

January 1990 to 30 June 2006, based on linked records of the use of mental health services, hospital admissions, Medicare claims for GP and specialist services, electoral roll registration and deaths. Adjusted rate ratios (ARRs) for the number of visits to GPs by MHCs relative to non-MHCs, and for different categories of mental disorders.

Results Relative to non-MHCS, the ARR of visits to GPs by MHCs was 1.622 (95% CI 1.613 to 1.631) overall, and was elevated in each separate category of mental illness. ARRs were highest for alcohol/drug disorders, schizophrenia and affective psychoses (2.404, 1.834 and 1.798, respectively). The results were not changed by location (metropolitan, rural or remote addresses). However, the 4% of MHCs with no fixed address had a very low ARR of visits to GPs (0.058; 95% CI 0.057 to 0.060).

Conclusion MHCs visit GPs substantially more often than non-MHCs, with the exception of those with no fixed address who seldom see a GP at all.

P2-170 DIRECT ESTIMATION OF TOBACCO-ATTRIBUTABLE CANCER MORTALITY IN POLAND

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Introduction The aim of the present study was to estimate the number cancer deaths, and their proportion over total deaths in that age ranges, attributable to tobacco in Poland.

Methods The calculation of tobacco-attributable mortality was based on the combination of RRs and prevalence of exposure. The selection of tobacco-related diseases and causes of death relied on recent comprehensive reviews by the International Agency for Research on Cancer [IARC, 2004] and the U.S. Government [USDHHS, 2004]. The set of RRs was derived from the Cancer Prevention Study II (CPS-II). Data on smoking prevalence come from national survey studies. Data on cancer mortality separately for 11 cancer sites related to tobacco were obtained from National Cancer Registry. To introduce into the model the latency effect demonstrated for most chronic health effects of tobacco, period of 20 years latency between exposure and death was implemented.

Results In 2005 in Poland there were 24 222 cancer deaths among men (197.3/100 000) and 5177 among women (35.8/100 000) attributed to active tobacco smoking. Among eleven cancer sites attributed to tobacco, the biggest killer was lung cancer with 15 478 deaths among men (60.4/100 000) and 3538 deaths among women (10.7/100 000).

Conclusion Direct estimations (based on smoking prevalence) can be successfully used to calculate tobacco burden. In Poland in tobacco-related cancers kill substantial number of men and women every year. Quantifying the size of tobacco burden gives arguments for evidence-based tobacco control intervention.

P2-171 PAIN AMONG OLDER PEOPLE AND ITS IMPACT ON DISABILITY: A 10/66 CROSS-SECTIONAL POPULATION-BASED SURVEYS IN LATIN AMERICA, INDIA AND CHINA

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Introduction Pain is an important indicator of health mainly among older adults. The aim of the present study is to describe the prevalence of pain and to examine the relationship between pain and disability in elderly.

Methods One-phase cross-sectional surveys of all residents aged 65 years and over (n=15 177) living in eight low- and middle-income countries. Pain was measured using three questions, about frequency, severity and extent of limitation associated with pain in the previous 4 weeks. Disability was assessed using the 12 item WHODAS 2.0. We calculated the crude and standardised prevalence of pain and used Poisson regression prevalence ratios, to estimate the association between pain and severe disability, and to generate population attributable prevalence fractions (PAPF).

Results The overall prevalence of pain—defined as any type of pain in the last 4 weeks - ranged between 15.1% (China) and 46.0% (Peru) in urban sites and between 33.5% (Peru) and 58.8% (India) in rural sites. Pain was associated with severe disability, prevalence ratio pooled estimate was 1.49 (95% CI 1.21 to 1.78), adjusted for depression, number of impairments and chronic disease diagnoses. The adjusted PAPF showed that 39.2% of severe disability could be explained by pain.

Conclusion The results show that the prevalence of pain in the elderly is high. Pain seems to be an important contributor to disability among older people. Pain in older people is an increasingly important health issue worldwide, and one that requires urgent worldwide attention from the public health and clinical perspectives.

P2-172 ADVERSE HEALTH EVENTS DURING OCCUPATIONAL EXPOSURE TO PESTICIDES, IN CORDOBA, ARGENTINA. AN ESTIMATION OF ITS IMPACT ON AGRICULTURAL APPLICATORS HEALTH

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The use of pesticides undeniably comes with some risks. It is understood that people who work with pesticides typically have much higher exposure than general public. The present work evaluated the prevalence of adverse events occurring during occupational exposure as an estimation of health impact. Also associations with several demographic characteristics, lifetime exposure years, working practices and protection level, considering a personal protection equipment (PPE) index, were investigated. Our results shown that the study population is relatively young (34.9±11.04 y); 71% have up to 10 years of exposure and 80% are under 45 years of age, being 11.8% illiterate or with incomplete primary school. PPE is not adequate used in around 70% of the workers. Agrochemical prescription, indicated by an agricultural engineer, is only used by 38% of workers and the percentage of use of modern technologies (such as crop sprayers equipped with cabs and activated charcoal filter) is low. Forty four percent answered to have irritative symptoms (skin, eyes, nausea and vomiting) frequently, 35% requiring medical consultation and 5.4% hospitalisation. Other symptoms such as headache, tiredness, nervousness or depression were also reported. The lifetime exposure is associated with irritative signs,

like headache, nervousness and depression and, the low protection, with irritative eye symptoms, headache, nervousness and depression. The use of modern application technologies was negatively associated with skin irritation. Low levels of PPE use, lifetime exposure and lack of safe environments with appropriate technologies, involves higher levels of cumulative exposure, resulting in greater negative impact on their health.

P2-173 CHRONIC DISEASES: STUDYING AND UNDERSTANDING OUTCOME USING ROUTINE DATA: CHRONIC KIDNEY DISEASE (CKD), AN EXAMPLE

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Internationally, chronic disease represents a major healthcare challenge for the 21st century. Prognostic tools that streamline and target care have been developed for cardiovascular disease. This study illustrates how routine data can be used to develop tools for other chronic diseases; using chronic kidney disease (a precursor of renal replacement therapy (RRT: dialysis or transplantation) requirement) as a model. Routine clinical data—serum creatinine (a measure of kidney function), RRT initiation and death registration were used to identify a CKD cohort, and follow them over 6 years. Mortality was compared to the general population. 3426 persons were identified with CKD (median age 79 years, 56% female). RRT initiation rates decreased with age from 14.3 to 0.7 per 100 person-years among those aged 15–25 and 75–85 years at baseline respectively (absolute numbers 6 and 34). Mortality rates increased with age from 1.9 to 33.8 per 100 person-years for those aged 15–45 and over 85 years at baseline—a 19 and 2 fold increase in mortality risk compared to the general population respectively (2 and 17 excess deaths per 100 person-years). CKD has been labelled a public health concern, and provides a typical pattern for chronic disease. Personal risk is low for the majority, but they represent a high societal cost; whereas those with high personal risk are few, with lower societal cost. Exploitation of routinely collected data are an efficient way of following up health outcome, and informing the development of prognostic tools for a chronic disease cohort.

P2-174 SURVIVAL ANALYSIS OF CYSTIC FIBROSIS PATIENTS IN A REFERENCE CENTRE IN RIO DE JANEIRO, BRAZIL

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Cystic Fibrosis (CF) is a rare genetic disease, of autosomal recessive transmission, with multiple organ involvement, a progressive course and is potentially lethal. We studied the factors associated with the reduced survival. In an open cohort of cases diagnosed between 01 January 1990 and 10 October 2009 in a CF reference centre in Rio de Janeiro, we analysed survival and risk factors associated with survival. Information on patients included that on CF diagnostic criteria follow-up and outcome. The model included variables on gender, genotype, number of involved organs, nutritional state, bacterial colonisation, enzyme replacement and calendar-time of diagnosis. Survival was estimated by Kaplan–Meier (KM) method

and covariates examined by log-rank tests. HRs were estimated by a Cox model and evaluated by the likelihood ratio, deviance and residual analysis. The majority of the population (n=177) was female (56%) and the median age at diagnosis was 14 months. The median survival was 19 years. After diagnosis, 81% survived up to 5 years, 70% up to 10 and 61% up to 14.5. The model explained 19.9% of the effects and included six covariates. HRs were 10.30 (2.41–43.97) for isolated pseudomonas colonisation, 4.50 (0.93–1.85) for *Staphylococcus aureus*, 3.38 (0.92–1.32) for other bacteria, 1.95 (0.96–3.96) for gender, 1.94 (0.94–3.98) for nutritional state and 4.34 (1.50–12.52) for decade of diagnosis. Risk factors obtained at diagnosis were associated with prognosis suggesting that interventions may reduce morbidity by nutritional improvement and pseudomonas eradication.

P2-175 MATERNAL SMOKING AND HEIGHT IN THE ADOLESCENT OFFSPRING. THE 1993 PELOTAS BIRTH COHORT

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Background Maternal smoking has been indicated as a risk factor for several health outcomes in the offspring.

Objective The aim of this work was to describe the association between maternal smoking during prenatal and postnatal periods and the offspring's height during adolescence.

Methods The 1993 Pelotas birth cohort (Southern Brazil) has primary data from birth to adolescence with several follow-ups and it comprised 5249 live-born newborns. The follow-up rates at 11 and 15 years old were, respectively: 87.5% and 85.7%. The variable maternal smoking was categorised as: never smoker, only prenatal smoker, only postnatal smoker (during first year of life) and always smoker. Height was used as height for age z-score at 11 and 15 years using WHO curves. The confounding variables taken into account were: maternal height, maternal age, maternal schooling, paternal smoking, family income, sex, skin colour, Tanner's stage and adolescent smoking.

Results After adjustment for potential confounders in a multiple linear regression model, maternal smoking showed a significant and negative association (β values) with height for age z-score: a) at 11 years old [never smoker as the reference]: only prenatal smoker (−0.47), only postnatal smoker (−0.12), always smoker (−0.30) $p<0.001$; b) at 15 year old: only prenatal smoker (−0.14), only postnatal smoker (−0.12) and always smoker (−0.30) $p=0.007$.

Conclusion We concluded that maternal smoking has an important effect on adolescence height.

P2-176 ANALYSIS OF THE FAMILIAR EXPENSES WITH MEDICINES FOR DIABETES TREATMENT IN THE BRAZILIAN POPULATION

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Introduction Direct costs for diabetes care accounts for 2.5% to 15% of national health expenditures around the world, fee that varies according to local prevalence of diabetes and to the complexity of treatment available. Economic aspects of diabetes have been studied in the United States and in countries of Europe, but such information are still scarce in Brazil. The main objective is to evaluate the individual spending with prescription drugs to treat diabetes based