Questionnaire (HTQ) and the 'Hopkins-symptom-checklist 25' (HSCL-25). Main biographical data was collected. **Results** 

#### Results

Men and women were exposed to high levels of adversity, most commonly reported events were forced expulsion and deprivation from water, food and shelter. 41.9% of the sample had values higher than the threshold level. No differences in symptom levels between men and women were found.

#### Conclusions

High level of impairment are likely to occur in populations affected by mass violence. Posttraumatic stress disorder seems to be as likely in men as in women after exposure to disasters of 'human design'. Modelling PTSD as a unidimensional construct seems to mask symptom differences between men and women. Further research is needed to get to know better the impact of man-made disaster on health of men and women.

Prevalence of symptoms in a case-control study before and after a disaster

#### Kerssens JJ, Yzermans CJ, Donker GA

NIVEL, Netherlands Institute for Health Services Research, The Netherlands  $Background \label{eq:Background}$ 

Individuals exposed to trauma report poorer health status and more physical symptoms than do similar non-exposed individuals while it is generally assumed that posttraumatic psychological symptoms precede physical symptoms.

#### Aim

This study's objective is to explore the prevalence of health symptoms after a man made disaster: the explosion of a firework depot in a residential area in Enschede, the Netherlands. Ten percent of the victims had to be relocated because their houses were destroyed.

#### Methods

Design: Pre-disaster baseline symptoms compared with post-disaster symptoms by monitoring in general practice using medical records of 9392 victims and 7392 controls.

Outcome measures: Psychological symptoms and medically unexplained physical symptoms (MUPS) were registered using the International Classification of Primary Care (ICPC). Prevalence rates in four weeks periods were calculated as the number of individuals presenting symptoms divided by the numbers at risk, taking into account the amount of person-time during which events were counted as well as the time elapsed before health symptoms were presented.

#### Results

Prevalence rates for pre-disaster psychological symptoms were 26 per 1000 per 4 weeks for both victims and controls. Immediately after the disaster the prevalence rate increased to 181 for victims and than gradually decreased to 41 in de last 4 weeks of the study-period. Relocated victims showed much higher prevalence rates for psychological symptoms than non-relocated victims. Prevalence rates for MUPS were 77 per 1000 per 4 weeks for victims and 67 for controls. Immediately after the disaster the prevalence rate increased to 84 for victims but rapidly fell back to the pre-disaster rate. However, relocated victims showed slowly increasing post-disaster rates for MUPS. Post-disaster psychological symptoms preceded MUPS in 50% of the victims presenting both symptoms, compared to 32% in the period before the explosion (p< .001).

#### Conclusions

Immediately after the disaster a lot of psychological problems and physical symptoms were presented to general practitioners but even two and a half years later an excess of psychological symptoms was observed. Furthermore, individuals presenting psychological symptoms had an increased risk for developing medically unexplained physical symptoms.

# Management of high risk opiate addicts in Europe (Risk Opiate addicts Study – Europe)

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### Universität Hamburg, Germany

Background

The EU project ROSE (Management of high risk opiate addicts in Europe – Risk Opiate addicts Study Europe) is motivated by the fact that in spite of the big range of therapeutic options for problematic opiate users, there are major deficiencies in both effective recruitment for treatment as well as treatment effectiveness. A substantial group of problematic opiate users is not reached by therapeutic services even though many of them regularly engage in drug using behaviours that put their health and lives at high risk. **Aim** 

#### Aim

The project aims to produce epidemiological data on high risk opiate addicts (not in treatment or not adequately treated) and the evaluation of the therapeutic management of high risk opiate addicts. Results could be used to identify shortcomings in present treatment approaches and to develop guidelines and standards on how to adapt drug services to the needs of high risk opiate addicts on the ground of different European experiences. The study tries to describe the status quo of treatment in different regions of Europe. Furthermore, with the help of patients and other experts, it tries to develop guidelines and recommendations to improve the outreach and the quality of current treatment systems.

#### Methods

The study is a multi-centre, multi-modal approach with a mixture of qualitative and quantitative measures. Key informant interviews for estimation of untreated and treated opiate dependent population and expert interviews about intervention strategies and the situation in the specific facilities were conducted. Furthermore, we conducted personal interviews of at least 50 users who are not in treatment and 100 interviews from users not adequately treated. A total of N=150 persons were be assessed in 10 countries with EuropASI OTI Health Scale, WHO DAS, TPC and additional questions. Additionally for each target group there will be 5 consumers who were interviewed qualitatively (PCI method) with a follow-up after 6 months and thus enabling us to explicitly gain local and cultural peculiarities for each centre. The last module is the delphi analysis of possibilities to generalize the findings and to elucidate standards of treatment for problem patients.

#### Results

The number of opiate addicts in the participating cities ranges from 2,800 in Bordeaux and 70,000 in London. The percentage of those in treatment vary from city to city, with as low as 10% in Athen and as high as 73% in Liege. It is not possible to assess one trend in Europe in the last five years in a consistent manner, since each city seems to have an individual pattern. Results from the quantitative measures, the face-to-face qualitative interviews and the delphi-analysis will be presented at the congress.

#### Conclusions

All cities have a significant percentage of high risk opiate addicts in need of treatment, yet with great differences between cities. Therefore guidelines for a public health strategy need to be developed at a national and local level, while the European comparison is helpful for assessing possible drawbacks of certain strategies.

# The development of integrated care under different financing and payment systems: Workshop of the EUPHA Section on Health Services Research

#### Organiser: EUPHA section Health Services Research Chairperson: Diana Delnoij

#### NIVEL, the Netherlands

The workshop will present examples from different Western health care systems on how financing and payment systems can enhance or hamper the development of primary care. Country presentations will focus on the United States (abstract not available yet), Switzerland (abstract not available yet) and Germany. There will be one more theoretical presentation on case mix reimbursement and integrated delivery systems, in which the lessons learned from the three case studies will be synthesized. Financial Incentives for Disease Management Programmes and Integrated Care in German Social Health Insurance

Greß S, Hessel F, Wasem J Germany

Example: Germany

Issue/problem

As a result of several health care reforms in recent years, the German legislator has introduced financial incentives for sickness funds to implement Disease Management Programmes and Integrated Care projects. Financial Incentives for Disease Management Programmes (DMPs) are linked to the risk adjustment mechanism. Funds receive higher compensations for those insured that are enrolled in accredited DMPs. Moreover, one of the major reform measures of the 2003 Health Reform Act was to cut budgets in ambulatory and hospital medical care by one percent. This budget cut was earmarked for Integrated Care projects instead.

#### Description of the project

The project analyses and evaluates the financial incentives for DMPs and Integrated Care projects for sickness funds, health care providers and patients/sickness fund insured. With regard to DMPs, incentives for sickness funds are determined by the risk adjustment mechanism while incentives for providers and enrollees of DMPs are determined by the DMP contracts between sickness funds and provider organisations. Incentives for Integrated Care projects are determined by the one percent budget cut for all providers and the desire to re-acquire it through the participation in integrated care projects.

#### Lessons learned

The implementation of DMPs has been slow. Due to the corporatistic character of the German health care system negotiations between provider organisations and sickness funds took extremely long. The same has been true for Integrated Care - at least until a small share of budgets has been earmarked for Integrated Care projects. Since then providers and sickness funds have become more active. However, the scope of these Integrated Care projects has been very limited so far.

#### Conclusions

Financial incentives for sickness funds and providers to implement Disease Management Programmes and Integrated Care projects have been not sufficient so far. A system of selective contracting between sickness funds and health care providers may be more promising.

#### Eight years of experience with legislation facilitating managed / integrated care in Switzerland: little impact, need for new incentives

#### Gurtner F. Schmid A

Sickness and Accident Insurance Unit, Swiss Federal Office of Public Health, Berne, Switzerland

#### Issue

Healthcare in Switzerland is provided in a fragmented system, characterized by compulsory health insurance, ambulatory fee for service care, and public and private hospitals with cantonal cofinancing and planning. Health insurance legislation (implemented 1-1-96) gives room for various developments towards Managed / Integrated Care (MIC), like gate-keeping by GP's, and health centres financed by capitation. Still, innovation was restricted to urban areas and attracted mainly healthy patients. Integration of single MIC interventions (disease and case management), MIC programmes, and supportive technologies for MIC into the normal fee for service system proved difficult, since reimbursement decision making was not prepared to evaluate this type of interventions. Description

Legislation: One out of several aims of the current revision of the health insurance law (submitted by the government to the parliament in Summer 2004) is to promote MIC, targeted in particular to patients with chronic disease. A stakeholder and expert group analysed the current incentive structure within the triangle: sickness funds - patients - providers. Several disincentives inherent in the present system were identified, and solutions proposed to the government.

Reimbursement: The decision making process, originally tailored to single medical technologies and interventions, has been opened in 2003 to rehabilitation and telemedicine, further extension towards single MC interventions (e.g. case / disease management) and palliative care are under way.

#### Lessons

Legislation: The analysis of the incentive structures by stakeholders and experts represented an effective method for formulating policy options.

Reimbursement: In the example of rehabilitation, the prospect of getting programmes reimbursed already stimulated providers to develop integrated approaches.

#### Conclusions

Future will tell if the measures taken by the administration will convince politicians and stakeholders (professionals, patients, insurers) and facilitate the further development of integrated health care.

#### Current and future developments in managed care in the United States and implications for Europe

#### Aspling D, Lagoe R, Westert G

## The Netherlands

Aim/Problem

As health care systems and managed care evolve, providers and consumers will be challenged to identify and preserve the most effective aspects of this approach while adapting to future needs. These mechanisms could be useful in improving the efficiency of utilization in Europe.

#### Description

The project involved identification of the current impact and future parameters of managed care through evaluation of its impact in two communities. Sacramento, California (1,400,000 population) is an area with high managed care penetration. Syracuse, New York (610,000 population) is an area with substantially lower managed care penetration.

The first objective of the project was to compare the current impact of managed care on health care utilization and outcomes in the two areas. At the system wide level, lengths of stay, admission / discharges per population, and inpatient expenditures per day were slightly lower in Sacramento. Utilization (mean lengths of stay and discharges per population) and outcomes (inpatient mortality) were slightly better in Sacramento for medical diagnoses, although lengths of stay in Syracuse have declined substantially as payor constraints on reimbursement have increased.

The second objective of the project was to identify new developments in health care resulting from increased managed care activity and related cost constraints. The recent budget crisis and related economic difficulties in California have stimulated the following types of initiatives by health insurance plans and hospitals.

a) Development of Consumer Driven Health Plans by payors which shift some responsibility for cost containment from insurance plans directly to consumers.

These plans have been developed in response to increased emphasis on consumers by pharmaceutical companies and other health care providers

b) Hospital initiatives focusing on increased control of utilization through the following activities.

Intensive management of lengths of stay by nurses.

- Use of hospitalists and long term care programs which provide the most efficiency service.

- Focus on controlling use of services by day, not just reducing stays. - Focusing on services which produce specific positive financial

### margins.

#### Conclusions

The comparative analysis demonstrated that areas with high managed care penetration such as Sacramento continue to produce more efficient utilization, while lower managed care penetration areas such as Syracuse are reducing the utilization gap.

Future trends in California suggest that more utilization and cost control measures will be necessary in hospitals in the future. Researchers in Europe need to evaluate the usefulness of these mechanisms for their health care systems.

#### Case mix reimbursement and the future of integrated delivery systems

## van Merode F

The Netherlands

#### Theoretical presentation aimed at synthesizing case studies on the USA, Switzerland and Germany

# Introduction

The redesign of Western health care systems should provide answers to the following questions:

a) What is the optimal health care chain? (Design perspective)

b) How do institutional forces suboptimize care?

c) What are appropriate methods do deal with suboptimization?

Many health care systems the practice is that third party payers buy a package and avoid 'cherry picking'. This practice sets a premium on the development of vertically integrated hospitals and creates and maintains barriers to innovative newcomers, e.g. specialized clinics. This maintains a market where innovation is a problem and quality management is primarily considered as a cost factor. This differs very much from a situation where customers would really have a choice. The value of the service or service package they select would be determined not only by the value of each single component of it, but also by the way these components are integrated and quality management would be a key service factor.

#### Target costing

Currently often conclusions from cost-effectiveness studies of medical innovation are not or only partially implemented.<sup>1</sup> In a real market situation these studies would not be useless but their function will be limited. What is needed is a method that allows translating customers needs into services produced by health care organizations. A method that would fit here is target costing. In target costing, the cost of a new service is no longer an outcome of the service design process; it becomes an input into the process .2 Following this it is then important to know the values clients would attach to the health care service and what would they want to pay for it.

#### Reengineering the chain

Especially two dimensions determine the future quality of the health care chain: the level of standardization of processes and the extent to which patient's needs are central. The extent to which patients' needs are central will influence the value created. The standardization of processes determines the cost structure of services. References

Van Merode F. A prelude of the 2004 Antwerp Quality conference: Targets and target values: integrating quality management and costing. In: Accreditation and Quality Assurance. February 2004; Vol 9 (Nr 3): 168–171. Kaplan RS, Cooper R. Cost & Effect: Using Integrated Cost Systems to

Drive Profitability and Performance. Harvard Business School Press, 1997: 217.

# Health and Policy

#### Predicting Mortality in Hospital Patients

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4) Piedmont Regional Agency for Health Services, Turin, Tuscany Regional Hospital 'S. Maria alle Scotte', Sienna, Italy @KOP = Background

The complexity and mix of assisted patients varies across clinicians

and institutions. Comparisons of outcomes across providers must adjust for differences in risk factors across patient populations. Similar diagnoses and procedures in different patients can reflect dissimilar severity conditions. The variables implemented in models which assess the patient's severity can be obtained from different sources of data: ad hoc studies or routine records. The latter, such as clinical discharges, have the advantage to be quick, cheap, easily collectable, and produced in a standardized way.

#### Aim

To compare the Charlson Index Score (CIS) and the APR-DRG system to estimate the mortality risk at different times from admission, type of hospital and patients.

#### Methods

Hospital discharge of the Piedmont region, 1997/1998, were studied. A selection of 31,652 medical and surgical records, referring to cerebrovascular (DRG 14-17), cardiovascular (DRG 121-123) and digestive patients (DRG 148, 154) were processed using CIS and APR-DRG; both are able to assign different likelihood mortality levels using information stored in the clinical discharges. We calculated Relative Risk (RR) using both CIS and APR-DRG methods at 1, 30, 60 and 90 days after admission and then we adjusted for 4 hospital types: regional, local, private and autonomousscientific no profit. Bivariate analysis and logistic regression were carried out to estimate mortality.

#### Results

Kaplan Meier survival estimates using both CIS and APR-DRG levels showed a similar trend: at graver levels corresponded higher likelihood of dying and all of them decreased in time. CIS and APR-DRG estimated a different likelihood of dying: APR-DRG showed an higher likelihood of dying in its gravest level while the CIS showed an increasing linear trend in its levels. Both CIS and APR-DRG adjusted for that the place of admission may produce differently.

#### Conclusions

APR-DRG and CIS are good severity descriptors, able to predict mortality after hospital care. They, respectively, show better predicting performance in short and long time periods. The type of hospital can influence the likelihood of dying.

#### Using measures of clustering in logistic regression to investigate contextual effects: an example on healthcare utilisation in Sweden

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#### Aim

Measuring the extent to which phenomena occur in cluster within areas is highly informative for public health policymakers. For continuous outcome variables, multilevel models provide a convenient measure of clustering within areas in the form of the intraclass correlation coefficient (ICC). However, for binary outcome

variables, only approximate definitions exist for the ICC. Therefore, Klaus Larsen and colleagues proposed to express the heterogeneity between areas in the well-known odds ratio scale with an index termed the median odds ratio (MOR). On the other hand, alternating logistic regression (ALR) models are now recognized as an interesting alternative. They measure clustering with a pairwise odds ratio that quantifies the similarity between individuals residing in the same area. Using Swedish data on healthcare utilisation, we compared these different approaches to investigate the clustering of phenomena.

#### Methods

Using Swedish data from the Health Survey in Scania in 2000, we investigated area-level variations in the utilisation of private rather than public healthcare providers. Multilevel models and ALR models adjusted for individual-level confounders were fitted to the data.

#### Results

In the multilevel model, the area-level variance in the utilisation of private providers was highly significant. The ICC was equal to 0.08. The MOR was equal to 1.81. In the ALR model, the POR was equal to 1.37 (95% CI: 1.19, 1.57). Both the multilevel and ALR models indicated that the heterogeneity in behaviour between areas was higher among older individuals. After adjustment for individuallevel confounders, the odds of consulting private providers increased with the area-level percentage of highly educated inhabitants. The strength of this contextual effect increased with age.

#### Conclusions

Measuring clustering of health-related phenomena provides important information to policymakers. Since the different methods provide information on clustering under different forms, we finally discuss their statistical consistency and interpretability in a public health user-oriented perspective.

Developing a HIA methodology for EU Policies <u>Abrahams D</u><sup>1</sup>, den Broeder L<sup>2</sup>, Doyle C<sup>3</sup>, Fehr R<sup>4</sup>, Haigh F<sup>4</sup>, <u>Mekel O<sup>4</sup></u>, Metcalfe O<sup>3</sup>, Pennington A<sup>1</sup>, Scott-Samuel A<sup>1</sup> 1) IMPACT, University of Liverpool, England

2) RIVM, National Institute for Public Health and the Environment, The Netherlands

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4) LOEGD, Institute of Public Health, Bielefeld, Germany

Issue

During the last 10 years, systematic methods for assessing the health impacts of public policy have emerged. However this has tended to focus on sub-national or national projects or policies. Description

This project builds on this work developing, testing and refining a robust HIA methodology for application on EU policies.

Phase 1 applied a rigorous approach to the synthesis of a generic HIA methodology, following a search, classification and prioritisation of HIA methods and tools. It also involved the selection of the European Employment Strategy (EES) from the EC's 2003 work programme against defined policy selection criteria.

In Phase 2 the generic HIA methodology was piloted on the EES at both pan-European and Member State levels. The pilot HIAs were evaluated using a comprehensive framework and the methodology refined.

#### Lessons

The evaluation identified the importance of policy analysis at EU level. Different units of analysis at EU level were defined. Availability and access to comparable data remains an issue.