

than $n = 30$ in each job group, and $\geq 20\%$ was actually observed.

Conclusions The proportion of observed workers did have an effect on p-values, but it appeared weaker than that of changing the total group size. These results suggest that it may be sufficient to observe only a minor proportion of workers if the overall size of the population is reasonably large.

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298 FALLS FROM ELEVATION AMONG UNION DRYWALL INSTALLERS: PATTERNS IN RATES OF INJURY AND THE UTILITY OF EVENT NARRATIVES

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Objectives Despite prevention efforts over the past several decades, drywall installers in the US remain at risk for work-related falls from elevation. These workers are challenging to study from an epidemiologic perspective. The purpose of this study was to describe patterns in drywall installers' rates of work-related injury from falls from elevation and event circumstances.

Methods Using data from the Carpenters Trusts of Western Washington and Washington State Department of Labour and Industries, we defined a cohort of 5,073 union drywall carpenters, their 37 million union work hours in Washington State, and their workers' compensation claims from 1989–2008. Individual-level data were linked using an encrypted identifier. Rates of work-related injury were calculated using Poisson regression. Injury event narratives provided additional details.

Results Falls from elevation made up 7.5% ($n = 454/6,066$) of work-related injuries among drywall installers. Rates of injury from falls from elevation declined from 7.8 per 200,000 worker-hours in 1989 to 1.1 per 200,000 worker-hours in 2008. Rates varied little by age and time in the union, except among 9% of events in which drywall material was a contributing factor; workers with 10 + union years had lower rates than their less tenured counterparts. Brief narratives consistently identified surfaces from which workers fell, commonly scaffolds (33%), ladders (21%) and stilts (13%). Worker task, described in 17.5% of events, often included drywall hanging, drilling/screwing or moving material. Information was lacking on height fallen, PPE use, work speed and influence of other workers.

Conclusions In addition to continued efforts to prevent work-related falls from scaffolds and ladders, particular attention should be paid to the prevention of drywall-handling-related falls among less experienced workers who may be at greater risk due to greater exposure. Improvements in the consistency of narrative data elements may enhance efforts to identify risk factors or evaluate regulatory changes or interventions.

299 THE ROLE OF MENTAL HEALTH PROBLEMS AND PSYCHOTROPIC DRUG TREATMENTS IN ACCIDENTAL INJURY AT WORK

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Objectives Some evidence exists that mental health problems and drugs with psychotropic effects may raise risks of accidental injury at work. To confirm this and to quantify risks we undertook a case-control analysis nested within the UK General Practice Research Database (GPRD).

Methods The GPRD logs all primary care information for some 6% of the British population. Medical consultations and referrals are classified by the Read system and drug prescriptions according to the British National Formulary. Using the GPRD, we identified 1,348 patients aged 16–64 years consulting a general practitioner between 1/1/89 and 31/12/09 for a workplace injury (cases - 479 diagnostic codes) and 6,652 age, sex, and practice-matched controls (subjects with no such consultation). Cases and controls were compared in terms of consultations for mental health problems (1,328 diagnostic codes) and prescription of hypnotics, anxiolytics and antidepressants before the index date of injury. Associations were explored using conditional logistic regression with adjustment for recorded alcohol misuse.

Results In all, 1,846 (23%) of the 8,000 subjects had had at least one consultation in one/more of the coded psychiatric categories prior to the index date; 1,682 (21%) had been prescribed one/more drugs of inquiry. Odds of injury consultation were raised 46% ($P < 0.00$) in those with prior mental health consultations, significant associations existing by subclass of diagnosis (psychosis, neurosis, certain other mental health conditions). Additionally, the Odds Ratio in relation to drug treatment was 1.59 (95% CI 1.38–1.83, $P < 0.001$) and significantly increased for each of the drug classes considered.

Conclusions Mental health problems and psychotropic treatments account for an important and potentially preventable minority of workplace injury events.

300 DIABETES AND RISK OF ACCIDENTAL INJURY AT WORK

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Objectives To assess the effect of diabetes on risk of occupational injury, we undertook a case-control analysis nested within the UK General Practice Research Database (GPRD).

Methods The GPRD logs all primary care data for participating general practices (6% of the population). Medical consultations are classified by the Read system and drug prescriptions according to the British National Formulary (BNF). We identified 1,348 patients aged 16–64 years consulting over a 10-year period with workplace injury (cases) and 6,652 age, sex, and practice-matched controls with no such consultation. Groups were compared in terms of their diabetic status (defined by 320 Read codes and 355 BNF drug codes); and for those with diabetes, according to risks from diabetic eye disease, other complications, blood sugar-lowering treatment (insulin or oral hypoglycaemics), and indices of sub-optimal control. Associations were explored using conditional logistic regression.

Results In all, 199 (2.5%) subjects were classed as diabetic before the index date, including 77 with eye involvement, 86 on insulin and 52 with poor diabetic control. Odds of occupational injury consultation were seldom elevated relative to non-diabetics (e.g. OR 1.01 overall, 1.02 in diabetics on insulin) and for some measures were lower (e.g. OR for eye involvement 0.72). Only suboptimal chemical control ($HbA1C > 7\%$) in the 12 months before the index date was associated with a slightly elevated risk (OR 1.35); no differences were statistically significant.

Conclusions These findings are reassuring. Lower risks in some comparisons may reflect chance or a degree of health selection out of hazardous work. In any event, current employment practices are not placing diabetic workers at particular risk of workplace injury.

301 MULTIPLE JOBS AND INCREASED RISK OF INJURY: FINDINGS FROM THE NATIONAL HEALTH INTERVIEW SURVEY

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Objectives Approximately 5–10% of US jobholders report working multiple jobs within the same week, and up to 20% have reported working in more than one job within a year. However, occupational injury surveillance research has largely explored only exposures at the primary job or the job in which the injury occurred. The objective of this study was to compare the risk of injury for those working in multiple jobs (MJH) with those working in only one job (SJH).

Methods The National Health Interview Survey is the only national survey to collect information annually about self-reported injuries in the last 3 months information about working multiple jobs. Using information for years 1997–2011, we calculated the rate of multiple job holding in the US and compared characteristics and risk of injury (work and non-work) with those who worked in only one job.

Results The risk of work and non-work injury was higher for MJHs compared with SJHs (9.9 vs. 7.4 *non-work* injuries per 100 workers, and 4.2 vs. 3.3 *work* injuries per 100 workers) and the rate of injury remained higher after controlling for work hours ($p < 1$). There was a significant elevated risk of injury for some subgroups (e.g. young workers aged 18–24 who worked in multiple jobs had a risk of injury, both during outside of work, of 19 per 100 workers, almost 40% higher than their SJH counterparts).

Conclusions Our findings suggest that multiple job holding is associated with an increased risk of injuries (work and non-work) and must be considered in injury surveillance. Suggested pathways exist for MJH to increase the risk of injury: fatigue, inexperience in jobs, hurried behaviour, or additional biological/emotional stress from alternating between different types of exposure.

302 PREDICTING RISK OF LOST WORK-TIME INJURY IN SMALL CONSTRUCTION COMPANIES

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Objective The construction industry experiences a high rate of injuries. A pattern of minor injuries may increase risk of severe injuries within a company. The assistance of outside safety and health professionals (S&HP) may help reduce risk of injury in construction firms. The goal of this study was to determine the association between minor injuries and risk of lost-time injury and to determine the association between company contact with an external S&HP and risk of lost-time injury.

Methods Workers' compensation data were evaluated covering 1,360 construction companies from 2004–2009. In analysis 1, minor injury experience prior to lost-time injury was categorised as: 0–1 claim, 2–3 claims, 4–6 claims, 7 or more claims. For analysis 2, S&HP contact prior to lost-time injury was categorised as: 0 contacts, 1 contact, 2 contacts, and 3 or more contacts. Hazard Ratios (HR) and 95% confidence intervals (CI) were estimated using a proportional hazards regression model and accounting for repeated events and time-varying covariates. A model based variance estimate accounted for correlated observations within companies over time. Models included confounding covariates of company size and union status.

Results Compared to experiencing 0–1 claims, increased risk occurred with experiencing 2–3 claims (HR = 1.25, CI = 1.32–1.75), 4–6 claims (HR = 1.36, CI = 1.19–1.56), and 7 or more claims (HR = 1.52, CI = 1.12–1.39). Compared to experiencing no S&HP contact, reduced risk occurred with experiencing 1 contact (HR = 0.77, CI = 0.67–0.88) and 2 contacts (HR = 0.63, CI = 0.55–0.74). Once companies reached the highest category of contacts, three or more, there was no longer and significant reduction in risk (HR = 1.06, CI = 0.92–1.22). Companies of larger size were associated with greater risk of a lost-time claim, as were union companies.

Conclusion The results indicate increasing non-lost-time claims experience is associated with increasing risk of lost-time injury, whereas contact of a S&HP may reduce the risk of lost-time injury.

303 ELEVATED RISK OF PSYCHIATRIC DISORDERS AFTER OCCUPATIONAL INJURY

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Objectives Psychiatric conditions are known to occur after traumatic injuries. This study aimed to determine the incidence rates of psychiatric disorders within one year after occupational injury and to compare the incidence of psychiatric disorders among people sustaining occupational and non-occupational injuries, and the enrollees of the National Health Insurance (NHI) without injury.

Methods We used cohort approach in this investigation. All eligible subjects were insured by the NHI of Taiwan, and aged 18–65 years old. We identified enrollees who sustained occupational injury and non-occupational injuries in 2001. Those in the reference group were patients who ever used the NHI for any medical condition in 2001. The patients who had been treated due to any injury within one year before and after the target injury/condition in 2001 and who had been treated due to psychiatric disorders within one year before the date of target injury/condition were excluded.

Results A total of 563,461 patients were enrolled in this study. Among them, 1060 patients sustained occupational injury, 7442 patients sustained non-occupational injury, 554,959 patients ever used NHI for any medical condition in 2001. The incidence rates of any psychiatric disorders within one year after occupational injury requiring hospitalisation, occupational injury treated as outpatient, non-occupational injury requiring hospitalisation, non-occupational injury treated as outpatient,