

Conclusion Such a high rate of premature mortality not only reflects social vulnerability, but also reveals the failure of intersectoral policies to control a situation that affects the prospects of adolescents, their families, and society as a whole. Epidemiological knowledge must translate to ethically oriented approaches by healthcare managers and governmental policymakers in order to minimise these deaths, which represent a serious health hazard and social disease in Brazil.

P1-334 USE OF WEIGHT-LOSS DRUGS IN SOUTHERN BRAZIL: A POPULATION BASED STUDY

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Introduction Increasing prevalence of obesity worldwide reinforces the importance of studying weight-loss habits of the population. It is known that lifestyle modifications (LSM) should be the mainstay of overweight treatment and that use of drugs should be considered adjuvant in the process. Despite weight-loss attempts being common practices and Brazil being considered a major consumer of anorectic drugs, population-based studies are still scarce.

Methods Between January and May 2010 we conducted a cross-sectional population-based study with household interviews among adults in Pelotas, a medium size city located in southern Brazil, to determine the prevalence of weight-loss attempts in the last year and identify substances most commonly used.

Results Data were collected from 2732 individuals, with a rate loss of 10.3%. Overall prevalence of anti-obesity agents use was 4.8% (4.0 to 5.7), being higher in women (7.3%, CI 6.0 to 8.6) and among those of higher schooling (9.3%, CI 7.0 to 11.7). Drugs mainly used were: sibutramine (45.5%) amphetamines (31.8%) and herbal medicines (25.0%). Weight-loss formulae containing combinations of drugs, illegal in Brazil, were reported by 6.1% of users. Only 39.4% of drugs users referred to add dietary changes and regular exercise, and 47.0% slimming teas.

Conclusion Despite the regulations, medical prescription was just reported by 49.6% of the users. Moreover, we found a high prevalence of cardiovascular risk factors among users of sibutramine and amphetamines (hypertension: 30.9%; Hypercholesterolaemia: 27.7%; Diabetes: 10.8%; Age >40 years: 36.6%; Smoking: 10.4%) with 5% of sibutramine users reporting previous myocardial infarction or angina, contra indications for its usage.

P1-335 LONG-TERM CUMULATIVE RISK OF HERPES ZOSTER AMONG IMMUNOCOMPETENT ADULTS 60 YEARS AND OLDER

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Introduction Herpes zoster (HZ) is a painful disease affecting mostly seniors. The goal of this study is to estimate the long-term cumulative risk of HZ in a general population 60 years and older.

Methods We conducted a retrospective cohort study of 227 277 randomly selected immunocompetent subjects from Kaiser Permanente Southern California members who were never vaccinated with a zoster vaccine, and followed them from 1 January 2007 to 31 December 2009. We estimated the age-specific incidence rates, and used density method to derive the long-term cumulative risk of HZ, assuming the incidence rate is stable over time and no cohort effect.

Results The 10-, 20-, and 30-year risks of HZ are 0.10 (95% CI 0.09 to -0.11), 0.21 (95% CI 0.19 to 0.24), and 0.34 (95% CI 0.30 to 0.38) for White men, and 0.14 (95% CI 0.13 to 0.16), 0.30 (95% CI 0.27 to

0.32), and 0.42 (95% CI 0.39 to 0.46) for White women, respectively. For Black men, the 10-, 20-, and 30-year risks are 0.08 (95% CI 0.06 to 0.10), 0.17 (95% CI 0.12 to 0.22), and 0.23 (95% CI 0.15 to 0.33), and for Black women, they are 0.09 (95% CI 0.07 to 0.12), 0.20 (95% CI 0.16 to 0.25), and 0.30 (95% CI 0.23 to 0.38).

Conclusions As the ever-increasing number of baby boomers is entering the retirement years, the number of elderly population is expected to increase. We estimated that the long term risk of HZ among people over age of 60 years is higher than previously expected. It may be prudent to suggest prevention measures such as vaccination to reduce the risk of HZ in this population.

P1-336 VALIDATION OF NHS HOSPITAL ADMISSION RECORDS FOR ISCHAEMIC HEART DISEASE IN THE MILLION WOMEN STUDY

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Introduction The Million Women Study is a large longitudinal UK study of women's health. Between 1996 and 2001, 1.3 million women mostly aged 50–64 years were recruited through NHS breast screening centres in England and Scotland. Their current average age is 68 years. For all participants, the study has linkage to hospital admission records (Hospital Episode Statistics [HES] for England, Scottish Morbidity Records) as one source of study outcomes. Ischaemic heart disease (IHD) is one of the leading causes of disability and death in women in their 60s. However, the accuracy of capturing IHD in women using hospital admission records unclear.

Methods The aim of this study is to validate the occurrence or absence of IHD in HES records in Million Women Study participants using general practice records. A random sample of 1000 women with a hospital record including an IHD diagnosis (ICD I20–I25) and 1000 women with no such admission (controls) were selected. We wrote to each woman's registered general practitioner (GP) asking for confirmation of an IHD diagnosis or not. Each GP was asked to complete a study form, supply relevant hospital documents and return these in a prepaid reply envelope. For each admission, HES data will be compared with GP data.

Results Response rates were 83% for IHD and 88% for controls. Results will include analysis of the agreement between general practice medical records and HES admissions data for both cases and controls. The implications of using administrative datasets for epidemiological research outcomes will be discussed.

P1-337 SOCIAL INEQUALITY IN MORTALITY: CAUSALITY OR SELECTION?

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Introduction The aim of this study was to examine to which degree the often demonstrated association between educational status and mortality is confounded by family characteristics, that is environment in childhood and genetic setup. To disentangle an independent causal effect of educational status on mortality from selection mechanisms, we used a discordant sibling design making it possible to control for the shared early life environment and to a lesser degree genetic setup per design.

Methods The study was register-based and the study population consisted of all individuals born in Denmark between 1950 and 1979

who had at least one full sibling born in the same period (N=1 381 436). All individuals were followed from age 28 years until the age of death, emigration, or December 2009. Using Cox' regression analyses, we estimated HRs for mortality according to educational status.

Results Both conventional cohort analyses and intra sibling analyses were carried out. Educational differences observed in the cohort analyses were attenuated in the intra- sibling analyses.

Conclusion The attenuation of the association in the intra sibling analyses indicates that environment in childhood and/or genetic setup explain some of the association between educational status and mortality. However, significant associations still persisted in intra-sibling analyses, supporting an independent effect of education on mortality.

P1-338 THE ASSOCIATION OF MATERIAL DEPRIVATION AND RR OF INFANT MORTALITY IN PENINSULAR MALAYSIA

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The aim of this paper is to investigate whether areas with greater deprivation index have higher RR of infant mortality in Peninsular Malaysia. This investigation is essential for the regional planning and development by policy makers to reduce the inequality and health gap across region within the country. We begin this investigation by studying the census based data for year 1991 and 2000 for the 81 administrative districts. These data are then correlated with RR of infant mortality data for the period of 1990–2000. In this paper, Bayesian hierarchical method is used to rank area deprivation and RR of infant mortality for each administrative district. The results are then mapped through choropleth maps to see the association between the two risk factor and health indicator. The analysis showed that regional material deprivation is strongly associated with the RR of infant mortality.

P1-339 PATTERN OF DROWNING AND ITS BURDEN IN NORTH COAST OF IRAN

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Background and objective Drowning is a neglected serious public health problem in the northern provinces of Iran. Since the first step for health program planning in each community health is the priority setting, in this study, the epidemiological pattern was reviewed and burden of drowning was calculated.

Methods This study used data on death registration system and deaths due to drowning disruption in two provinces of Mazandaran and Gilan happened in 2008 were addressed. Initially with the help of descriptive statistics to describe characteristics of drowning, using the standard WHO forms the burden of drowning was calculated.

Results During 2008, 158 indigenous people from the provinces died from drowning. Of these 140 cases (88.6%) were male and 18 patients (11.4%) were female. The mean age of the drowned was 26.4 (SD=16.2) years. The drowning death rate was 2.9 per 100 000 population in two provinces. In examining place and time, most cases (85.4%) occurred in summer, the month of August (29.7%). Number of years lost was 4110 equivalent of 76.1 per 100 000 respectively. Most disabled age lost life years (DALYs) was seen to age group 10–19 years.

Conclusion With regard to the issue that most drowned in the sea and occurred in the summer time and the highest number of DALYs was in the age group 10 to 19 years, these findings need to be considered for prevention strategies in these provinces.

P1-340 FOLATE STATUS AND FOLIC ACID INTAKE 6 YEARS FOLLOWING MANDATORY FORTIFICATION OF FLOUR IN BRAZIL: A POPULATION-BASED STUDY IN SÃO PAULO

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Introduction To prevent neural tube defects (NTD) folic acid fortification of wheat and corn flour has been mandatory in Brazil since 2004. The purpose of this study was to examine the effect that folic acid fortification has had on serum folate levels and its contribution of total folate intake.

Methods Data were obtained from two 24 h dietary recalls from a population-based study (2008–2010) in São Paulo-Brazil for 297 participants who also had serum folate concentrations measured. Folate intake was obtained using the software program Nutrition Data System for Research. Descriptive statistics, Pearson's correlates, Kruskal-Wallis and Student's t-tests were performed using Stata (Version 10.0).

Results The reference range (5th–95 th percentiles) for the population after the introduction of folic acid fortification was 4.6–16.4 ng/ml for serum folate. The prevalence of low (<3 ng/ml) serum folate was 0.6%, while 1.4% of population exceed the limit value of 20 ng/ml. Synthetic folate (folic acid) contributed 51.3% [49.2 to 53.4 95% CI] of total folate intake. Both natural folate and synthetic folate did not correlate with folate serum concentrations ($p>0.05$), however participants in the highest serum folate tertile were older ($p=0.001$), and synthetic folate intake among adults and the elderly was less than the group aged <19 years ($p=0.01$).

Conclusion There was a very low risk of folate deficiency in the studied population; older participants had higher levels of serum folate and lower intake of synthetic folate. Participants with excessive serum folate concentrations after the folic acid mandatory fortification of flour were identified.

P1-341 DENGUE SPATIAL RISK DISTRIBUTION IN CAMPINAS, BRAZIL

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Introduction Dengue fever is an arbovirus of great importance in public health. Currently, the urban population *modus vivendi* favours transmission and maintenance of breeding sites of the vector, *Aedes aegypti*. Given the complexity of vector control, epidemiological surveillance for early case detection is of fundamental importance for the prevention of outbreaks of major proportions. This research aims to study the spatial distribution of the risk of dengue in the city of Campinas from January to December 2007.

Methods Spatial RR of dengue fever was calculated for each 4 weeks in Campinas using generalised additive model in a case-control study. All 9018 reported and confirmed autochthonous dengue fever cases of residents in the municipality were geocoded, while controls were generated from a representative sample of the population of Campinas based on IBGE census.