

- Workshop: Participants to split into groups according to clinical scenario, ensuring diverse country-representation in each group.

- Introduction and explanation of scenarios

- Group 1: Urgent services for acutely unwell children
- Group 2: Planned services for children with long-term conditions

- Group 3: Adolescent health services
- Group 4: Mental health and behavioural services
- Group 4: Services for vulnerable or abused children
- Group 5: Routine and population-based care

Each group will have a suggested list of questions and issues to discuss, progressing through a clinical pathway based on the scenario.

- Feedback: each group will give feedback to the workshop with a brief overview of their group's discussion

Conclusions: next steps

Child health services and systems

Ingrid Wolfe

I Wolfe, M McKee

London School of Hygiene and Tropical Medicine, Health Services Research Unit, London, UK

Issue

Children's health services are a key issue for European health systems. There is increasing recognition that children's health needs are different from adults', and health services often fail to reflect the distinction adequately.

Currently, many countries are facing similar and often competing pressures on health services; for example, a drive to

centralize and specialize services to improve quality, while improving local access and containing costs. Clearly, this is a time of great change in health services. The aim of this project is to provide the information necessary to ensure that health services adapt and change in the best interests of children.

Methods

A descriptive study of child health services and systems in Europe, based on a questionnaire distributed to expert respondents, and literature reviews and data analysis of health outcomes in each country. Initially, eight countries were chosen to give a spectrum of circumstances and conditions.

Results

This project is in the early stages. It is anticipated that most questionnaire responses will be returned by July 2008. The final paper will include detailed descriptions of child health indicators and trends for each country, and clinical pathway-based descriptions and analyses of child health service policy. There will be clear descriptions of the child health service configuration for each country, with specific examples of how the system functions.

A later stage of work will comprise forming an expert committee to generate agreed indicators for child health services to be used for evaluating and then improving the quality of child health services. The EUPHA workshop is intended to be the first stage of this process.

Lessons

Providing clear descriptions of child health service structures and systems for European countries, and generating agreed service indicators would enable policy makers to devise policies based on robust evidence about how well child health services work in meeting children's needs.

D.6. Workshop: Injury severity, the white area of the map—how to measure it?

Chairs: Dr Birthe Frimodt-Møller¹, Johan Lund^{2}*

¹University of Southern Denmark, Denmark

²EUPHA Section on Injury prevention and safety promotion, Sweden

Organizer: Section on Injury prevention and safety promotion

*Contact details: johan.lund@medisin.uio.no

Information on the burden of injuries is relevant for priority setting; for comparisons with other health issues as well as for comparisons within the domain of injuries. We have relatively good information on injury mortality in the European countries, less good information on hospitalized patients due to injuries. We lack information about the severe injuries, those who create permanent impairments, disabilities and handicaps. The two most important types of severity indicators measures are (i) threat to life and (ii) threat to disability.

This workshop aims at describing the state of the art with regard to these two different types of indicators and to give results on projects studying the severity of injuries.

The severity indicator measures that are discussed are for threat to life: AIS (Abbreviated Injury Scale) and ICISS (International Classification of Injury Severity Score). For threat to disability, the relevant measures are: SF-36, EuroQOL, the Health Utilities Index, Disability Adjusted Life Years and Functional Capacity Index.

Hospital discharge data constitute a potentially powerful data source for documenting the nature and severity of injuries. A Swedish study demonstrate how high autopsy rate and merging hospital discharge data and autopsy data are effective ways to improve the accuracy of survival estimates and mortality prediction models. A Danish study will show how long-term consequences (1–10 years) of severe injuries in the form of health service use and perceived health related to socio-economic status can be determined.

An overview of relevant and realistic indicators to threat to life and threat to disability

Maria Segui-Gomez

M Segui-Gomez

European Center for Injury Prevention, University of Navarra, Spain

Background

Injury prevention research over the past three decades has extensively used severity measures to provide an additional layer of information to otherwise simpler counts of frequency of injuries as reported in prospective or retrospectively gathered surveillance- or research-oriented data sets. Probably, the first such measure, as well as the most extended one, is the Abbreviated Injury Scale (AIS). Although originally the scale was born with a hope to assess severity in a multi-dimensional fashion that included threat to life, intensity of care, likely impairment and cost of treatment, most empirical research to date points that the scale mostly measures threat to life.

In recent years, an effort to derive empirically based threat to life scales (as opposed to scales driving on expert assessment), led to the ICISS (International Classification of Injury Severity Score). ICISS uses real world data to compute a ration of death/survival to all cases with any given injury as described by the International Classification of Diseases WHO-maintained classification scheme.

It is in the last decade that interest has broadened to develop scales that assess disability, although disability is a more difficult concept to measure. Some of these metrics include the SF-36, EuroQOL, the Health Utilities Index, Disability Adjusted Life Years or the Functional Capacity Index.

Methods

But neither the severity nor disability-oriented scales are indicators. Indicators imply the definition of a cut-off point, which defines a subset of the population complying with some level of the scale and compares this subset with either the remaining injured cases or a population denominator. In this session, we will present a review of the injury literature on indicators.

Results

The literature review identified some 500 such metrics, although only a fraction contained severity or disability issues. For example, population rates of injuries AIS3 or higher, or ICISS 0.94.

Conclusions

We will also discuss the recent discussions in the International Collaboration Effort on Injury Statistics to reach consensus in a number of these indicators.

Improved injury severity measures by linking hospital discharge data with cause of death data

Rolf Gedeberg

R Gedeberg^{1,2}, I Thiblin³, L Byberg^{2,4}, L Wernroth⁴, K Michaëlsson^{2,4}

¹Department of Surgical Sciences – Anaesthesiology and Intensive Care, Uppsala University

²Department of Surgical Sciences – Orthopedics, Uppsala University

³Department of Surgical Sciences – Forensic Medicine, Uppsala University

⁴Clinical Research Center (UCR), Uppsala University, Sweden

Background

Hospital discharge data constitute a potentially powerful data source for injury epidemiology. Compared to dedicated trauma registers, hospital discharge data are a valid source for documenting the nature and severity of injuries. The objective of this study was to estimate the benefit of adding cause of death data to hospital discharge data and thereby adding pre-hospital deaths and clinically missed diagnoses to mortality prediction models.

Methods

In a nation-wide, population-based study, data were collected from all hospital admissions for injuries in Sweden between 1998 and 2004. We studied 8627 deaths in hospital among 598 137 incident hospital admissions.

Results

New specific injury categories were added in 7.4% (95% CI 6.8–8.0) of all deaths with an autopsy rate of 24.2%. It was estimated that this proportion would have increased to 25.1% (95% CI 23.0–27.2), if all deaths had been autopsied. The most pronounced effect of clinically undiagnosed injuries was found for internal organ injury in the abdomen or pelvis, where they reduced the estimated survival from 0.83 to 0.69 (95% CI for the difference 0.09–0.20). Autopsy diagnoses also revealed

substantial bias of survival estimates for vascular injuries in the thorax and crush injuries to the head. The performance of the International Classification of Diseases Injury Severity Score (ICISS) improved when autopsy diagnoses were added to hospital discharge diagnoses. The maximum proportion of injury deaths attributable to missed injuries was estimated to be 6.5%.

Conclusions

Maintaining a high autopsy rate and merging accurate hospital discharge data and autopsy data are effective ways to improve the accuracy of survival estimates and mortality prediction models, and to estimate mortality attributable to diagnostic failures.

A Danish study of consequences of injury

Bjarne Laursen

AMH Toft, B Laursen, B Frimodt-Møller

National Institute of Public Health, University of Southern Denmark, Denmark

Background

While treatment and prevention of injuries have attracted much attention, consequences of injuries except for a few injury types like brain injury has been overseen. The aim of the Danish study is to determine the long-term consequences of severe injuries in the form of health service use, perceived health and socio-economic status.

Methods

The study is based on register data and health survey interview data. The study of health service use is based on register information on the entire Danish adult population ($n=4$ million), whereas the study of perceived health is based on the population participating in the surveys in the year 2000 and 2005 ($n=30\,000$ in total). The follow-up period for injuries is 1–10 years. The injuries included are: concussion and other severe injuries to the brain, fractures, whiplash injuries, muscle/tendon injuries, amputations and severe burns. The injured persons are compared to a group without severe injuries, matched by age and sex. Further, the influence of socioeconomic status and educational level on the long-term consequences of injury is studied.

Results

Preliminary results show that ~8% of the adult Danish population reported long-term consequences of injuries. Details on the results and methodological issues will be presented at the conference.

Conclusion

A large share of the population suffers from consequences of injuries. This calls for injury prevention that focuses on those injuries that have long-term consequences.

E.6. Session: Health inequalities

Tackling the wider determinants of health and health inequalities: evidence from systematic reviews

Marcia Gibson

M Gibson¹, C Bamba², M Petticrew³, A Sowden⁴, M Whitehead⁵, K Wright^{4*}

¹MRC Social and Public Health Sciences Unit, Glasgow, UK

²Department of Geography, Durham University, UK

³Public and Environment Health Research Unit, London School of Hygiene and Tropical Medicine, UK

⁴Centre for Reviews and Dissemination, University of York, UK

⁵Division of Public Health, University of Liverpool, UK

*Contact details: marcia@sphsu.mrc.ac.uk

Background

There are increasing numbers of systematic reviews of interventions aimed at the social determinants of health. The use of ‘umbrella’ reviews (i.e. systematic reviews of systematic reviews) could help to make sense of this increasing volume of

evidence. This umbrella review aimed to identify: (i) what is known about the effects of interventions to tackle health inequalities, and (ii) gaps in the evidence base, thus informing the development of new primary research.

Methods

Systematic review methods were employed to identify systematic reviews of interventions in high-income countries to address social determinants of health (specifically layer three of Dahlgren and Whitehead’s ‘rainbow’ model, i.e. living and working conditions and access to essential goods and services). Databases, websites and journals were searched (2000–07) and experts were contacted. Two reviewers assessed study quality. Reviews of studies with adult participants which assessed impacts on health inequalities, the health of disadvantaged groups and general population health were data-extracted.