Involvement of prescription opioids in fatal car crashes climbs sevenfold

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The percentage of fatally injured drivers who tested positive for prescription opioids rose sevenfold from 1 percent in 1995 to over 7 percent in 2015, according to a new study at Columbia University's Mailman School of Public Health. The findings appear online in the *American Journal of Public Health*.

"Prescription opioids as potent pain medications can cause drowsiness and impair cognitive functions. The 700 percent rise in the prevalence of prescription opioids detected in fatally injured drivers is cause for great concern," said Guohua Li, MD, DrPH, professor of Epidemiology at the Mailman School of Public Health and principal investigator.

Annual prescriptions of opioids such as oxycodone, hydrocodone, and methadone, quadrupled from 76 million in 1991 to nearly 300 million in 2014. With latest estimates at 3,900 people initiating nonmedical prescription opioid use daily, opioid abuse and overdose has become a national public health crisis "The opioid epidemic has been defined primarily by the counts of overdose fatalities. Our study suggests that increases in opioid consumption may carry adverse health consequences far beyond overdose morbidity and mortality," noted Li, who is also director of the Center for Injury Epidemiology and Prevention at Columbia.

Li and co-author Stanford Chihuri in the Department of Epidemiology examined two decades of data from the Fatality Analysis Reporting System, focusing on drivers who died within one hour of a motor vehicle crash in California, Hawaii, Illinois, New Hampshire, Rhode Island, and West Virginia—states that routinely conduct toxicological testing on injury fatalities. Of the 36,729 drivers in the analysis, 24 percent tested positive for non-alcohol drugs, including 3 percent who tested positive for prescription opioids.

Of drivers testing positive for prescription opioids, 30 percent also had elevated blood alcohol concentrations, and 67 percent tested positive for other drugs.

Prescription opioid prevalence was higher in female than in male drivers, 4.4 percent compared to 3 percent. The prevalence of prescription opioids increased from 0.9 percent during 1995-1999 to 5.2 percent during 2010-2015 in male drivers, and from 1.4 percent to 7.3 percent in female drivers.

Currently, all states and the District of Columbia operate prescription drug monitoring programs that collect and report opioid prescription data. "Although the effect of these programs on opioid prescription misuse has been studied extensively, little is known about their effectiveness in reducing driving under the influence of opioids," said Chihuri. "In light of our findings, evaluations of these programs should be expanded to study opioid involvement in traffic injuries in particular and even take into account the role of specific types and doses of opioids in crash causation."

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