Abstracts

Oral Session 17 – Surveillance


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Introduction: In industrialised countries such as France, asbestos has been widely used for decades, and occupational exposure to asbestos has been identified as the most important risk factor for pleural mesothelioma.

Objective: To identify which occupations and industries that are at high risk for pleural mesothelioma among men and women.

Methods: A population based case-control study was conducted between 1998 and 2002 in 19 French cancer registration areas included in the Mesothelioma National Surveillance Program. The report is based on 455 cases (80% of males) histologically confirmed and 704 controls (matched for sex, age, and area residence), aged 41–94 years. Occupational history was collected by trained interviewers with a standardised questionnaire. Conditional logistic regression was applied to calculate odds ratios (ORs) and 95% confidence intervals (CIs) for each occupation and industry according to national and international standard classifications, taking subjects never employed in each occupational group as the reference.

Results: Among men, statistically significant highest risks were observed for plumbers and pipe fitters, welders, sheet metal workers, structural steel workers, and machinery fitters and assemblers, and for the industries of shipbuilding and repair, asbestos products, structural metal products, fabricated machineries, railroad equipment, construction, and chemicals. Among women, we observed a statistically significant excess risk only for secretaries (OR 3.2, 95% CI 1.2 to 8.5), among secretaries, a majority was employed in the industries of fabricated metal products, construction, and chemicals.

Conclusions: The highest risks for pleural mesothelioma were found for occupations and industries well known to be exposed to asbestos in the past. These results could be used in surveillance and prevention actions among workers in occupations and industries at high risk.

[O17.2] EPIDEMIOLOGY OF ASBESTOS RELATED DISEASES IN QUEBEC, CANADA

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Introduction: In 1997, in light of international developments with respect to asbestos, the Québec Department of Health and Social Services set up a committee to examine the epidemiology of asbestos-related diseases in Québec, Canada.

Methods: Tumour, death, and hospitalisation registries were used to describe the incidence and mortality of malignant mesothelioma and asbestosis in the general population of Québec. Compensation data were also used and allowed the description of economic sector and occupations responsible of asbestos related diseases among workers.

Results: Between 1982 and 1996, the standardised incidence rate of registered pleural malignant mesothelioma increased by 5% per year among men in the general population, and this increase was statistically significant. Among women, the increase was 3% and was not significant. The same pattern was observed for the standardised death rates for pleural cancer for the years 1981 to 1996. Men and women in Québec showed significantly higher incidence rates of malignant mesothelioma of the pleura than men and women in other provinces of Canada. From 1987 to 1996, 1333 men and 53 women were hospitalised with a diagnosis of asbestosis, and 115 Québécois died from this disease. From 1988 to 1997, 691 workers were diagnosed with an asbestos related disease (mesothelioma, asbestosis, or lung cancer) of occupational origin for the Commission De La Santé et de L’A Sécurité du Travail (CSST or Québec Workers’ Compensation Board). The majority of cases were those exposed while working in the construction industry or in the maintenance or repair of asbestos containing materials. Workers with mesothelioma and lung cancer were matched to the Québec Tumour Registry cases. Mesothelioma and lung cancer cases registered at the CSST represent respectively 22% and 0.03% of the Tumour Registry cases.

Conclusions: Our results emphasise the need to continue the monitoring of asbestos related diseases in the Québécois population. Recommendations were made to governmental agencies to achieve this objective.


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Introduction: Working life expectancy is the length of time a person is expected to spend in employment. This paper is concerned with their estimation jointly with expected times spent in the related states of ‘on disability pension’ and ‘in old age retirement, unemployed, or other alive but not working’.

Methods: The applied methodology, which seems novel in the field of occupational health, first estimates year and age dependent marginal probabilities of being in the employment/health status of interest. We know when individuals are in the workforce initially but not their commencing work ability or health status. Secondly, estimates of the expectancies are given for the case of Finnish men and women aged 16–64 years for 1981, 1986, 1991, 1996, and 2001, together with projections for 2006.

Results: According to the estimation, 20 year old men and women had 31 and 29 years, respectively, of future working life in 2001, whereas for 45 year olds the expectancies were 11 years for both genders. The proportion of life in employment for men declined in the considered time period. For example, men aged >50 years suffered a decline of about 10 percentage points in the future proportion of life to the age of 64 years spent in employment. For 1980–1991, the estimated working life expectancy for men was uniformly greater for all ages than the corresponding figure for women, although the difference diminished as age increased. There was no such decline for women, and for women aged 40 years and over the working life expectancy is forecast to overtake the male figure by year 2006.

Conclusions: The decline in the proportion of life in employment for males over the period was due to frequent early retirement and high unemployment, and not disability, for which the proportion has been declining for both genders since around 1996. This development will be aggravated by the retirement of ‘baby boom’ cohorts in the upcoming years. For an ageing population, these trends could entailing serious social and economic implications for the Finnish society.


[O17.4] TRENDS IN OCCUPATIONAL EXPOSURE TO SILICA IN BRAZIL

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Introduction: There are no reliable estimates of occupational exposure to silica in Brazil. In this work, an administrative database was used to estimate the exposure and analyse the trends of occupational silica exposure prevalence from 1985 to 2001 in Brazil.

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Method: An industrial hygienist and an epidemiologist estimated the silica exposure by means of a double job exposure matrix (JEM) cross tabulating industry and occupation. Exposure was classified in four categories: not exposed, possibly exposed, probably exposed, and definitely exposed. The number of workers for each year of the studied period was extracted from the national database Annual Report of Social Information. Prevalence of each silica exposure category was calculated by sex, economic sector, and geographical region, and trends were analysed by straight linear regression.

Results: On average, 14.4% of the Brazilian formal workers were exposed to silica for more than 1% of the time during their working week in the examined period. Prevalence of definite exposure in male workers showed a stable trend along this period, but prevalence in female workers revealed a decreasing trend. Seven economic sectors constituted 98% of exposures: mining, construction, metallurgy, manufacture of non-metallic minerals, technical services, agriculture, and rubber manufacture. All regions of the country presented trends toward stability for those definitely exposed workers.

Conclusions: This JEM detected a tendency to reduction of silica exposure for definitely exposed female workers only. Among males, even though the trend for those definitely exposed was of stability, this means an increase in the number of workers definitely exposed from 1,470,000 to more than 2 million between 1985 and 2000. The identification of industries with higher levels of exposure to silica gives direction for priority criteria of occupational surveillance to silica in Brazil.