

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.

## Session: 15. Occupational injuries

### 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.