

introducing necessary control measures were €34bn, €19bn and €10bn, respectively. Introducing an OEL of 6 mg/m³ for rubber dust has only a minimal impact, while introducing an OEL of 0.6 mg/m³ for rubber fumes avoids approximately 50 cancer deaths per year. The net health benefit for implementing the rubber fume OEL is approximately €579m to €1.2bn, compared to cost for compliance of €55–275m. In relation to mineral oils, we assumed that implementing best practice would prevent any cancers cases due to this exposure post 2040, resulting in a net monetary health benefit of €0.3–1.6bn, compared to a €50–900m required to implement best practice.

Conclusions The proposed changes for silica, rubber fumes and mineral oils will result in significant number of avoidable cancers, with monetized health benefit outweighing the cost of controlling exposure. For DEEthe proposed limit of 100 mg EC/m³ will not lead to significant health benefits.

Session: Mini symposium III: Workers compensation

195 WORK INJURY RISK BY TIME OF DAY IN TWO POPULATION-BASED DATA SOURCES

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Mini-Symposium: Innovative uses of workers' compensation data: improving the impact.

Objective To estimate the rate of work injury over the 24 hour clock in two independent data sources for the Ontario labour force over a five year period 2004–2008.

Methods A cross-sectional, observational study of work-related injury and illness for a complete population of occupationally-active adults 15–64. The two independent data sources were lost-time compensation claims and emergency department encounter records. Estimates of hours worked annually for the Ontario labour force by time of day, age, gender, and occupation were derived from population-based surveys.

Results The incidence of emergency department visits for work-related conditions was approximately 40% higher than the incidence of lost-time workers' compensation claims: 707,933 emergency department records and 457,141 lost-time claims. For men and for women and across all age groups, there was an elevated risk of work-related injury or illness in the evening, night and early morning periods in both administrative data sources. This elevated risk was consistently observed across manual, mixed and non-manual occupational groups. The fraction of lost-time compensation claims that can be attributed to the elevated risk of work injury in evening or night work schedules is 12.5% for women and 5.8% for men.

Conclusions Despite the high prevalence of employment in non-daytime work schedules in the developed economies, the work injury hazards associated with evening and night schedules remains relatively invisible. This study has demonstrated the feasibility of using administrative data sources to enhance the capacity to conduct surveillance of work injury risk by time of day. More sophisticated etiologic research is needed to

understand the specific mechanisms of hazards associated with non-regular work hours.

196 THE IMPACT OF INJURY TYPE, HOSPITALISATIONS AND CHRONIC CONDITIONS ON AGE DIFFERENCES IN ABSENCE FROM WORK FOLLOWING INJURY

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Objectives To examine the relative importance of pre-existing chronic conditions versus differences in injury type and subsequent hospitalisations on age differences in absence from work following a work-related injury.

Methods This study used short and long term disability claims (i.e. claims involving time away from work) reported to Work-Safe British Columbia (WSBC) linked with the British Columbia Discharge Abstract Database (DAD) and Medical Services Plan (MSP) at the individual level. We ran a series of nested regression models to examine the impact adjustment for eight different chronic conditions, and injury type and hospitalisations, on attenuating age differences in days of absence from work over the two year period following the injury. Analyses were run separately for men and women.

Results Among men, a clear direct gradient was observed for number of days absent from work and age. Among women there appeared a threshold effect, with no increase in days away from work among 45 - 54 and 55+ year olds relative to 35 to 44 year olds. Pre-existing osteoarthritis, depression, and diabetes, as well as fractures, multiple injuries and hospitalisations were associated with longer absence from work among both men and women. Adjustment for injury type and hospitalisations attenuated differences across age groups among men by approximately 20%. Adjustment for chronic conditions did not attenuate age differences in workers less than 35 years of age, and only marginally attenuated differences among older male workers.

Conclusions The relationship between age and absences from work following a work injury differs for men and women. Age differences in injury type and subsequent hospitalisations are more important pathways in explaining age differences in absence from work among men than pre-existing chronic conditions

197 THE BENEFITS OF INTEGRATING COMPENSATION DATA WITH SURVEY DATA: THE PROSPECTIVE OUTCOMES OF INJURY STUDY EXPERIENCE

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Objectives The Prospective Outcomes of Injury Study (POIS) is a prospective cohort study that has followed 2856 injured New Zealanders for 2 years. The study examines the influence of injury, rehabilitation, social, work and economic factors on vocational, functional and disability outcomes following acute injury in New Zealanders.

Methods POIS has collected data using personal interviews at 3, 5, 12 and 24 month post-injury intervals on over 600 potential explanatory variables and three main outcomes. The cohort was recruited from the entitlement claimants register of New Zealand's monopoly universal accident compensation and