

Effectiveness of mandatory alcohol testing programs in reducing alcohol involvement in fatal motor carrier crashes

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Abstract

Mandatory alcohol testing programs for motor carrier drivers were implemented in the United States in 1995 and have not been adequately evaluated. Using data from the Fatality Analysis Reporting System during 1982-2006, the authors assessed the effectiveness of mandatory alcohol testing programs in reducing alcohol involvement in fatal motor carrier crashes. The study sample consisted of 69,295 motor carrier drivers and 83,436 non-motor-carrier drivers who were involved in 66,138 fatal multivehicle crashes. Overall, 2.7% of the motor carrier drivers and 19.4% of the non-motor-carrier drivers had positive blood alcohol concentrations. During the study period, the prevalence of alcohol involvement in fatal crashes decreased by 80% among motor carrier drivers and 41% among non-motor-carrier drivers. With adjustment for driver age, sex, history of driving while intoxicated, and survival status, implementation of the mandatory alcohol testing programs was found to be associated with a 23% reduced risk of alcohol involvement in fatal crashes by motor carrier drivers (odds ratio = 0.77, 95% confidence interval: 0.62, 0.94). Results from this study indicate that mandatory alcohol testing programs may have contributed to a significant reduction in alcohol involvement in fatal motor carrier crashes.

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