

**0009 ASBESTOSIS AND EXPOSURE LEVELS IN A CHINESE ASBESTOS WORKER COHORT**

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**Objectives** To assess the relationship between quantitative exposure levels and the development of asbestosis in a Chinese asbestos worker cohort.

**Method** A cohort consisting of 577 male workers from an asbestos products factory in China was followed for 37-years. Personal information was collected, including date of hire, specific job types, duration of exposure, and smoking habits. There were 127 workers (22%) diagnosed as asbestosis by a specialised panel using Chinese radiographic Diagnostic Criteria for Pneumocosis (GB5908–86). Individual cumulative fibre exposures (f-yrs/ml) were estimated based on periodic dust/fibre measurements from different workshops and years of working at specific workshops, and then categorised into four levels (quartile). The relationship between the exposure levels and cumulative incidence of asbestosis was assessed with Cox Proportional Hazard Model, adjusting for age and smoking.

**Results** Workers at the four exposure levels were comparable in age at entry, exposure duration (around 25 yrs), and smoking rate. However, the proportion of asbestosis cases was greater with exposure levels, accounting for 9%, 27%, 29% and 36% from 1<sup>st</sup> quartile to 4<sup>th</sup> quartile, respectively. Hazard ratios for cumulative incidence of asbestosis showed a clear trend with the exposure levels, with a nearly three-fold increase (3.42. 95% CI 2.0, 5.9) at the highest exposure level, compared to at the lowest level.

**Conclusions** The study using quantitative estimate of exposures, which was seldom available in China, provides additional evidence for the exposure-response relationship between chrysotile exposure and the development of asbestosis in asbestos workers.

**0010 THE IMPORTANCE OF CONDUCTING REGULAR SAFETY INSPECTIONS IN SMALL AND MEDIUM SIZE ENTERPRISES**

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**Objectives** A considerable effort has been made to examine the health and safety of employees in large-sized enterprises. However, there has not been much attention given to the organisation of work, occupational health and safety, and work disability prevention in small and medium enterprises (SME). The purpose of our study is to examine facilitators and barriers to occupational health and safety among SME in Ontario.

**Method** A cross-sectional design was used to examine the occupational health and safety culture of small and medium sized enterprises from public and private sectors in Ontario. A convenience sample of employees from all position titles in Ontario organisations that ranged from 5 to 100 full-time equivalent employees were invited via email to participate in the survey.

**Results** A total of a 153 questionnaires were returned. Most of the respondents were female (84.2%) with a mean age of 49.8 years (SD = 10.6). Multivariable logistic regression modelling

revealed the odds of a safe work environment for SME who conducted regular safety inspections were estimated to be 2.88 (95% CI, 1.57–5.27) greater than the odds of a safe work environment for SME who did not conduct regular safety inspections.

**Conclusions** This study profiled the work and safety among small and medium enterprises in Ontario. Moreover, better implementation and training strategies that focus on adapting occupational health and safety legislation to the nature and diversity of SMEs is warranted.

**0011 WORK ABILITY AND WORK-RELATED STRESS: A CROSS-SECTIONAL STUDY OF OBSTETRICAL NURSES IN URBAN NORTHEASTERN ONTARIO**

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**Objectives** The aim of this study was to determine: 1) if quality of work life (QWL), location of cross-training, stress variables, and various demographic factors in nurses are associated with work ability, and 2) nursing occupational stress, QWL, and various associated factors are related with nurses' work ability.

**Method** This cross sectional study was conducted in 2012 in four hospitals in northeastern Ontario, Canada. A stratified random sample of registered nurses (n = 111) were selected.

**Results** The majority of participants were female (94.6%) ranging in age from 24 to 64 years (M= 41.9, s.d.=10.2). For the stress and QWL model, one variable: QWL (home-work support) (p = 0.015), cross-trained nurses (p = 0.048), and having more than 4 patients per shift (p = 0.024) significantly contributed to the variance in work ability scores. In the logistic regression model, the odds of a higher work ability for nurses who received home-work support were estimated to be 1.32 (95% CI, 1.06 to 1.66) times the odds of a higher work ability for nurses who did not receive home-work support.

**Conclusions** Work ability in the work environment of obstetrical nursing is important. To be high functioning, workplaces should maximise the use of their employees' actual and potential skills.

**0013 SALIVARY CORTISOL RESPONSE TO A HIGH-PROTEIN CHALLENGE AND METABOLIC SYNDROME IN POLICE OFFICERS**

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**Objectives** Policing is considered a high-stress occupation and officers have elevated cardiovascular morbidity and mortality. We evaluated the association between salivary cortisol response to a standardised challenge and the metabolic syndrome (MetSyn), an indicator of increased cardiovascular risk.

**Method** Cross-sectional data from the Buffalo Cardio-Metabolic Occupational Police Stress Study (2004–2009) were analysed. MetSyn was defined as three or more of five components: abdominal obesity, hypertension, elevated triglycerides, reduced high-density lipoprotein cholesterol, and glucose intolerance. Officers provided five salivary cortisol samples, one before challenge (ingestion of a high-protein shake) and four at 15-minute