Poster Presentation

Injuries

**0421** INJURY SEVERITY, RETURN TO WORK, AND OUTCOMES IN COLLECTIVELY-BARGAINED ALTERNATIVE WORKERS’ COMPENSATION ARRANGEMENTS

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10.1136/oemed-2017-104636.348

**Introduction** The construction industry experiences severe injuries. When an employee is injured, the goal is to minimise long-term disability and efficiently return the employee to work. The Union Construction Workers Compensation Program (UCWCP) of Minnesota provides an alternative, collectively-bargained system administered by workers’ compensation insurance providers. The program includes exclusive provider network for medical care and access to alternative dispute resolution process. The goal of this study is to determine injury outcome differences for UCWCP members.

**Methods** Workers’ compensation claims were examined over a ten year period. UCWCP membership and date of enrollment were determined. Claims were stratified by medical or lost-time status. Multiple measures of severity and outcome were examined, including claim rate and duration, time to return-to-work, and permanent partial disability status. We calculated rates and comparative risk based on UCWCP. A logistic model will estimate rate ratios (RR) and 95% confidence intervals (CI) as a function of claim rate. Time-to-event models will assess differences in duration of disability based on UCWCP. Proportional hazards regression estimated hazard ratios (HR) and 95% CI.

**Results** UCWCP employers had a lower rate of lost-time claims. Compared to non-UCWCP employers, UCWCP-membership was associated with a 9% increased likelihood of claim closure for both medical and lost-time claims (HR=1.09, CI=1.05–1.13; HR=1.09, CI=1.02–1.17). Most differences occurred in the first 90 days. Return-to-work likelihood and reduced permanent disability appeared to be related to UCWCP.

**Conclusions** Alternative workers’ compensation arrangements may include elements that collectively protect workers’ interests, reduce injury severity, and are cost-effective for insurers.

Oral Presentation

Specific Occupations

**0422** A TOTAL WORKPLACE SAFETY AND HEALTH PROJECT FOR SECURITY OFFICERS IN A SINGAPORE UNIVERSITY – FROM NEEDS ASSESSMENT TO INTERVENTIONS AND EVALUATION

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10.1136/oemed-2017-104636.348

**Objectives** To implement and evaluate a Total Workplace Safety and Health Project (Total WSH) at a security office in a Singapore university.

**Methods** Total WSH is an integrated approach to the management of health and safety in the workplace. In the first phase of our project, we evaluated the gaps and challenges of the safety and health management system within the department, and gained understanding of the health status of the security officers, through assessment tools including a Basic Health Survey, workplace visits and semistructured interviews. Recommendations were subsequently discussed with the senior management for implementation in the intervention phase, with evaluation of process and outcome measures thereafter.

**Results** Strong communication among all staff in the security office was noted, and this is related to the openness of staff across different management levels. All staff took part in the Basic Health Survey, which found that 91% have a “Good” or “Excellent” Work Ability Index. There is a high proportion of employees with chronic diseases and obesity. In addition, 36% of employees consume sweet drinks daily, while only 16% and 37% consume two servings of fruits and vegetables a day respectively. Recommendations were made related to the safety and health management system, and health promotion such as improving access to healthy food, facilitating physical activity during work, and implementing a chronic disease management system. These recommendations would be implemented from January 2017 onwards.

**Conclusion** Total WSH is effective in enabling the holistic management of safety and health in the workplace.

**0423** GEOSPATIAL TRENDS IN OCCUPATIONAL INJURY AND WORKERS’ COMPENSATION UTILISATION

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10.1136/oemed-2017-104636.349

**Introduction** Workers’ compensation data provide a source of information on occupational injuries and their burden on workers and the workplace. Injured workers utilise healthcare systems for treatment of their injuries and various factors may influence access to care and the ultimate outcome of the claim. Some factors may be dependent wholly, or in part, on geographical access to care and the communities in which employees live. We explored a new injury surveillance and analysis technique by coupling of geographical information systems (GIS) and workers’ compensation data.

**Methods** Employee addresses were geocoded using Esri Street Map to determine spatial trends. Time/distance (accessibility) to health care providers were calculated. Geographic masking maintained individual-level confidentiality. We calculated rates and comparative risk of severity and disability duration of workers’ compensation claims based on accessibility. Using a negative binomial model, we estimated rate ratios (RR) and 95% confidence intervals (CI) as a function of claim rate. Cox proportional hazards regression assessed differences in duration of disability benefit levels based on accessibility to

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Abstracts