4.7. Workshop: Burden of injuries in Europe

Chairs: Dr Johan Lund, Dr Saakje Mulder*
Section on Injury prevention and safety promotion
Consumer Safety Institute, Amsterdam, the Netherlands
Organiser: EUPHA section on Injury prevention and safety promotion
*Contact details: johan.lund@fnh.no

This workshop aims at describing how various indicators give information of various areas of the burden of injuries. A Dutch burden of injury model determines the burden of injuries that are comparable to other health care issues. Valid cost-effectiveness analyses show the potential value (cost saving) of measures to prevent injuries. European Community Health Indicators are now developed in order to answer rather simple questions about injuries in the EU. Mortality data from across Europe show that the burden of injuries varies quite a lot between eastern and western part of Europe.

Burden of injury: relevant for policymakers

Saakje Mulder

S Mulder
Consumer Safety Institute, Amsterdam, the Netherlands

Issue

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. In the Netherlands information on the burden of injuries is often used as a basis for policy decisions.

Description

The Consumer Safety Institute (CSI) in the Netherlands was launched in the early eighties to prevent injuries (in particular home and leisure injuries). It has always been difficult to get attention for injuries in competition with other health issues. A way to get more attention (and money) for injuries in the Netherlands turned out to be the development of the Dutch Burden of Injury Model. This model provides information on the consequences of injuries by calculating the direct medical costs, costs of absenteeism and the quality. The model is also the basis for cost-effectiveness- and cost-benefit analyses which have been applied in the Netherlands to a series of interventions (anterior as well as posterior).

Lessons

Information on the burden of injuries (in particular the costs of injuries) and cost-effectiveness analyses turned out to be extremely valuable for policy makers to base their decisions upon. It worked for determining the priorities within the large domain of health care issues, for determining priorities within the domain of injuries, but it also had effect on determining the most effective preventive measure. It especially had effect, since during the last couple of years cost efficiency in the health care is a pretty dominant indicator in the Netherlands.

Conclusions

It is relevant to determine the burden of injuries by means of methods that lead to results that are comparable to other health care issues. Valid cost-effectiveness analyses show the potential value (cost saving) of measures to prevent injuries.

ECHI-I: European Community Health Indicators for Injuries

Robert Bauer

R Bauer
[1](on behalf of the Working Party on Accidents & Injuries of the PHP) and [2]Austrian Road Safety Board, Vienna, Austria

Issue

The concept of ECHI shall lead to comparability of health information in all Member States. This concept is currently being facilitated through programmes in the EU. Health information in the area of injuries is characterized by the specific dimension of 'external causes of injures' (e.g. in ICD based statistics) and additional 'vertical' data systems (e.g. for traffic and workplace accidents). Recently, the Injury Database (IDB) is featured as an 'all injury' surveillance system for the EU. IDB implementation shall be facilitated through the EC Council Recommendation on the 'Prevention of injuries'. However, even with a number of relevant injury data sources available, simple questions about injuries in the EU cannot readily be answered and key ECHI indicators are still missing.

Description

The shortcomings of current EU level injury information and injury indicators will be described and compared to the respective ECHI requirements. The concept for a comprehensive set of ECHI compatible injury indicators will be discussed with a focus on morbidity indicators, preferred data sources and data quality.

Lessons

In the highly fragmented area of injury statistics, a conceptual approach is needed in order to make the best use of the available information, to define the existing gaps and to develop 'intelligent' solutions for collecting the data that is still needed in order to meet the health policy needs as defined by the ECHI list.

Conclusions

At the moment, quite simple and frequently asked questions about injuries – 'How many bicycle accidents are there in the EU?'– cannot readily be answered or at least not with sufficient validity. The implementation of the proposed concept for EU level injury indicators, specifically from the IDB, would provide for an EU level injury surveillance and injury reporting to international standards – and also substantially complete the ECHI list.

Burden of injuries varies between eastern and western part of Europe

Johan Lund

W Zatonski[1], M Manczuk[1], J Lund[2]
[1]Cancer Centre and Institute of Oncology, Warsaw, Poland and [2]University of Oslo, Norway

Issue

Over the last decades, the health indicators have diverged and there has been apparent appreciable health gap due to fatal injuries between eastern and western part of Europe. The divergence goes deeper within the eastern part of European Union and is much more apparent between the Baltic States and the other central and eastern European EU new member states. The aim was to explain the reasons for such dramatic gap in mortality from fatal injuries in European countries.

Description

Trends in death rates from fatal injuries in European countries in the period 1985–2002 were analysed. Annual specific mortality rates were derived for 5-year age groups across the range 20–64 years. Alcohol exposure and relative risk information was combined to derive alcohol-attributable fractions for relevant causes if premature mortality.

Lessons

For the whole period of observation fatal injury mortality trends are the highest in the Baltic States, out of all EU countries. Second in rank are the remaining new EU member states from central and eastern Europe. The lowest rates are observed in the EU15. The course of fatal injury mortality trends in all considered group of countries was identical in men and women, although in women at a few fold lower level. In Central and Eastern part of European union (CEE) alcohol was responsible for 38% of all deaths from injuries in the male population aged 20–64. In the Baltic States this proportion was 48% and in the EU-15 at the level of 29%. In female

population, this proportion was 29% in CEE countries, 42% in the Baltic States and 19% in EU15.

Conclusions

The unusual leaps of the sudden deaths due to injuries in the time of peace in eastern Europe is without precedence in modern history. The phenomenon concerns mostly the weakest, the lowest educated, those with no profession and the lonely people. Proximate cause leading to a very high level of injuries is alcohol.

4.8. Socio-Economic Inequalities 1

Interrelations among multiple dimensions of socioeconomic position and health

Eero Lahelma

E Lahelma[1], M Laaksonen[1], P Martikainen[2], O Rahkonen[1]*
[1]Department of Public Health, University of Helsinki and
[2]Department of Sociology, University of Helsinki, Finland
*Contact details: eero.lahelma@helsinki.fi

Background

Socioeconomic position is a multidimensional construct but studies often overlook the complex socioeconomic pathways through which health inequalities are produced. Different indicators of socioeconomic position are unlikely to be interchangeable but each indicator reflects both common impacts of a general hierarchical ranking in society as well as particular impacts specific to the indicator. Our aim was to examine interrelations among seven indicators of socioeconomic position in the production of inequalities in four health related outcomes.

Methods

Analyses used data from the Helsinki Health Study collected in 2000, 2001 and 2002. Employees of the City of Helsinki, aged 40–60 years, received a mailed questionnaire (response rate 67%, $n = 8960$, 80% women). Socioeconomic position was measured by parental education, childhood economic difficulties, own education, occupational social class, household income, home ownership and adulthood economic difficulties. Outcomes included self-rated health as below good, common mental disorders (GHQ-12 score 3–12), current smoking and obesity (BMI 30+). Odds ratios from logistic regression analysis were calculated, adjusting for age and gradually for all socioeconomic indicators.

Results

Adjusting for age only, each socioeconomic indicator was associated with self-rated health, smoking and obesity, but common mental disorders were only associated with childhood and adulthood economic difficulties. Adjusting gradually for all socioeconomic indicators led to weaker or non-existent associations, but childhood and adulthood economic difficulties remained associated with all other outcomes except smoking. After full adjustment the association of parental education with self-rated health, smoking and obesity disappeared or reversed and income lost its associations with all outcomes. Own education and occupational class remained associated with self-rated health and smoking even after full adjustment.

Conclusions

There were inequalities across all studied seven socioeconomic indicators for self-rated health, smoking and obesity, whereas for common mental disorders there were inequalities by economic difficulties only. The results also suggest socioeconomic pathways as the associations of parental education with health related outcomes were likely to be mediated through own education. The associations of income with the outcomes were, in turn, explained by own education and occupational class. In conclusion analyses of the predictive power of socioeconomic indicators on health related outcomes run the risk of being fruitless, if interrelations and pathways among the various socioeconomic dimensions are neglected. A deeper understanding of the socioeconomic production of health helps focus measures aiming at narrowing the existing large health inequalities.

Glasgow's health in an urban European context: comparisons across six countries accounting for socioeconomic circumstances

Linsay Gray

LA Gray[1], J Merlo[2], H Ohlsson[2], E Regidor[3], D O'Reilly[4], J Tafforeau[5], AH Leyland[1]*
[1]Medical Research Council Social and Public Health Sciences Unit, Glasgow, UK
[2]Social Epidemiology and Health Economics, Malmö University Hospital, Lund University, Malmö, Sweden
[3]Department of Preventive Medicine and Public Health, Universidad Complutense de Madrid, Madrid, Spain
[4]Department of Epidemiology & Public Health, Queen's University Belfast; and
[5]Scientific Institute of Public Health, Brussels, Belgium
*Contact details: l.gray@sphsu.mrc.ac.uk

Background

Relative to Western Europe, Glasgow has high morbidity and mortality. The aim of this study is to investigate whether differences in health measures between adults in Glasgow and those in selected urban areas elsewhere in Europe can be explained by socioeconomic factors. Data from the Scottish Health Survey (SHS) 2003 [Greater Glasgow ($n = 1267$)]; Health Survey for England (HSE) 2002/2003/2004 [Greater Manchester (1587), Tyne&Wear (1072), Merseyside (1512)]; Northern Ireland Health and Wellbeing Survey (NIHWS) 2001/2005 [Eastern (4260)]; Health Survey for Scania (HSS) [Malmö (4053), Helsingborg (2565), Lund (4533)] 2004; Spanish Health National Survey (SHNS) 2001 [Madrid (1998), Barcelona (1538), Valencia (871), Seville (495) and Malaga (329)]; and Health Interview Survey Belgium (HISB) 2001/2004 [Brussels (6959), Antwerp (2586), East Flanders (1914), Hainaut (3425), Liège (2551), West Flanders (1530), Namur (1036)] were available.

Methods

Data on age; sex; geographical area; socioeconomic factors: educational qualifications (none, below degree level, degree level and above) and social class (professional and managerial, intermediate and skilled, unskilled) were available from all surveys. Self-reported general health (SHS, HSE, NIHWS, SHNS, HISB), longstanding illness (SHS, HSE, NIHWS, HISB), cardiovascular disease (CVD); (SHS, HSE) and General Health Questionnaire (GHQ12) – a measure of mental distress and psychological ill health, with high scores indicative of psychiatric morbidity – (SHS, HSE, NIHWS, HISB), were available from the surveys indicated. Logistic regression analyses compared health measures in Greater Glasgow to those in other regions stratified by sex, unadjusted and adjusted for age and socioeconomic factors.

Results

Compared with Glasgow, lower prevalence of poor self-assessed general health among men in Eastern Northern Ireland [odds ratio = 0.29;95% confidence interval:0.18–0.47], Madrid (0.30;0.18–0.49), Barcelona (0.31;0.18–0.52), Valencia (0.30;0.17–0.55), Seville (0.33;0.16–0.65), Brussels (0.30;0.19–0.50), Antwerp (0.12;0.07–0.21), East Flanders (0.13;0.06–0.26), Hainaut (0.34;0.21–0.56), Liège (0.26;0.15–0.47), West Flanders (0.18;0.09–0.37) and Namur (0.33;0.16–0.69) were not explained by age or socioeconomic factors. Poor general health in Merseyside (0.45;0.24–0.85), Eastern Northern Ireland (0.46;0.31–0.69), Antwerp (0.21;0.12–0.36), East Flanders (0.44;0.25–0.80), West Flanders (0.33;0.18–0.59) and Namur (0.37;0.18–0.78) remained lower than in Glasgow