discriminate between workers at a wider range on each scale, and detect changes in IWP. In conclusion, the IWPQ seems to be a suitable instrument to study IWP in occupational epidemiology.

52 ASSOCIATION OF PSYCHOTHERAPY WITH LONG-TERM DISABILITY BENEFIT CLAIM CLOSURE AMONG PATIENTS DISABLED DUE TO DEPRESSION

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10.1136/oemed-2013-101717.52

Objectives To evaluate the effect of psychotherapy for depression in patients receiving disability benefits.
Methods Using administrative data from a large Canadian, private, disability insurer, we evaluated the association between the provision of psychotherapy and other potentially predictive factors with time to long-term disability (LTD) claim closure.
Results We analysed 10,338 LTD claims in which depression was the primary disabling complaint. Depression management included psychotherapy in 1580 (15.3%) LTD claims. In our adjusted analyses, receipt of psychotherapy was associated with faster claim closure (hazard ratio [HR] = 1.42; 95% confidence interval [CI] = 1.33 to 1.52). Older age per decade (0.83 [0.80 to 0.85] respectively), a primary diagnosis of recurrent depression (0.80 [0.74 to 0.87]) versus major depression, a secondary psychological (0.77 [0.72 to 0.81]), or non-psychological diagnosis (0.66 [0.61 to 0.71]), a longer time to claim approval (0.995 [0.992 to 0.998], and an administrative services only policy (0.87 [0.78 to 0.96] or refund policy (0.73 [0.69 to 0.77]) versus non-refund policy were associated with longer time to claim closure. Residing in the Prairies (1.46 [1.35 to 1.57]) and Quebec (1.93 [1.82 to 2.05]) versus Ontario were associated with faster LTD claim closure.
Conclusions We found multiple factors, including psychotherapy, which were predictive of time to LTD claim closure. Our findings may however be influenced by selection bias and other biases that present challenges to the analysis and interpretation of administrative data, and highlight the need for well-designed prospective studies.

53 ASSOCIATIONS OF THE PSYCHOSOCIAL WORK ENVIRONMENT FACTORS WITH THE MENTAL HEALTH DISORDERS IN NURSING PROFESSION

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10.1136/oemed-2013-101717.53

Objective This study examined the associations of work environment factors with the mental health disorders in nursing profession.
Methods A cross-sectional survey was carried out among registered nurses in the Tartu University Hospital. The electronic questionnaire was sent to all 906 full staff nurses working in hospital. The Estonian translation of the Copenhagen Psychosocial Questionnaire, version II (COPSOQ II) was used to measure psychosocial work environment dimensions and mental health disorders. Data were analysed using the SPSS version 18 and Statistical Software R. Descriptive statistics was used to assess means and standard deviations for psychosocial risk factors and mental health disorders. Binary logistic regression analysis was used to observe relationships between risk factors and mental health disorders. The results were summarised by OR-s with 95% CI-s.
Results A total 404 questionnaires (45%) were used in the analysis. The average age of the study group was 40.2 years (SD 10.8) and most of respondents were women (98.3%). The mental health indicators showed relatively high average values of burnout and stress among nurses. High average scores of positive work characteristics (meaning of work, role clarity, social relationships at work and mutual trust between employees) in a 100 point scale were detected. High average scores were measured also on the negative work characteristics as work-family conflict, work pace, emotional and cognitive demands. The increased risk for mental health disorders was caused by work-family conflict, above-average quantitative and emotional demands and other factors. Risk for mental health disorders was decreased by above-average justice and respect, commitment to the workplace, job satisfaction and other factors.
Conclusions Our study confirmed that there are strong relationship between psychosocial risk factors and mental disorders. The present study refers to the urgent need for preventive strategies to reduce the psychosocial stress factors as the main causes of mental health problems.

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54 OCCUPATIONAL CANCERS RISK PERCEPTION IN IRANIAN INDUSTRIAL WORKERS

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10.1136/oemed-2013-101717.54

Objectives This cross sectional study examined the occupational cancer risk perception among 269 Iranian industrial workers according to their knowledge, job titles hazard and demographical properties.
Methods The structured questionnaire was used to measure participants knowledge and perception toward occupational cancers (= 0.72). There was significant difference in both knowledge and perception about occupational cancers in different age, and educational groups.
Results It was significant relation between knowledge and perception (p-value = 0.001, r^2 = 0.323). True answer to some questions was less than 20 percent. An optimistic bias was found in participant's perception. We developed a path analytical model for occupational cancers risk perception according to these findings.
Conclusions Our findings prove that cancers risk perception in industrial workforces is affected by several factors. Another important finding in our results is the differences between our findings and other studies about cancer risk perception in general population. It seems that there is different model for perception of occupational cancers in workforces. Further efforts should be placed in the training of workers to enhance their knowledge and subsequently their perception toward occupational cancers.

55 AN HISTORICAL COHORT STUDY OF WORKERS IN THE UK HARD-METAL INDUSTRY

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10.1136/oemed-2013-101717.55

Objectives A feasibility study has shown that a scientifically rigorous and comprehensive epidemiological study of workers involved in the manufacture or production of tungsten carbide with a cobalt binder is feasible, and should include workers from sites in the United States and in Europe. Objectives include: (i) to investigate the total and cause-specific mortality experience of current and former workers as compared with the corresponding national and local populations from which the workforces were drawn, with adjustment for potential confounding factors; (ii) to characterise as completely as possible the current and past working environment of the study participants; and (iii) to determine the relationship between level and duration of exposures and mortality from lung cancer with analytic adjustment for important potential co-exposures, including tobacco smoke. The study is funded by the International Tungsten Industry Association.
Methods The study cohort will be enumerated using human resources data, with cross-checks for completeness against pension, payroll, occupational health and other sources. All available occupational hygiene data will be extracted to facilitate a study-wide exposure assessment.
Results Initial meetings have been held with the two UK factories to establish the scope and quality of demographic and industrial hygiene data. In parallel with this an application has been submitted to an ethics committee and the National Information Governance Board, the latter seeking to obtain an exemption from having to gain positive consent for study participants. A worker leaflet explaining the study has been drafted for inclusion in the ethical submission. Work to determine the optimum way to extract the data from the factories, is currently underway.
Conclusions This large study will represent multiple companies, countries and manufacturing processes and will be larger, more robust and more definitive than any hard-metal manufacturing epidemiological study done to date.

56 INCIDENCE OF MESOTHELIOMAS IN QUÉBEC AND CANADA FROM 1984 THROUGH 2007: TRENDS AND ESTIMATE OF FUTURE BURDEN

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10.1136/oemed-2013-101717.56

Objectives We compared the incidence rates of pleural (MPL) and peritoneal (MPR) mesotheliomas between Quebec and the rest of Canada to describe past and estimate future temporal trends of MPL in Quebec until the year 2032.
Methods New cases occurring between 1984 and 2007 were counted in the Canadian Cancer Registry according to the international classification of diseases for Oncology, 3rd version (ICD-O-3). Equivalent ICD-O-1 coding was used to identify mesothelioma cases before 1992. Age-standardised rates were compared between sexes and regions. Poisson regressions were carried out to assess the effects of birth cohorts and to estimate future rates of MPL.
Results The age-standardised incidence rates of MPL averaged 2.12 and 0.42 for 100000 person-years among Quebec men and women respectively. Age-adjusted rates of MPL were 1.45 (95% CI = 1.37–1.54) times higher in Quebec men and 2.00 (95% CI = 1.76–2.27) times in women than among Canadian men and women. The age-adjusted rate of MPR was 1.36 (95% CI = 1.09-1.68) times higher among Quebec residents than in the rest of Canada. A significant slowdown in the increase of MPL was observed after 1995. Younger cohorts experienced a lower incidence of MPL. The incidence of MPL should peak between 2008 and 2012 (at 2.79/100000 in Québec and 1.79/100000 in Canada). In Quebec, there would be an absolute excess of some 700 new male cases and 160 female cases over a 5-year period.
Conclusions The observed higher and continuously increasing rates of MPL in Québec warrant a stricter surveillance of mesothelioma incidence and asbestos exposure to ensure that rates effectively drop down to background levels.

57 AN INTERNATIONAL HISTORICAL COHORT STUDY OF WORKERS IN THE HARD-METAL INDUSTRY

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10.1136/oemed-2013-101717.57

Objectives In 2006, IARC found limited evidence in humans and sufficient evidence in animals that tungsten carbide (WC) with cobalt binder (WCCo) acted as a lung carcinogen (Group 2A). Our historical cohort study was designed to overcome certain limitations of earlier epidemiology studies by including a rigorous exposure assessment component, a nested case-control study of lung cancer and use of external and internal cohort rate comparisons. The primary research objectives include:

To investigate the total and cause-specific mortality experience of current and former workers as compared with corresponding national and regional populations and internally-derived control groups, with adjustment for potential confounding factors and focus on lung cancer.

To characterise the past and current working environment of subjects relative to work area, job title/function and potential for exposure to WCCo, as well as the component exposures: tungsten, tungsten carbide (without cobalt), carbon black, and cobalt;

To determine the relationship between level and duration of exposures and lung cancer mortality with adjustment for potential co-exposures, including information obtained on tobacco smoking habits via a nested case-control study.
Methods Our cohort comprises 10 manufacturing sites in the United States and nine sites in Europe, and represents three companies, five countries (US, Austria, Germany, Sweden and UK) and multiple manufacturing processes. The study will include separate and pooled analyses. The epidemiological and exposure assessment components of the study are coordinated by the University of Pittsburgh and the University of Illinois at Chicago, respectively. The study is funded by the International Tungsten Industry Association; the US record collection phase was supported in part by the Pennsylvania Department of Health.
Results We will report on current progress in the US component of the study and in our efforts to coordinate the international study. Progress in the European studies will be reported separately by the respective investigators.

58 AN INTERNATIONAL HISTORICAL COHORT STUDY OF WORKERS IN THE HARD-METAL INDUSTRY - GERMAN COMPONENT