

were 2.7 times more likely to develop safe mobility plans than men (OR 2.7, 95% CI: 1.1–6.9).

Conclusions The program engaged older drivers in self-regulation but this did not translate to reduced mileage. The logic model informs decision making to channel resources to those who will benefit most.

Occupational Safety

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191 OCCUPATIONAL SAFETY BEHAVIOUR OF ONTARIO ELECTRICIANS: A MENTAL MODELS APPROACH TO INJURY PREVENTION

¹Laurel C Austin, ²Dan Kovacs, ²Sarah Thorne, ³Nancy Evans, ³Joel Moody. ¹Copenhagen Business School, Denmark; ²Decision Partners, LLC., Ontario, Canada; ³Electrical Safety Authority, Ontario, Canada

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Background Electric current is a leading cause of occupational fatality in North America. For each fatal electrical occupational injury in Ontario there are about five critical and 18 non-critical injuries. Analyses show that unsafe work practices and human error play a role in about 70% of fatal electrical occupational injuries. Electric workers are at especially high risk. To understand the cause of unsafe work practices, one must first understand the influences on electric workers' real-time decisions and behaviours.

Methods We used a mental models research approach to identify and gain insight into those influences. First, we developed an "expert model" of influences on electricians' judgments and decision making regarding safe work practices based upon a literature review and a workshop with electricians and representatives from electrical associations, unions, NGOs and government. The expert model informed development of a semi-structured interview protocol to elicit electricians' "mental models" – their complex webs of beliefs about safe work behaviours. In-depth interviews were then conducted with 60 Ontario electricians in Fall 2015 to discuss work experiences and influences on safe work practices. Responses were coded against the expert model.

Results We will present the results of the mental models research with electricians using the expert model as a framework. The expert model itself is an important research product, providing a structured representation of experts' perceptions of influences on electric workers' behaviour. It can be used as a framework for further research and for development of risk communications and other safety initiatives.

Conclusions This study is the first to use a decision analytic mental models approach to understand influences on electricians' decision making and safety behaviours. Resulting insights will inform development of behaviour-focused interventions to reduce injury and death.

192 IS BURNOUT AMONG COMMUNITY MIDWIVES JUST A PROBLEM OF HIGH-INCOME COUNTRIES? CROSS-SECTIONAL STUDY FROM SRI LANKA

¹Indika Pathiraja, ²Pushpa Fonseka, ³David Mant. ¹Provincial Department of Health, North Western Province, Sri Lanka; ²Faculty of Medical Sciences, University of Sri Jayawardenapura Sri Lanka; ³Department of Primary Care Health, University of Oxford, UK

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Background Burnout is a state of physical and psychological fatigue and exhaustion, which is attributed to personal, work and client related spheres in a person's life. It has major behavioural and health implications. Being a grass root level health care worker, Community Midwives (Public Health Midwives) are at risk of burnout due to their responsibilities with community and their commitment to services. This study was carried out to establish whether community midwives (Public Health Midwives) in Sri Lanka suffer from the problem of occupational burnout described in high-income countries.

Methods A cross sectional descriptive study was conducted in a sample of 556 PHMs in Western Province of Sri Lanka selected by stratified random sampling. A self administered questionnaire was used including validated Sinhala version of Copenhagen Burnout Inventory (CBI-S).

Results Burnout was a much bigger problem in younger than older midwives. In those with 5–9 years service, 26.1% (95% CI: 14.3 to 41.1%) scored >50 (the threshold which have suggested indicates a significant problem). Personal burnout (mean score in all age groups 44.5, 95% CI: 43.0 to 46.1) was a significantly bigger problem than client or work related burnout (mean scores 21.2 and 26.4 respectively). As in Europe, high workload was a risk factor but lack of a supportive work environment was equally important. The most important personal factor was housework burden.

Conclusions Burnout among community midwives, particularly junior midwives, is not a problem restricted to high-income countries. It undermines care quality and threatens the sustainability of the service. Despite country-specific cultural differences, the underlying causes and solutions are almost certainly the same. Resource constraints make it difficult to reduce workload but providing better recognition and professional support for younger midwives working in isolated community settings is not resource-intensive and likely to impact substantially on sustainability and future service quality.

193 INJURY AMONG OLDER WORKERS IN AN AGEING NEW ZEALAND WORKFORCE

Rebecca Lilley, Chrystal Jaye, Gabrielle Davie, and the Collaboration for Ageing Research Excellence (CARE). University of Otago, New Zealand

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Background The New Zealand (NZ) workforce is experiencing rapid demographic ageing and older workers (aged 55+ years) are a fast growing segment of the working population. Few analyses have examined the nature and cause of injury for older workers in any depth despite older workers having high rates of work-related injury. This study aims to describe the nature and cause of work-related injuries in older NZ workers for the period 2008–2014.

Methods Retrospective descriptive cohort data for older workers were extracted from national work-related injury accepted claims data (2008–14) and analysed by gender, employment status, industry, injury type and external cause. Comparisons by age groups (55–59, 60–64, and 65+) were also undertaken.

Results Of 44,061 unintentional work-related injury entitlement claims 2008–14 in workers aged 55 years or older; 17,098 were 55–59; 14,160 were 60–64 and 12,803 were 65+ years. Fatal injuries were sustained by 307 workers with 171 deaths in workers aged 65+. Preliminary analyses reveal patterns of injury differ by age, particularly for the oldest 65+ group. Overall, males

(79%), employees (78%), those in physical work (83%), and in manufacturing (20%), agriculture (17%), and construction (16%) sectors had the most claims. The oldest group, 65+, had the highest proportion of claims in males (85%), for the self-employed (26%), in sedentary work (21%) and for the agriculture sector (23%). Injuries to the face were common (30%), particularly for workers aged 65+ (56%), while back and hand/wrist injuries were also prevalent in those aged 55–59 and 60–64. Falls were prevalent (31%) and highest in workers aged 55–59 (35%) and 60–64 (33%).

Conclusions The burden of work-related injuries in older workers will increase with their increasing participation in work. Interventions to protect older workers from injuries at work need to consider their specific characteristics and vulnerabilities to inform age-sensitive injury prevention strategies.

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RETURN TO WORK AFTER WORK INJURY: A COMPARATIVE POLICY EFFECTIVENESS STUDY

¹Alex Collie, ¹Tyler Lane, ¹Behrooz Hassani-Mahmooei, ¹Jason Thompson, ²Christopher McLeod. ¹Monash University, Australia; ²University of British Columbia, Canada

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Background Extended periods of time off work can have a negative impact on health. Australia has an array of state-based workers' compensation systems that seek to return injured workers to the workforce at minimal cost to society. These systems vary substantially in their design, and with respect to return to work (RTW) policy and practice. This study examined whether workers' compensation policy is an independent predictor of RTW following work injury.

Methods Comparative analyses of administrative data from eight Australian workers' compensation systems, containing 94,675 accepted work injury claims. Logistic regression controlling for demographic, work and injury factors were used to assess whether jurisdiction of claim had an independent impact on time loss from work at 4, 13, 26, 52 and 104 weeks post injury.

Results Substantial jurisdictional differences were identified at all time points post injury, after controlling for demographic, work and injury factors. Compared to New South Wales: workers in Victoria and South Australia had significantly greater odds of being off work (receiving income benefits) at all time points; workers in Tasmania had greater odds of being back at work (off benefits) at all time points, while RTW of workers in Western Australia and Queensland improved at later time points. The magnitude of jurisdiction effects were as or more substantial than that identified for injury type, age, gender, occupation and socio-economic status.

Conclusions Workers' compensation system design has a significant and independent impact on RTW following work injury. Findings reveal the need for identification and implementation of policies and practices that promote timely and appropriate RTW.

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NURSES AND ANTINEOPLASTIC AGENTS: FACTORS INFLUENCING EXPOSURE RISK

¹David M DeJoy, ²Todd D Smith, ¹Henok Woldu, ³Aimee Dyal. ¹University of Georgia, U.S.A.; ²Indiana University, U.S.A.; ³Kennesaw State University, U.S.A.

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Background Chemotherapy drugs pose a hazard to those administering them. This study examined the effects of individual, situational, and organisational factors on compliance with personal protective equipment (PPE), use of engineering controls, and exposures in a sample of oncology nurses (n = 1.915).

Methods Data came from the web-based NIOSH Health and Safety Practices Survey of Healthcare Workers. Survey measures included demographics, employment situation, safety practices, training, safety climate, antineoplastic drug (AD) administration, and exposures.

Results Preliminary descriptive and bivariate analyses were conducted. Two stepwise multiple regressions were computed with PPE compliance and engineering controls as outcome variables. For PPE, safety climate and familiarity with guidelines were the strongest predictors of use (both p < 0.0001). Non-profit status, hospital setting, and having more employees were also relatively strong predictors of compliance (p < 0.002 to 0.006). The strongest predictors for engineering controls were relevant policies/procedures, safety climate, and familiarity with guidelines (all p < 0.0001). Engineering control practices were also better for those in non-profit (p < 0.001) and government settings (p < 0.007). A final stepwise multiple logistic model assessed occupational exposures (skin contact and/or spill/leak of AD). Exposure risk increased with number of AD administrations (p < 0.0001), while the use of engineering controls reduced exposures by nearly 30% (p < 0.0001). Safety policies/procedures, PPE and safety climate also reduced exposures.

Conclusions This study highlights the importance of organisational and safety management practices in preventing exposures to antineoplastic agents. Exposures increased with the number of AD administrations, but policies/procedures, associated controls, and safety climate reduced risk.

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MENTAL FIRST AID MODEL HELPS WORK COMMUNITY IN VARIOUS DIFFICULT SITUATIONS

¹Hanna Jurvansuu, ¹Marja Paukkonen, ²Anna-Maria Teperi. ¹Education Department, City of Helsinki, Finland; ²Finnish Institute of Occupational Health

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Background In the city of Helsinki, employees report thousands of threatening situations at work every year. Two thirds of victims typically cope on their own after a critical incident but one third needs help to manage. If not handled shortly, incidents may cause excessive stress or absence from work. Occupational health care organises debriefing after severe incidents but many minor incidents are left unhandled.

Description of the problem There was a need for mental first aid" at workplaces, so that personnel facing incidents could unload the mental burden right away. How to handle incidents quickly, during the workday, with a colleague? After the incident, the manager is usually responsible for examining the facts whereas colleagues could support with the mental process.

Results A short training based on Critical Incident Stress Management (CISM) was organised for some employees and leaders. The training included e.g. lecture and discussion of safety culture at work and of human reactions during and after incidents. A discussion model of mental first aid (in Finnish *hetipurku*) and practical tools to support it were presented and practiced. According to the participants' experience, the model turned out to be useful