness of self-questionnaires in estimating the frequency of severe drinking problems in an unselected patient population (17 924 patients from 250 practices) was determined. Two thousand six hundred and twenty-two (14.6%) patients with dangerous level of alcohol consumption were identified. Following a brief intervention, 124 (6.9%) of the true alcohol patients volunteered to be treated (0.69% of the whole study population).
- 2007, Department of Family Medicine, University of Pécs. The attitudes of 300 American and 339 Hungarian GPs towards hospice care of terminally ill patients were compared.
- 2007, Department of Family Medicine, Semmelweis University and MOCSAK. The cross-sectional study HURAC (Hungarian Uric Acid Study) involved 11 254 persons over 40 years from 360 practices, with the aim to determine the prevalence of hyperuricaemia and its association with cardiovascular diseases in the Hungarian population.

#### **Current issues in conducting research in primary care**

The lack of independent financing results in dependence on support from pharmaceutical companies. Rigorous application of scientometric indices, when compared to other fields of medicine, does not permit receipt of grants for research in primary care. Ageing and increasing retirement of GPs, along with insufficient supplementation of newly graduated doctors who are committed to research, is also a serious problem. Heavy workload in the single-office structure does not always favour research activity.

#### **Saturday, 18 October 2008**

Location: Hotel Mercure Budapest Buda

Address: Krisztina Körút 41–43, H-1013 Budapest

**08.30–08.50: 4th Keynote Speaker: Professor Arno Hoes** Professor of Clinical Epidemiology and General Practice, Julius Centre for Health Sciences and Primary Care, University Medical Centre, Utrecht, the Netherlands

#### **Theme: Diagnosis and diagnostics measures/instruments for cardiovascular diseases**

*A new test to diagnose cardiovascular disease. Should I use it in my practice?*

Diagnosing cardiovascular disease (e.g., heart failure, myocardial infarction, pulmonary embolism) in primary care is notoriously difficult. This is at least

partly attributable to the limited diagnostic value of signs and symptoms, and the lack of availability of useful additional diagnostic tools in the primary care setting. With the identification of a number of potentially useful biomarkers (such as BNP and D-dimer) and the development of rapid point-of-care tests to measure the levels of these parameters, the diagnostic management of suspected cardiovascular disease in primary care may change.

Before such tests, however, can and should be applied in daily practice, research proving the diagnostic value of these tests should be available. In contrast to research assessing the value of new therapeutic interventions, there is no real consensus about the methodological paradigm of such studies. Consequently, the evidence for novel diagnostic tests is often either lacking altogether or methodologically flawed. In addition, many studies are performed outside the primary care setting, hampering the applicability of the findings in general practice.

During the presentation, first, the conditions that should be met in order to provide clinically relevant evidence on the diagnostic value of novel tests in the primary care setting will be discussed. These will then be illustrated and discussed using examples from recently completed or ongoing studies, with emphasis on suspected heart failure and myocardial infarction.

#### **Presentation 1: Theme paper**

**Friday, 17 October 2008, 09.50–10.20**

#### **Secondary prevention of heart disease in general practice: A cluster randomized controlled trial of tailored practice and patient care plans (ISRCTN24081411)**

Andrew Murphy, M. E. Cupples, S. M. Smith, Mary Byrne, M. C. Byrne, J. Newell  
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**Background:** Key issues remain uncertain regarding interventions designed to improve outcomes in patients with established heart disease, including optimal design, frequency, and duration.

**Method:** Cluster randomized controlled trial involving 48 of 160 eligible general practices in two separate healthcare systems testing a multi-faceted complex intervention developed according to the MRC framework. The intervention included two elements: tailored practice care plans (comprising

practice-based training, individual practice support enhanced by a quarterly newsletter) combined with tailored patient care plans (based on motivational interviewing, goal identification, and target setting for lifestyle change). Control practices continued to provide usual care. Primary outcomes, at 18 months follow-up, were blood pressure, total cholesterol, physical and mental health status (SF-12), and hospital admissions.

**Results:** Of 903 participants, 838 (92.8%) completed follow-up and we analysed primary endpoints for a minimum of 762 (84%). No treatment effect, in terms of change from baseline, was found for three of the primary outcomes: systolic blood pressure (mean difference between interventions and controls 3.31 mmHg [95% CI -1.02 to 7.63]), total cholesterol (mean difference 0.13 mmol/l [95% CI -0.03 to 0.30]), SF-12 physical (mean difference -0.78 [95% CI -2.58 to 1.03]), and SF-12 mental (mean difference -0.02 [95% CI -2.40 to 2.35]). However, hospital admissions were significantly reduced by a mean difference between interventions and controls of 0.15 admissions over 18 months (95% CI 0.01 to 0.29).

**Conclusions:** This complex intervention resulted in significant reductions in hospital admissions but, possibly as a result of a ceiling effect related to improved management of cardiac disease in the community, did not provide other clinical benefits.

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## Presentation 2: Theme paper, study proposal/idea

Friday, 17 October 2008, 10.20–10.50

### Self-monitoring blood glucose (SMBG) frequency and metabolic control: A prospective, multicentre cohort study

Xavier Cos, Daniel Martinez, Manel Mata, Marti Birules, Julita Morro, Angels Conesa, Francesca Sancho

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**Background:** Catalanian SMBG recommendations were published in 2001, but accuracy was very difficult to check, since most diabetic patients were visited by other professionals. Since 2002, our centre has undergone a progressive process of computer-assisted clinical recording.

**Research question:** Is the recommended SMBG frequency associated with poorer metabolic control?

**Aims:** To assess whether type 2 diabetes (T2D) patients with an appropriate SMBG frequency according to our national guidelines have worse control compared to those with other checking frequency.

**Method:** Prospective cohort study. We will study all T2D patients, at five primary care centres, taking antidiabetic drugs (oral therapy or insulin) with any HbA<sub>1c</sub> control between January and June 2008 in our reference lab centre. We will also review computer clinical records, collecting the following data: date of birth, gender, T2D treatment—secretagogues (SG) and non-secretagogues (NSG) drugs or insulin—number of SMBG/week, and HbA<sub>1c</sub> value. We will classify SMBG use into three categories (cohorts): correct, overcheck, and undercheck. Over the course of 1 year, we will register the variation in number of SMBG/week, in treatment, and in patient's habits. Between 9 and 15 months after the first HbA<sub>1c</sub> control, we will carry out a second check. HbA<sub>1c</sub> difference will be calculated and classified into two categories: poorer metabolic control (if HbA<sub>1c</sub> difference is higher than 2 SD [1%]) and better or similar metabolic control (if HbA<sub>1c</sub> difference is <2 SD [1%]). The global prevalence ratio (and 95% CI) will be calculated for each treatment category.

**Conclusions:** With these results, we would like to obtain hard data related to SMBG among our diabetic patients, which can be used to readapt our recommendations. The cohort study will also give us more information about the benefits of SMBG in this therapeutic subgroup.

**Points for discussion:** Usefulness of SMBG in primary care. Are present recommendations equal in all European countries?

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## Presentation 3: Theme paper

Friday, 17 October 2008, 11.20–11.50

### What knowledge of their hypertension do primary-prevention-treated patients have?

Hélène Vaillant-Roussel, Philippe Vorilhon

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**Background:** The frequency and complications of hypertension make it a major issue in public health. Several studies have shown that treatment adherence is often imperfect. The purpose of this study was to explore patients' perceptions of their hypertension risk as well as to inform their caregivers about meaningful education messages.

**Research question:** What knowledge of their hypertension do primary-prevention-treated patients have?

**Method:** Qualitative study by semi-structured interviews. In 2007, 24 patients were interviewed within three surgeries. The responses were recorded and transcribed, and then analysed thematically. Patients had to be at least 18 years old and treated for hypertension in primary prevention for at least 1 year.

**Results:** Patients had good knowledge of their treatment and blood pressure goals. Lifestyle measures were known but were declared to apply in only one out of two cases. Symptoms were heart related, loss of self-control, or body malfunction. The main themes were nerves, blood, and blood pressure. The nosological entity “nervous tension” was identified as a cause of hypertension, resulting from the interaction of social pressure and patient’s temperament. When history existed in the entourage, the planned complications were related to the heart and brain in the form of disabling accidents.

**Conclusions:** Representations of hypertension are heavily dependent on the personal experience of the patient, his fears, and his entourage. The general practitioner should inform patients of treatment goals and feared complications in a non-threatening therapeutic alliance.

**Points for discussion:** Patient’s perceptions; risks and adherence; therapeutic alliance

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#### Presentation 4: Theme paper

Friday, 17 October 2008, 11.50–12.20

#### Electronic health-record systems and global cardiovascular prevention

Annelies Van Linden, Nathalie Van de Vyver, Ester Cornelis, Edward Van Rossen

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**Background:** The Flemish guideline on “Global Cardiovascular Prevention” (GCP) for general practitioners (GPs) was published in September 2007. Electronic health record systems (EHRS) are potentially important tools to facilitate implementation. In Flanders, there are 14 different EHRS, and they differ greatly from each other.

**Research question:** Do the Flemish EHRS allow GPs to implement a GCP strategy?

**Method:** From the guideline, we extracted a set of 20 parameters, all of which were to be completed in the EHRS in order to end up with a global risk score that is necessary to choose the form and intensity of the therapy. Next, these parameters were discussed in a group of key representatives (practising GPs) of the four most popular used EHRS and two others. Every representative then examined and described—by a live presentation of his EHRS—which parameters are allowed for in his EHRS. Last but not least, the resulting report will be discussed with the different EHRS vendors.

**Results:** The results for the different EHRS varied considerably. For instance, in some of them, the indicators that are necessary to calculate a patient’s global risk (high, medium, or low) had to be manually entered one by one into a separate calculator module, while others allowed for a fully automatic calculation based on indicator scores that were entered previously and elsewhere in the EHRS (i.e., when the purpose of calculating a global risk score was not yet envisaged). None of the systems allowed for an optimal registration of all parameters. The results of the discussion with the EHRS vendors will be available in September 2008.

**Conclusions:** The current versions of the most popular Flemish EHRS are not good enough to fully implement GCP. Important changes are to be made before they can fulfil their true potential.

**Points for discussion:** 1) How is it in other countries: Does your EHRS allow for an easy/easier implementation of GCP? 2) Who, in your opinion, should be responsible for taking action (and, if so, what action?) to improve the degree to which EHRS allow for the implementation of good practice?

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#### Presentation 5: Theme paper, ongoing study, no results yet

Friday, 17 October 2008, 12.20–12.50

#### Cardiovascular risk and intervention study in Croatian family medicine

CRISIC-fm Investigation Group (Biserka Bergman Marković [leader], Dragica Ivezić Lalić, Ksenija Kranjčević, Davorka Vrdoljak, Jasna Vučak)

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**Background:** Cardiovascular diseases (CVD) are the leading cause of death in Croatia and worldwide,

and are a great economic burden for healthcare systems. CVD prevention should include a proactive approach to all, with additional care for high-risk groups. Total risk estimation significantly surpasses the sum of individual risk factors, and it is recommended.

**Research question:** The assumption is that total CVD risk estimation using the Systematic Coronary Risk Evaluation (SCORE) risk chart in primary prevention (PP) in an intensive intervention group (IIG) (using measures accepted by the guidelines of professional societies) could result in greater primary CVD endpoint reduction compared to the single-factor approach in a conventional intervention group (CIG).

**Method:** Multicentric, prospective, randomized, cohort study is planned. Sample of 64 general practitioners (GP) is stratified; each GP includes systematic random sample of 55 patients aged  $\geq 40$  years who meet inclusion criteria and visit during a 2-month period. Study questionnaire was created and validated (socio-demographic data, anthropometric measurements, family and personal medical history, current medication, nutrition, smoking and drinking habits, physical activity, QOL, blood and urine analyses, ECG, SCORE, Framingham risk chart, MNA scale [nutritional assessment for patients aged  $\geq 65$  years]). GPs randomized into the IIG ( $n = 32$ ) were educated to perform in a systematic manner precisely set risk factor follow-ups; GPs randomized into the CIG ( $n = 32$ ) will perform in "the usual way". After an 18-month period, a cohort of at-risk-of-CVD patients from both groups will be retested using identical methods. SSD (baseline and post-interventional parameters, and total CVD risk) between IIG and CIG will be tested (univariate multifactorial ANOVA, level of significance 95%; 95% CI;  $p < 0.05$ ).

**Results:** Survey is in progress.

**Conclusions:** The concept of total CVD risk estimation using the SCORE risk chart in PP of CVD should substitute the single CVD risk factor approach in general practice. GPs' systematic approach is considered to be more successful than a conventional approach in both the PP and secondary prevention CVD target groups.

#### Presentation 6: Theme paper

Friday, 17 October 2008, 11.20–11.50

#### Open-access echocardiography in the Netherlands: An efficient service for detecting patients with (risk of developing) heart failure

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**Background:** In eastern South Limburg, an open-access echocardiography service was started in 2002. It was the first service of its kind in the Netherlands. Its main objective was to lower the threshold for evaluating patients suspected of heart failure. To prevent overload of the echocardiography department, referral indications were strict: dyspnoea, cardiac murmur, or peripheral oedema.

**Research question:** To evaluate demand for the service, general practitioner (GP) participation, referral indications, echocardiography outcomes, and GP management.

**Method:** The first 625 consecutive patients were evaluated (December 2002–March 2007). Our data came from 1) GP referral forms; 2) echocardiography outcome letters; and 3) a GP questionnaire on management. For the latter, GPs examined their electronic patient records for data on management after having received advice from a cardiologist.

**Results:** The participation rate of GPs in using the service was 81% (105/129). Eighty-three per cent of all participating GPs returned the questionnaire on management. On average, a GP referred one patient per year to the service (range 0–9). Intended indications for referral were cardiac murmur (59%), dyspnoea (32%), and peripheral oedema (17%). Of the "other" indications (22%), one-third was evaluated for suspected left ventricular hypertrophy (LVH). Main expected outcomes were left ventricular dysfunction (43%; 3% "only systolic dysfunction") and valve disease (25%). An unexpected outcome was the proportion of LVH: 50% of all referrals. Only 24% of all echocardiograms showed no relevant disease. In patients with at least one abnormality, the cardiologist gave specific advice in 47.5%. The GP followed the cardiologist's advice to refer the patient for further evaluation in 71% of cases. Overall, 32% of patients with at least one abnormality (24% of all patients) were eventually referred to the outpatient department.

**Conclusions:** Open-access echocardiography was used efficiently and for good reasons by the GPs. Referral indications might be widened, e.g., to include "suspicion of LVH".

**Points for discussion:** Open-access echocardiography in other countries and health care systems; the use of regular patient care data for research purposes

(ethics, quality); medical students (first two authors) as novice researchers

### **Presentation 7: Theme paper**

**Friday, 17 October 2008, 11.50–12.20**

#### **Effects on quality of life of patients with chronic systolic heart failure by a practice-based complex intervention: Results of the Heidelberg Integrated Case Management (HICMan) trial (ISRCTN30822978)**

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**Background:** Patients with chronic systolic heart failure (CHF) have an impaired quality of life (QoL), and the delivery of care in general practice is complex.

**Research question:** To test whether a comprehensive primary care-based case management (CM) can improve patients' QoL and decrease CHF hospital admissions or death.

**Methods:** HICMan is a randomized controlled trial conducted in German general practices with patients with ascertained left ventricular systolic dysfunction ( $EF \leq 45\%$ ) with 12-month follow-up. Structured, standardized CM consisted of telephone monitoring, home visits and additional diagnostic screening (in 3- to 6-week intervals) by a previously trained doctor's assistant. Patients from the control group received usual care (UC). GPs were introduced to guideline-oriented management and health counselling. Main outcome measurement for patients' QoL was the scale "physical functioning" (PF) (SF-36). One secondary outcome was disease-specific QoL (Kansas City Cardiomyopathy Questionnaire; KCCQ). To evaluate time and group effects for first overall analyses of QoL, an analysis of variance with repeated measurements was performed.

**Results:** 199 eligible patients (targeted: 188) were randomized to the CM or UC group ( $n=99$  and 100, respectively). In the respective groups, five vs. five patients died, and seven vs. two discontinued the intervention; 11 vs. seven patients accounted for 18 vs. nine heart failure hospital admissions (combined endpoint 16 vs. 12). First analyses for the scale PF showed mean scores (SD) at baseline of 49.5

(29.1) vs. 50.7 (27.1) and 50.7 (27.1) vs. 51.7 (29.6) with no effects. Time  $\times$  group effects could be shown for mean scores (SD) of the scale "vitality" in favour of CM (at baseline 43.1 (22.7) vs. 47.7 (22.3); at follow-up 47.6 (23.9) vs. 43.9 (21.1);  $p=0.003$ ). The KCCQ domains "symptom frequency" and "self-efficacy" showed positive time effects ( $p=0.086$  and 0.006, respectively). Symptom variability improved in favour of UC ( $p=0.032$ ).

**Conclusions:** First overall analysis showed no significant changes with regard to the primary outcome. For other outcomes, mixed results were obtained. Differentiated results regarding adjustments of analysis will be presented at the meeting, enabling more definite conclusions.

**Points for discussion:** "Clinically relevant" changes in QoL scores; contamination

### **Presentation 8: Theme paper**

**Friday, 17 October 2008, 12.20–12.50**

#### **Arrhythmias in primary care: Common treatment failures that could be adjusted**

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**Background:** Although arrhythmias are a common symptom resulting frequently in serious implications for patients' health and their quality of life, they are often treated inadequately by family doctors. Patients reporting recurrent arrhythmias or palpitations sometimes receive anti-anxiety medicines, such as benzodiazepines, without any other specific treatment.

**Research question:** Our study aimed at reporting on effectiveness of treatment and the personal health perception of arrhythmic patients at the Health Centre of Chrisoupolis, in Greece.

**Method:** During the last semester of 2007, 212 patients reported for the first time or repeatedly arrhythmic symptoms (90 males, 122 females; mean age 67.13 [SD 9.97] years). Demographics, habits, history of arrhythmia, background regarding related chronic diseases and medical treatment, and the General Health Questionnaire – 12 (GHQ-12) were used to evaluate the personal health perceptions of the patients. Physical examination, auscultation, and



ECG were also performed. Finally, lab analysis or referrals were conducted when appropriate.

**Results:** 20.8% reported more than five arrhythmic episodes in the past 6 months. The most common type was atrial fibrillation/flutter (65.1%); 72.5% of them received anti-anxiety therapy and 63.8% anti-aggregants. Of all the arrhythmias, 30.7% were triggered by non-cardiac causes. In total, 79.1% of patients were diabetic, 26.4% did not receive any anti-aggregant therapy ( $p=0.001$ ), and 16.0% received anti-anxiety medicines ( $p=0.006$ ). Only 25 of the 152 referrals to a specialist had a pathological ECG at the time of examination ( $p<0.001$ ). Patients were 2.39 times more likely to be referred if presenting more than one arrhythmic episode ( $p=0.005$ ). Those having experienced few episodes of arrhythmia per day had a significantly worse GHQ (median 13.00) than those having sustained few episodes per month (median 10.50,  $U=882.00$ ,  $p=0.014$ ).

**Conclusions:** The high percentage of arrhythmic patients with inappropriate therapy should enforce GPs' awareness to follow treatments according to the guidelines.

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**Presentation 9: Freestanding paper**  
**Friday, 17 October 2008, 14.15–14.45**

**Are CME journals corrupt? And, if so, to what extent?**

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**Background:** For their prescribing, GPs need unbiased information on drugs. For this, GPs only very rarely rely on original papers. Most information they use is processed to some degree. Despite the availability of electronic information, print journals remain an important source of prescribing information. Journals read by GPs differ by the degree they depend on advertising by drug companies. On one hand, there are CME journals that rely heavily on advertising without paying subscribers. On the other hand, there are drug bulletins that carry no advertisements, to preserve their independence. Their income is based exclusively on subscription payments.

**Research question:** Is there an association between the source of funding of a journal (advertising) and

recommendations with regard to drugs (editorial content)?

**Method:** Eleven periodicals typically read by German GPs we analysed for a 1-year period. We defined three categories of journals: 1) no advertising, subscription only; 2) mainly advertising, no or negligible subscriptions; and 3) mixed. Recommendations for or against 10 recently introduced drugs in articles were systematically quantified. We selected clopidogrel, incretine enhancers, glitazones, insulin analogues, AT1-blockers, ezitimibe, acetylcholinesterase inhibitors, pregabalin, duloxetine, TNF-alpha-blockers. Raters were blinded to the source by scanning each article and presenting it in neutral format. The tendency (bias) of these recommendations was analyzed according to journal category and the amount of specific advertising. We also investigated "coincidences" of specific recommendations (editorial content) and advertising within one issue.

**Results:** This is a work in progress. Results will be presented at the upcoming EGPRN meeting.

**Conclusions:** The above-formulated hypotheses have been shown to apply to consumer information of financial services. If this kind of bias also exists for drug-prescribing information, this would be a matter of concern.

**Points for discussion:** 1) These data require complex statistical analysis. Do EGPRN participants agree with our strategy? 2) What is the external validity of our results? Do countries differ? 3) What can be done to reduce bias in prescribing information for GPs?

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**Presentation 10: Freestanding paper**  
**Friday, 17 October 2008, 14.45–15.15**

**Patients' perceptions of osteoarthritis treatment**

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**Background:** Osteoarthritis is a very common pathology, affecting approximately 10 million patients in France. It is a disabling disease, leading to possible important changes in patients' lives because of both pain and movement limitations. From a general practitioner's (GP's) point of view, osteoarthritis is a banal and mild pathology since it does not threaten life. EBM recommendations

propose first non-pharmacological measures such as daily activity, weight reduction, and physiotherapy. The first medication recommended is paracetamol. It appears that there could be a gap between patients' perceptions of their pathology and their everyday life impairment and medical management.

**Research question:** How do patients feel about their osteoarthritis treatment and its apparent simplicity?

**Method:** Qualitative study. Patients with severe arthrosis leading to surgery were excluded. Twenty semi-structured interviews were conducted by four researchers—of patients from Paris and its suburbs—which were recorded, transcribed, coded, and analysed.

**Results:** Most of the patients had negative feelings about arthrosis: they considered it a severe illness, possibly leading to disability and the use of a wheelchair. They described a poor quality of life impaired by pain and movement limitations. They felt that GPs and other specialists as well as their relatives did not understand and trust them. While doctors proposed walking and paracetamol, patients sought help in terms of non-conventional medications and therapies.

**Conclusions:** There is a misunderstanding between patients and doctors concerning arthrosis management; there seems to be a gap between patients' and doctors' representations of this very common pathology. The information given by doctors and the disease management did not appear to be clear, understandable, and acceptable to the patients.

**Points for discussion:** How to improve patient information concerning osteoarthritis

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**Presentation 11: Freestanding paper**  
**Friday, 17 October 2008, 15.15–15.45**

**Muscular and skeletal disorder associations among employable French patients**

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**Background:** A previous study concerning chronic diseases in France showed a high prevalence of muscular and skeletal disorders (MSDs) among patients aged 26–59 years. A discriminative analysis of this population showed that some patients suffered from multiple MSDs. MSDs are a major

public health and occupational medicine concern in France.

**Research question:** To assess the most frequent chronic MSD associations among employable French patients.

**Method:** Descriptive cross-sectional study between 2002 and 2004 using data collected by OGM, a French computerized network of general practitioners (GPs) using standardized clinical situations assessed by case definition and criteria. Data from 68 GPs concerning 45,018 patients, 284,126 consultations for chronic disease, and 718,772 chronic problems were available. We included all patients aged 26–59 years who consulted at least once for chronic MSDs. The numbers of consultations, of overall chronic diseases, and of different MSDs were analysed using analysis of distribution and chi-square test adjusted for gender, age, and both 26–39- and 40–59-year age groups.

**Results:** We found 21,880 patients presenting at least one MSD (48.6% of total population), the majority of whom were female (55.7%). In 90% of cases, two or three different MSDs were associated. Whatever the age, men had significantly more often lumbar pain associated with pain in another joint, including the shoulder; epicondylitis appeared among the associations in those aged  $\geq$  40 years. Among women, in the 26–39-year age group, lumbar and neck pain were significantly associated; from 40 years onward, the appearance of articular pain and/or neuralgia associated with carpal tunnel syndromes was noted. More detailed results by gender and age groups will be presented at the congress.

**Conclusions:** GPs have to carefully search for multiple MSDs. The sooner a diagnosis can be ascertained, the better for the beginning of a prevention and care programme, and an ergonomic adaptation of the workplace.

**Points for discussion:** In France, public-supported organizations developed an information media campaign ("Let's speak about them to make them recede") aiming at a better screening of MSDs. How is the situation in your country? Have such similar campaigns proven effective?

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**Presentation 12: Theme paper**  
**Friday, 17 October 2008, 14.15–14.45**

**Far from easy and accurate: Metabolic syndrome diagnostics in Finnish primary care**  
Eeva-Eerika Helminen, Pekka Mäntyselkä, Irma Nykänen, Esko Kumpusalo

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**Background:** Finland has been a pioneer in promoting the concept of metabolic syndrome (MetS) from the beginning of the 1990s. Nonetheless, it remains unclear how well the concept of MetS had been taken into practice by general practitioners (GPs). GPs hold a key role in recognizing MetS.

**Research question:** To assess how well general practitioners in Finland recognize MetS among patients with coronary heart disease or at least one of its risk factors.

**Method:** The Heart 2005 study was performed in 26 randomly selected health centres around Finland, representing all of Finnish primary care in terms of their size and location. The data were collected by 181 general practitioners. As a result, 1331 Finnish patients were collected from the natural patient stream during 2 working weeks in April 2005. Of these, 1180 completed a patient questionnaire and attended a nurse's appointment. The participation rate was 88.7%. We determined how many patients met the criteria for MetS according to measurements and records made at the nurse's appointment and according to responses in the patient questionnaire. GPs responded to a question about whether or not the patient had MetS. Modified National Cholesterol Education Program criteria for MetS were used in the study. Patients answered a question concerning whether or not they had been diagnosed with or treated for MetS.

**Results:** Almost half of the study patients (48.1%) met the criteria for MetS. However, according to the GPs, only 28.5% of the study patients had MetS. These groups did not match, and the sensitivity of GP diagnosis of MetS was 0.28, with a specificity of 0.71. Very few of the study patients (7.1%) themselves stated that they were suffering from MetS.

**Conclusions:** Metabolic syndrome is not being recognized by general practitioners in Finland. General practitioners' diagnostics of MetS are inaccurate.

**Points for discussion:** 1) What is the meaning of metabolic syndrome from the GP's point of view? 2) What could be the reasons why metabolic syndrome has not broken through to GPs? 3) What would be the best ways to investigate further the reasons for the GPs' inaccurate...

### Presentation 13: Theme paper, ongoing study with preliminary results

Friday, 17 October 2008, 14.45–15.15

#### Cordiaal: A multi-faceted intervention programme to implement a guideline on "Global Cardiovascular Prevention"

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**Background:** The "Global Cardiovascular Prevention" (GCP) guideline for Flemish general practitioners (GPs) was published in September 2007. Two surveys show inappropriate implementation

of GCP guidelines by GPs in Belgium (including Flanders). Researchers suggest multi-faceted approaches to overcome such underperformance.

**Research question:** What interventions to implement the GCP guideline for Flemish GPs are feasible and effective?

**Method:** Inspired by scientific literature and experience, the scientific association of Flemish GPs is coordinating a multi-faceted approach on different levels: the individual GPs, their practices, their local peer-review groups, and their regional associations. Interventions include: 1) written tools such as a guideline summary with a score card to calculate a patient's global cardiovascular risk, prescription decision aids, leaflets, and other aids for patient communication, etc.; 2) product improvement suggestions for vendors of electronic health-record systems; 3) a train-the-trainer programme; 4) facilitation of regional problem-solving initiatives; 5) e-learning packages; 6) sharing experience with European partners; and 7) lobbying to governmental bodies.

**Preliminary results:** Feasibility: for some interventions, it is very hard to find sufficient financial support (e.g., prescription decision aids and lifestyle-oriented training modules). The pharmaceutical industry provided no funds, mainly because the guideline focuses on lifestyle interventions rather than medication and the scientific association declined offers that implied a sponsorship monopoly. This hampers a smooth progress and full rollout. Effectivity: we plan to evaluate all our interventions, but it is yet to be proven that our (inspired) expectations are valid. Most interventions have not

yet been completed. Only preliminary results can be presented.

**Conclusions:** With the diverse interventions of our “Cordiaal” project, we tried our best to develop and implement a feasible and effective multi-faceted approach, as suggested by the scientific literature, to overcome GCP underperformance. So far, we have learned mostly about its feasibility. The evaluation will prove or disprove its effectiveness.

#### **Presentation 14: Theme paper, ongoing study with preliminary results**

**Friday, 17 October 2008, 15.15–15.45**

#### **Decision support in general practice: Role of the decision support module of the RIGHT system in hypertension care**

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**Background:** Diagnosis and treatment risk can be reduced by using IT support in general practices. This was a main conclusion of the conference of EU countries’ health ministers in 2004, and the basis of the “Reducing Diagnosis and Treatment Risk by Leveraging Knowledge and Practices of Health Care Professionals” (RIGHT) project (supported by the EU’s 6th framework).

**Research question:** Is it possible to create an IT tool that can adequately support the diagnostic and treatment activities of general practitioners (GPs) in everyday practice?

**Method:** An international project consortium of eight technical and “pilot” partners (one of which is the Department of Family Medicine, University of Debrecen) has been working on the development of the RIGHT tool since 2006.

**Results:** We now have a prototype of the RIGHT tool, with three modules (decision support module, semantic information retrieval module, and collaboration module) that are integrated into electronic health records (eHR) used by Hungarian GPs and work in online connection with the system’s server. In this presentation, we demonstrate the functions of the decision support module of the RIGHT system by running the hypertension care protocol.

**Conclusions:** In this phase of the project, our main task is to assess the opinions and feedback of GPs

on the role of this IT tool in the care of patients with cardiovascular risks such as hypertension.

**Points for discussion:** 1) Is the RIGHT tool useful enough to support GPs’ work in everyday practice? 2) What are the limitations of using decision support systems?

#### **Presentation 15: Freestanding paper**

**Friday, 17 October 2008, 16.15–16.45**

#### **A matter of attention: Inconsistencies between prescription and drug intake in elderly multimorbid patients in primary care**

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**Background:** A major concern for patient safety is inappropriate medication use, in particular for elderly and multimorbid patients. Polypharmacy and prescriptions from different physicians combined with uncontrolled self-medication exaggerate the risks for inadequate pharmacotherapy.

**Research question:** To determine the prevalence of inconsistencies between prescription and drug intake in elderly multimorbid patients in primary care.

**Method:** Cross-sectional study collecting data on drugs prescribed by general practitioners (GPs) and, in a structured telephone interview with the patient, about medication use. In 20 general practices, we randomly selected 15 from their most costly patients fulfilling inclusion ( $\geq 65$  years,  $\geq 3$  chronic conditions,  $\geq 5$  drugs in long-term treatment) and exclusion criteria (living in nursing homes or unable to answer the telephone). Consecutively, 10 of these patients were included after giving written informed consent. Inconsistencies were defined as substances that were either not mentioned in the GP’s documentation or in the patient interview, or when dosages or dosing interval differed.

**Results:** Of 162 included patients (50% male; median age 73 years, range 65–97 years), 153 patients completed the interview. GPs documented 11 (4–33) diagnoses and 8 (5–16) prescriptions/

patient. Patients reported a median intake of 9 (3–24) drugs. In 147/153 (96%) of the patients, we found at least one inconsistency (median 5 (0–25)/patient): 224 drugs were prescribed for 104/153 patients but not taken (1–9 drugs/patient); 284 drugs were taken by 110/153 patients (1–17 drugs/patient) without the GP's knowledge; 69 patients reported taking lower dosages than prescribed (1–4 drugs/patient); 63 patients reported higher dosages (1–5 drugs/patient); in 69 patients (1–5 drugs/patient), the actual dosing interval differed from prescription. Sixteen drug classes accounted for 80% of the variation in GPs' documentation from interviews.

**Conclusions:** Prescriptions and actual intake of drugs differed in most patients. Medication reconciliation by the GP may be time consuming but is necessary to improve patient safety.

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**Presentation 16: Freestanding paper, ongoing study with preliminary results**  
**Friday, 17 October 2008, 16.45–17.15**

#### **Gender differences in symptom reporting in COPD patients**

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**Background:** In chronic obstructive pulmonary disease (COPD), it remains unclear whether there are substantial differences between men and women with respect to reported symptoms of the disease. Subjective complaints, however, are important for general practitioners (GPs) in daily practice.

**Research question:** The aim of our study was to determine the effects of gender on symptom reporting of COPD patients visiting primary healthcare. Subjective complaints included coughing, wheezing, phlegm production, and nocturnal awakening. Dyspnoea, scored by the MRC dyspnoea scale, and the frequency of exacerbations were also recorded. The impact of age and smoking behaviour was specifically taken into account.

**Method:** We analysed clinical data of all patients in the region of Maastricht (the Netherlands) with an established diagnosis of COPD who had been automatically enrolled in a disease management programme in general practice. Patients were asked

for subjective and objective complaints in a structured way. Data from 1766 COPD patients (943 males and 823 females) from 42 GPs, gathered between May 2002 and June 2007, were included.

**Results:** Subjective symptom analysis showed that younger men (age 41–55 years) reported more coughing, wheezing, phlegm, and nocturnal awakening than women. After this age, women showed more of these symptoms than men. Women aged 40–80 years reported not only more dyspnoea but also more exacerbations than men. Of the included patients, 432 (45.8%) males and 516 (62.7%) females were active smokers.

**Conclusions:** Clear gender differences were found for both objective and subjective complaints in COPD patients, but a large impact of age and smoking behaviour was apparent as well. The typical reversal for subjective complaints around the age of 55 years might be explained by historical differences in smoking behaviour and the influence of paid work and type of peer groups on these complaints.

**Points for discussion:** 1) COPD and gender; 2) subjective vs. objective complaints

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**Presentation 17: Freestanding paper**  
**Friday, 17 October 2008, 17.15–17.45**

#### **Management of chronic obstructive pulmonary disease (COPD) exacerbations: Results of a French cohort study**

Denis Pouchain, J. L. Demeaux, Séverine Lignot Maleyran, S. Lamarque, R. Lassaller, M. A.

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**Background:** In 2001, the French Health Ministry developed a national plan to optimize the prescription of antibiotics. To this end, it was deemed useful to describe the treatment interventions in disease situations where antibiotics are commonly used, such as chronic obstructive pulmonary disease (COPD).

**Research question:** To describe the management of COPD exacerbations by general practitioners (GPs) and pneumologists in France.

**Method:** Prospective cohort study of patients with COPD exacerbations carried out with a representative sample of GPs and pneumologists. Pa-

tients diagnosed with COPD exacerbation were included from September 2006 to January 2007. Descriptive statistical analysis was weighted to take into account COPD exacerbation consultation activity and national distribution of GPs and pneumologists.

**Results:** 951 GPs and 89 pneumologists included 4575 and 419 patients, respectively; 61.4% were male, and mean age was 64.4 years. The mean COPD exacerbation caseload of GPs and pneumologists was 5.9 and 6.4 cases per month, respectively. Extrapolation to all GPs and pneumologists in France allows an estimation that GPs see 98% of patients with COPD exacerbation. The main clinical signs of COPD exacerbation were cough (93.7% for GPs, 94.3% for pneumologists), expectoration or increase of its volume (78.8% and 88.7%, respectively), and dyspnoea (74.1% and 93.6%, respectively). Antibiotics were prescribed to 92.1% of GP patients and 79.8% of pneumologist patients. The most frequent antibiotics were co-amoxiclav (19.0%), telithromycin (10.1%), and clarithromycin (9.6%). Other prescribed drugs were oral corticosteroids (41.3% for GP and 51.5% for pneumologist patients), mucolytics (41.5% and 16.3%, respectively), and beta2-agonists (30.4% and 46.4%, respectively).

**Conclusions:** Most patients with COPD exacerbation were treated by GPs. Antibiotics and mucolytics were more frequently prescribed by GPs than pneumologists; oral corticosteroids and beta2-agonists were more frequently prescribed by pneumologists.

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**Presentation 18: Freestanding paper, ongoing study with preliminary results**

**Friday, 17 October 2008, 16.15–16.45**

**Eating disorders: Description of population treated in general practice. How to compare with controls?**

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**Background:** Prevalence estimates of eating disorders (ED) vary depending on assessment methods and on definitions used. It has been established that about 1% of young women have classic anorexia nervosa (AN), and that about 2–5% meet criteria for bulimia nervosa (BN). Because most patients

deny their illness and its severity, treatments are often initiated after delay. Even though most general practitioners (GPs) do not concern themselves with ED, only a minority of people with eating disorders, especially with bulimia nervosa, are treated in mental healthcare. One study showed that ED patients consulted significantly more in primary care than controls for gynaecologic and digestive symptoms over a 6-month period prior to the diagnosis of an ED.

**Research question:** Our study aims at 1) describing patients consulting a GP for an ED, and 2) comparing frequency and type of care over the 6 months prior to diagnosis with those of controls.

**Method:** Descriptive study (1993–2007) on patients treated for an eating disorder in the French GMO database, a computerized network of GPs coordinated by the French Society of General Medicine. We will analyse patient characteristics: gender, age, episodes of care, frequency, and type of care during the 6 months before the first contact for an ED. The analysis will be conducted with SAS 9.1.

**Results:** Description: out of the 690,000 patients of the complete database, 1300 patients (11–64 years old) were seen at least once for eating disorders by 100 GPs (range 1–68); 85.8% were females; mean age at first contact was 30.3 years (ET 12.9). Analyses on frequency and type of care are in progress. A complete description will be presented in Budapest. The comparison raises some methodological questions.

**Conclusions:** Improved knowledge is necessary for better screening. Hence, a better description of the general practice population in this field is important.

**Points for discussion:** What methodology should be used to compare the ED population to others patients in the database? Matched control or analyses adjusted according to age, gender, doctor, date of consultation? Others? What are the benefits or drawbacks of using either of these methods?

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**Presentation 19: Freestanding paper**  
**Friday, 17 October 2008, 16.45–17.15**

**Adherence to low back pain guidelines in primary care: A systematic review**

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**Background:** Low back pain (LBP) is an epidemiologically and economically highly relevant disorder. Variation in care for LBP is substantial. Therefore, national and European guidelines for management of LBP have been developed. Implementing guidelines and assessing their impact on patient care remains a difficult task.

**Research question:** The aim of this review is to assess adherence to low back pain guidelines and the effect of guideline implementation strategies in primary care and patient-relevant outcomes.

**Method:** We performed a systematic literature search in Medline, EMBASE, and other databases for studies on guideline adherence in LBP management in primary care. We searched studies published from 1994 when the Agency for Health Care Policy and Research guideline on LBP was published in 2007.

**Results:** We found three surveys, seven observational studies, and five controlled implementation trials. Most surveys and observational studies revealed low guideline adherence. Controlled trials showed mostly only moderate or minimal effects of targeted interventions. Criteria for guideline assessment were heterogeneous and often not clearly defined. Clinical data as modifiers of criteria for assessment of guideline adherence were not sufficiently taken into account. Most quality indicators were negative, e.g., no imaging or no prescription of physiotherapy within the first 4 to 6 weeks. Patient-relevant outcomes like pain reduction and functional capacity have not been assessed.

**Conclusions:** Adherence to low back pain guidelines is low. There is a lack of valid and consented quality indicators for assessing guideline adherence of management of LBP patients. Quality indicators reflecting patient-relevant outcomes and clinical circumstances need to be developed. Future implementation trials should assess pain and functional capacity, and not be limited to measuring guideline adherence.

**Points for discussion:** Is LBP suitable for quality indicators at all? Who should develop quality indicators for LBP? How should patient expectations contradicting evidence be taken into account?

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**Background:** There are two major problems for the management of neck pain in primary care: 1) most therapeutic approaches are not evidence based, and 2) many patients suffering from neck pain also have psychosocial problems. This constitutes a challenge for both general practitioners (GPs) and their patients.

**Research question:** To find out how patients perceive and manage neck pain and what they expect from their doctors, with the aim to find out how doctors can balance between prescribing ineffective treatments, supporting the patients' self-care activities, and eliciting psychosocial aspects.

**Method:** From a larger study of 432 neck pain patients in primary care, an initial random sample of 10 patients was selected for semi-structured telephone interviews. Later, a second sample was chosen according to the principles of theoretical sampling until data saturation was reached after a total of 20 interviews. Interviews were recorded, transcribed, and labelled with ATLAS.ti. Labels were condensed to themes. Analysis was oriented to the approaches of Miles & Huberman and Ritchie, Spencer, & O'Connor.

**Results:** Patients described their pain in detail rather than using the term "neck pain". They often avoided psychosocial themes when talking to their doctors in order not to provoke a psychological hypothesis. Most people regarded themselves as competent and preferred self-care. When this was no longer sufficient, they often visited their doctor with a precise demand for the treatment that they thought most effective. Patients were mostly satisfied with their GP but sometimes criticized specialists. Therapies such as physiotherapy and massage were judged ambivalently, with massage considered as more effective.

**Conclusions:** Patients use, and ask for, ineffective treatments. This could impede the discussion of reasons for neck pain and heighten the risk of medicalization.

**Points for discussion:** Should doctors avoid the term "neck pain" to encourage a broader conversation about the psychosocial background of patients' complaints? Should GPs refuse prescriptions and enforce discussion about psychosocial issues?

**Presentation 20: Freestanding paper, ongoing study, no results yet**

**Friday, 17 October 2008, 17.15-17.45**

**Patient competence, self-management, and the doctor-patient relationship in the case of neck pain: a qualitative study**

**Presentation 21: Theme paper**  
**Saturday, 18 October 2008, 09.40–10.10**

**Patients treated with anticoagulants want more education**

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**Background:** Anticoagulants are responsible for serious adverse effects such as haemorrhage. Therapeutic education showed a decrease in bleeding, but we do not know what education patients received in Finistère (France) or their expectations for the management of their anticoagulant treatment.

**Research question:** What therapeutic education on anticoagulants is received by patients in Finistère, what knowledge do they have, and what are their expectations?

**Method:** An opinion poll conducted by postal questionnaire. We randomly selected 1000 patients who had had a refund of an anticoagulant drug during the month of May 2007 according to the Health Insurance Office database. The questionnaire contained 20 items divided into four parts: patient characteristics and history of treatment, therapeutic education received and expectations, current management of treatment, and knowledge assessment. Analyses were performed with Epi Info 6 and SAS 9. The results are given in absolute and percentage of total respondents.

**Results:** 647 questionnaires were analysed. Of these, 525 (81%) received information about their treatment: 226 from their GP (35%), 163 from a hospital physician (25%), and 96 from both (15%). Education was issued most often verbally (368, 57%), sometimes accompanied by written material (108, 17%). Knowledge control: 441 (68%) correctly managed their treatment in the case of low INR; 419 (65%) had a non-risky behaviour in terms of traumatism; 394 (61%) wanted more information about their treatment; 198 (31%) wanted double information (written and verbal), and 174 (27%) a face-to-face interview with their general practitioner; 189 patients (29%) wanted to learn self-management.

**Conclusions:** A majority of patients received verbal information about their treatment. Two-thirds had good knowledge about management. A majority wanted more verbal and written information, and a third of respondents wanted to learn

self-management. GPs were the most appreciated medium for information.

**Presentation 22: Theme paper, study proposal/idea**

**Saturday, 18 October 2008, 10.10–10.40**

**Type 2 diabetes mellitus control in Mediterranean countries: A collaborative survey in primary care settings**

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**Background and aim:** Management of type 2 diabetes by general practitioners is often criticized for failing to achieve recommended clinical goals. This issue is mainly explained by clinical inertia, which can be defined as failure to intensify treatment in patients who are poorly controlled. In the UK, an incentive scheme to improve quality of care delivered by primary healthcare was recently implemented. As a result, it has been shown that clinical indicators for quality management of type 2 diabetes have been greatly improved. The following study is aimed at measuring target achievement for quality management of type 2 diabetes across different Mediterranean countries. We also intend to compare our results with those from the UK.

**Research question:** What is the level of control of type 2 diabetes among Mediterranean countries in primary care settings?

**Method:** We suggest using a cross-sectional design to describe management of patients. Data sources will be medical records of patients with type 2 diabetes having consulted in primary healthcare settings in different Mediterranean countries between January 2007 and December 2007. Records will be selected at random. The variables to be evaluated are: 1) socio-demographic parameters: educational level, age, sex, etc.; 2) metabolic and clinical data: HbA<sub>1c</sub>, urinary albumin excretion rate (microalbuminuria), lipidaemia (low-density lipoprotein [LDL] cholesterol), blood pressure, diabetic complications, and comorbidities. To assess quality of management, we will use the following targets: HbA<sub>1c</sub> < 7% and systolic blood pressure (SBP) < 130 mmHg and/or diastolic blood pressure



(DBP) <80 mmHg, microalbuminuria <30 mg/day, and LDL <100 mg/dl will be considered normal. We will obtain data from both rural and urban practices from each country involved.

**Significance of this proposed study:** This study is purely descriptive. However, we still think that it could be a reliable pilot study for future research in this field.

**Points for discussion:** Relevance and feasibility of this study

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### Presentation 23: Theme paper

Saturday, 18 October 2008, 09.10–09.40

#### Cardiac arrest in Irish general practice: Preliminary incidence data

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**Background:** Ireland has around 5000 sudden cardiac deaths (SCD) annually; estimates suggest up to 500,000 such deaths in the EU each year. Virtually no data exist on the role of general practice in the management of these events. SCD is common, usually occurs in the home, work, or community, and anecdotally involves many general practitioners (GPs) at some point in their working careers. In Ireland, survival rates from out-of-hospital cardiac arrest are reported at less than 5%. Can a systematic initiative support GPs in the management of cardiac arrest in the community?

**Research question:** What is the incidence rate of cardiac arrest in Irish general practices? What characterizes these events, and how do GPs respond? What outcomes occur?

**Method:** The Medical Emergency Responders Integration and Training (MERIT) project trains and equips GPs in BLS and ALS care, provides defibrillators and emergency care kits, and supports practices with local project officers. MERIT is funded through state programmes in pre-hospital emergency care. Clinical audit data on cardiac arrest incidence and features are collected routinely by participating practices.

**Results:** Since 2005, 429 practices (of a national total of 900) have taken part. Data on 529 “practice defib years” are available, reporting 80 cardiac arrests in a 2-year period. More than half occurred in the surgery or patient’s home, half were in a

shockable rhythm, and 18% of patients survived to hospital discharge.

**Conclusions:** GPs are anxious to have training, equipment, and support in a key area of practice. Cardiac arrests are managed regularly by GPs and have survival rates which compare well with other reported systems of care.

**Points for discussion:** 1) The role of general practice in cardiac arrest management has been completely unexplored to date: these data suggest it is an infrequent but key area of practice. 2) GPs respond enthusiastically to training and practical support in dealing with SCD.

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### Presentation 24: Theme paper

Saturday, 18 October 2008, 09.40–10.10

#### Alternative diagnoses after exclusion of deep vein thrombosis in symptomatic patients in general practice

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**Background:** Clinical diagnosis of deep vein thrombosis (DVT) in primary care is difficult. The differential diagnosis includes various alternative diagnoses.

**Research question:** What is the frequency and management of alternative diagnoses in patients suspected of DVT in general practice? By what clinical features can these diagnoses be characterized?

**Method:** Analysis of data of a management study on DVT (AMUSE), involving 1028 consecutive patients with complaints suspect for DVT. Consultation data were recorded by GPs 1 week after presentation and extracted from patient questionnaires and medical records after 3 months.

**Results:** Besides DVT, the four most frequent alternative diagnoses were muscle rupture (18.5%), chronic venous insufficiency (CVI, 14.6%), erysipelas (12.6%), and superficial thrombophlebitis (SVT, 10.9%). Swelling (odds ratio [OR] 8.6) and redness (OR 21.3) were strongly associated with erysipelas. Absence of swelling (OR 0.2–0.6) or redness (OR 0.6), and presence of leg trauma (OR “absence” 0.5) were associated with muscle rupture. Painful palpa-

tion of a vein had a strong association with SVT (OR 3.7). A non-acute onset (OR 0.5) of a painless (OR 0.4) swollen leg (OR 1.9) and malignancies (active/non-active, OR 2.4/2.1) were associated with CVI. A low risk of thrombosis and a negative D-dimer test were associated with muscle rupture, whereas previous SVT or DVT and a positive D-dimer test increased the probability of SVT. In almost 30% of cases, no therapy was initiated. The percentage of compression therapy in erysipelas (35%) and CVI (33%) was low. Of nine missed cases of DVT, three occurred in patients with the working diagnosis SVT, which is statistically unusual ( $p=0.026$ ).

**Conclusions:** Muscle rupture, CVI, erysipelas, and SVT are the most common diagnoses in the differential diagnosis of DVT. These diagnoses have characteristic clinical features. A more active approach might be opportune in erysipelas, CVI (compression therapy), and SVT (anticoagulant medication).

**Points for discussion:** Methodology: secondary analysis of data to describe features of alternative diagnoses for DVT in a diagnostic study designed for DVT

#### Presentation 25: Poster

Saturday, 18 October 2008, 11.10–12.40

#### Is presbycusis a risk factor for dementia? The ACOUEM study

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**Background:** Although it seems logical to postulate a relationship between presbycusis and cognitive disorders, no study has yet confirmed this. The objective of this research was to demonstrate that the prevalence of cognitive disorders was significantly higher in elderly patients with hypoacusis than in those with normal hearing.

**Method:** This was a comparative transversal epidemiological study in a population of elderly institutionalized patients matched with respect to gender, age, and educational level. A total of 319 subjects aged over 75 years were evaluated using verbal audiometry to test auditory acuity and three validated tests to assess cognitive function. The prevalence of patients with cognitive disorders was compared between presbycusis patients and those with normal hearing, using the chi-square test.

**Results:** The mean age of the subjects was  $85.3 \pm 6$  years. The groups with and without hearing disorders were comparable with respect to their other characteristics. The relative risk of developing cognitive disorders was 2.48 in patients with presbycusis (95% confidence interval [CI] 1.54–3.99,  $p < 0.001$ ). Furthermore, the statistically significant odds ratio between presbycusis and cognitive disorders persisted with the same effect size irrespective of gender and age range.

**Conclusions:** This study is the first step in proving the relationship between presbycusis and cognitive disorders. The next step will be to conduct a study in the general population to confirm this relationship, followed by a randomized controlled trial testing the efficacy of fitting a hearing aid in reducing cognitive decline in hypoacusis patients with mild to moderate dementia.

#### Presentation 26: Poster

Saturday, 18 October 2008, 11.10–12.40

#### Signs and symptoms in diagnosing acute myocardial infarction and acute coronary syndrome: A diagnostic meta-analysis

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**Background:** Prompt diagnosis of acute myocardial infarction or acute coronary syndrome is very important.

**Research question:** We conducted a systematic review to determinate the accuracy of 10 important signs and symptoms in selected and non-selected patients.

**Method:** Design: diagnostic meta-analysis. Data sources: Medline, Cinahl, Embase, tracing references, contacting experts. Review methods: inclusion—studies have to describe one of the 10 signs and symptoms; exclusion—not based on original data. Validity assessment: QUADAS. Data synthesis: pooling using a random-effects model.

**Results:** 16 of the 28 included studies were about non-selected patients. In this group, absence of chest wall tenderness on palpation had a pooled sensitivity of 92% (95% confidence interval [CI] 86–96) for acute myocardial infarction and 94% (95% CI 91–96) for acute coronary syndrome. Oppressive pain

followed with a pooled sensitivity of 60% (95% CI 55–66) for acute myocardial infarction. Sweating had the highest pooled positive likelihood ratio (LR), namely 2.92 (95% CI 1.97–4.23) for acute myocardial infarction. The other pooled positive LRs fluctuated between 1.05 and 1.49. Negative LRs varied between 0.98 and 0.23. Absence of chest wall tenderness on palpation had a negative LR of 0.23 (95% CI 0.18–0.29).

**Conclusions:** Based on this meta-analysis, we were not able to define an important role for signs and symptoms in the diagnosis of acute myocardial infarction or acute coronary syndrome. Only chest wall tenderness on palpation largely ruled out acute myocardial infarction or acute coronary syndrome in a low-prevalence setting.

**Points for discussion:** If this meta-analysis was not able to define an important role for signs and symptoms in the diagnosis of acute coronary syndrome, what diagnostic criteria do general practitioners (GPs) actually use in daily practice?

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#### **Presentation 27: Poster**

**Saturday, 18 October 2008, 11.10–12.40**

#### **The Expert Patient Programme at the Catalan Health Institute**

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**Background:** The increase in life expectancy and lifestyle changes in recent times have increased the incidence of chronic diseases. In 2004, the Catalan Health Institute (ICS) developed the Disease Management Project in Heart Failure, including it within the framework of the primary care system in Barcelona. Heart failure was the first disease included in the project. Within the project, a set of strategies was developed to ensure the ongoing care of the patient. The Expert Patient Programme (ICS) was included within the Disease Management Project with the aim of improving self-care, shared responsibility, and patient autonomy.

**Research question:** Can these expert patient sessions help to promote lifestyle changes, and the ability to improve quality of life and self-care of other fellow patients?

**Method:** The Expert Patient Programme is both theoretical and practical. It consists of nine 1.5-hour sessions, lead by an expert patient. This patient is trained and counselled by health professionals. One of the advantages of this programme is that the leader has experienced the symptoms him/herself.

**Results:** So far, 10 expert-patient groups from the ICS programme in heart failure have been carried out. The total number of participants was 78 (41 women, 37 men). At the end of the programme, 21% of patients showed an improvement in their lifestyle and 9% on knowledge about the disease. Six months after starting this treatment, an improvement in lifestyle was noted and an increase in knowledge of the disease was observed in 39% and 14%, respectively. The level of satisfaction of these participants was high, on both quantitative and qualitative evaluations.

**Conclusions:** The Expert Patient Programme, similar to programmes in other countries, is a positive step towards the improvement of lifestyle and knowledge of the disease in patients with chronic diseases.

**Points for discussion:** 1) What do you think about the contribution of the Expert Patient Programme to the continuity of the process health-disease? 2) Do you think the Expert Patient Programme can substitute the individual or group health education given by health professionals? Why?

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#### **Presentation 28: Poster**

**Saturday, 18 October 2008, 11.10–12.40**

#### **Home blood pressure measurement: Is anxiety during measurement a limitation?**

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**Background:** Home blood pressure measurement (HBPM) has been widely used for diagnosis and follow-up of hypertension. However, there are few data concerning its impact on patients' quality of life, and a "white-coat effect" of this self-measurement has not yet been clearly evaluated.

**Research question:** What are the determinants of anxiety while performing a home blood pressure measurement?

**Method:** Prospective study performed with six general practitioners in northern Finistère (Brittany, France). Fifty non-anxious patients were included: 12 underwent HBPM for diagnosis and 38 for follow-up. Three HBPMs were performed every morning and every evening for 5 days. Within a week, quality of life, anxiety, and HBPM results were evaluated by a phone questionnaire and were re-evaluated after 3 months. Data were analysed with Epidata 3.1 and SAS 9.1. Normal law was not available, so we used Fisher and Wilcoxon tests. Significance was aimed for  $p=0.05$ .

**Results:** 36% of patients considered that HBPM perturbed their everyday life. The incidence of anxiety caused by HBPM was 20% in this study. Urban and high-educational-level patients tended to be more anxious, but with limited significance ( $p=0.21$  and  $0.07$ , respectively); anxiety was reduced by 40% at 3 months. The main result was that anxious patients had higher diastolic HBPM than non-anxious patients ( $p=0.04$ ), even though they were lower than in practice.

**Conclusions:** HBPM causes anxiety in 20% of non-anxious patients. Patients with high educational level are more anxious. This tends to result in higher diastolic results among these patients, even though anxiety is reduced with time. This could lead to practitioners' overtreatment for these patients. Longer and larger studies should be conducted to confirm these results.

#### Presentation 29: Poster

Saturday, 18 October 2008, 11.10–12.40

##### Obesity among Hungarian elderly

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**Background:** The epidemiological importance and serious health consequences of obesity is one of the most topical medical issues. Obesity alone or combined with other cardiovascular risk factors is common among elderly people.

**Research question:** Could the possible reasons for obesity be explored in primary care individually? Are there any differences between eating habits in different age groups and body-mass index (BMI) groups of elderly people?

**Method:** Study design: cross-sectional (including retrospective elements), consecutive selection, voluntary participation. Participants: 266 elderly subjects (109 men, 157 women; aged over 60 years). The main topics of the questionnaire fulfilled by each person were: eating habit (frequency, timing, and principal meal, economic issues), educational level, incidence of obesity among family members, retrospective life-long data on body weight in each decade, physical activity. Nutritional assessment was performed with a standardized dietary record by 53 people (27 men, 26 women), analysed by dietitians. Anthropometrical measurement was performed by all.

**Results:** Obese people were less educated and represented a smaller proportion among older age groups. People with normal BMI ate more frequently than those overweight (BMI 25–30 kg/m<sup>2</sup>) or obese (BMI > 30 kg/m<sup>2</sup>). Meal frequency became more regular with increasing age. Daily physical activity was very low. Energy and fat intake was high in both genders. The life-long increase of body weight was significantly higher in the obese group than in the overweight or normal-weight categories. The food choices were influenced by economic reasons in two-thirds of the study population. Thirty per cent of obese people had obese parents, and 24% of them had obese children.

**Conclusions:** Unfavourable nutritional habits and sedentary lifestyle may have a prior responsibility for obesity. People without obesity, with less cardiovascular risk, may have more chance of longer life. Obesity management should be started early, preferably at the primary healthcare level.

**Points for discussion:** 1) How can general practitioners (GPs) evaluate and explore the reasons for a patient's obesity? 2) What contribution and compliance can be expected from obese patients? 3) Is the advice of GPs always credible for patients?

#### Presentation 30: Poster, ongoing study, no results yet

Saturday, 18 October 2008, 11.10–12.40

##### The prevalence of obstructive sleep apnoea (OSA) in patients with difficult-to-control hypertension managed in family practices

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**Background:** Thirty per cent of hypertensive patients have obstructive sleep apnoea (OSA), but an even higher prevalence (60–86%) has been reported in patients with treatment-resistant hypertension (HTN) referred to a tertiary care clinic.

**Research question:** What is the prevalence of OSA in patients with difficult-to-control hypertension managed in primary care? Is this prevalence higher than the prevalence of the condition in patients with well-controlled blood pressure (control group)?

**Method:** In a cross-sectional study, a total of 200 patients with high blood pressure (BP) will be randomly selected from 10 primary care practices, 20 from each. Overnight polysomnography will be conducted, and 24-hour blood pressure, weight, height, neck circumference, and information on health-related demographics and medications will be obtained. Patients will be divided into two groups according to the number of medications needed to control BP: taking >3 antihypertensive medications (difficult-to-control HTN) and those needing only 1 or 2 antihypertensives (well-controlled group). The chi-square test will be used to compare the prevalence of OSA in difficult-to-control and in well-controlled hypertensives. Multivariate analysis will be used to test if having difficult-to-control HTN is an independent predictor of OSA.

**Results:** We expect that the prevalence of OSA will be higher in the difficult-to-control HTN group versus the well-controlled group, even after adjusting for important co-variables and risk factors.

**Conclusions:** Family physicians need to be aware of the increased risk of OSA in patients with difficult-to-control HTN. OSA needs to be considered in such patients.

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### Presentation 31: Poster

**Saturday, 18 October 2008, 11.10–12.40**

#### We live healthily

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**Background:** Morbidity and mortality caused by cardiovascular diseases are high in Slovenia, but the highest rates are found in the lower-socioeconomic northeastern part of the country. This was the reason why we decided to develop prevention programmes in this region first.

**Research question:** Is it possible to achieve improvement of health conditions with non-pharmaco-

logical methods among the population of a local community?

**Method:** For all inhabitants of the municipality of Beltinci ( $n=8640$ ), we used the same programme for primary prevention, which contains 12 preventive activities. The effectiveness of the programme was tested on 303 randomly chosen volunteers from the region. At the start ( $n=186$ , March 2002) and at the end ( $n=161$ , March 2003) of the programme, we measured fitness index, systolic and diastolic blood pressure, cholesterol, and body-mass index (BMI). The measurements and the collection of data were taken by questionnaire and adhered to the standards of CINDI. Differences between the first and second measurement were tested by the paired  $t$  test. The level of significance was set to  $p<0.05$ .

**Results:** The results of the analysis showed a statistically significant improvement in health among the study participants: a reduction in mean systolic blood pressure of 4.7% ( $p<0.001$ ), a reduction in mean total cholesterol of 4.9% ( $p<0.001$ ), and a reduction in mean BMI of 3.2% ( $p<0.005$ ); the average fitness index increased by 9.7% ( $p<0.003$ ). However, the results did not show significant differences in consumption of alcohol, soft drinks, or smoking. Change of lifestyle was seen in terms of a statistically significant increase in the number of people who consumed healthier fats ( $p<0.0005$ ), milk with less fat ( $p<0.0005$ ), and more fruit and vegetables ( $p<0.0005$ ).

**Conclusions:** The results are encouraging. They demonstrate the efficiency of the programme and confirm a need to expand and deepen preventive measures.

**Points for discussion:** Preventive programmes in the community and certain subgroups of the population (e.g., addicts, children, Romany, low-educated people); responsibilities for conducting such work; economic interests

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### Presentation 32: Poster

**Saturday, 18 October 2008, 11.10–12.40**

#### The prevalence of cardiovascular risk factors and the control of blood pressure in elderly patients in Vilnius

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**Background:** High blood pressure (BP) is estimated to account for 6% of deaths worldwide and is the most common treatable risk factor for cardiovascular disease (CVD). During the last 30 years, hypertension treatment has improved dramatically, but the majority of patients' BPs remain uncontrolled in all societies.

**Research question:** The aim was to evaluate the control of BP in elderly hypertensive patients and the prevalence of cardiovascular risk factors.

**Method:** The study was performed in five primary healthcare centres in Vilnius in 2005. The sample consisted of 601 patients: 200 (33%) males and 401 (67%) females with arterial hypertension, receiving antihypertensive medication, aged 20 years and older. BP was measured according to WHO recommendations. Cardiovascular risk factors (overweight, hyperlipidaemia, diabetes mellitus type 2 [DM2], smoking) were assessed by referring to anamnesis and documents.

**Results:** BP <140/90 mmHg was found in only 5.8% of patients. DM2 was found in 108 (18%) patients: 41 males (38%) and 67 females (62%). Thirty-six (6%) patients smoked (23 males [63%], 13 females [37%]). Hyperlipidaemia was found in 228 (38%) patients: 75 males (33%) and 153 females (67%). Five hundred and three (84%) patients—166 (83%) males and 337 (84%) females—had an increased body-mass index (BMI).

**Conclusions:** BP was insufficiently controlled ( $p < 0.05$ ). BP in patients with cardiovascular risk factors (hyperlipidaemia, DM2, smoking) was not statistically significantly higher ( $p > 0.05$ ). Patients with overweight or obesity had a higher BP than patients with normal weight ( $p = 0.002$ ), and a correlation between BMI and BP was found (Spearman's correlation coefficient 0.195 and 0.167,  $p < 0.05$ ).

### Presentation 33: Poster

Saturday, 18 October 2008, 11.10–12.40

#### Theses from family medicine residency in Turkey

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**Background:** Family medicine residency training duration is 3 years in Turkey. The right to have

residency education is gained by a national examination, and the educational period is completed by a thesis presentation and a competency examination.

**Research question:** Are family medicine theses in Turkey focused on the real field of family medicine? What procedure is followed during preparation of theses in Turkey?

**Method:** Theses of family medicine specialists were gathered via web sites of the Ministry of Health and the Turkish Higher Education Committee, via e-mail groups of family medicine residents and specialists, and from individuals. Theses completed between 1 January 2006 and 30 June 2008 were included in the study.

**Results:** Of the family practitioners, 89 were male and 86 were female. A consultant was a family medicine specialist in 28.6% of the theses. Of the theses, 67.4% were produced at educational government hospitals, and 32.6% at university hospitals. Questionnaires were used in 75.4%, and laboratory tests were used in 36% of the theses. Most of the research was cross-sectional (57.1%), followed by retrospective (23.4%) and prospective (19.4%) studies. Research was performed at secondary or tertiary care environments (hospitals) in 78.3%, and in a primary care environment in 21.7% of the theses. Only 22.9% of the theses received the consent of an ethics committee, and only 6.3% received financial support from the institution.

**Conclusions:** Preparation of a thesis is an important procedure in residency education. As so much time and effort is spent on a thesis, it must be focused on the real aim of the residency education: for family medicine, it should be directed to primary care problems. Also, it should improve the academic qualifications of the resident.

**Points for discussion:** 1) What should be the criteria for deciding the topic of a thesis? 2) What should be the role of the consultant in the process of preparing a thesis? 3) What is the aim in preparation of a thesis?

### Presentation 34: Poster, ongoing study with preliminary results

Saturday, 18 October 2008, 11.10–12.40

#### "Chronic illness" and its determinants in general practitioners' medical records: A secondary data analysis

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**Background:** “Chronic illness” in Germany has been defined by the Federal Joint Committee (Gemeinsamer Bundesausschuss) as illness needing medical care for at least 1 year and at least once in a quarter (continuous care).

**Research question:** The aim of this ongoing study was to identify patients with chronic illness, and to relate this to determinants of patients, diagnoses, and practices.

**Method:** Electronic patient records from 472,775 patients of 156 general practices, from 1990 until 2007, were examined. “Chronic illness” was attributed to a patient having at least one contact with the practice in each of four adjacent quarters of a year. For determinants, practices were stratified according to type, location, and annual number of patients; patients were stratified according to sex, age, contacts per quarter, and ICD diagnoses. Influence on “chronic illness” (yes/no) was modelled using logistic regression.

**Results:** 170,255 patients contacted general practices in at least four and up to 71 quarters, of which 123,805 (72.7%) patients were identified as being chronically ill. Determinants for chronic illness were female sex (odds ratio [OR] 1.31, 95% confidence interval [CI] 1.28–1.34) and age decade (OR 1.27, 95% CI 1.27–1.28) of patient. Of 20,331 patients attending the practices 5 years and longer, 20,127 were found to be chronically ill. Again, determinants were female sex (OR 2.49, 95% CI 1.86–3.32) and age decade (OR 1.29, 95% CI 1.22–1.37). As determinants for chronic illness, further results for patients (number of contacts, diabetes, CHD, COPD, and others) and practices are expected.

**Conclusions:** 26.2% of unselected GPs’ patients were identified as being chronically ill, for which several determinants were found.

**Points for discussion:** What are definitions of “chronic illness” in other European countries? What statistics might be helpful in identifying GPs’ patients as chronically ill or in need of continuous care?

## **GP home visits: Should we go? One family medicine centre’s experience**

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**Background:** In Lithuania, in 2006, home visits became the responsibility of general practitioners (GPs).

**Research question:** To determine the main reasons for GP home visits; to analyse distribution during the year, according to age and gender; to examine how many patients give incorrect information about their condition.

**Method:** In the analysis of home visits, notes were taken concerning the main reasons for the home visits, their distribution, the age and status of the patients, the distribution among the sexes, and the inconsistency of information supplied by patients.

**Results:** 1176 home visits, overall. Average: 22.6 per week (range 4–62, SD 12.9). Two hundred and thirty-nine visits to adult men, 480 to adult women, and 457 to children (410 of them to ill children, and 47 active visits to newborns). Newborns, infants, and elderly people asked for most home visits. Forty-one per cent of home visits were to patients <20 years old. The unemployed asked for a doctor more often than those in employment (60.97%). Most home visits were during the winter–spring period, mainly for non-complicated upper and lower respiratory tract infections (>50%,  $p=0.0055$ ). Of those with fever, 25.2% of men and 17.4% of women asked for a GP ( $p=0.001$ ). Patients were often inclined to exaggerate the nature of their condition ( $p<0.001$ ). Women and men “lied” equally about the status of their health. Only 11.07% of home visits were to disabled patients. For a GP home visit, only for the prescription of compensated drugs were women more frequently represented than men ( $p=0.003$ ).

**Conclusions:** 1) The main reason for GP home visits was non-complicated upper respiratory tract infection. 2) Most home visits were during the winter–spring period; unemployed people ask more often for a GP; women – more often. 3) Both genders “lied” equally about the status of their health.

**Points for discussion:** How can the number of home visits be reduced?

**Presentation 35: Poster**

**Saturday, 18 October 2008, 11.10–12.40**

**Presentation 36: Poster, ongoing study with preliminary results**

**Saturday, 18 October 2008, 11.10–12.40**

**French consensus about gut feelings in general practice**

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**Background:** General practitioners (GPs) sometimes base their clinical decisions on gut feelings alone, even though there is little evidence of their diagnostic and prognostic value in daily practice. Research into the significance of this phenomenon with focus groups in the Netherlands provided a concept of gut feelings in general practice: a sense of alarm, a sense of reassurance, and several determinants. A description of these two types of gut feelings was obtained with a Delphi consensus procedure with a heterogeneous sample of 27 Dutch and Belgian GPs or former GPs involved in academic programmes. A survey among members of the EGPRN showed that the sense of alarm is a familiar phenomenon in general practices in Europe. To validate this concept in Europe, we need comparable descriptions of gut feelings.

**Research question:** What consensus on gut feelings in general practice in France can be obtained, using the Dutch results and the same methods?

**Method:** Translation of the seven Dutch defining statements about gut feelings conducted as forward–backward translation. Qualitative research including a Delphi consensus procedure with a heterogeneous sample of 30 French GPs involved in university educational or research programmes, included by a randomized selection of the associated teachers' list of general practice in France.

**Results:** The first two translations were done by a Dutch-speaking GP working in France and by the first author and were adjusted by a French-speaking native interpreter at a Dutch university. The backward translation was performed by a Flemish GP. Two Dutch GPs, authors of the original research, compared this text with the original statements. After some final corrections, the French text was accepted. We have already recruited 25 GPs and will soon start the consensus procedure.

**Conclusions:** The translation problems were solvable. This is an ongoing study. We will present the first results at the congress.

**Presentation 37: Poster, study proposal/idea**

**Saturday, 18 October 2008, 11.10–12.40**

**Robert N. Braun's "House of General Practice"**

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**Background:** Research in primary care has been a recurrent topic ever since general practice was recognized as a special discipline/field of study. The Austrian pioneer researcher Robert N. Braun (1914–2007) dedicated his life to building solid, scientifically based knowledge on what is going on in everyday general practice. He characterized the dilemma that general practitioners (GPs) face as follows: How to adequately apply the huge current knowledge of medical science within a "six-minute" consultation. In association with his research activities, Braun imagined a "house of general practice", of which he had laid the foundation and whose fictitious rooms were only partly "furnished" by his research findings.

**Research question:** To what extent can Braun's oeuvre contribute to "drafting" further rooms, i.e., establishing a research agenda?

**Method:** Summaries of all 11 books written by Braun (dating from 1945 to 2004) will be used to outline characteristic features of each of them. Their content will be linked to research areas, a) which he deemed important in primary care, and b) which are mentioned in the research agenda in correspondence with WONCA's core competencies.

**Results:** The content of Braun's books relate to one, but often to two or three, of the following areas: 1) basic knowledge, 2) practice-based epidemiology (statistics on cases frequencies), 3) concepts for the new special discipline of primary care, 4) intellectual "tools" (checklists, guidelines), 5) integration. Furthermore, these correspond mainly with WONCA's core competencies: specific problem solving and primary care management.



**Conclusions:** Braun's scientific work blends in to the topics discussed for a research agenda. For long periods of time, Braun was a lone player in the field of primary care research and not known well enough worldwide. We find it worth exploring his legacy.

**Points for discussion:** 1) The poster should contribute to a fruitful discussion on the research agenda. 2) We want to raise awareness of Braun's large oeuvre. 3) Would translations be worthwhile in order for these works to become more widely known?

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**Presentation 38: Poster, ongoing study with preliminary results**  
**Saturday, 18 October 2008, 11.10–12.40**

**Randomized controlled trial of ciprofloxacin versus ibuprofen in the treatment of uncomplicated urinary tract infection: A feasibility study in German general practice**

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**Background:** Uncomplicated urinary tract infections (UTI) are common in general practice and are usually treated with antibiotics. A double-blind randomized-control study was designed to assess whether symptomatic treatment with ibuprofen was equally as effective as ciprofloxacin in treating women with uncomplicated UTI.

**Research question:** First, a pilot study was conducted to demonstrate the feasibility of a clinical drug trial in German general practice and the safety of our treatment approach.

**Method:** 29 of 165 (18%) participating practices were trained to perform a clinical trial. Practices were asked to screen patients with uncomplicated UTI within a 6-month timeframe and to enrol suitable patients who had given their informed consent. Inclusion criteria were typical symptoms of uncomplicated UTI. Patients were randomized to receive either ibuprofen (3 × 400 mg/day) or ciprofloxacin (2 × 250 mg plus a placebo) for 3 days. On days 4, 7, and 28, symptoms were checked by telephone interviews. Number of complications was one important aspect in this pilot/feasibility study, which is still underpowered for the primary outcome “no symptoms on day 4”. The secondary outcomes

will be “no symptoms on day 7” and relapses within 28 days.

**Results:** A total of 80 patients were recruited, ranging from 0–12 per practice. Of these, 93% had pollakisuria, 86% dysuria, and 54% subabdominal pain. The overall mean of the symptom score was 5.5 (max. 12) on day 0, 1.2 on day 4, and 0.6 on day 7. Twenty-two patients required secondary antibiotic treatment of symptoms, but none developed serious diseases or complications. Data quality of included patients was good, with few screening failures, protocol violations, or missing data.

**Conclusions:** The trial proved its feasibility; however, recruitment and data quality can be improved. In a follow-up study, we will investigate the non-inferiority of ibuprofen vs. ciprofloxacin with an adequate sample size.

**Points for discussion:** 1) Experience with clinical trials among GPs; 2) supervision and education of the practice team

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**Presentation 39: Poster**  
**Saturday, 18 October 2008, 11.10–12.40**

**Socio-demographic and clinical characteristics, health behaviour, and accidents among snorers: A population survey**

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**Background:** Increasing evidence suggests that snoring is part of a spectrum of sleep-disordered breathing, from simple snoring on the one end through loud snoring with breathing pauses to obstructive sleep apnoea/hypopnoea syndrome on the other.

**Research question:** Here, we assess the socio-demographic characteristics, pattern of health behaviour, and comorbidity associated with snoring in the Hungarian population.

**Method:** Data were collected within a framework of the “Hungarostudy 2002” cross-sectional, nationally representative survey of the Hungarian population. The Hungarian National Population Register was used as the sampling frame, and a clustered, stratified sampling procedure was employed. The study population represented 0.16% of the population over the age of 18 years according to age, sex,

and 150 subregions of the country. Interviews were carried out in the homes of 12,643 subjects. Self-reported information on smoking, alcohol consumption, comorbidity, chronic pain, daytime sleepiness, and accidents were also tabulated.

**Results:** 37% of males and 21% of females reported loud snoring with breathing pauses. We found a significantly increasing trend for alcohol and coffee consumption and smoking among non-snorers, and quiet and loud snorers, respectively. In an ordinal regression model, male gender, the presence of smoking, the presence of three or more comorbid conditions, and alcohol consumption (AUDIT) were the strongest predictors of snoring (odds ratio [OR] 1.99, 1.76, 1.45, and 1.22, respectively;  $p < 0.001$ ) after controlling for multiple socio-demographic and clinical variables. The prevalence of accidents was higher in the loud-snoring group than among non-snoring individuals (24% vs. 17%,  $p < 0.0001$ ).

**Conclusions:** Snoring is frequent in the Hungarian adult population. In contrast to quiet snoring, loud snoring with breathing pauses is strongly associated with high-risk health behaviour, higher number of comorbidities, and higher prevalence of accidents.

#### Presentation 40: Poster

Saturday, 18 October 2008, 11.10–12.40

#### Does obstructive sleep apnoea (OSA) correlate with sexual problems and impotence?

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**Background:** Previous studies have shown that obstructive sleep apnoea (OSA) is associated with impotence and decreased sexual drive.

**Research question:** Is OSA associated with self-reported sexual problems and/or impotence in patients referred to a sleep laboratory?

**Method:** In a retrospective analysis, data obtained from 154 consecutive patients who visited our sleep laboratory were analysed. Every patient completed an overnight sleep study. They also completed a battery of questionnaires, including the Center for Epidemiologic Studies—Depression (CES-D) and the Epworth Sleepiness Scale (ESS). The following two questions were also included: Do you have a sexual problem? And for men: Do you have any problems with erection?

**Results:** 94 of the 154 patients answered the first question, and 61 of 97 men answered the second question. Twenty-three per cent of the patients reported to have sexual problems (32% of men, 25% of women); 18% of men reported to have problems with erection. ESS score, body-mass index (BMI), and age did not differ between individuals with and without sexual problems. Men who reported erectile problems were older ( $54.2 \pm 11$  vs.  $48.5 \pm 12$  years,  $p < 0.01$ ), but BMI and ESS score did not differ between these groups. The severity of sleep apnoea (measured with the apnoea/hypopnoea index) was not significantly different between patients with and without sexual or erection problems ( $p = 0.6$  and  $0.2$ , respectively; Mann-Whitney test). The most prominent difference between patients with and without self-reported sexual problems was the score achieved on the CESD depression scale ( $p < 0.01$ ; Mann-Whitney test).

**Conclusions:** In our survey, sexual problems and erection were not associated with obstructive sleep apnoea. The presence of self-reported sexual problems was associated with depression, and erectile dysfunction with age.

#### Presentation 41: Poster

Saturday, 18 October 2008, 11.10–12.40

#### Generalized anxiety disorder diagnosis

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**Background:** Generalized anxiety disorder (GAD) is one of the most frequent psychiatric pathologies in general practice. DSM-IV defines this pathology according to very precise diagnostic criteria in terms of symptoms and their duration. This definition remains controversial. In 2001, ahead of these variations of practice, the National Agency of Accreditation and Evaluation of Care (ANAES) in France published recommendations for clinical practice in the diagnosis and care of GAD.

**Research question:** What is the performance for the practice of the DSM-IV definition of GAD, and what type of care is organized by general practitioners (GPs) for patients affected by this disorder?

**Method:** We carried out a descriptive, retrospective epidemiological survey among GPs from the French

county of Yvelines to define how GAD is currently diagnosed and treated. A paper questionnaire was sent by mail, followed by a reminder letter.

**Results:** Three hundred and forty-one patients were included. One-third of these patients referred by the surveyed GPs did not meet the DSM-IV diagnostic criteria. These patients did not differ from other patients, either from an epidemiologic point of view or in terms of the type of patient management offered by the GP. A high level of comorbidity with other psychiatric disorders—particularly depression—was observed. Our study shows that serotonergic antidepressants and benzodiazepines are the most used treatments. They are very often prescribed together by the GP. Almost 96% of patients benefited from psychotherapeutic help, which was usually (74%) provided directly by the GP.

**Conclusions:** These results highlight an inadequacy between the current definition for GAD in DSM-IV and disorders actually observed and treated by GPs.

**Points for discussion:** 1) Use of classifications for GAD diagnosis; 2) revision of DSM-IV and the CIM-10

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**Presentation 42: Poster, ongoing study with preliminary results**

**Saturday, 18 October 2008, 11.10–12.40**

**Discerning the dynamic of living with diabetes**

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**Background:** Dynamics, the pace and pattern of change over time and what influences this, are central to the experience of living with chronic illness such as diabetes. Our study responds to concerns that applying medical evidence can distract clinicians from assessing patient dynamics and tailoring interventions to fit with or challenge the dynamic. We report results of secondary analysis of interviews with patients living with diabetes. Our approach to analysis developed from an EGPRN collaboration.

**Research question:** 1) Can the dynamics of living with diabetes be characterized for individuals? 2) What is the diversity of dynamics of living with diabetes, and how does it relate to wellbeing?

**Method:** Our published pilot study included analysis of interviews with six adults living with diabetes and suggested an emergent dynamic could be identified from assessing each interview as a whole. Secondary analysis is underway of interviews with a further 22 adults living with type 2 diabetes. Analysis involves identifying descriptions of change, what influences it and the emergent dynamic, and comparison between cases.

**Results:** Initial analysis suggests there is a distinct phase after diagnosis of rapid change. Individuals then settle into dynamic patterns of varying duration from months to many years. Most participants were relatively stable. This stability could be positive (allowing for experimentation with food and exercise to find out about the body's responses) or more ambivalent, characterized by fear of a change for the worse. For others, dynamics were more changeable, and they oscillated between attempts at mastering their diabetes and denial or rebellion against dietary regimes. Our presentation will be of our final analysis, including categories of these patterns and how these relate to wellbeing.

**Conclusions:** Initial analysis indicates clinical assessment of patient dynamics has potential to improve tailoring of interventions to individuals.

**Points for discussion:** Is the qualitative assessment of patient dynamics meaningful and useful for health professionals?

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**Presentation 43: Poster, study proposal/idea**

**Saturday, 18 October 2008, 11.10–12.40**

**Type 2 diabetic patients with chronic renal failure: Do GPs consider it?**

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**Background:** Prescription of oral anti-diabetic agents (OA) in type 2 diabetes patients with chronic renal failure (CRF) in primary care is a controversial issue. In a recent pilot study, we found that 41.12% of patients had some degree of renal failure and needed a dose reduction of their treatment. Kidney disease in people with type 2 diabetes (T2D) is becoming an important health problem due to an

increase of T2D prevalence and aging of our population.

**Research question:** Do we consider CRF as a contraindication to OA use in T2D? What is the best strategy for improving quality of OA prescription in diabetic patients with CRF?

**Method:** Prospective longitudinal study (basal audit and intervention). Inclusion criteria: all T2D patients visiting four urban primary care centres (more than 60 000 people) in 2007; lab test with serum creatinine, HbA<sub>1c</sub>, and glomerular filtration rate (GFR) calculated by the MDRD formula (CRF as a GFR < 60 ml/min/1.73 m<sup>2</sup>). Variables: sex, gender, T2D treatment, and past clinical history of hypertension, dislipidaemia, obesity, and any cardiovascular events. Clinical and laboratory variables: serum creatinine, HbA<sub>1c</sub>, albumin/creatinine ratio, LDL-c, HDL-c, TG, total cholesterol, SBP and DBP. GP data: age, gender, years in clinics. Intervention for improvement strategy: 1) teaching programme and leaflet about management of oral anti-diabetic agents in patients with CRF, 2) a computer reminder (T2D patient with CRF), and 3) a control group. We would like to do a cluster intervention and statistical analysis with a previous randomization. Comments: There are not strong data published related to this topic. Chronic renal failure is a difficult and generally overlooked issue in primary care, and many of our T2D patients (elderly) have some level of CRF without any treatment changes.

**Points for discussion:** To describe all possible contraindications in T2D patients' treatment according to their CRF degree; to assess the effect of two interventions for improving the prescription profile of our GPs in patients with T2D and chronic renal failure (CRF).

diagnose the condition early and treat it efficiently. If we consider risk factors, heredity, lifestyle, and habits, and if we work preventively together with a patient, we can prevent fatal results and improve individual quality of life. Success of pharmacological treatment depends on appropriate education of the patient as well as on lifestyle change, stopping smoking, increase in physical activity, individual solutions to stressful problems, and cultivation of a positive attitude towards one's health.

**Research question:** To investigate distribution of the disease, according to age and sex, and treatment in order to enable preventive work and modern therapy.

**Method:** Access to patient files and follow-up of prescribed therapy.

**Results:** 341 patients were examined. Twenty females (f) and 140 males (m) had hypertension arterialis diagnosis that needed pharmacological treatment. According to age, the distribution of patients was as follows: 40–50 years, 12f/12m; 50–60 years 38f/26m; 60–70 years, 71f/37m; and over 70 years 80f/65m. For ACE-inhibitors, the distribution was: 40–50 years, 10f/4m; 50–60 years, 47f/22m; 60–70 years, 56f/28m; and over 70 years, 88f/65m. For Ca channel antagonists: 40–50 years, 6f/2m; 50–60 years, 21f/12m; 60–70 years, 49f/18m; and over 70 years, 49f/20m. For beta inhibitors: 40–50 years, 7f/7m; 50–60 years, 22f/19m; 60–70 years, 49f/19m; over 70 years, 44f/18m. For diuretics: 40–50 years, 6f/2m; 50–60 years, 43f/11m; 69–70 years, 36f/21m; and over 70 years, 70f/28m.

**Conclusion:** Sex (female) and age are risk factors. ACE-inhibitors are the most commonly used medicament in therapy. In older patients, a combination of medicaments is commonly used.

**Points for discussion:** Hypertension, disease distribution, prevention, treatment

#### Presentation 44: Poster

Saturday, 18 October 2008, 11.10–12.40

#### Prevention and therapy challenges of hypertension arterialis

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**Background:** Artery hypertension is an illness in itself as well as a risk factor for arteriosclerosis and all of its unpredictable consequences. The family doctor faces a challenge, as well as a responsibility to

#### Presentation 45: One slide/five minutes

Saturday, 18 October 2008, 15.00–15.10

#### Caregivers of patients suffering from Alzheimer disease in primary care: difficulties and needs, and consequences for the general practitioner

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**Background:** 850 000 patients are currently suffering from Alzheimer disease in France. Familial caregivers are mostly in charge of daily care; their burden is highly demonstrated. The general practitioner (GP) has to take care of both Alzheimer patients and caregivers, especially in long-term follow-up. A specific way of taking into account this burden and its consequences on their health seems to be needed. Specific practice is required to preserve the balance of care receiver and caregiver.

**Research question:** To identify caregivers' and general practitioners' difficulties and needs; to establish the specific role of the GP in caregivers' healthcare; to take advantage of various health systems proposals in France, the United States, and Canada

**Method:** This study will be run in three parts. Firstly, qualitative research including semi-directive interviews of caregivers and focus groups of general practitioners. This first process will lead to questionnaire design for each group. Secondly, a quantitative process: we will collect data from the questionnaires sent to GPs and caregivers. Finally, we will compare results from American, Canadian, and French participants.

**Expected results:** This study will help GPs to identify and to deal with the specific health needs of caregivers, in order to improve their daily practices and caregivers' health. Ways and solutions of dealing with caregivers' problems could be tested.

**Points for discussion:** Difficulties encountered when constructing questionnaire; difficult comparison of several care systems; adhesion to qualitative research

items: dysuria, dipstick leukocytes, dipstick nitrites) in each case could help primary care physicians differentiate women who need antibiotics or cultures from those who do not.

**Research question:** Can a clinical decision tool successfully reduce the number of unnecessary antibiotic prescriptions and urine cultures in the setting of acute cystitis in women?

**Method:** Female patients (aged 16–50 years) with suspected cystitis attending Maccabi Healthcare clinics would receive their usual physician care (antibiotics and/or urine cultures). Nevertheless, a urine culture and dipstick would be obtained in each case. This would render a 0–3 item score for each patient (e.g., clinical decision tool; CDT). This work will examine whether high scores (2–3) in CDT can correctly predict a urinary infection, thus requiring empirical antibiotics and sparing the need for a urine culture. Furthermore, low scores (0–1) would not rule out the diagnosis but would prompt culturing and subsequent treatment of positives, which could reduce unnecessary antibiotic prescriptions. The positive predictive value of the CDT would be calculated from the gold standard of a positive urine culture result. Also, reduction in prescriptions and cultures could be assessed and compared with usual physician care.

**Points for discussion:** 1) Diagnosis of acute cystitis in primary care: Is it a pure clinical diagnosis? 2) Empirical antibiotics vs. urine culture for all: Which is more cost effective? 3) Uropathogens' resistance to antibiotics: A call for judicious antibiotic use

#### **Presentation 46: One slide/five minutes, study proposal/idea**

**Saturday, 18 October 2008, 15.20–15.30**

#### **A clinical decision tool to assist physicians' management of acute cystitis**

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**Background:** Acute cystitis is highly prevalent among women of reproductive age. Lack of consensus regarding diagnosis and management has led to excessive use of empirical antibiotics and urine culturing. Applying a clinical decision tool (of three

#### **Presentation 47: Freestanding paper**

**Saturday, 18 October 2008, 16.00–16.30**

#### **Quality of communication during telephone triage at Dutch out-of-hours centres**

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**Background:** Communication between doctors and patients has changed during the last few decades due to social shifts in our society. In the past, communication focused on the disease process, whereas nowadays communication is increasingly patient

centred. The disease is no longer the main point of discussion, but the communication is centred on the patient who feels unwell. The need for good communication skills in telephone triage is also recognized.

**Research question:** To assess the quality of communication skills of triagists, working at out-of-hours (OOH) centres, and to determine the correlation between the communication score and the duration of the telephone consultation.

**Method:** Telephone incognito standardized patients (TISPs) called 17 OOH centres, presenting with different clinical cases. The assessment of communication skills was carried out using the RICE communication rating list. The duration of each telephone consultation was determined.

**Results:** The mean overall score for communication skills was 35% of the maximum feasible. Triagists usually asked questions about the clinical situation mostly correctly and little about the patients' personal situation, perception of the problem, or expectations. Advice about the outcome of triage and advice on self-care were usually given without checking patients' understanding and acceptance of the advice. Calls were often handled in an unstructured way, without summarizing or clarifying the different steps within the consultation. There was a positive correlation of 0.86 ( $p < 0.01$ ) between the overall communication score and the duration of the telephone consultation.

**Conclusions:** Assessment of communication skills of triagists revealed specific shortcomings and learning points to improve the quality of communication skills during telephone triage. Training in telephone consultation should focus more on patient-centred communication, with active listening, active advising, and structuring of the call. Apart from adequate communication skills, triagists need sufficient time for telephone consultation to enable high-quality performance.

**Points for discussion:** Use of out-of-hours centres for primary care in your country; tools for assessment of quality of telephone triage; training in telephone communication at OOH centres

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**Background:** Doctors' health is an important issue. We thought that it was important to obtain objective data on this topic. Our HMO runs a programme of quality indicator (QI) measurements in the domains of primary and secondary prevention, follow-up, treatment, and control of chronic diseases.

**Research question:** Are there any differences in the QIs that are related to health behaviour between doctors (as patients) and the general population (the patients they treat)?

**Methods:** Study populations: 429 physicians (51.7% women) aged  $50.8 \pm 8.5$  years and 1621 age-, gender-, and socioeconomic-matched controls from our HMO who are patients in our district. Data extraction: All the medical records are fully computerized, and data to calculate quality indicators are automatically extracted from the medical files and from the central database of the HMO. Main outcome measure: Differences in the health behaviour between doctors and the patient population.

**Results:** We found that women doctors do mammography as much patients do (55.2% vs. 56.7%, NS) and that doctors measure their LDL at least as frequently as patients (85% vs. 84%, NS) and undertake colorectal cancer screening at the same rate as patients (23.2% vs. 27.3%, NS). Doctors with hypertension have their blood pressure measured by their general practitioner (GP) considerably less frequently than patients do (56.1% vs. 76.6%,  $p < 0.001$ ). We found no areas in which doctors' health as measured by QIs is better than that of patients.

**Conclusions:** Doctors' health behaviour as measured by standardized QIs is poorer than the general population in some very important areas. In other areas, it is only as good as but never better than the general population. This is of utmost importance to doctors themselves, their organizations, and health systems as a whole, as doctors do not seem to take advantage of the health resources widely available to them.

**Points for discussion:** Even when treated, doctors' blood pressure and cholesterol levels are no better than patients. Doctors do not seem to take advantage of their better access to care and understanding that they have. Doctors prefer colonoscopy to faecal occult blood test.

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**Presentation 48: Freestanding paper**  
**Saturday, 18 October 2008, 16.30–17.00**

**Do doctors look after themselves as well as they could?**

Shlomo Vinker, Tuvia Baevsky, Julian Dresner