



*EGPRN is a network organisation within
WONCA Region Europe - ESGP/FM*



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European General Practice Research Network

Bertinoro – Italy

7th – 10th May, 2009

SCIENTIFIC and SOCIAL PROGRAMME

***THEME: “Data Analysis of Electronic Patient Record Databases in
General Practice”***

**Pre-Conference Workshops
Theme Papers
Freestanding Papers
One slide/Five minutes Presentations
Posters**

Place

**University Residential Centre Bertinoro
Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy
tel +39 0543 446551/500 - fax +39 0543 446599
http://www.centrocongressibertinoro.it/index_en.cfm**

This EGPRN Meeting has been made possible thanks to the unconditional support of the following sponsors:



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The meetings of the European General Practice Research Network (EGPRN) have earned accreditation as official postgraduate medical education activities by the Norwegian, Slovenian, Irish and Dutch College of General Practitioners.

Those participants who need a certificate can contact Mrs. Hanny Prick at the EGPRN-Coordinating Office in Maastricht, The Netherlands.

“DATA ANALYSIS OF ELECTRONIC PATIENT RECORD DATABASES IN GENERAL PRACTICE”

Dear Colleagues,

On behalf of the organizing committee we are delighted to invite you to participate at the 68th European General Practice Research Network Congress to be held in Bertinoro, Italy.

The use of Electronic Medical Records (EMRs) have been proposed as an effective information management tool with the potential to improve the care of the principal chronic diseases, in Primary Care. Currently available EMRs can identify patients suffering from serious disease, assess whether the patient is due for recommended tests or screening procedures, and determine which patients have not achieved evidence-based clinical goals for process and outcome indicators. In General Practice current care is characterized by high rates of clinical inertia, which can be defined as failure to intensify treatment in patients who have not achieved evidence-based clinical goals. Rates of clinical inertia in particular cases can exceed 50%, EMR technology and databases facilities and clinical audits (and net-audits) procedure seems well-suited to reduce this problem, thus improving care.

These facts and ideas prompted us to choose “Data analysis of Electronic Patient Record Databases in General Practice: the potential to improve the quality of care of the main chronic diseases in Primary Care” as a topic of the European General Practitioners Research Network Conference in May 2009. During this Congress we would like to share experience and ideas about the use of these tools all over Europe and to find out to what extent they are used effectively. This project could have an important impact on reducing prejudices about improper use (no proxies) of information technology and techniques of analysis of health care data aimed at conducting short clinical research and audit in general practice. The setting of an authoritative international body, such as EGPRN, can promote the reduction of barriers and professional resistance (particularly the psychological ones) towards the approach to these disciplines. There will be a preconference course on Epi Info™, a database and statistics software for public health professionals. Epi Info™ is public domain software package on freely distributed worldwide. With Epi Info™ and a personal computer, General Practitioners can rapidly develop a questionnaire form, customize the data entry process, and enter and analyze own patients data. We hope you will have a very successful Congress.

Bertinoro is situated in the Emilia Romagna Region 80 km from Bologna and is half way between Forlì and Cesena, 6 Km away from the national road n. 9 called “Via Emilia”, right to the East of Forlimpopoli.

Bertinoro is very well known as “town of hospitality” and its symbol is the “Colonna delle Anella” (Column of Rings) a column made of stone dating back to the XIV century.

The University Centre of Bertinoro is composed of three large historical and monumental buildings few metres far from one another. They form a unique block on the top of the built-up area of the ancient town, in a quiet and hospitable place, surrounded by a very pleasant and peaceful atmosphere.

[\(http://www.centrocongressibertinoro.it/\)](http://www.centrocongressibertinoro.it/)

The Centre was conceived and founded in 1994 by Ser.In.Ar. Ltd (the company which promoted and supported the decentralization of the University of Bologna to Forlì and Cesena) in order to host residential training courses, seminars, workshops and conferences as well as cultural and research initiatives.

A partnership set up on purpose by Bologna and the Campus of the region Romagna, local Institutions and Bertinoro Town Council runs the whole Centre.

We look forward to seeing you in Bertinoro.

Yours sincerely,

Ferdinando Petrazzuoli National Representative of EGPRN-Italy

On behalf of the Host Organising Committee

Pasquale Falasca - Coordinator of the Italian development project of Epi Info

Franco Del Zotti – MD WONCA ITALY EGPRN

Nicola Buono MD EGPRN

EGPRN ITALY

WONCA ITALY

Advisory Board

Angelo Campanini – GP Equip-Wonca

Roberto Grilli – Director Regional Agency for Health and Social Care Emilia Romagna (Italy)

MEETING EXECUTIVE BOARD

GENERAL COUNCIL MEETING

Executive Boardmeeting

Thursday 7th May, 2009

09.30 - 10.00: Welcome and Coffee for Executive Board

10.00 - 12.30: Executive Board members

Location: Conference Venue University Residential Centre Bertinoro

Room: Red (first floor of the castle)

General Council meeting with the National Representatives

Thursday 7th May, 2009

14.00 - 17.00 : Executive Board members and National Representatives

Location: Conference Venue University Residential Centre Bertinoro

Room: Fresco (first floor of the castle)

REGISTRATION

► Thursday 7 May 2009

REGISTRATION FOR PARTICIPANTS OF PRE-CONFERENCE WORKSHOPS ONLY

Location: - University Residential Centre Bertinoro

On arrival, every participant, who has not paid by electronic bank transfer, pays € 25,= (or € 50,= if a non-member) per person for each pre-conference workshop

► Friday 8 May 2009

REGISTRATION FOR ALL PARTICIPANTS

Time: 08.00 – 08.30 h.

Location: University Residential Centre Bertinoro

On arrival, every participant, who has not paid by electronic bank transfer, pays € 100,= (or € 200,= if a non-member) per person.

FOR ALL EGPRN PARTICIPANTS

Social night on Saturday 9th May 2009

(Dinner, speeches and party)

at Casa Artusi Forlimpopoli

Address: Via Costa 31, Forlimpopoli 47034, Italia (5 km North of Bertinoro).

Phone: +390543748049 .

Entrance Fee: € 30,= per person.

Please address to EGPRN Registration Desk.

Unfortunately, we have **NO** facility for electronic payments (credit card, Maestro) on the spot. We only accept **EUROS**.

We do **NOT** prefer pay cheques, given the extra costs. If you have no other option we will charge € 25 extra.

PROGRAMME OF THE EUROPEAN GENERAL PRACTICE RESEARCH NETWORK IN BERTINORO-ITALY

THURSDAY 7th MAY, 2009:

Location : **University Residential Centre Bertinoro**

09.30 - 12.30 : **Executive Board Meeting**
(only for Executive Board Members)
in: Red room (first floor of the castle)

10.00 - 12.30 : **Pre-Conference Workshops (only for participants who have registered
beforehand)**

10.00 - 12.30 : **2 EGPRN Pre-Conference Morning Workshops; €25 (€50) each p.p.**
Parallel workshops:

Workshop on “Epi Info an Approach to Data Analysis”

Chairs: Andrew Dean (USA), Pasquale Falasca (Italy).

in: Main room (at Revellino)

***Workshop on “Insights into Methodology for Primary Care Researchers.
Cluster Randomization in General Practice”***

Chairs: Luc Martinez, Denis Pouchain (France), Christos Lionis (Greece),
Pinar Topsever (Turkey).

in: Fresco room (first floor of the castle)

12.30 - 13.30 : **Lunch (price not included in fee pre-conference workshops)**

14.00 - 17.00 : **3 EGPRN Pre-Conference Afternoon Workshops; €25 (€50) each p.p**
Parallel workshops:

Workshop on “Qualitative Studies”

Chairs: Etienne Vermeire, Kristin Hendrickx (Belgium)

in: Main room (at Revellino)

Workshop on “Collaborative Studies”

Chairs: Harm van Marwijk (The Netherlands), Zaida Azeredo (Portugal)

in: Red room (first floor of the castle)

Workshop on “Net Audit” (in Italian language)

Chairs: Francesco del Zotti, Carmine Farinaro (Italy)

In: Museum room (at the main courtyard of the castle)

14.00 - 17.00 : EGPRN General Council Meeting.

**Meeting of the Executive Board Members with National Representatives
(only for Council Members).**

in: Fresco room (first floor of the castle)

Social Program: For ALL EGPRN-participants of this meeting who are present in

18.00 - 19.30 : Bertinoro this time. (Entrance Free)

Welcome Reception and Opening Cocktail for all participants.

Location: University Residential Centre Bertinoro

Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

Speakers:

- **Prof. Julian Tudor Hart Family (UK) doctor of experimental life**
- **Dr. Roberto Grilli (Italy) Director Regional Agency for Health and Social Care Emilia Romagna (Italy)**
- **Prof. Allyson Pollock (UK) International Public Health Policy Edinburgh University.**

FRIDAY 8th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

08.00 - 08.30 : Registration at EGPRN Registration Desk.

08.30 - 08.50 : Welcome.
Opening of the EGPRN-meeting by the Chairman of the EGPRN, Prof. Dr. Paul van Royen.

08.50 - 09.10: 1st Keynote Speaker: *Professor Jean-Karl Soler MSc* – Malta.
Theme: “Research using EPR: The Potential of ICPC in Primary Care Research”.

09.10 – 09.30: 2nd Keynote Speaker: *Professor Marco Cambielli* – Italy.
Theme: “Problems related to data collection from Electronic Patient Records in Primary Care: reliability of data”.

09.30 – 10.30 : 2 Theme Papers on ‘*Database in Primary Care*’
in: main room -plenary session-

- 1. Francesco Del Zotti (Italy)**
Prevalence and Management of Chronic Heart failure (CHF) in a network of Electronic Care Records (ECR) databases of 114 GPs of Veneto Region.
- 2. Frans Smits (The Netherlands)**
Predictability of persistent frequent attendance. A historic 3-year cohort study.

10.30 - 11.00 : Coffee Break

11.00 – 12.30 : 3 Theme Papers ‘*Database in Primary Care*’
in: main room -plenary session-

- 3. Stefaan Bartholomeeussen (Belgium)**
Time trends in the incidence of peptic ulcers and oesophagitis between 1994-2003.
- 4. Gunter Laux (Germany)**
The German CONTENT database: Advanced Options for Multimorbidity Analyses.
- 5. Pasquale Falasca (Italy)**
Combined Predictive Model to improve General Practitioners’ performance.

12.30 - 14.00 : Lunch

After lunch, the meeting continues with parallel sessions till 17.20 h.

**14.00 – 15.30 : A. Parallel session - 3 Freestanding Papers ‘Micellaneous’
in: Main room –parallel session A-**

- 6. Roger Ruiz-Moral (Spain)**
Patient Participation in Decision Making in Primary Care Settings: What general practitioners do and what patients perceive?
- 7. Xavier Cos (Spain)**
The European EUCLID pilot study on care and complications in people with type 2 diabetes in primary care.
- 8. Paul Van Royen (Belgium)**
Are abstracts presented at EGPRN meetings followed by publication?

**14.00 – 15.30 : B. Parallel session - 3 Freestanding Papers
on ‘Respiratory Disease in Primary Care’
in: room B**

- 9. Edo Lyklema (The Netherlands)**
Relative effectiveness of GINA 3 and 4 asthma medications in 6-18 year old children: A network meta-analysis.
- 10. Lonke van der Mark (The Netherlands)**
The effect of different operational definitions of asthma on clinical prediction rules of childhood asthma.
- 11. Jean Yves Le Reste (France)**
The SpiFP (Spirometrie in Family Practice) study. Study design.

15.30 – 16.00 : Coffee/Tea Break

**16.00 – 17.30 : C. Parallel session - 3 Freestanding Papers ‘Micellaneous’
in: Main room –parallel session A-**

- 12. Marjolein Krul (The Netherlands)**
Musculoskeletal problems in overweight and obese children.
- 13. Denis Pouchain (France)**
General practice-based intervention for suspecting and detecting dementia in France. A cluster randomized controlled trial.
- 14. Alain Mercier (France)**
High prescription rate of ATD drugs in France: GPs’ motives.

16.00 – 17.30 : D. Parallel session - 6 One-Slide/Five Minutes Presentations
'Miscellaneous' - in: room B

15. **Claudio Carosino (Italy)**
Management of Acute Chest Pain In Rural Practice In Europe.
16. **Tiago Villanueva Portugal)**
Impact of Virtual Consultancy in the number of GP referrals to Dermatology.
17. **Ferdinando Petrazzuoli (Italy)**
Type 2 Diabetes Mellitus Control in Mediterranean Countries: a Collaborative Survey in the Primary Care settings. Second step: research protocol.
18. **Roman Topor-Madry (Poland)**
The improvement of quality of care in family practices using electronic data system in Poland.
19. **Marco Zoller (Switzerland)**
Project FIRE: Swiss General Practice Electronic Database in an early Stage.
20. **Christophe Berkhout (France)**
Is the activity of a GP in an Emmaus Community comparable to the usual activity of a GP working in an urban district?

17.30 – 17.50 : **Plenary Session in: Main room A**
Closing of the day by Prof. Jean-Karl Soler, MSc, keynote speaker, who will summarize on today's theme papers.

18.00 – 19.00 : **Meeting of EGPRN Working Groups**
- **Research Strategy Committee**
- **Educational Committee**
- **Communication and PR Committee**

Location: **Dept. of Family Medicine in Centro Residenziale**
Universitario Bertinoro (FC)-Italy

Meeting point: **Centro Residenziale Universitario Bertinoro (FC)- ITALY**
Main Entrance - colleagues will be waiting for you.

Social Programme :

18.00 – : **Practice Visits to local Health Centres in and around Bertinoro.**

Meeting point: **Centro Residenziale Universitario Bertinoro (FC)- ITALY**
Main Entrance - colleagues will be waiting for you.

SATURDAY 9th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

08.45 – 09.05: 3rd Keynote Speaker: *Professor Giampiero Mazzaglia* – Italy.
Theme: “Computerized Patient Database in General Practice: experience in Italy and Europe”.

09.05 – 09.25: 4th Keynote Speaker: *Professor Mike Pringle* – Nottingham, United Kingdom
Theme: “Unlocking the potential of the GP electronic record: experience in the UK.”

09.30 – 11.00 : 3 Theme Papers ‘*Database in Primary Care*’
in: main room -plenary session-

- 21. Ernesto Mola (Italy)**
Leonardo Project: a patients empowerment approach based on Chronic Care Model into the setting of General Practice. The role of the specific WEB based software.
- 22. Catharina van den Dungen (The Netherlands)**
Do population characteristics make a difference?
- 23. Thomas Kuehlelein (Germany)**
The CONTENT-EPR as a tool for guideline implementation

11.00 - 11.30 : Coffee Break

11.30 - 13.00 : Posters
In five parallel sessions (5 groups)

11.30 - 13.00: Parallel group 1: Posters ‘Database in Primary Care’ (5)

- 24. Bengu Pala (Turkey)**
Use of computer and electronic records among Primary Care doctors in Turkey.
- 25. Peter Burggraeve (Belgium)**
SumEHR in Belgium which practices have them and how are clinicians using them?
- 26. Katrin Västra (Estonia)**
Analysing Family Physicians’ Financial Data in Estonian Health Insurance Funds Database for Family Physicians Bonus Payment System results after three year experience in Estonia.
- 27. Stephania Kokkali (France)**
A new tool for diagnosis of Chronic System Diseases in primary care.

28. **Marc Verbeke (Belgium)**
Quality of Encoded data from GP's EPR.

11.30 - 13.00: Parallel group 2: Posters 'Miscellaneous' (5)

29. **Filippo D'Addio (Italy)**
Osteoporosis in premenopausal and postmenopausal women receiving long-term L-thyroxine therapy.
30. **Carsten Kruschinski (Germany)**
Dizziness increases the risk of fractures: A retrospective cohort study.
31. **Juliette Chambe (France)**
Melanoma : how to adapt post-graduate and continuing education to the recent guidelines?
32. **Marieke Gieteling (The Netherlands)**
Functional abdominal pain in children in Dutch general practice.
33. **Joseph Azuri (Israel)**
Medical Students' Disease.

11.30 - 13.00: Parallel group 3: Posters 'Diabetes and Urinary Infection' (5)

34. **Debby Keuken (The Netherlands)**
Data quality improvement in a cohort of diabetes patients in General Practice.
35. **Anh Thi Tran (Norway)**
Does diabetic patients ethnic background influence quality of care received in general practice?
36. **Giulio Rigon (Italy)**
Ve.Di.Cli.S. Project (Verona Diabetes Clinical Study) - Continuous Quality Improvement (CQI) in primary care management of type 2 diabetes.
37. **Stella Argyriadou (Greece)**
Managing type 2 diabetes mellitus in primary care: Measuring or controlling
38. **Jutta Bleidorn (Germany)**
Symptomatic treatment or antibiotics for uncomplicated urinary tract infection?

11.30 - 13.00: Parallel group 4: Posters 'Cardiovascular Disease and Vaccination' (5)

39. **Pemra C. Ünalán (Turkey)**
Influenza and pneumococcal vaccination and screening rates of the elderly in a private outpatient clinic.
40. **Vincenzo Pirrotta (Italy)**
The M.I.S.U.R.A. project: a multidisciplinary prevention approach to decrease CV risk.

41. **Matteo Rispoli (Italy)**
Cardiovascular risk factors prevalence and therapy adherence in 502 patients with previous cardiovascular and/or cerebrovascular event.
42. **Stefan Bösner (Germany)**
Accuracy of symptoms and signs for coronary heart disease in primary care: a diagnostic study with follow up.
43. **Catherine La Porte (France)**
Gestational hypertension in General Practice: Screening and orientation of a pathological pregnancy by the General Practitioner.

11.30 - 13.00: Parallel group 5: Posters ‘Depression and Organisation of Care’ (5)

44. **Ewelina Gowin (Poland)**
Patient's gender influences preventive supplies in primary care.
45. **Margreet Schipper (The Netherlands)**
Supplied and Demanded Services in General Practice.
46. **Pinar Topsever (Turkey)**
To what extent are core competencies addressed in European General Practice research? Classification of EGPRN meeting abstracts 2002-07.
47. **Chiara Roni (Italy)**
Antidepressants prescription analysis in primary care: a Verona survey from 2001 to 2005.
48. **Chommanard Sumngern (Portugal)**
Happiness among the elderly in communities: Thai Happiness Indicators; THI-15.

13.00 - 14.30 : Lunch

Plenary Session in: Main hall

14.30 - 15.00 : ●● Chairman's report by Prof. Paul van Royen : Report of Executive Board and Council Meeting.

15.00 - 15.20 : ●● Introduction on the next EGPRN-meeting in Dubrovnic-Croatia by the Croatian national representative.

**15.20 – 16.50 : 2 Theme Papers on ‘Database in Primary Care’
in: main room -plenary session-**

49. **Antje Erler (Germany)**
Garbage in-garbage out? Validity of claims-based diagnoses as morbidity indicators in German general practice.

50. Shlomo Vinker (Israel)

Incidence and clinical manifestations of rheumatic fever an electronic medical records based survey.

51. Philippe Ryckebosch (Belgium)

Out of hours primary care in Belgium: registration of reasons for encounter, diagnoses and referrals.

16.50 – 17.20 : Plenary Session in: main room

- **Closing of the day by Prof. Mike Pringle**, keynote speaker, who will summarize on today's theme papers and posters.
- **Presentation of the EGPRN Poster prize by Dr. Harm van Marwijk.**
- **Closing of the conference by Prof. Paul van Royen, EGPRN chairperson.**

Social Program :

**20.00 - : Social Night - Dinner, speeches and Party
at Forlimpopoli – (FC)
Entrance Fee: € 30,= per person.**

SUNDAY 10th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

09.30 - 11.30 : 2nd Meeting of the EGPRN Executive Board.

FRIDAY 8th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

08.50 - 09.10: 1st Keynote Speaker: Professor Jean-Karl Soler MSc – Malta.

Theme: “Research using EPR: The Potential of ICPC in Primary Care Research”.

The theme of the EGPRN Bertinoro, Italy, meeting in May 2009 is “Data analysis of electronic patient record databases in general practice”. The theme is important because data from electronic patient records is a potentially valuable source of empirical information about day-to-day general practice, and which is collected routinely about millions of patients around the world every day. Such data should inform quality assurance, education, training and research. The potential applications of such data and its analysis are truly endless, and include epidemiology of general practice (studying patients’ reasons for encounter, doctors’ diagnostic labels, and interventions to provide care), computerised decision support systems, drug adverse event surveillance, studying the process of diagnosis in general practice, studying co-morbidity, and many others.

We have published recently ¹ on the necessity of precision in measuring events in such databases in order to capture the maximum amount of information with reliability and validity. The International Classification of Primary Care fulfils all the requirements of a modern and precise tool for organising data in primary care for clinical care, practice management, and analysis at the micro, meso and macro level for research, education and quality assurance. Its purpose is to order the domain of family practice in the format of episodes of care. It provides a single terminology for the patient’s RFE and the family physicians diagnosis, thus representing both sides of the same coin. It captures the changes (transitions) in the content of episodes of care over time. It follows strict taxonomic rules, and so its classes are mutually exclusive. It offers—if possible—one class for common (occurring >1 per 1000 patient years) reasons for encounter and diagnoses. Less common classes are included in ‘ragbags’. Its biaxial structure (chapters for body systems/problem areas and components identical throughout all chapters) results in three-digit mnemonic, alphanumeric codes. Its reliability and validity are supported by its coding rules and a growing comparative international database. In the coding process, localization takes precedence over aetiology. Symptom diagnoses take precedence over disease diagnoses that are uncertain (i.e. do not fulfil the inclusion criteria). It does not cater for mind-body metaphors: ‘psychosomatic’ and ‘somatoform’ disorders are not included.

The presentation will look at data collected with ICPC in an episode of care model from three countries, and analyse utilisation, frequencies of reasons for encounter, interventions and diagnoses (episodes), and research relationships between reasons for encounter and episode titles (research into diagnosis) and between episode titles themselves (co-morbidity) using pre- and post-test probabilities expressed as odds ratios.

References:

1. Soler JK, Okkes I, Wood M, Lamberts H. “The coming of age of ICPC: celebrating the 21st birthday of the International Classification of Primary Care.” *Family Practice* 2008; **25**: 312-317.

FRIDAY 8th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

09.10 – 09.30: 2nd Keynote Speaker: Professor Marco Cambielli – Italy.

Theme: “Problems related to data collection from Electronic Patient Records in Primary Care: reliability of data”.

Family practitioners and other staff working in primary care require comprehensive and accurate data on patients at the point-of-care if they are to provide high quality health services to their patients. Electronic patient records (EPR) are an effective method of achieving this objective, by dispensing with the need to use difficult to access, and often illegible, paper-based records. Electronic patient records underpin many information technology initiatives in primary care, such as screening for identifying patients at high risk of cardiovascular disease, call–recall systems for asthma and other long-term disease management programmes, computerized decision support systems for prescribing, electronic ordering of tests and electronic referral systems to secondary care. These are all, however, dependant on comprehensive and accurate coded data.

There are known to be large variations in the accuracy and completeness of the clinical information stored in electronic patient records. In some systematic reviews it was found that the recording of consultations was generally high (typically greater than 90%), but assigning a morbidity code during each consultation was more variable. Some Authors identified major omissions in the diagnoses. The recording of diagnoses in primary care was less complete and, when a diagnosis of disease was recorded, it was generally less detailed than in the data held by various National Registries.

Soler et al. (1)described the progress of the International Classification of Primary Care (ICPC): the wide use of the ICPC facilitates international comparisons of clinical practice and coding in primary care.

Key areas for further work are the development and evaluation of data quality standards for use in electronic patient records; and the evaluation of methods for improving data quality. Electronic patient records offer enormous benefits, not only for patient care but also, when aggregated, for secondary analysis; and when linked with other health and social care datasets, for outcomes measurement, quality improvement, public health surveillance, and research. These benefits cannot be fully realized without high quality data. Systems in which ‘free text’ natural language (reflecting clinicians thought processes) could be coded and used for additional functionality are still far in the future.(2)

Markers of quality should comprise internal reference standards based on objective and diagnostic EPR elements that have high positive predictive value (3)

References

1. Soler JK, Okkes I, Wood M, Lamberts H. The coming of age of ICPC: celebrating the 21st birthday of the International Classification of Primary Care. *Fam Pract* 2008; 25: 312–317.
2. Majeed A. et al. Accuracy and completeness of electronic patient records in primary care. doi:10.1093/fampra/cmn047
- 3.Thiru K et al. Systematic review of scope and quality of electronic patient record data in primary care. *bmj.com* 2003;326:1070-4

SATURDAY 9th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

08.45 – 09.05: 3rd Keynote Speaker: *Professor Giampiero Mazzaglia* – Italy.

Theme: “Computerized Patient Database in General Practice: experience in Italy and Europe”.

Before the advent of automated databases, the identification and appropriate follow-up of large cohort of patients required a major effort to ensure complete and accurate collection of the required information. To date, the increasing number of general practitioners (GPs), which use computers for administrative purposes, to keep patient records, and to generate prescriptions, allows researchers to conduct epidemiological studies in a highly efficient approach. The Health Search-Thales database (HSD) was set up by the Italian College of General Practitioners (SIMG) in 1998 with the primary aim of carrying out epidemiological research in a community-based setting.

The HSD contains data from the computer-based patient records from a selected group of GPs distributed across Italy who voluntarily agreed to collect data for the database and attend specified training courses. The database contains information on the age, gender and identification of the patient, and GP registration information, which is linked to the prescription information, clinical events and diagnoses, hospital admission and causes of death.

The HSD has been the source for a number of peer-reviewed publications on the prevalence of disease conditions, drug safety, and prescription patterns in Italian primary care. At national level, the information from the HSD is used for developing prescribing indicators for appropriate use of drug. Such indicators are annually published by the National Department of Health and National Medication Agency in their annual report. At international level, the HSD is involved into several projects, including EU-ADR project funded by the European Commission within the 7th Framework Programme. Such project federates clinical records and claims databases of 30 million Europeans in Denmark, Italy, the Netherlands, and the UK with two main aims: (1) to discover new drug safety signals; (2) to substantiate signals, using causal reasoning based on Bradford-Hill criteria, semantic mining of the biomedical literature, and computational analysis of biological and chemical information (drugs, targets, anti-targets, pathways etc.). In conclusion, although proper utilization of such databases requires multi-disciplinary skills, these information are invaluable source of data for epidemiological studies.

SATURDAY 9th MAY, 2009:

Location: University Residential Centre Bertinoro
Address: Via Frangipane, 6 - 47032 Bertinoro (FC) - Italy

09.05 – 09.25: 4th Keynote Speaker: *Professor Mike Pringle* – Nottingham, United Kingdom
Theme: “Unlocking the potential of the GP electronic record: experience in the UK.”

In this presentation I will explore the UK experience of using GP electronic records for research and health services delivery. In particular I will cover:

1. Data quality: supporting and improving it using PRIMIS+

I am Service Director of PRIMIS+, a state funded initiative to cascade training to family practices in order to improve clinical data recording and use. PRIMIS+ provides a voluntary analysis tool for practices to assess their data quality (CHART) and a facility to compare their data quality with other practices (CHART Online). The evidence on data quality will be presented.

2. Service delivery support: through QSurveillance and QRisk

These two projects are run in my department in Nottingham. QSurveillance can monitor epidemics (a Flu pandemic etc) and the effects of disasters (the Buncefield fire for example). QRisk is a new risk score for cardiovascular disease which includes deprivation.

3. Research: using large databases such as QResearch, GPRD, THIN and UK Biobank

These databases are gathering more extensive and more useful data. I will give an update on progress in UK Biobank, of which I am on the Board, towards its recruitment of 500,000 people.

4. European collaboration: the results of eHID

This recently completed research project looked at the potential for using GP datasets for comparison of prevalences of common diagnoses across Europe. I will illustrate some of the findings.

Through these four examples I will try to illustrate the potential and challenges in using routine GP data for secondary purposes.

PRESENTATION 1: Friday 8th May, 2009
09.30 – 10.00 h.

THEME PAPER

TITLE: Prevalence and Management of Chronic Heart failure (CHF) in a network of Electronic Care Records (ECR) databases of 114 GPs of Veneto Region.

AUTHOR(S): Maurizio Cancian *, Alessandro Battaglia*, Mario Celebrano*, Francesco Del Zotti*, Bruno Franco Novelletto *, Mario Saugo**
*SVEMG-Scuola Veneta Medicina Generale- SIMG Società Italiana di Medicina Generale -
** Local Health Authority

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Background:

CHF is connected with increasing prevalence and new tools for diagnosis and treatment, but few studies are conducted in GP setting.

Research Question:

What is the Prevalence and Management of CHF of 114 GPs of Veneto Region?

Methods:

A baseline audit has involved 114 GPs, divided in 20 groups of all Local districts of Veneto Region, using the same ECR, assisted centrally with an extraction procedure for CHF ICD9 codes and an SQL query for finding “suspect CHF”.

Every GP matched these lists with criteria from SIGN Guideline 2007 chosen after “agree” scoring.

Results:

1905 CHF-Pts were extracted from 155617 patients, with a prevalence of 1.2% (CI 95% 1.17-1.28) and considerable variability among the 20 GPs groups.

1213 (64%) CHF-Pts were extracted as ICD9 code; 692 (34%) after the SQL query. Echocardiography (ECO) is present in 57% of cases and ejection fraction in 31% of patients with an ECO; EKG in 76% of patients.

At least one annual Blood Pressure is present in 89% pts; electrolytes+creatinine: 88%. Considering 611 pts with spironolactone and ACE/ARBs: 10% have no annual recording of creatinine + potassium and 30% just 1 per year.

There is no annual recording of weight in 43% of patients.

ACE inhibitors or ARBs are used in 77% of CHF-Pts; Betablockers in 46% (first choice beta-blockers - bisoprolol, carvedilol, nebivolol - in 36%). Even for follow-up and for drugs there is an important variability.

Conclusions:

Data show the strength of integrating database in GP for the evaluation of CHF and some weaknesses: there is space for improvement in diagnostic process (coding; diagnostic criteria), in follow-up and therapy. Our audit, based on ECR data collection and on local groups, and the found variability push us to discuss and lead the internal and external levels of the change needed.

Points for discussion:

- a) Are there similar studies in other countries?
- b) How is perceived in European GP the Gap between the perduring difficulty of diagnostic process and new diagnostic test and drugs in CHF?

PRESENTATION 2: Friday 8th May, 2009
10.00 – 10.30 h.

THEME PAPER

TITLE: Predictability of persistent frequent attendance. A historic 3-year Cohort study.

AUTHOR(S): Frans T. Smits, H.J. Brouwer, H.C. van Weert, A. Schene
G. ter Riet

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Background:

Few patients who attend their General Practitioner frequently continue to do so. While transient frequent attendance may be readily explicable, persistent frequent attendance often is not. Persistent frequent attenders increase GPs' workload while reducing work satisfaction. It is neither reasonable, nor efficient to target diagnostic assessment and intervention at transient frequent attenders.

Research question:

Is it possible to construct a prediction rule for selecting persistent frequent attenders using readily available information from GPs' electronic medical records?

Method:

A historic 3-year cohort study using data on 28,860 adult patients from 2003 to 2005. Frequent attenders were patients whose attendance rate ranked in the (age and sex adjusted) top 10 percent during 1 year (1-year frequent attenders) or 3 years (persistent frequent attenders). Using bootstrapped multivariable logistic regression analysis, we determined which predictors contained information on persistent frequent attendance.

Results:

Out of 3045 1-year frequent attenders 470 (15.4%) became persistent frequent attender. The prediction rule could update this prior probability to 3.3% (lowest value) or 43.3% (highest value). However, the 10th and 90th centile of the posterior probability distribution were 7.4% and 26.3%, respectively, indicating that the model performs modestly. The area under the receiver operating characteristics curve was 0.67 (95% confidence limits 0.64 and 0.69).

Conclusions:

Among 1-year frequent attenders, six out of seven are transient frequent attenders. With the present indicators our rule performs modestly in selecting those at risk of becoming persistent frequent attender.

Points for discussion:

- Which, not yet registered, factors can help to predict persistence of frequent attendance?
- Are persistent frequent attenders a group of patients suitable for preventive medical care?
- Is "persistent frequent attendance" more than (1-year)

PRESENTATION 3: Friday 8th May, 2009
11.00 – 11.30 h.

THEME PAPER

TITLE: Time trends in the incidence of peptic ulcers and oesophagitis between 1994-2003.

AUTHOR(S): Stefaan Bartholomeeussen, J. Vandenbroucke, C. Truyers, F. Buntinx

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Background:

The incidence of peptic ulcers has shown considerable fluctuations in the past. Most epidemiological studies have been performed in hospitals on patients with complications. General practice is the appropriate location to investigate the incidence of peptic ulcers. A gastroscopy can be performed ambulatory and drug treatment started.

Research question:

Examine time trends in incidence of peptic ulcer and oesophagitis and prescription of acid secretion inhibiting drugs in the period 1994-2003.

Method:

Retrospective cohort study based on the Intego-database, composed from data extracted from the electronic medical records of 55 GPs in 47 general practices, spread over whole Flanders. Diagnoses are registered by means of program-specific keywords, that are converted into the ICPC-2-classification in the central database. The practices are selected on quality of registration. The population of the database agrees on the Flemish population. Incidences of new patients with duodenal or gastric ulcer or oesofagitis, and the proportion of patients with a prescription of a H2-antagonist or proton pump inhibitor, were calculated for the period 1994-2003.

Results:

Between 1994-2003 age-standardized the incidence of patients with duodenal ulcer decreased from 2.22‰ (95% CI 1.94 to 2.50) to 0.85‰ (95% CI 0.70 to 1.00), the incidence of gastric ulcer from 1.75‰ (95% CI 1.50 to 2.00) to 1.01‰ (95% CI 0.84 to 1.18). The incidence of oesophagitis raised from 7.20‰ (95% CI 6.70 to 7.70) to 8.73‰ (95% CI 8.23 to 9.23). The proportion of patients with a prescription of a proton pump inhibitor increased from 8.68‰ to 50.02‰ and with a prescription of a H2-antagonist remained stable around 20‰.

Conclusions:

In ten years the incidence of peptic ulcers decreased considerably, while the incidence of oesophagitis increased. Different trends in society are probably responsible for this, such as a shift in diagnosis and the increased use of proton pump inhibitors.

Points for discussion:

Are there similar trends in other countries?

PRESENTATION 4: Friday 8th May, 2009
11.30 – 12.00 h.

THEME PAPER
Ongoing study with preliminary results

TITLE: The German CONTENT database: Advanced Options for Multimorbidity Analyses.

AUTHOR(S): Gunter Laux, T. Kuehlein, A. Gutscher, J. Szecsenyi

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Background:

CONTENT (CONTInuous morbidity registration Epidemiologic NeTwork) is an ambitious project in Germany that aims to establish a system for adequate EMR keeping and analysis in primary care based on episodes of care.

An episode is defined as health problem from its first presentation by a patient to a doctor until the completion of the last encounter for it. The CONTENT database meanwhile contains more than 90,000 patients and more than 1,000,000 encounters between doctor and patient.

Research Question:

The presented study aims to describe patterns of health care utilization based on patients' multimorbidity.

Methods:

The analyses were based on a total of 39,699 patients in a yearly contact group for which data entry based on episodes of care was performed using the International Classification of Primary Care (ICPC). In order to model the relationship between explanatory variables (age, gender, multimorbidity) and response variables of interest (prescriptions, referrals, encounters) that were applied to measure health care utilization, we used multiple linear regression.

Result:

Multimorbidity measured by the number of patients' chronic conditions had a manifestly stronger impact on the number of encounters ($\beta = 0.51$, $p < 0.0001$) in comparison to age or gender. Moreover, we could observe that the number of patients' chronic conditions had a significant impact on the number of different prescriptions ($\beta = 0.226$, $p < 0.0001$) as well as on the number of referrals ($\beta = 0.3$, $p < 0.0001$).

Conclusion:

Documentation in primary care on the basis of episodes of care facilitates an insight to concurrently existing health problems and related medical procedures. Therefore, the resulting data provide a basis to obtain co- and multimorbidity patterns and corresponding health care utilization issues in order to understand the particular complex needs caused by multimorbidity.

Points for discussion:

Which techniques could be useful to minimize an information bias in EMR keeping?
(i.e. entered data should be complete and consistent)

PRESENTATION 5: Friday 8th May, 2009
12.00 – 12.30 h.

THEME PAPER
Ongoing study with preliminary results

TITLE: Combined Predictive Model to improve General Practitioners' performance.

AUTHOR(S): Pasquale Falasca, A. Berardo, F. Di Tommaso, A. Accorsi - Ausl Ravenna

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Background:

The King's Fund and the Department of Health (NHS) has recently provided a predictive statistical model to evaluate the risk of urgent hospitalization in order to enable appropriate preventive measures for chronic diseases and to help to improve GPs' performance.

Research question:

Does implementation of strategies for management and control of chronic diseases cause a significant reduction in the risk of hospitalization?

Methods:

A dataset which includes information collated from different databases (inpatient, outpatient, emergency care (EC), GPs, Social Services) is used to identify patients at a high risk of hospitalization.

A Combined Predictive Model has been developed with a multivariate logistic regression (stepwise) and applied to population aged > 65 years in the province of Ravenna (Italy). The chronic diseases involved are: Asthma, Coronary Heart Disease, Heart Failure, Chronic Obstructive Pulmonary Disease, Depression, Diabetes, Hypertension, Cancer.

Patients are divided into three groups according to their risk level: high risk (immediate charge), moderate risk (ordinary management) and minimum risk (interventions for prevention and self care).

Results

82% of all subjects > 65 years (73,055) has average risk per year of 5.9%, 8% (6,710) has a risk of 16.4% and 4% (4,411) has average risk rating that of 37.7%.

63% of patients > 65 yrs with at least one chronic disease had urgent hospitalization.

This percentage rises to 88% for the high risk group.

High risk patients are admitted to hospital almost 10 times more than low risk, they also have 5.4 times more accesses to the EC and 2.4 times more access to their GP.

Conclusion:

This model has been proved to be a useful tool to predict hospitalization. It can also help GPs to stratify patients according to their risk and enable to allocate appropriate resources and attention to the higher risk groups.

Points for discussion:

- Combined Predictive Model
- Chronic diseases
- Risk of hospitalization

PRESENTATION 6: Friday 8th May, 2009
14.00 – 14.30 h.

FREESTANDING PAPER

TITLE: Patient Participation in Decision Making in Primary Care Settings:
What general practitioners do and what patients perceive.

AUTHOR(S): Roger Ruiz-Moral, Lucía Peralta Mungía, Luis Pérula, Mariana
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Background:

Patient involvement in decision making (PIDM) is widely recommended and promoted, but it seems that GPs scarcely foster these behaviours in consultations.

Research questions:

To what extent do GPs involve their patients in PIDM in consultations?
Which is the patient's perception about her/his involvement in decisions?

Method:

We video-recorded 648 patients attending 95 family doctors for a new health problem (average 6 patient/doctor). A single trained observer rated all the encounters with the CICAA-D (17 items scale with a range of responses across 3 point previously validated). Intra-rater reliability was assessed in a 25 interviews sample by means the test-retest (Cohen's Kappa and global Intraclass-Correlation-Coefficient). Patient perception about their participation was registered by three questions just after the encounter.

Results:

We analyzed 637 encounters: in 386 (60%) no PIDM was detected. In 250 (39%) interviews some kind of PIDM was observed. Taking the latter, the patient involvement in 160 (64%) encounters were labelled as "participated decision making", in the rest 90 (36%) as "shared decision making". There were significant differences ($p:0.000$) between the global CICAAD scores of those interviews considered as no participative at all (mean:6.9) and those defined as "participative" (mean:9.88) and "shared" (mean:12.30). The 59% of patients would like the doc to ask him/her about his/her idea regarding the proposed treatment/s.

Conclusions:

In a high rate of encounters GPs do not facilitate patient participation. In practice we observed that PIDM can occur at different levels.

Doctor's communication quality is higher depending on the degree of participation. These results support our previous concept of PIDM and the value of the CICAAD as a tool for measuring PIDM. Patient's wishes of participation seem to increase when doc gives the opportunity to participate and some patients perceive to be involved even when no specific behaviour from the doctor is detected.

Points for discussion:

The concept of "involve patients in decision making" in Primary Care.

Tools for grasping this phenomenon.

Correlation among external evaluation and patient appraisals.

PRESENTATION 7: Friday 8th May, 2009
14.30 – 15.00 h.

FREESTANDING PAPER

TITLE: The European EUCCLID pilot study on care and complications in People with type 2 diabetes in primary care.

AUTHOR(S): Kees Gorter, Johan Wens, Xavier Cos Claramunt, Pinar Topsever Kamlesh Khunti, Anne Karen Jenum, Nikolay Khalangot Margalit Goldfracht, Imre Rurik, Christophe Berkhout, Christos Lionis Guy Rutten.

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Background:

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

Research question:

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

Method:

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

Outcomes:

feasibility of logistics, central laboratory and dataflow, prevalence of indicators of metabolic control.

Results:

In all 103 patients were included from 22 GPs in 11 countries. A total of 1.184 DM2 patients participated from the rural practices (19 (Israel) to 524 (UK)) and 1.079 DM2 patients from the urban practices (9 (Israel) to 338 (UK)). After random selection, biomaterials and questionnaires were obtained from 52 patients from urban and 51 patients from rural practices.

Patient characteristics:

55% female, mean age 66 years (sd 10.6). Biomaterials: mean BMI 29.2 kg/m² (sd 5.3) ranged from 26 (Norway) to 34.5 (Spain). HbA1c 7,1% (sd 1.3) ranged from 6.6 (UK and Hungary) to 8.0 (Ukraine), systolic blood pressure 134 mm Hg (sd 16.3) ranged from 126 (Hungary) to 144 (Ukraine) and total cholesterol 4.9 mmol/l (sd 1.2) ranged from 4.1 (UK) to 6.2 (Ukraine). Questionnaires: EuroQOL VAS mean 70 (sd 21,5) ranged from 46 (Ukraine) to 81 (Norway).

Conclusions:

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

Points for discussion:

1. To assess quality of diabetes care, data on patients' adherence and on GP's clinical inertia and barriers to activity are needed. Suggestions on how to incorporate these in an European study.
2. Suggestions for questionnaires to include in the main

PRESENTATION 8: Friday 8th May, 2009
15.00 – 15.30 h.

FREESTANDING PAPER

TITLE: Are abstracts presented at EGPRN meetings followed by publication?

AUTHOR(S): Paul Van Royen, Hagen Sandholzer, Frances Griffiths
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Background:

Research presented to a scientific meeting is often inaccessible to clinicians, unless it is also published in a journal.

Research question:

To assess the publication rate of studies presented at 10 European General Practice Research Network (EGPRN) meetings, from two time periods (1999-2002 and 2005-2006).

Method:

All authors were contacted by postal questionnaire or by e-mail. Presentations were rated as published if a copy of the (pre) publication or a letter confirming acceptance by a journal was included, or when the publication was found by a Medline search.

Results:

Information was obtained on 249 presentations. In total 111 (45 %) presentations were published. Papers were most frequently published in The British Journal of General Practice, the Scandinavian Journal of Primary Health Care and Family Practice. However only 63 % of the evidence was published in English Medline listed Journals, increasingly also in non general practice journals. Discussion at EGPRN meeting was rated as helpful by 60% of the presenters who published their results. The major reason for non-publication was that the projects presented were not complete. This reflects the EGPRN philosophy to act as a discussion forum for research ideas or ongoing research at an early. The most frequent cause for non-publication was failing to submit the paper at the time of follow up (105 responses).

Conclusions:

At EGPRN meetings often research ideas or ongoing research are presented and discussed. In this light the ratio of published work to presented work compares well with the result of international meetings of other specialities. The discussion is valued as very helpful for publication. Presenters, presumably those who are not native English speakers, need help in submitting and publishing their work in international Medline listed journals.

Points for discussion:

- Do you see other reasons for non-publication of papers presented at EGPRN?
- Do we need a publication strategy for our EGPRN network in order to increase the publication rates?
- How could the results of this survey help us in prioritizing future activities?

PRESENTATION 9: Friday 8th May, 2009
14.00 – 14.30 h.

FREESTANDING PAPER
Ongoing study, no results yet

TITLE: Relative effectiveness of GINA 3 and 4 asthma medications in 6-18
Year old children: A network meta-analysis.

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Background

Several treatment options are available for treatment of asthma in children. Current guidelines are based on some randomized controlled trials performed in children, but mainly on scientific evidence found in adults or based on consensus. For asthma, drug treatments are compared to placebo, not against each other, although such evidence is what a physician needs in practice. In the absence of a collection of large, high quality, randomized trials comparing all eligible treatments, indirect comparisons of multiple treatments are a way to rank order treatments as to their effectiveness. Using direct and indirect comparisons, a 'network structure' can be composed.

Research Question

How do the different drug treatments' effectiveness compare for children 6-18 years old diagnosed with moderate persistent asthma in step 3 and 4 of the GINA-guideline?

Method

A literature search was performed to identify randomized controlled trials of all direct and indirect comparisons of treatment options according to the GINA guidelines step 3 and 4. Two independent reviewers assessed all references and extracted data from the included references. We performed a comprehensive 'network' meta analysis of treatment options for asthma in children for which randomized trials have been published and will rank the relative effectiveness of all options. Using logistic regression, the relative effectiveness of each treatment can be calculated. Bayesian methods will be explored as well.

Results

Thus far more than 7500 articles have been screened and of these 19 have been included. At this moment we are analyzing the data obtained and expect to be able to present the results at the conference.

Conclusion

A clear overview of the effectiveness of the treatment options for children 6-18 years old diagnosed with moderate persistent asthma.

Points for discussion: -

PRESENTATION 10: Friday 8th May, 2009
14.30 – 15.00 h.

FREESTANDING PAPER

TITLE: The effect of different operational definitions of asthma on clinical prediction rules of childhood asthma.

AUTHOR(S): Karina van Wonderen, Lonneke van der Mark, Patrick Bindels
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Background:

Clinical prediction rules, by providing illness probabilities, may be used to help physicians choose management options. It is unclear how much asthma prediction rules may be affected by variation in the (operational) definition of asthma.

Research Question:

What is the impact of different asthma definitions on the proportion of children for which a physician remains in doubt with respect to management (“area of clinical indecision”) after application of a prediction rule
Method: We performed a Medline search (from 2000 to 2008) for cohort studies on childhood asthma. We extracted data on the (operational) definitions of asthma used therein. Next, we constructed logistic regression models for 6 different definitions, using wheezing, eczema, and specific IgE as predictors. To illustrate the potential impact of using different definitions on clinical decision-making, we defined an area of clinical indecision (posterior probability between 25% and 60%) and calculated the number of children who remained inside this area after application of the prediction rule. Proportions, differences between proportions and their 95% confidence intervals were calculated using the bootstrap.

Results:

The search yielded 1238 references, of which 142 were included. These 142 references yielded 53 different definitions of childhood asthma. Fifty-seven percent of definitions were based on a doctor’s diagnosis (without time constraint) with or without other symptoms or medication use. In 11% of the papers, bronchial hyperresponsiveness or spirometry was a component of the definition. In 11% of the references, asthma was defined using asthma symptoms alone. The percentage of children whose posterior asthma probability was in the area of clinical indecision varied from 11.5% to 76.4% depending on the operational definition.

Conclusions:

The performance of a prediction rule may depend much on the operational definition of asthma used to build it. Physicians should pay close attention to how asthma was defined when using a prediction rule.

Points for discussion:

Crude prevalence rates may strike high; we used clinical data of an ongoing prospective cohort study for children with high risk for developing asthma.

PRESENTATION 11: Friday 8th May, 2009
15.00 – 15.30 h.

FREESTANDING PAPER
Study proposal / idea

TITLE: The SpiFP (Spirométrie in Family Practice) study. Study design.

AUTHOR(S): S. Cadier, P. Barraine, C. Gut-Gobert, C. Leroyer, Jean Yves le Reste

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Background:

Smoking cessation is the only intervention that can modify the natural history of COPD, a leading cause of mortality according to WHO. Smoking cessation, using the “minimal intervention” strategy, is applicable and relevant in a primary care setting. Whether spirometry testing, as a biomedical risk assessment tool, is up to increase smoking cessation rate remains controversial.

Research question:

is spirometry, associated with the “minimal intervention” strategy more effective on smoking cessation rate than the “minimal intervention” strategy alone?

Method:

The setting will be in family practice with a recruitment of 120 GPs in charge of trainees in seven French universities. We will train all GPs for the “minimal intervention” strategy. GPs will then be randomized in two groups: “minimal intervention” strategy alone vs “minimal intervention” strategy and spirometry with a collective training in the case of spirometry use. Each GP will aimed at including all smokers older than 18 years over a one year period. The end point will be at twelve months of the intervention, each patient will be asked for smoking status and a carbon monoxide test will be performed. Individual patient’s data will be computerized in one central database, using a eCRF.

Estimation of the study sample:

taking the hypothesis of at least a quarter more smoking cessation rate of at 12 months in the spirometry group, the inclusion of 5000 patients in each group is needed (unilateral testing with an α error set at 5 % and a β error set at 20 %).

All comments are welcome. (no results and no conclusion at it is a study design)

Points for discussion: -

PRESENTATION 12: Friday 8th May, 2009
16.00 – 16.30 h.

FREESTANDING PAPER

TITLE: Musculoskeletal problems in overweight and obese children.

AUTHOR(S): Marjolein Krul, J.C. van der Wouden, F.G. Schellevis
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Background:

The obesity epidemic in children is spreading at alarming rates. Musculoskeletal problems can influence physical activity.

Research questions:

- Do overweight and obese children report more musculoskeletal problems in daily life than their normal-weight peers?
- Do overweight and obese children seek help for musculoskeletal problems more often than their normal-weight peers?

Methods:

We performed a cross-sectional database and face-to-face interview study that included 2459 children aged 2-17 years from Dutch General Practice. We collected self reported height and weight (BMI), self reported musculoskeletal problems in the 2 weeks prior to the interview, General Practitioner (GP) consultations for musculoskeletal problems in one year and age (two age groups were analyzed; 2-11 years and 12-17 years, because of the proxy interview in the youngest age group). We calculated Odds Ratios (OR) and 95% Confidence Intervals (CI) for musculoskeletal problems in overweight and obese children, compared to normal weight children.

Results:

Overweight and obese children in both age groups (2-11 years and 12-17 years) reported significantly more musculoskeletal problems; OR (95%CI) 1.86 (1.18-2.93) and 1.69 (1.08-2.65), than normal weight children. The total group of children with overweight and obesity reported more lower extremity problems, than the normal weight children; OR 1.62 (95%CI 1.09-2.41), they reported more ankle and foot problems than children with normal weight; OR 1.92 (95%CI 1.15-3.20). Overweight and obese children aged 12-17 years consulted the GP more often with lower extremity problems than the normal weight children; OR 1.92 (95%CI 1.05-3.51).

Conclusion:

This study shows that overweight and obese children more frequently experience musculoskeletal problems, than normal weight children. Children with overweight and obesity aged 12-17 years more frequently seek medical help for their lower extremity problems than their normal-weight peers.

Points for discussion:

- 1) The vicious circle of being obese, musculoskeletal problems and physical inactivity, where will it most often start? What is the best place for intervention?
- 2) Do we need more research to gain more insight in this vicious circle?

PRESENTATION 13: Friday 8th May, 2009
16.30 – 17.00 h.

FREESTANDING PAPER

TITLE: General practice-based intervention for suspecting and detecting Dementia in France. A cluster randomized controlled trial.

AUTHOR(S): Virginie Rondeau, Denis Pouchain, Jean-François Dartigues et al, for the IMAGINE study group

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Aims:

To evaluate the impact of a general practice-based intervention on 3 021 patients aged > 75 years with spontaneous memory complaints and to identify evocative signs of Alzheimer's disease through a cluster randomized controlled trial.

Question:

What is the impact of an intervention on GPs capacity to identify Alzheimer disease in patients with memory complaint?

Method:

681 general practitioners (GPs), randomly selected and assigned to an intervention (n = 352) or a control group (n = 329), and 214 specialists to confirm diagnosis. The intervention group participated in training sessions relating to dementia diagnosis and the use of brief neuropsychological tests. The control group dispensed care. The primary outcome was suspicion of dementia by GPs. The secondary outcome was accurate detection of dementia by the GPs.

Results:

Most patients (96%) were already followed by the GPs for 10.8 years. Suspicion of dementia was two-fold higher for GPs in the intervention group (adjusted OR = 1.99, p < 0.0001). Probability of suspected dementia increased with patient age and decreased with educational level. However the positive predictive value was not significantly different between the two groups (60.9% vs. 64.4%, p = 0.41). GPs from the intervention group also had a higher probability (adjusted OR = 2.24, p = 0.01) of correctly detecting demented patients. The study showed that information on dementia and application of simple psychometric tests could improve the precision of a GP's diagnosis without changing the efficacy of detection of dementia.

Conclusion:

Information on dementia and application of simple psychometric tests could improve the precision of diagnosis by GPs without changing the efficacy of the detection of dementia. Other methods should be tested in order to improve the detection rate, in particular intervention in patients with no cognitive complaints.

Points for discussion:

How to improve GPS capacity to recognise Alzheimer disease in old patients with spontaneous memory complaint ?

PRESENTATION 14: Friday 8th May, 2009
17.00 - 17.30 h.

FREESTANDING PAPER
Ongoing study with preliminary results

TITLE: High prescription rate of ATD drugs in France: GPs' motives.

AUTHOR(S): Alain Mercier, I. Aubin, L. Coblenz, M. Schuers, E. Lefebvre, E. Mauviard
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Background:

Antidepressants (ATD) drugs are very commonly prescribed in all industrialized countries. Consumption in France is higher than in other European countries. The reasons for this higher prescription rate are still unknown. In this study we explore the GPs attitudes on prescribing ATD in France

Research question:

Understanding either contextual and diagnostic reasons to prescribe ATD among French GPs

Method:

Qualitative data about reasons of ATD use were collected through GP focus groups. This sensitive topic was also completed by in depth interviews, to be sure not to miss any essential information, and to explore the points which remained unclear. The main points of the topic guide insisted first on social, family, or personal situations and patients' requests. Secondly, it focused on possible "non psychiatric" diagnoses. The analysis was made with a phenomenological approach and content analysis, using QSR Nvivo 8.0 Software.

Results:

This is an on going study. Preliminary results show that GP's prescriptions were mainly influenced by social and professional conditions of their patients. They also used ATD as a "diagnostic test" when dealing with unspecified symptoms, but only when they were associated with mental health problems. They commonly used ATD for "non psychiatric" diseases, such as migraine, colopathy, pain conditions, sexual problems, but those conditions were always combined with mental health problems.

Conclusions:

According to the GPs some prescriptions seem to be justified out of official guidelines.

Points for discussion:

What do you know about recommendations and attitudes for ATD prescriptions in "non psychiatric diagnosis" in other countries?

PRESENTATION 15: Friday 8th May, 2009
16.10 - 16.20 h.

ONE SLIDE / FIVE MINUTES
Ongoing study, no results yet

TITLE: Management of acute chest pain in rural practice in Europe.

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Background:

GPs have often to face the problem of acute chest pain. It is probably the most frequent symptom in emergency cares and certainly one of the most important because it can disclose some severe diseases as Acute Coronary Syndrome, pericarditis or pulmonary embolism. In order to make a correct diagnosis and to provide a right therapy the AVAILABILITY OF SOME TECHNOLOGIES and the TIME NEEDED for this are crucial. GPs working in rural and isolated areas have probably to overcome further problems and to find special way for applying guidelines.

Research question:

We would like to draw a picture of real management of this problem in different rural setting across Europe and to point out problems and barriers to follow international GLs.

Method:

We choose the topic after a wide discussion on EURIPA's listserver and in a workshop during Wonca Europe Conference in Paris 2007. We asked EURIPA's members to take part as volunteers in this project and we gathered about forty practices in different countries available for collecting clinical data. The protocol of the study is the result of further discussion in a special listserver for researchers and consists in a perspective longitudinal observational study.

We developed a form in order to record each case of "NEW ONSET (not due to a trauma) CHEST PAIN (for which we are usually asked for an unscheduled consultation, an home visit or an after hours call) WHEN WE HAVE TO DO WITH A DIFFERENTIAL DIAGNOSIS ABOUT A SEVERE HEART OR LUNG DISEASE". The form aims to collect details about the epidemiology of the problem (frequency, symptoms), the process of care (timing of intervention, decision procedures, diagnosis instrumental supports) and outcomes.

Results: -

Conclusions: -

Points for discussion:

- is the problem relevant?
- is the methodology correct and suitable?

PRESENTATION 16: Friday 8th May, 2009
16.20 – 16.30 h.

ONE SLIDE / FIVE MINUTES
Study proposal / idea

TITLE: Impact of Virtual Consultancy in the number of GP referrals to Dermatology.

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Background:

In Portugal, dermatologists often criticize GP's for their lack of dermatology knowledge and skills, as well as for writing poor referral letters. In many case GP's are criticized for referring patients who do not meet referral criteria.

Virtual Dermatology Consultancy may help GP's decrease their referral rates to dermatology by allowing them to send pictures taken at point of care and to discuss clinical cases with experienced dermatologists via email. Dermatologists then provide feedback, namely diagnostic or therapeutic guidance, which in many cases may allow the GP to manage cases adequately and thus avoid the need to refer the patient. Virtual Dermatology Consultancy can also function as a means of continuous professional development for GP's, and foster the integration of primary and secondary health care.

Research question:

Does virtual consultancy in dermatology decrease the number of referrals from general practice to dermatology?

Method:

This is a prospective cohort study (the study population are GP patients with dermatological lesions). For one year, a GP trainee, will alternate periods of two months, in which he, on one hand, exchanges emails with a dermatology specialist based at the local Central Lisbon Hospital concerning dermatology cases of the practice. On the other hand, he will alternate with equal periods in which he will decide on his own how to manage the patient without any email advice.

The GP trainee would send emails to the dermatologist including a photo of the dermatologic lesion, as well as brief clinical information from the patient's history and physical examination. The dermatologist would then email the GP trainee back with diagnostic and therapeutic guidance, as well as with advice as to whether or not to refer the patient. The GP trainee would then manage the case, or refer it, according to the dermatologist's guidance.

Points for discussion:

- Is there a need for a more widespread use of Virtual Consultancy in General Practice?
- Use of Virtual Consultancy as a CPD tool for GP's.
- Impact of Virtual Consultancy on integration of Primary and Secondary Health Care.

PRESENTATION 17: Friday 8th May, 2009
16.30 – 16.40 h.

ONE SLIDE / FIVE MINUTES
Study proposal / idea

TITLE: Type 2 Diabetes Mellitus Control in Mediterranean Countries: a Collaborative Survey in the Primary Care settings. Second step: research protocol.

AUTHOR(S): Ferdinando Petrazzuoli, Xavier Cos, Frank Dobbs, Christos Lionis
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Background:

Issues of effectiveness regarding management of type 2 diabetes (T2D) in primary care have a central place in the literature. In the UK, an incentive scheme to improve quality of care delivered by general practitioners has recently been implemented with great success. This study aims to measure quality performance in T2D management across different Mediterranean Countries (Italy, Spain, Greece, France, Malta, Israel, Croatia, Turkey) using of some of the quality indicators for T2D established in the UK Quality and Outcome Framework (QOF).

Research question:

What is the level of control of T2D among Mediterranean Countries in the Primary Care settings?

Method:

A retrospective cohort analysis of the medical records of patients with T2D having consulted in primary health care settings of different Mediterranean countries between 01/2007 and 12/2007. Records will be selected at random.

Exclusion criteria: newly diagnosed patients; steroids or a mayor surgery in the last three months; dementia; terminal illness or extreme frailty. The variables (outcome and explanatory variables) to be evaluated will be: 1) sociodemographic parameters 2) metabolic and clinical data: HbA1c (as the main outcome indicators), urinary microalbumine, LDL cholesterol, blood pressure, diabetic complications, co-morbidities. To assess quality of management, we will use the following targets: HbA1c<7%, SBP<130mmHg and/or DBP<80mmHg, microalbuminuria<30mg/day, and LDL<100mg/dl. The analysis will be performed at a patient level. A sample size will be calculated to detect a 10% difference in performance, with 95% confidence and 80% power. Since great variance of values and distributions for many quality indicators is expected, we will provide non-parametric bootstrap techniques to compare arithmetic mean between countries.

Points for discussion:

1. Relevance of the study.
2. Validity of the methodology.

PRESENTATION 18: Friday 8th May, 2009
16.40 – 16.50 h.

ONE SLIDE / FIVE MINUTES
Study proposal / idea

TITLE: The improvement of quality of care in family practices using electronic data system in Poland.

AUTHOR(S): Roman Topor-Madry, R. Kacorzyk, T. Sobalski, Z.J. Król, A. Windak
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Background:

The dedicated computer systems are not often used in family practices in Poland, even the possible benefits are impressive as showing the experience in other countries. The drEryk is a computer software developed purposely for family practices and designed by family doctors to support process of diagnosis, treatment, and monitoring patients using electronic data system. Currently it is used by near 400 practices in Poland.

Research question:

The aim of the project is to assess the benefits of electronic documentation in family practices in Poland in improvement of quality of care, patient monitoring and management.

Method:

Participants of the project will be family practices using drEryk software. The practices agreed to participate will create the net and share the experience of using the system and the data. The data collection would consist of standardized questionnaires which will be filled by family doctor periodically and non-individual data coming from the practices. The published results will be aggregated and blinded. Each family doctor would have access to him/her individual data which will be compared to average data of the net. The main data would be quality indicators and data referred to management of the practice.

Expected Results:

The outcomes of the project are clinical and not-clinical. The main clinical outcomes are morbidity (with a special aspects of multimorbidity in older age), use of drugs, use of procedures, basic screening procedures (blood pressure, blood glucose and diabetes), use of prevention advices. Non clinical aspects include time of visit, waiting time, access to information, reporting for national statistics and insurance systems, management etc.

Conclusions:

The collaboration of family practices in the nets are very useful way for improving quality of care. Support from dedicated computer software would facilitate running single practices and give the hard data for more fruitful net collaboration.

Points for discussion:

1. electronic documentation in Poland (benefits of using and NOT using)
2. quality control and support based on electronic computer system
3. net collaboration and comparison of quality outcomes

PRESENTATION 19: Friday 8th May, 2009
16.50 – 17.00 h.

ONE SLIDE / FIVE MINUTES
Ongoing study, no results yet

TITLE: Project FIRE: Swiss General Practice Electronic Database in an early Stage.

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Background:

In countries like UK, Germany, Australia, Malta etc. electronic databases facilitate research in general practice settings. Ideally data from practices using a primary care classification are uploaded directly from electronic medical records (EMRs) to a central server. Less than 13% of GP practices are fully equipped with EMRs.

The executive board of swiss society of general practitioners in cooperation with the Zurich institute of general practice started a project last year.

The aim of the project

Is to build a research network of 100 GP practices until 2010 using EMRs and coding problem list and reason for encounter using ICPC-2.

Method:

The project integrates the following steps: A pilot group of 15 GPs attended courses about using ICPC and started coding in daily routine practice. A WIKI-Website was set up to adapt a German and French ICPC - Thesaurus to terms used in Swiss General Practice. A roadmap was published to standardize architecture, formats and important procedures in GPs EMRs. A minimal data set was defined for the first stage. All companies offering practice information systems in Switzerland got detailed information about specifications for XML-files and were asked to offer an export tool for the data set. The central server was set up to receive data from practices.

Results:

In the second semester of 2009 we intend to collect data from pilot practices such as vital data, laboratory test results, drug prescription and list of problems and diagnoses. Analysis and benchmarking tools are under development.

Conclusions: -

Points for discussion:

1. Which steps in completing the dataset in further project-stages have proven to be most useful?
2. Anonymized data without unique patient identifier allow only cross-sectional data analysis. What do we have to take into consideration to prepare for future.

PRESENTATION 20: Friday 8th May, 2009
17.00 – 17.10 h.

ONE SLIDE / FIVE MINUTES
Ongoing study with preliminary results

TITLE: Is the activity of a GP in an Emmaus Community comparable to the Usual activity of a GP working in an urban district?

AUTHOR(S): Christophe Berkhout, Stéphane Cogez, Gilles Hebbrecht
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Background:

Emmaus Communities are places where precariously living people can recover if they participate by their work to the communities' shared costs and enter a reintegration programme. A weekly general practice intervention is carried out on the Dunkirk Community's site.

Research question:

Is the activity of a GP working in an Emmaus Community comparable to the usual activity of a GP working in an urban district?

Method:

Retrospective epidemiological survey on for 5 years ongoing encounters' registered data that were extracted from the electronic record and compared with data from the OMG database. Outcomes were the "results of consultation" from the dictionary of consultation results. Analysis was at first descriptive and differences in the activity of Emmaus Community settled GP's versus "standard urban settled GP's" were tested.

Results:

The data from the Dunkirk Emmaus Community totalized 263 patients, 2 075 encounters and 2 695 results of consultation. Analysis is ongoing.

Preliminary results should be ready for presentation in Bertinoro.

Conclusions might find evidence to tell if a GP needs a special training to deal with precariously living people.

Points for discussion:

1. Do you know other experiences of electronic data recording for the specific care to precariously living people with usual GPs' recording tools?
2. Can precariously living people reach the same quality of primary health care than any other non precarious.

PRESENTATION 21: Saturday 9^h May, 2009
09.30 – 10.00 h.

THEME PAPER

TITLE: Leonardo Project: a patients empowerment approach based on Chronic Care Model into the setting of General Practice. The role of the specific WEB based software.

AUTHOR(S): Ernesto Mola, R. Rizzo, A. Aquilino, A. Musilli, M. Panfilo, R. Rollo

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Background:

Project Leonardo, a feasibility study promoted by a public-private partnership between the Puglia Regional Health Authority (Italy) and Pfizer Italia, was a disease management program aimed to show that a team-based approach including Care Managers (CMS), General Practitioners and specialists as "partners" of the patient with chronic conditions, promoting an empowerment approach, can improve adherence to treatment and follow up, clinical outcome, patients and health professionals satisfaction. The whole program was supported by a web based software, called Informacare.

Research question:

What was the role of Informacare in collecting data?
Did the software give an useful decisional support to the CMS?
What were benefits of using a web based software?

Method:

30 nurses / Care Managers, appropriately trained, have been inserted in 20 Family Medicine Group gathering 83 GPs, to support and coach 1160 patients in self-management their chronic conditions and doctors in drafting an Individualized Care Plan based on guidelines and needs, expectations, social, and economic situation of patients.

Results:

Patients enrolled in Leonardo Project improved adherence to healthy lifestyles and to medications as well as clinical outcomes and satisfaction.
The web based tool allowed the management team to have real time data organized in weekly reports, facilitating the project monitoring, focusing on attained results and critical areas that needed additional training.
Informacare supported CMS and doctor in defining individualized Care Plan for each patient.
The web based solution also guaranteed data safety.

Conclusions:

Project Leonardo demonstrates the feasibility of a patient-centred, team-based model of care, including well trained CMS in general practices to manage patients with chronic conditions. The web based tool Informacare appeared essential to collect data, to monitor step by step program activities, and as decisional support.
General Practice database could benefit of a similar software in managing chronic patients.

Points for discussion:

1. Usefulness of the EMR in managing chronic patients.
2. Usefulness of a shared software on the WEB.
3. EMR as decisional support.

PRESENTATION 22: Saturday 9^h May, 2009
10.00 – 10.30 h.

THEME PAPER
Ongoing study with preliminary results

TITLE: Do population characteristics make a difference?

AUTHOR(S): Catharina van den Dungen, N. Hoeymans, F. Schellevis, G. Westert

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Background:

In the Netherlands, morbidity rates derived from general practice registration networks (GPRNs) are used as a public health indicator. These networks continuously collect anonymous information on patients about problems presented in general practice. In the Netherlands many GPRNs exist, but the morbidity rates differ.

Research question:

What is the influence of adjusting for the differences in socio-economic status (SES), degree of urbanization, and non western population among Dutch GPRNs on morbidity estimations of diabetes, asthma, coronary heart disease (CHD) and herpes zoster?

Method:

We used the recorded information of several Dutch GPRNs on the incidence and prevalence of their population in 2007. The distribution of gender, age, SES, the degree of urbanization and non western population is known in each GPRN. We calculated the incident and prevalent rates of diabetes, asthma, CHD and herpes zoster.

We compare the morbidity rates adjusted for age and gender with the rates also adjusted for SES, degree of urbanization or percentage of non western population.

Results:

Preliminary results: After adjustment for SES, ethnicity and degree of urbanisation the variation in morbidity rates among Dutch GPRNs declined. In May, we want to present the final results from the study.

Conclusions:

The tentative conclusion on the basis of the preliminary analysis is that adjusting for SES, degree of urbanisation and ethnicity has a positive influence on reliability, because the variation between them reduced. In further research we recommend to discount for these population characteristics.

Points for discussion:

1. Which different population characteristics are important to consider?
2. Which factors, next to population characteristics, can influence morbidity rates or improve the use of morbidity estimations?

PRESENTATION 23: Saturday 9^h May, 2009
10.30 - 11.00 h.

THEME PAPER

TITLE: The CONTENT-EPR as a tool for guideline implementation.

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Background:

Data of the CONTENT-database (CONTInuous morbidity registration NeTwork) revealed that against recommendation for treatment of uncomplicated lower urinary tract infections (uLUTI), trimetoprim (TMP) was prescribed in only 12% of the cases (quinolones 60%). Doctors justified their behaviour with perception of a high rate of therapy failure. Research question: Internal evidence and experience of the GPs seem to outweigh external evidence. Does a proper trial and a control of the success rate with the CONTENT-EPR effect change?

Method:

Mixed three-step study design. In a baseline focus-group opinions concerning guideline recommendations were assessed. In a 3-months trial period participants prescribed TMP (2x150mg/day for 3 days) to their uLUTI patients, documented in episodes of care in the CONTENT-EPR. Therapy failure was defined as necessity to prescribe a second antibiotic or referral to specialists. In a second focus group GPs were confronted with the results and the effect on their opinion was explored. Results: Therapeutic decisions were mainly driven by former hospital training and what was perceived as common therapy in letters after hospital discharge and from specialists. GPs felt no need to change a successful and common regimen. TMP had a success rate of 94% (84 episodes of uLUTI). The proper trial strongly changed the opinion towards the use of TMP. Personal and group experience still were named as having the strongest influence on decision (N=9 GPs in two focus-groups). Statistical data analysis was seen as an important means of confirmation. Documentation in the CONTENT-EPR was judged as easily feasible.

Conclusions:

Internal evidence, experience and peer group opinion seem to be the strongest determinants for clinical decisions. Ownership of data acquisition and analysis gives strong support in the process of change and is easily feasible with an adequate EPR.

Points for discussion:

Data quality in research data-bases supplied by EPRs is dependent on the perceived usefulness and meaningfulness of data acquisition on the side of the participating GPs. How can we further enhance GPs interest in working with their own data and improve.

PRESENTATION 24: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: Use of computer and electronic records among primary Care doctors in Turkey.

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Background:

Computer and electronic medical records are thought to help primary care physicians in their daily work and making their clinical decisions. We aimed to gather ideas of primary care physicians and learn how they use computers for clinical and scientific aims.

Research question:

What are the ideas of primary care physicians about use of computers and electronic medical records (EMR) for clinical and scientific aims, and how they behave in their clinical practice?

Method:

We performed a questionnaire, which included questions aiming to learn doctors' behaviors about using computer and EMR, to 86 primary care doctors who were selected randomly among participants of a national primary care conference. All analyses were performed with SPSS for Windows, version 13.0.

Results:

Most of the 86 respondents, 80,2% had computers in their offices, and 87,2% had computers in their clinics available for common use. Of them, 89,5% use an electronic medical record system at the office. About using an EMR system, 67,4% of respondents defined it to be increasing their daily burden, but 65.1% pointed out the increase of their medical care quality, only 2.3% thought that using an EMR system is unnecessary. Of all respondents, 18,6% thought that using an EMR system decreased their daily burden. Of the respondents, 55.8% rated the EMR system that they use to be poor about privacy of the information of the patients, and 50% rated their system to be poor on saving patients' datas.

On the other hand, a big rate of respondents (61.6%) thought that using EMR system engrave the time and effort on using it.

Conclusions:

Most of the physicians agree that inclusion of computers and EMR into daily clinical practice is useful, providing that EMR system must be improved.

Points for discussion:

1. Can it be helpful to standardize the electronic medical recording systems among all primary care givers in order that it can also be helpful to standardize the further in service training?

PRESENTATION 25: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: SumEHR in Belgium which practices have them and how are clinicians using them?

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Background:

Continuity of primary care requires availability of patient information at all moment. In Belgium a new standard for communication between practices is introduced since 2007, the 'Summarized Electronic Health Record' containing core health information of patients. It aims availability of data during out of hours services and further facilitate exchange health information.

Research question:

How to develop quality exchange and data collection in primary care?

Method:

Data were collected from a small convenience sample of practices participating in development of standards for electronic medical recordkeeping. A dummy patient was created and sent to 20 practices, representing the ten Flemish formally accredited softwares. A facilitator visited the practice to check how the patient was filed in the EMR. The XML (SumEHR) export was collected for further analysis. Results were discussed at a meeting with participants and software packages.

Results:

The XML-syntax (export message) was not valid for 8 out of 10 softwares.

Semantics or content showed a diversity in SumEHR export. Main reasons were coding behaviour of the GP, presence (or absence) of links between the different levels of the EPR. A better outcome was found among practices using episode registration.

Conclusions:

Technical problems make it impossible for different practices to communicate or exchange patient data in a secured way. To improve outcome and utilisation content of SumEHR needed to be better defined and application harmonised between software packages. More standardised data entry should be promoted.

Points for discussion:

1. How can we enhance use of more standardised input of patient data in the EMR.
2. Is development of a European standard for summarised records feasible?
3. Can Health Research Information System content be improved through data collection networks?

PRESENTATION 26: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Analysing Family Physicians' Financial Data in Estonian Health Insurance Fund's Database for Family Physicians' Bonus Payment System – results after three year experience in Estonia.

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Background:

To promote the family physicians (FP) to be actively involved with disease prevention, to prevent the spread of infectious diseases and ensure more effective monitoring of ill persons in case of chronic diseases, a bonus payment (BP) system was implemented in 2006.

Research question:

Can we use financial data sent by FP to analyse quality of care and how was the additional bonus payment applied with objective to improve quality of care?

Method:

We have used the Estonian Health Insurance Fund's (EHIF) financial database as well as the activity reporting from the family physicians. The number of voluntarily participating FP-s in voluntary quality bonus system was 63% in 2006, 57% in 2007 and 78% in 2008. The quantitative analysis includes the target groups' coverage and interventions provided, where family physicians involved in bonus pay scheme and others are compared.

Results:

The results after three years of implementation are encouraging.

- All FP-s sent their financial data via electronic channels (submitted bills) to EHIF throughout all three years.
- FP-s who participated in the program performed more activities as compared to FP-s who did not participate in the quality bonus program (like family nurse's individual consultations, infant vaccination, management of diabetes and essential hypertension).
- The indirect positive impact of the quality bonus system was the improved results of all FP-s (participants as well not participants) compared to the results of the first and second year of the system.

Conclusions:

- The FP -s financial data collection is suitable for bonus payment system and monitoring of the policy.
- The patients with chronic diseases are more involved in testing and those primary care practitioners, participating in the bonus pay system, are more actively engaged in preventive care.

Points for discussion: -

PRESENTATION 27: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study, no results yet

TITLE: A new tool for diagnosis of Chronic System Diseases in primary care.

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Background:

Due to the low prevalence of chronic system diseases (CSD) in primary care, there are only few papers dealing with that topic. These ones suggest an underdiagnosis and delay in treatment for patients with rheumatic arthritis managed by general practitioners (GP). We made the hypothesis that GPs and the trainees in family practice are not comfortable with the diagnostic of these rare but unavoidable diseases.

Research question:

Will a new tool, helping to screen our patients for the diagnostic of CSD, be helpful for the GP and maybe other specialities?

Method:

1. Taking in account the prevalence of CSD, we are building a reminder including a listing of clinical symptoms with their positive and negative predictive values. This will lead the GP to make different hypothesis. This electronic tool will allow the GP to ask the right screening test (X-rays, antibodies, hormones) when he's confronted to a suspicion of CSD.
2. This reminder will be validated by one or a few specialists in CSD.
3. This validated tool will be distributed to all physicians in Alsace area via internet, willing to answer a questionnaire dealing with CSD before and after using the tool
4. An adapted questionnaire like the one mentioned above will be given to all our post graduate trainees in family practice.

Results:

The questionnaire for the trainees will assess the need for medical education relevant to the CSD in a pre- and post- graduate level.

The questionnaire for physicians before and after 3 months using the tool could give us an evaluation of the satisfaction using the tool.

The rate of downloading will give an idea of their needs.

Conclusions:

The tool and the trainees' expectations should be available for the meeting.

Points for discussion:

How to build a relevant questionnaire to assess the satisfaction for the tool?

PRESENTATION 28: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Quality of Encoded data from GPs EPR.

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Background:

The quality of data analysis from EPR in General Practice depends on the consistency of the reported data. The best way to manage the data from the EPR is by using classifications adopted for primary care. Encoded data are better manageable than free text, and ICPC is a good tool for GPs reporting.

Research question:

Starting up a registration network we want to have a look on the quality of the encoding of the data by the GP

Method:

For this observational study we selected 13 GPs working with the same software. The software vendor offered the only free training the GPs had. That system has been selected because of the implementation of a Belgian Thesaurus defining more than 48.000 clinical concepts that can be used as labels in the different parts of the journal. By using this Thesaurus all of the data are ICPC/ICD encoded in the background without a GP being a specialist in encoding. After three months the GP did the retrieval of all used codes in the EPR. The use of the codes was split up in all the different parts of the EPR journal (SOAP).

Results:

This retrieval illustrates on which level GPs are intended to encode spontaneously: 92,7% on diagnostic level and 58,2% to describe clinical interventions. The RFE has been encoded by 50% of the GPs. RFE is poorly encoded in follow-up encounters. GPs avoid repeated reporting: automated reporting offers better results.

Conclusions:

Our results demonstrate that encoding data by GPs using a good tool is feasible but we suppose this will be better after training. Within our observation we have no idea of the quality of the content of the encoding. We suppose that when the GPs win by using encoded information, they can do it quiet well.

Points for discussion:

1. How to improve quality of encoded data?
2. The importance of record structure?
3. Added value for GP of encoded data?

PRESENTATION 29: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Osteoporosis in premenopausal and postmenopausal women receiving long-term L-thyroxine therapy.

AUTHOR(S): Filippo D'Addio, Ferdinando Petrazzuoli, Nicola Buono
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Background:

The impact of long term L-thyroxine therapy (LTT4) on bone loss in pre- and post-menopausal women is a significant issue because of the large amount of women receiving this drug treatment. Scientific published studies show the effect on bone loss and on growing osteoporosis of LTT4 given at suppressive (high) doses, but studies performed on women with LTT4 given at replacement doses show a light effect on bone loss without an increase in clinical osteoporosis. The analysis of drug prescription GPs database is very useful to assess the link between LTT4 usually performed, and clinical osteoporosis.

Research question:

Is the prevalence of clinical osteoporosis in pre- and post-menopausal women treated with LTT4 higher than that in all the pre- and post-menopausal women?

Method:

From data of all drugs prescriptions performed during the years 2006 and 2007 of a drugs prescription database of 10 Italian GPs were extracted the sample of drugs prescriptions of women over forty linked to osteoporosis diagnosis (code 733 of ICD 9 classification). In these women, we searched the permanent prescription of L-thyroxine. We calculated the prevalence of osteoporosis in all the sample and in women of the sample that took L-thyroxine.

The statistical difference was evaluated with the software STAT-CALC EPI-INFO.

Results:

Of 3575 women over forty, 397 (11%) had drugs prescription related with osteoporosis, 264 (7%) had LTT4, 46 (17%) of these women in LTT4 had drugs prescription related with osteoporosis. The risk relative in this population is 1,7 and it is statistically significant.

Conclusions:

The data of drugs prescription database of 10 Italian GPs confirm a higher risk of clinical osteoporosis in pre- and post-menopausal women taking LTT4 usually performed.

Points for discussion: -

PRESENTATION 30: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Dizziness increases the risk of fractures: A retrospective cohort study.

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Background:

Dizziness is known to be associated with the risk of falls. However, there is not much direct evidence for the increase of fractures caused by dizziness.

Research question:

Do patients suffering from dizziness show an increased fracture rate?

Method:

Retrospective cohort study using a population-based administrative database. A cohort of n=2,442 patients with at least one diagnosis of dizziness between 01/1998 and 06/2003 was compared with n=16,125 age- and sex-matched control patients. The main outcome measure was any kind of first fracture after the index date of dizziness. In addition, we stratified by osteoporotic and non-osteoporotic fractures. Statistical analysis was performed using the Cox proportional hazard regression model adjusting for possible confounders.

Results:

Analysis revealed a significant effect of dizziness as an independent contributing factor to fractures (adjusted HR 1.26, 95%CI: 1.03-1.55). Moreover, a fracture in the year prior to the index date was highly associated with the incidence of a subsequent fracture (adjusted HR 2.69, 95%CI: 2.09-3.47) as well as male gender was (adjusted HR 1.30; 95%CI: 1.18-1.40). Stratified analysis revealed that each of these factors had an independent effect on the non-osteoporotic fractures (n=569), the adjusted HR of dizziness being 1.31 (95%CI: 1.05-1.64). Osteoporotic fractures, however, were strongly correlated only with a precedent fracture (adjusted HR 3.91; 95%CI: 2.31-6.63), and they were more frequent in female patients (adjusted HR 1.39; 95%CI: 0.97-1.98).

Conclusions:

Besides the “typical” elderly female patients being at risk of osteoporotic fractures, male patients suffering from dizziness should be carefully evaluated, and prevention strategies should be considered in order to minimize their risk of suffering non-osteoporotic fractures.

Points for discussion:

1. Validity of symptom-coded reasons for encounter such as dizziness.
2. Matching.

PRESENTATION 31: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Melanoma : how to adapt post-graduate and continuing education to the recent guidelines?

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Background:

Melanoma is a rare and severe cancer. As Incidence is getting stable in other european countries, it is still growing in France. Early detection of that skin cancer is the only way to reduce mortality. A new guideline promote a strategy that places the general practitioners in the center of healthcare coordination.

Research question:

Using that guideline, a training for interns and general practitioners should improve their ability to identify thin melanomas.

Method:

The training lasted half a day for the interns and one day for the GPs. They analysed the recommandation with a dermatologist expert. Short-term evaluation consisted in a pre-test and immediate post-test, with open questions and photo analysis. Mid-term evaluation was sent 3 months later by email. It consisted in open questions, photo analysis and qualitative evaluation of the training and their change in practice.

Results:

16 interns and 27 GPs were volunteers. The basic knowledge was good in both groups (67% and 63%). The short-term evaluation attested a global significant progress (78% and 76%, $p < 0.05$). The best results concerned risk factors and Breslow index. The notion of solar prevention for children was a failure.

Three groups of answers emerged in the picture analysis. A significant improve was noticed only in one of them, but recognition of melanoma progressed up to 88%.

The mid-term evaluation showed a partial loss of efficiency to analyse malignant lesions, but it did not affect their attitude for 92%.

Most of the participants appreciated the training, but wished to complete it with a clinical practice in dermatology.

Conclusions:

A one-day training improves the skill of interns and general practitioners to detect early melanoma at short and mid-term. Future trainings should insist on the use of a risk score and a systematic examination.

Points for discussion:

How to use risk score for melanoma in everyday practice?

PRESENTATION 32: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Functional abdominal pain in children in Dutch general practice.

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Background

Functional abdominal pain (FAP) is a common complaint in childhood that has a big impact on the child's daily life. Despite high prevalence's found in open population studies, difficulties in management and poor prognosis reported in secondary care studies little is known about childhood FAP in general practice.

Research questions

To determine workload and prevalence rate of childhood FAP in general practice, to evaluate patients' characteristics and GP's management.

Methods

Data of patients aged 2-17 years consulting for FAP were retrieved from the Second Dutch National Survey of general practice (electronic patient record database), carried out in 2001. During 1 year 90 general practices electronically coded all contact diagnoses, prescriptions and referrals. We calculated the percentage of consultations for childhood FAP and its prevalence rate per 1000 person-years. We compared the consultation rate for psychological and functional problems between children consulting for FAP and those consulting for other reasons and we determined referrals and prescriptions for FAP.

Results

FAP accounted for 2.5% (95% CI: 2.48-2.62) of all childhood's consultations and it had a prevalence rate of 63.3 per 1000 person-years. Ninety percent of patients consulting for FAP only consulted once or twice for this problem. Children who frequently consulted for FAP consulted twice as much for psychological and functional problems (respectively 224 (95% CI: 189-264) versus 117 (95% CI: 114-121) and 252 (95% CI: 215-295) versus 116 (95% CI: 113-119) consultations per 1000 person-years). GPs prescribed medication in 39.9% of all FAP-consultations and referred in 3.6%. During consecutive consultations GPs referred and prescribed more.

Conclusions

FAP is a significant health problem in Dutch general practice. GPs are very capable in managing this condition. Children with FAP referred to secondary care are a selection of frequent-consulters presenting more often with psychological and functional complaints.

Points for discussion: -

PRESENTATION 33: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Medical students' disease.

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Background:

Medical school exposes students to vast medical knowledge.

Studying a specific illness, might raise wrong interpretation of physical symptoms, so that symptoms that were otherwise considered normal are now regarded as a true sign of an illness.

Research question:

To examine the appraisal of self health state, existing fear of morbidity and level of health related anxiety among medical students throughout their learning period.

Method:

Anonymous questionnaires were distributed to 1st-6th year medical students at the Tel Aviv University medical school. The questionnaire was based on validated existing questionnaires. The variables tested were the degree of anxiety concerning health, fear of morbidity, demographic variables and future desired field of specialization. The questionnaires were analyzed according to their perceptual-cognitive vs. emotional-distress components.

Results:

An inclination trend can be observed in the perceptual-cognitive process throughout the medical years (a rise from 16.71% to 31.11% in the rate of students who replied: to a large extent – to a very large extent, $p < 0.001$).

However, we observed a rise in the emotional-distress process during the third year (a rise from 2.82% to 14.22% in the rate of repliers: to a large extent – to a very large extent, $p < 0.001$) and then a descent during the fifth year (from 15.28% to 6.19%, $p < 0.001$). The number of reported one's clinic visits, medication therapy or desired field of future specialization was insignificant to both processes. Nonetheless, it seems that medical students express more concern of cancer than cardiovascular morbidity (13.28% to 3.53%).

Conclusions:

"Medical student's disease" should be regarded as a phenomenon depending on the years of learning. By breaking it down to two components, one can better characterize it and predict its beginning. Defining it as a normal process, one can assist in guiding medical students during their studies thus reducing the level of anxiety.

Points for discussion:

1. Is this phenomenon a world-wide characteristic of medical studies?
2. Can this phenomenon be characterized by other variables (personal medical history, future desired field of specialization etc.)?

PRESENTATION 34: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: Data quality improvement in a cohort of diabetes patients in General Practice.

AUTHOR(S): Debby Keuken, R. Bruessing, P. Keijser, H. Brouwer

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Background:

In 2007 a diabetes cohort was initiated by the department of General Practice/Family Medicine of the Academic Medical Center-University of Amsterdam (AMC), the Netherlands. The aims were to enhance quality improvement of diabetes care and to provide an infrastructure for diabetes-related research. Since 2007, registration of diabetes care indicators has been implemented as part of a disease management program. Previous studies have shown difficulties in obtaining a complete set of diabetes indicators.

Research question:

What is the quality of diabetes care indicator-registration in an established research network of General Practitioners (GPs) and how can this be improved?

Method:

We used a subset of data from the GP registration network of the AMC. In this network data are recorded in electronic medical records on a routine basis and used for research purposes. For the 2585 patients known by their GPs with diabetes type 2, practice based process measures for the diabetes care indicator HbA1C is calculated over the year 2007 (12 month period). These values are presented to the 37 practices in the network during feedback sessions. For the records of patients with missing values for HbA1c the reasons for the missing values were investigated by the GPs. Causes for missing values were discussed in an expert team and main limitations for indicator recording were formulated.

Results:

Of the 2585 patients diagnosed with diabetes type 2, 772 (29,9 %) HbA1C values are missing in 2007. Analysis of missing HbA1c indicator reveals several causes, amongst which: - the patient is under specialized care, - the patient does not attend his/her appointments, - the patient is not invited within 12 months period.

Limitations for indicator recording are formulated.

Conclusions:

Our results demonstrate that various causes exist for missing HbA1C values.
Formulated limitations will be used to improve the quality of indicator registration.

Points for discussion:

1. Are the causes for missing indicator-data presented here familiar to the attendants of the EGPRN?
2. Target levels for indicators of the diabetes care process should never be 100%.
3. High quality of electronic medical records is a basic requirement.

PRESENTATION 35: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Does diabetic patients' ethnic background influence quality of care received in general practice?

AUTHOR(S): Anh Thi Tran, A. K. Jenum, J. G. Cooper, T. Claudi, M.F. Hausken
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Background:

A multiethnic general practice is challenging for the GPs due to ethnic variations in prevalence and clinical course for common illnesses like diabetes type 2 (DM2).

Research question:

Does patients' ethnic background influence the quality of care received for DM2 in general practice?

Method:

We used software designed for this study to identify patients in GPs' electronic patient records (EPJ). For patients with a diabetes diagnosis, predefined data were captured, e.g. ethnicity, measurements of HbA1c, blood pressure (BP), cholesterol, eye investigation, smoking habits. For each identified patient, captured data were manually checked on site by an experienced research nurse. Ethnicity was categorized according to country of birth.

Results:

In 2005, about 58 000 patient records in 11 practices (49 GPs) were screened. 2 064 patients had a diabetes diagnosis out of which 1653 had DM2 and were cared for by their GP and were included in this study.

Mean age varied across ethnic groups (from 52.3 to 66.4 years), native Norwegians were oldest. In all ethnic groups, most had their HbA1c (91.4 to 95.2%), BP (85.2 to 92.5%), and cholesterol (92 to 97%) controlled. Immigrants were treated more intensely with oral hypoglycaemic agents (OHAs), or combined OHAs and insulin whereas 18% of all minority patients vs. 28% of Norwegians were non-users. Compared to Norwegian DM2 patients, immigrant patients in all treatment groups had significantly higher HbA1c (7.4 vs. 7.1% for OHA only, 8.4 vs. 7.9% for OHA and insulin combined, and 8.6 vs. 7.7% for insulin). 56.1-72.6% of the ethnic groups achieved treatment target for hyperglycaemia (HbA1c \leq 7.5%). Minority groups had lower BPs and received less anti-hypertensive therapy and statins.

Conclusions:

Even if immigrant DM2 patients generally were younger than corresponding Norwegians, their glycaemic control was worse despite receiving more intensive treatment with glucose-lowering therapies.

Points for discussion: -

PRESENTATION 36: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: Ve.Di.Cli.S. Project (Verona Diabetes Clinical Study) - Continuous Quality Improvement (CQI) in primary care management of type 2 diabetes.

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Background:

The increasing prevalence of type 2 diabetes in the western world brings many problems and challenges. The high quality management of this condition at primary care level is crucial for the sustainability of the health care system.

Research question:

The aim of the study is to measure the quality of diabetes care in a group of Italian GPs during a time of 3 years.

Method:

NICE Clinical Guidelines for Type 2 Diabetes (2005), was identified as the best guideline because of the high methodological quality. A panel of diabetes care quality indicators was identified to check the performance of a group of 30 GPs in Verona during a time of 3 years. Each indicator was adapted to the organizational context in which the GPs operate by a focus group session. The group of GPs underwent 4 learning sessions (a full day for each session) aimed to standardize and improve the knowledge about the evidence based management of diabetes.

The performance data were collected by electronic queries sent by e-mail. The participants were required to run the queries in their professional database and send back the data to the scientific committee. The discussion continues online on the blog of the project.

Results:

Table 1 shows the baseline (09/2008) performance data compared with data coming from another national database (Health Search) and the mean optimal theoretical performance level expressed by the participants.

Conclusions:

At baseline level the performance data in the Vediclis GPs group is better than national level but it is far from GPs think it should be. After a basic step of training, an e-mail/blog network is an efficient system to update and to collect performance data.

Points for discussion:

TABLE 1: Results of baseline performance data (sept. 2008) Vediclis Criterion Baseline Health Search
Standard % of Type 2 diabetes 5,30% 5,4% BMI 46% 35,4% 80% HbA1c

PRESENTATION 37: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Managing type 2 diabetes mellitus in primary care: Measuring or Controlling.

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Background:

Although personal nutritional profile and self-management is the cornerstone in type 2 diabetes mellitus (DM2) care, only few patients are able to achieve long-term dietary changes and good metabolic control.

Research question:

In what extent an intervention based on Mediterranean dietary model and nutritional self-managing can improve DM2 control.

Method:

GPs examined 500 users of health services of the Chrisoupolis Health Centre (ages >44 years), collecting demographics, medical history, chronic therapies and lifestyle information. Blood pressure, BMI and laboratory examinations were performed, including lipids count, fasting blood glucose (FBG), and in case of DM2, HbA1c. Diabetics were randomly divided in two groups; a conventional treatment group (CG), with personalized diet and therapy, and an intervention group (IG), which followed a 6-hour educational course about Mediterranean nutrition, ways of quantity and quality controlling food consumption, and meal self-planning methods. A blood glucose monitoring system was provided to IG participants and monthly follow-up meetings were scheduled. After 3 months FBG and HbA1c were reevaluated.

Results:

From 156 diabetics, 11 were newly diagnosed. Diabetics had a significantly higher BMI (Mdn=30.00, $p=0.005$) and only 12 had HbA1c levels within the recommended range (<7%). There was a significant interaction effect between the type of the therapeutic strategy and the multiple measures of FBG ($F=25.34$, $p<0.001$) and HbA1c ($F=49.13$, $p<0.001$). Patients of the IG presented significantly lower values of FBG (Mdn=120, $U=1268.00$, $p<0.001$) and HbA1c (Mdn=8,4%, $U=1159.50$, $p<0.001$) in the follow-up. 16 of them versus 8 of the CG resulted having a controlled HbA1c (<7%, $p=0.003$).

Conclusions:

Motivating diabetics to become actively involved in their dietary assessment seems to have positive effects on their disease management. Future studies could be conducted by GPs to investigate the long-time effects of this methodology.

Points for discussion: -

PRESENTATION 38: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: Symptomatic treatment or antibiotics for uncomplicated urinary tract infection?

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Background:

Uncomplicated urinary tract infections (UTI) are common in general practice and are usually treated with antibiotics. This study was conducted to assess whether symptomatic treatment with ibuprofen was equally effective than ciprofloxacin for uncomplicated UTI.

Research question:

1) To assess the equivalence of ibuprofen and ciprofloxacin for uncomplicated UTI with regard to symptom resolution. 2) To demonstrate the feasibility of a randomised-controlled, double-blind drug trial in German general practices.

Method:

A double-blind, multicentre, randomised controlled equivalence trial was conducted in 29 German General Practices. Inclusion criteria were typical symptoms of uncomplicated UTI. Patients were randomised to receive either ibuprofen (3x400mg/d) or ciprofloxacin (2x250mg/d) for 3 days. Intensity of main symptoms – dysuria, frequency, low abdominal pain - was recorded at inclusion and after 4,7 and 28 days, scoring each symptom from 0 (none) to 4 (very strong). The main clinical outcomes were symptom resolution on day 4 and number of patients with secondary antibiotic treatment.

Results:

A total of 79 women presenting with at least one of the main UTI symptoms dysuria and frequency were analysed. On day 4, 21/36 (58,3 %) of patients in the ibuprofen-group were symptom-free versus 17/33 (51,5 %) in the ciprofloxacin-group. Ibuprofen patients reported less symptoms in terms of total sum score (1; SD 1,42) than those in the ciprofloxacin-group (1,3; SD1,9), difference -0,33 (95% CI [-1,13; +0,47]). However, during the first week 12/36 (33%) of patients in the ibuprofen-group re-consulted with ongoing or worsening symptoms resulting in secondary antibiotic prescriptions, versus 6/33 (18%) in the ciprofloxacin-group.

Conclusions:

There is a strong tendency towards equivalence of ibuprofen and ciprofloxacin for treatment of uncomplicated UTI. If this can be confirmed by further trials, antibiotics could be reserved to patients with persistent or recurrent symptoms, possibly resulting in a decrease of antibiotic use.

Points for discussion:

-change of treatment strategies for uncomplicated UTI.

PRESENTATION 39: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: Influenza and pneumococcal vaccination and screening rates of the elderly in a private outpatient clinic.

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Background:

Influenza and pneumococcal vaccination (PPV) policy for elderly people in Turkey has changed for the last 3 years. National Health Insurance System accepted to pay for these vaccines if the patient is older than 65 years of age and in case of other known indications. But these vaccinations are still not introduced as a strategic objective of health for the elderly people defining any age limit by the Ministry of Health.

Research question:

What are the vaccination and screening rates of the elderly (over 65 years of age) people if it is not reminded in the records?

Methods:

A reason for those unvaccinated is the payment made by the patient. To overcome this factor we conducted a retrospective descriptive study including all the patient records which belong to the patients over 65 years of age between January-December 2008 assigned to all outpatient clinics of a private hospital.

Electronic patient records didn't contain a prompt for immunization information.

So these computerized clinical records were screened with Influenza OR pneumococ OR vaccination terms. Descriptive data relating to those terms positive records are evaluated manually.

Results:

Eight people from a total of 15.889 encounters were asked about influenza vaccination and they were immunized by the physicians. Five of them were men and the mean age was 77.5. Six of the 15.889 encounters were asked about PPV 3 of them were men and the mean age was 72.

Conclusions:

These results must be alarming for us to improve the vaccine uptake.

Communicating individually and monitoring the progress of the vaccination are known to be the helping practices. But before the electronic patient records don't have a standard window for this inquiry, it is very difficult to find the vaccine coverage in a year exactly and to discuss the factors that affect this result.

Points for discussion:

Can we find any other way (method) to find an answer to our research question using electronic records?

PRESENTATION 40: Saturday 9^h May, 2009
11.30 - 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: The M.I.S.U.R.A. project: a multidisciplinary prevention approach to decrease CV risk.

AUTHOR(S): Enzo Pirrotta, Maurizio Briganti, Alfredo Cuffari, Stefania Graziosi
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Background:

MISURA is an acronym which could be translated in "keep yourself fit by regular habits". It is a plan for active health promotion addressed to asymptomatic people at presumed high cardiovascular (CV) risk according to 2007 Fourth Joint Task Force of the European Society of Cardiology (ESC) on cardiovascular risk prevention in clinical practice.

Obstacles for people trying to change their lifestyle are socioeconomic status, social isolation, stress, negative emotions and complex or confusing advice.

Research Question:

Is a multidisciplinary prevention approach to decrease CV risk an effective and feasible tool in the primary care setting?

Methods:

Data extracted from GPs Electronic Medical Records (EMRs) will be shared with the University Medical Department "La Sapienza" in Rome. The project started in October 2008 and is planned to last 2 years. 320 people in good health and asymptomatic (160 for the interventional group and 160 for the control group), aged 35 to 59 at presumed increased CV risk will be enrolled. total CV risk will be estimated using the Istituto Superiore di Sanità Progetto Cuore Individual Risk Score. Traditional prescriptive methodology will be used in the control group while in the interventional group patients and their families will receive a 2 hours monthly structured education programme, involving GPs and Psychologists.

Outcomes: the process and quality indicators according to the ESC IV JTF are being evaluated.

Results:

The enrolment is still in progress. So far we've found 7% new onset diabetes and 22% metabolic syndrome. CV Risk Score ranges from 1.8% up to 24.5%, and BMI from 24.2 up to 42.1.

Conclusion:

A possible answer to overcome obstacles in cardiovascular prevention is a new participatory and active model of management of chronic diseases which includes a multidisciplinary approach and an effective partnership between primary and specialist services.

Points for discussion:

1. Relevance of the study in Primary Care.
2. Methodology.

PRESENTATION 41: Saturday 9^h May, 2009
11.30 - 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: Cardiovascular risk factors prevalence and therapy adherence in 502 patients with previous cardiovascular and/or cerebrovascular event.

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Background:

Many studies have shown a high prevalence of risk factors in patients with previous acute cardio-cerebrovascular event, and a high rate of patients with poor therapeutic adherence and poorly motivated to change their life style. These data stimulate us to perform this evaluation in our practice.

Research question:

What is the risk factors prevalence and the cardiovascular drug utilization in the population with previous acute cardio and/ or cerebrovascular event in our practice?

Method:

From April to May 2008 patients with previous diagnosis of Stroke, Transient ischemic attack (Tia) and or Coronary artery disease have been selected from the database of electronic medical records of 15 general practitioners in Salerno, Southern Italy. Data collected were: blood pressure, smoking habit, waist circumference, glycemia, triglycerides and cholesterol level and drug therapy.

Results:

502 patients were enrolled (263 males, medium age 66±10 years). High level of cholesterol (according to NCEP ATPIII) was found in 54 female (F) and 85 males (M); hypertension (according to ESC-ESH 2007) in 120 M and 180 F; smoking habit in 80 M and 72 F; obesity (ESC2007) in 70 M and 57 F; hypertriglyceridemia in 60 M and 40 F; diabetes mellitus (ADA) in 50 F and 70 M. 70% of the patients were on platelets inhibitors; 40% on ACE inhibitors and diuretics; 30% on nitrates; 20% on angiotensin receptor blockers (ARBs); 21% on betablockers; 20% on calcium antagonists; 10% on alfablockers; 66% on statins (47% on simvastatin, 20% atorvastatin, 20% pravastatin, 13% others)

Conclusions:

In our population there is still a high level of modifiable risk factors which can be dealt both with life style change, or with medical therapy. Secondary prevention is regularly performed only a few months after the event but then adherence to therapy and life style tends progressively to worsen.

Points for discussion:

1. Relevance of the study.
2. Validity of the methodology.

PRESENTATION 42: Saturday 9^h May, 2009
11.30 - 13.00 h.

POSTER

TITLE: Accuracy of symptoms and signs for coronary heart disease in primary care: a diagnostic study with follow up.

AUTHOR(S): Stefan Bösner, Annette Becker, Maren Abu Hani, Heidi Keller
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Background:

Diagnosing the aetiology of chest pain is challenging. GPs have to identify serious cardiac disease reliably but also have to protect all other patients from unnecessary investigations and hospital admissions. Data on the diagnostic accuracy of signs and symptoms for acute coronary events in low prevalence settings are still lacking.

Research question:

What is the diagnostic accuracy of symptoms and signs in patients presenting with chest pains in general practice?

Method:

A cross-sectional diagnostic study with delayed-type reference standard was conducted in 74 GP surgeries in Germany with 1249 patients consecutively presenting with chest pains. GPs recorded symptoms and findings of each patient on a report form. Patients and GPs were contacted at 6 week and 6 month intervals. Data on chest complaints, investigations, hospitalisation and medication were reviewed by an independent reference panel. Coronary Heart Disease (CHD) and indication for urgent hospital admission were the reference conditions.

Main outcome measures were sensitivity, specificity, likelihood ratio, predictive value and odds ratio for different variables of patients with a reference diagnosis.

A secondary analysis was conducted for acute presentations, i.e. symptom duration < 48 hrs.

Results:

The following signs and symptoms showed associations with CHD: known vascular disease, pain worse on exercise, patient assumes cardiac origin of pain, age, known heart failure and diabetes mellitus. Negative associations were found for: stinging pain, cough present, localized muscle tension and pain reproducible on palpation. For "indication for urgent hospital admission" the following criteria were effective: pain radiating to left arm, known clinical vascular disease, home visit requested, known heart failure and pain reproducible on palpation. Pain localisation and temporal pattern, sex, risk factors other than diabetes did not contribute.

Conclusions:

Although individual criteria were only moderately effective, in combination they can contribute as an effective filter function in primary care.

Points for discussion:

1. Is there 'the ideal reference standard' for diagnostic studies?
2. Methodological aspects for choosing univariate parameters for multivariate analysis.
3. Limited diagnostic value of pain localisation and temporal pattern of pain.

PRESENTATION 43: Saturday 9^h May, 2009
11.30 - 13.00 h.

POSTER

TITLE: Gestational hypertension in General Practice: Screening and orientation of a pathological pregnancy by the General Practitioner.

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Background:

Gestational hypertension (GH) is the first complication in pregnancy and the second cause of maternal death. Although delivery is the only available treatment, a decrease in morbimortality is observed through early screening and monitoring

Research question:

The goal of this study was to explore and better understand the attitude of general practitioners (GP) when confronted to GH, and to propose optimizations in the role of the GP.

Method:

A qualitative study was pursued through semi-directive interviews of 14 liberal GPs in the Gard area between May and July 2008. These GPs monitored more than 5 pregnancies per year. The interviews were recorded and literally transcribed. A thematic analysis was then performed.

Results:

GH, regarded as potentially hazardous, was systematically screened by GPs: monitoring of arterial pressure, proteinuria and other clinical signs. The decision to reroute the patient to a specialized monitoring was the negotiated consequence between theoretical knowledge, professional experience, medical and paramedical environment. GPs regretted the weak initial and ongoing training, the lack of coordination between professionals (obstetricians-gynecologists and midwives), the undervaluation of their role in perinatality.

Conclusions:

Management of GH could be improved by: the training of GPs through an adaptation to the difficulties of the practice; the coordination between health professionals through a more pertinent action of the regional perinatality network; and a clarification of the GPs role in the monitoring of pregnancy through rethinking the organization of the health system.

Points for discussion:

perinatality, gestational hypertension, French health system

PRESENTATION 44: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study with preliminary results

TITLE: Patient's gender influences preventive supplies in primary care.

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Background:

Most health care systems have recommended several preventive services to be delivered in primary care. Given the limited time and resources of GP's, it is necessary to choose which preventive procedures to offer and to whom.

Research question:

What is the effect of patient's gender on the directly observed delivery rates of preventive procedures to 40-plus persons in primary care?

Method:

The observational study was performed in 113 Polish primary care surgeries. A sample of GPs who work in Wielkopolska were asked by phone to participate in the study and those who agreed were visited by observers recruited from last year medical students. The observers directly recorded preventive procedures performed during the consultation of 4 consecutive patients aged 40+. The collected data were blinded for the researchers. The GP's were not informed about the nature of the observation. For statistical analysis t-test and chi-square test were used.

Results:

A total of 1073 preventive procedures were registered during 450 consultations in 267 women and 183 men by 113 doctors. Mean number of procedures per patient was 2.37 (SD=1.6). Eleven categories of preventive procedures were recorded.

The most common procedures were: serum glucose in 68%, blood pressure in 58.4%, and total cholesterol in 55.6% of patients. Six out of eleven procedures were offered to less than 10% of patients: dietary, exercise and anti-alcohol advice, BMI and waist measurement. Men were more likely to receive anti-smoking ($p=0.02$), anti-alcohol advice ($p=0.0004$) and BMI measurement ($p=0.02$), while more women had total cholesterol measured ($p=0.01$).

Conclusions:

1. This study shows that the delivery of preventive services in Polish primary care falls below recommended levels.
2. Secondary prevention based on clinical examination and laboratory tests is performed more often than life style advice.
3. Men receive more preventive procedures, in particular anti-smoking, anti-alcohol advice and BMI measurements.

Points for discussion:

1. Which preventive procedures are of biggest value for GPs and which are most valued by patients?
2. What are the differences in routine consultations of female and male patients?

PRESENTATION 45: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER
Ongoing study, no results yet

TITLE: Supplied and Demanded Services in General Practice.

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Background:

In The Netherlands there is an ongoing shift of services from secondary care to primary care. GP practices are increasingly supplying multiple and more diverse services, e.g. evening surgery-hours, vasectomy, health checks, while some existing services disappear, e.g. obstetrics, friendly visits. Little is known about the actual demand within a patient population. Also little is known about the willingness of GPs to adapt to supplying other/more services.

Research Questions:

1. What services are demanded by patients?
2. Do patient characteristics or patient populations influence this demand?
3. Are GPs willing to adapt and change their supply according to their patients' demands?

Method:

Patient questionnaires: four general practices (in Purmerend, Amsterdam, and Hoofddorp) send questionnaires to samples of 300 patients each. In this questionnaire demographic data and chronic diseases are asked as well as their today use of services and the services they would wish to be available at their general practice.

GP questionnaires: the GPs working in the four participating practices will fill out a questionnaire on which services they are offering and which services they would be willing/unwilling to offer if their patients would ask for it.

GP interviews: In individual interviews GPs give their considerations on the results: are they willing to supply new services that are demanded by their patients? Are they willing to stop existing services that are not demanded by patients?

Analyses: questionnaire scores will be analysed in Microsoft Access and Excel.

Differences in demands between patient populations will be computed at item level.

Interviews will be audio-taped and GPs' considerations will be extracted qualitatively.

Results:

Will be available in May 2009. Demands will be presented quantitatively, specified for different patient populations and characteristics. Considerations of GPs will be presented qualitatively.

Conclusions:

Will be available in May 2009.

Points for discussion:

1. Can our Dutch results be generalised to other European countries?
2. How should GPs handle dilemma's arising from patient feedback, e.g. patients demand evening surgeries whereas GPs hate working late, or patients prefer hospital care while the pr.

PRESENTATION 46: Saturday 9^h May, 2009
11.30 – 13.00 h.

POSTER

TITLE: To what extent are core competencies addressed in European General Practice research? Classification of EGPRN meeting abstracts 2002-2007.

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Aims:

To investigate the use of core competencies in European General Practice research in order to contribute to the development of an European Research Agenda by the EGPRN.

Method:

Abstracts from 11 EGPRN meetings between 2002-2007 were descriptively evaluated according to date and country-city of meeting, country of origin of the principle investigator, multicentre / international study design, and six Core Competencies (CC) of the WONCA definitions 2005 ('The European definition of GP/FM'). Results are presented as descriptives and frequencies (n, %).

Results:

A total of 526 abstracts were analyzed. When grouped according to countries; Turkey and Germany with 68, each (13%), The Netherlands with 60 (11%), France with 44 (8%) and UK with 40 (8%) abstracts constituted already 53% of all analyzed abstracts, while the remaining 47% of abstracts originated from 26 other countries. 'Specific problem solving skills' (n=202; 38%), 'Primary care Management' (n=110; 21%) and 'Patient-centered care' (n=103; 20%) were the most frequently addressed CCs, followed by, □Comprehensive approach□ (n=76; 14%), 'Holistic approach' (n=16; 3%), and 'Community orientation' (n=15; 3%).

Four abstracts (1%) could not be assigned to any CC.

Eighty six abstracts (16%) were matching a second CC: 'Specific problem solving skills' (n=30; 35%), 'Patient-centered care' (n=21; 24%), 'Primary care management' (n=15; 17%), 'Comprehensive approach' (n=9; 10%), 'Community orientation' (n=6; 7%) and 'Holistic approach' (n=5; 6%).

Forty four studies (8%) were international and 127 (24%) were national multicentre studies.

Conclusions:

Most studies submitted to EGPRN meetings were addressing 'Specific problem solving skills', whereas, there was almost no attention for 'Holistic approach' and 'Community orientation' competencies. This finding suggests several core competency related research gaps in European general practice research, which is likely to be mirrored in the EGPRN abstracts.

PRESENTATION 47: Saturday 9^h May, 2009
11.30 - 13.00 h.

POSTER

TITLE: Antidepressants prescription analysis in primary care: a Verona survey from 2001 to 2005.

AUTHOR(S): Chiara Roni, R. Joppi, M. Andretta, C. Anecchino, G. Danti, F. Del Zotti, M. Font, L. Mezzalana, M. Romero, G. Tognoni on the behalf of ISD Working Group

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Background:

Particularly new antidepressants have been increasingly promoted for prescription in Primary Care (PC) for a even wider range of depressive symptoms and disorders, despite the substantial lack of conclusive evidences specifically produced in PC settings.

Research question:

What kind of subjects are treated with antidepressants in Verona's PC setting? How and how long are they treated?

Method:

A retrospective surveillance of prescriptions data on 9.065 patients (3,9% of Verona's population), aged 21-60 years was conducted. The included patients had at least one GP prescription of antidepressants in the period March 2001-February 2002. The selected cohort has been followed up for three years.

On the basis of the prescribed DDDs number, three categories were identified: 1) patients who have received less than 90 DDDs within 90 days have been considered "poorly exposed"; 2) patients who have received more than 240 DDDs within 240 days have been considered "highly exposed"; 3) all other patients have been considered "at intermediate exposure".

Results:

Women represented 67,8% of the studied population; the prevalence of antidepressants use increases from 1,9% between 21-30 years old to 6,2% between 51-60 years old; 78% of the cohort have been treated with newer antidepressants; 24% of the patients have been treated up to three months, 11% show an erratic pattern, and 7% are to be considered under chronic treatment ("highly exposed").

Conclusions:

Results apparently suggest the majority of the patients under antidepressants are treated not in accordance with current Guidelines for Depression (heterogeneity of depressive disorders; short and repeated treatment cycles), and are poorly compliant. The amount of chronic depressive patients seems to be relevant.

Points for discussion: -

PRESENTATION 48: Saturday 9^h May, 2009
11.30 - 13.00 h.

POSTER

TITLE: Happiness among the elderly in communities: Thai Happiness Indicators; THI-15.

AUTHOR(S): Chommanard Sumngern, Zaida de Azeredo
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Background:

Happiness is an individual emotional or affective state that is characterized by feeling of enjoyment and satisfaction related to the elderly which means successful aging resulting in a good life.

Research question:

1. How is happiness of the elderly in different regions?
2. What are the reasons which affect the happiness in the Thai older adults?

Method:

Thai Happiness Indicators (THI-15) was used in this study of 306 participants 60 years of age and older in rural, suburban, and urban regions. The elderly were chosen among those in Senior Thai Clubs by chance.

Results:

The elderly perceived their happiness as "Good" (12%), "Fair" (25%), and "Poor" (62%) Among the regions, there was a difference ($p < .001$) in happiness perception: "poor"- 64.5%, 61.2%, and 22.8% in the rural area, the suburban area, and the urban area respectively. We also verified that there was a difference ($p < 0.01$) in "poor" happiness between male (57.9%), and female (42.2%).

Education is related to happiness: the higher educated is the percentage of the elderly perceiving "good" happiness more than the lower educated elderly ($p = .007$). There was also a difference between happiness and the occupation; the results showed that the elderly who did not work had a better score of happiness than the elderly who had to work, especially who worked in farms had the highest percentage in "poor" happiness.

Conclusions:

Happiness could be one of the indicators of mental health among the elderly in the community that health care providers should be concerned about using the proper interventions and/or activities in order to alleviate the mental health problems among the elderly in the community, especially the elderly who were indicated with "Poor Happiness".

Points for discussion: -

PRESENTATION 49: Saturday 9^h May, 2009
15.20 – 15.50 h.

THEME PAPER

TITLE: Garbage in-garbage out? Validity of claims-based diagnoses as morbidity indicators in German general practice.

AUTHOR(S): Antje Erler, M. Beyer, C. Muth, F.M. Gerlach, R. Brennecke

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Background:

Coded diagnoses from claims records are frequently used as morbidity indicators. In Germany, the mandatory coding system is ICD-10 instead of ICPC, and documentation and coding of diagnoses are mainly performed for administrative and remuneration purposes.

Research question:

Aim of the study was to examine whether claims-based diagnoses adequately describe episodes of illness of patients treated over a one year period, or whether an over-reporting of diagnoses occurs.

Method:

In a retrospective cross-sectional study of a random sample of 250 patients from 10 GP practices we identified all health problems treated in the year 2003 on the basis of the patients' medical records and summarized them as episodes of illness. We used percentages, kappa value, sensitivity, and positive predictive value to describe the match, correctness, and completeness of the most frequently coded episodes of illness compared to claims-based diagnoses within the same time period.

Results:

In spite of a high mean of 6.1 claims-based diagnoses per patient, episodes of health problems were under-reported in 30% of cases, mainly relating to non-severe diagnoses frequently encountered in GP practice, chronic conditions not requiring medication, and diagnoses justifying a screening test. An over-reporting for diseases not treated within the study period was observed in 19% of cases, most often in the case of permanent chronic conditions. In 11% of cases the ICD-10 codes of claims-based diagnoses and the diagnoses in the medical records did not match ("erroneous codes"). For six of the diagnoses most common in GP practice (hypertension, diabetes, hyperlipoproteinemia, cardiovascular disease, back pain, and acute respiratory tract infections) correctness at 71 to 93% was higher than completeness (56 to 86%).

Conclusions:

The suitability of claims-based diagnoses to describe morbidity in general practice is limited. Morbidity will be more often under- than overestimated when claims-based diagnoses are used as indicators.

Points for discussion:

Is it possible to compare German morbidity data from general practice with data from other countries which use an episode-based documentation system and ICPC for coding of health problems?

PRESENTATION 50: Saturday 9^h May, 2009
15.50 – 16.20 h.

THEME PAPER

TITLE: Incidence and clinical manifestations of rheumatic fever – electronic medical records based survey.

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Background:

Most data about the incidence of rheumatic fever (RF) had been collected from hospital records. We presumed that there may be cases of RF that did not require hospitalization, especially in countries with high quality community health care.

Research question:

To explore the incidence and characteristics of RF using community electronic medical records.

Method: A retrospective descriptive study among the members (more than 450,000) of the Clalit Health Services Central district during 2000-2005. The electronic medical records of members up to 40 years old who had a diagnosis of RF in hospital discharge letters or during community clinic visits had been retrieved. Patients with first episode of RF according to the modified Jones criteria had been included.

Results:

44 patients had a first episode of RF. All patients were younger than 29 years old. The annual incidence among patients aged 0-30 years was 3.2:100,000. 25% of the patients were both diagnosed and treated in an ambulatory care setting. The highest incidence was among children aged 5–14 years (7.5:100,000), and in males it was 2.26 times higher than in females. The incidence was higher among patients from large families, non Jewish ethnicity, and rural areas.

Conclusions:

A quarter of new cases of RF were treated in an ambulatory setting.

Using the electronic medical record we had been able to evaluate the incidence and characteristics of RF. Any future estimates of the disease incidence should take in account that the disease is becoming an ambulatory treated disease.

Points for discussion:

1. The medical record as a tool for the evaluation of disease incidence.
2. The shift of treatment of rheumatic fever to the community.

PRESENTATION 51: Saturday 9^h May, 2009
16.20 - 16.50 h.

THEME PAPER

TITLE: Out of hours primary care in Belgium: registration of reasons for encounter, diagnoses and referrals.

AUTHOR(S): Philippe Ryckebosch, J. Brouns, J. Goris, E. Vermeire
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Background:

In Belgium, during the weekends and on holidays, patients can turn to a general practitioner (GP) on call or go straight to a hospital's emergency department (ED). Unfortunately there is no data as to what kind of problems GPs encounter when they are on call, which problems they handle themselves or which patients are referred to a hospital.

Research question:

What kind of medical problems do GPs encounter when they are on call ? Which problems do they handle themselves and which patients are referred to a hospital or to their GPs scheduled hours?

Method:

In 2003 the first general practitioner deputizing service was opened in Deurne-Borgerhout. A new software, the HWP-Mailer, was developed. The Reason For Encounter (RFE) and the main diagnosis are registered via ICPC2 -ICD10 (Wonca) and the Belgian version of Thesaurus within a new codification module. The referral to a ED, to the patient's own GP, or the decision to have the patient referred for hospital admission are stored in the database. As such, data are available on RFEs, diagnoses, frequencies and reasons for which people are referred.

Results:

The most common RFEs are: R05 Cough, A03 Fever and R21 Throat symptom / complaint; the most common diagnoses are: R74 Upper respiratory infection acute, D73 Gastroenteritis presumed infection, R78 Acute bronchitis / bronchiolitis. 6,44% of all patients were referred to a hospital: 4,19% to the ED (most common diagnosis D88 Appendicitis), 2,25% for admission (K90 Stroke / cerebrovascular accident). 3,7% of all patients (R78 Acute bronchitis / bronchiolitis) were referred back to their own GPs.

Conclusions:

With the development of a new out-of-hours health record figures are available about the reasons for encounter, diagnoses and referrals. These data will be helpful in refining the information gathering in primary care in Belgium.

Points for discussion:

- 1 Do RFEs / diagnoses registered by the GP on call differ from those during normal sheduled hours?
- 2 Do you know about similar studies of out of hours services in other countries? Were the results similar or different?
3. Could these data help us in.

