

EFFECT OF DRUG TESTING PROGRAMMES ON INJURY RATE AND SEVERITY IN SMALL AND MEDIUM SIZED CONSTRUCTION COMPANIES

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Background Construction work is hazardous and workers consistently rank in the top of all occupations and industries for illicit drug and heavy alcohol use.

Objective Determine the associations between active company drug testing programmes, injury rate, and severity.

Methods We evaluated workers' compensation claims data covering 1360 construction companies from 2004 to 2009. Presence of a testing programme was obtained from the compensation carrier. Hours at-risk and injury claims were used to determine injury rates. Rate ratios (RR) and 95% CI were estimated as a function of injury rate using a Poisson regression model and accounting for time dependent factors. Generalised estimating equations are used to account for correlated observations within companies over time. Models include confounding covariates of company size, union status, and trade. Drug testing programmes were classified into two categories: pre-employment and post-accident OR pre-employment, post-accident, random, and suspicion testing.

Results Compared to no testing, results respectively were RR=0.85 (CI 0.72 to 1.0) and RR=0.97 (CI 0.86 to 1.10) for overall injuries, and RR=0.78 (CI 0.60 to 1.03) and RR=1.01 (CI 0.86 to 1.19) for lost-time injuries. Analysis by specific trades revealed significant reductions, as great as 60% for some trades. Significantly lower rates were seen in both union and non-union companies with testing programmes. Major injury event and injury type categories also had lower rates when testing programmes were used.

Significance/Contributions Our results indicate drug testing programmes may reduce injury rates in this population; however effects vary on multiple factors. Programmes may be a potential solution to reducing injury burden to workers in a high risk population.