

industry (difference: 9 jobs). The use of MRS allowed us to identify job characteristics that are associated with lower agreement between experts and to quantify the potential benefit of using multiple raters.

Poster Presentation

Cancer

0304 TEMPORO-SPATIAL ANALYSIS OF MORTALITY FROM PLEURAL MESOTHELIOMA FROM 1975 TO 2012 IN ÎLE-DE-FRANCE

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Context Pleural mesothelioma surveillance, a marker of asbestos exposure, improves early detection and helps improving compensation of the disease. Few epidemiological data exist at a sub-district level in France.

Objectives This study presents an analysis of mortality in Île-de-France region from pleural mesothelioma from 1975 to 2012, by sex, district and "cantons-villes" residence.

Material and methods Pleural mesothelioma deaths from 1975 to 2012 were provided by the CepiDc and the corresponding population numbers by INSEE. Mortality rates stratified by age were reported for the region and its districts. Standardised mortality ratios were calculated using the Île-de-France population as a reference at "canton-villes" level. A ranking algorithm to order the mortality by "canton-ville" over the period was developed and applied.

Results The epidemic peaked in the mid-90s. Among men the lowest standardised rate was observed for Paris (3.4 per 100,000) and the highest in Seine-et-Marne and Seine-Saint-Denis (5.1 per 100,000). Among women the lowest mortality was observed in Paris and in the Val d'Oise (1.3 per 100,000) and the higher in the Seine-Saint-Denis (1.8 per 100,000). The temporo-spatial representation shows high mortality areas consisting of neighbouring "cantons-villes" in Seine-et-Marne (Perthes) and Seine-Saint-Denis (Aulnay-sous-Bois), in contrast with areas of low mortality localised mainly in Paris and the Val-d'Oise. The epidemic timeline differed among "canton-ville".

Conclusion Epidemic of pleural mesothelioma can be characterised at a fine scale over a long period. This territorial knowledge can be an aid to targeted education of health professionals and the populations concerned.

Oral Presentation

Cardiovascular Disease

0305 OCCUPATIONAL EXPOSURE TO RESPIRABLE QUARTZ AND RADON AND THE RISK OF ACUTE MYOCARDIAL INFARCTION

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Objectives The aim of this study is to investigate the effect of occupational exposure to radon and respirable quartz (RQ) on the risk of acute myocardial infarction.

Methods This individually matched case-control-study is nested into the Wismut cohort of former uranium miners. Acute myocardial infarction (AMI) was ascertained from hospital discharge diagnoses coded in ICD-10 and validated according to WHO criteria (1979) by patient records. Exposure to RQ, radon, long-lived radionuclides, Gamma-radiation, and arsenic was estimated by a corresponding job-exposure-matrix. Information on silicosis was included in the dataset to reduce a possible Healthy-worker-effect. To exclude effects of possible exposures before hire in uranium mining, a second analysis was performed limited to miners born after 1930. Conditional logistic regression was used for risk modelling.

Results In total, 467 cases of AMI and 467 controls, matched by year of birth, were ascertained. The analysis of the full dataset shows only a weak increase of AMI-risk with increasing exposure to RQ. But the second analysis, based on 126 matched pairs, revealed a positive dose-response relationship with RQ. The odds ratio for the highest quintile (>15 mg/m³·year) was 4.91 (95%CI: 1.43–16.8). Including RQ as a linear term yields OR=1.05 per mg/m³·year. The analysis of the cumulative radon exposure produced similar findings.

Conclusions This study shows elevated risk of AMI due to radon and RQ exposure. Because of the high correlation between both exposures, a differentiation between the corresponding effects is not possible.

Oral Presentation

Exposure Assessment

0306 USING DATA FROM EXPOSURE DATABANKS: COMPARING MEASUREMENT LEVELS IN LIMS (QUEBEC, CANADA) AND IMIS (USA)

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Objectives The LIMS databank stores all occupational exposure measurements collected by public health teams in Quebec. The IMIS databank contains exposure measurements collected by the U.S. Occupational Safety and Health Administration inspectors to verify compliance. We investigated differences/similarities between both databanks.

Methods Personal exposure measurements from 1994–2011 were abstracted, and industry from both databanks was recoded according to the Canadian Standard Industrial Classification. Logistic regression was used to explore differences between exposure levels in both databanks for 27 chemicals in common industries, taking into account the type of exposure (short-term or long-term), year, and industry. Ratios of the predicted odds of exposure above the threshold limit value (O_{ER}) for IMIS compared to LIMS were calculated for each chemical for years 1997 and 2008.

Results Our analysis was based on 64,938 LIMS and 53,078 IMIS measurements. Exposure levels were significantly lower in IMIS compared to LIMS for metals (O_{ER} estimated in 1997: 0.43 across agents, 95% confidence interval (CI): 0.30–0.62; O_{ER} 2008: 0.57, 95% CI: 0.42–0.77), and they became similar in recent years for solvents (O_{ER} 1997: 1.47, 95% CI: 0.91–2.38; O_{ER} 2008: 0.99, 95% CI: 0.58–1.69). Short-term exposure levels were on average 3 times higher than long-term ones across the two databanks. Results were unchanged when industry from both databanks was recoded according to the U.S. Standard Industrial Classification or the North American Industry Classification System.

Conclusions Differences between exposure levels in the two databanks may reflect distinct sampling strategies or prevention policies between the two countries.

Poster Presentation

Musculoskeletal

0307

DETERMINANTS OF MODIFIED WORK AS PART OF THE RETURN-TO-WORK PROCESS FOR INJURED WORKERS WITH MUSCULOSKELETAL INJURIES IN BRITISH COLUMBIA, CANADA

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Introduction The longer an injured worker is off work the less likely they are to return to work and modified work is associated with shorter recovery durations. However, low rates of modified work have been found in Canadian compensation jurisdictions. This study investigated the determinants of modified work among workers with musculoskeletal injury compensation claims in British Columbia.

Methods Three cohorts of injured workers were identified from compensation claims for back strain, limb fractures and connective tissue injuries. The effect of age, sex, occupation, wage quintile and prior claim on at least one modified day (yes/no) within the first four weeks of claim was analysed using Poisson regression.

Results In multivariable models, female gender was associated with an increased likelihood of modified work (back strains:

IRR 1.15 [95%CI 1.06, 1.25]; limb fractures: 1.22 [0.91, 1.64]; connective tissue injuries: 1.14 [0.85, 1.52]), while older age (e.g. 55 to 65 years) was associated with a decreased likelihood (back strains: IRR 0.69 [95%CI 0.63, 0.76]; limb fractures; connective tissue injuries: 0.59 [0.43, 0.81]). Higher income was associated with an increased likelihood of modified work for limb fractures (highest quintile: IRR 1.84 [1.27, 2.67]). The effect of occupation was variable on modified work by injury type.

Discussion Unmeasured injury severity may have resulted in residual confounding of disability duration by gender and age. The offer of modified work may be dependent on occupation and the flexibility of higher paying occupations. The overall low rate of modified work for musculoskeletal injuries (<30%) warrants further investigation.

Poster Presentation

Other

0308

A BRAZILIAN LOOK AT OCCUPATIONAL HEALTH AND SAFETY IN THE USA: OBSERVATION AND LEARNING WITH COSH GROUPS

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Labour laws in the United States of America are less protective than the norms of most countries, including Brazilian ones. However, there is a strong militant movement for occupational safety and health in USA, organised in an articulated network that includes university professors and students, trade unionists, community leaders, public agents and various sectors workers.

The successful experience of the social activism of the Committees on Occupational Safety and Health (COSH) groups, which have been advocating for the safety and health of workers in the United States for 45 years, deserves propagation and study because it can inspire similar initiatives in Brazil and in other countries.

This exploratory research collected data through open interviews with workers, lawyers, teachers, researchers and activists heard between October/2013 and March/2014, as well as directed observation and interviews made during three events held in Boston and Baltimore (COSH Network, APHA 2013 and National Worker Safety and Health Conference).

The results show that COSHs are alliances that promote education and advocacy for workers' health and safety. They articulate a national agenda to improve health and safety conditions for immigrant workers under the prevention bias, providing information and support in Spanish and other languages, as well as advocating for just compensation for workers who are ill or injured at work. They also carry out activities to integrate health and safety activism into organised campaigns, as well as advocate for the respect of existing health and safety laws and fight for new protections for workers.