04 RELATIVE AND ATTRIBUTABLE RISKS OF FATAL CRASHES ASSOCIATED WITH DRUG USE

doi:10.1136/injuryprev-2012-040580d.4

G Li. *Columbia University, 622 West 168th Street, PH5-505, New York, New York 10032, USA*

Background While alcohol-related motor vehicle crashes have declined in recent years, driving under the influence of illicit drugs and prescription drugs has become a major safety concern. The influence of drugs on driving safety has been studied extensively under controlled, experimental conditions based on driving simulators. Epidemiologic data linking drug use and crash risk, however, are scant.

Aims To estimate the relative and attributable risks of fatal crashes associated with drug use in drivers.

Methods The association between drug use and fatal crash risk was assessed using the case-control design and the population-attributable risk was calculated based on the estimated OR and prevalence of drug use among drivers. Cases (n=737) were drivers who were involved in fatal crashes on Fridays and Saturdays during specific daytime and night time periods between during July 20, 2007 through December 1, 2007 in the continental USA and who tested for drugs, identified from the Fatality Analysis Reporting System. Controls (n=6906) were participants of the 2007 National Roadside Survey of Alcohol and Drug Use, who were randomly selected for drug testing while driving during the same time periods as the cases.

Results Overall, 31.9% of the cases and 13.7% of the controls tested positive for at least one drug, yielding a crude OR of 2.96 (95% CI 2.49 to 3.51). The estimated ORs between drug use and fatal crash involvement were similar between sexes and across age groups and time periods. The estimated population-attributable risk of fatal crashes associated with drug use was 21.2%.

Significance In the USA, drugged driving is common and is attributable to over one-fifth of fatal crashes. Intervention programmes to prevent drugged driving are urgently needed.