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 [keyes-150x166.jpg](#) [1]
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Transmission

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January 12, 2015 -- Half of young drivers who died in car crashes in U.S. states such as California, Hawaii and West Virginia were under the influence of either alcohol or marijuana, or both, according to statistics for fatal road accidents involving 16- to 25-year olds in nine U.S. states. Researchers at [Columbia University's Mailman School of Public Health](#) [4] analyzed the data to gauge how possible policy changes could influence substance use among adolescents and young adults. The study, led by [Katherine M. Keyes, PhD](#), [5] assistant professor of Epidemiology, is published online in the journal *Injury Epidemiology*. [6]

Keyes and colleagues analyzed 7,191 fatal accidents involving the young drivers from 1999 to 2011 who died within one hour of the crash in California, Connecticut, Hawaii, Illinois, New Hampshire, New Jersey, Rhode Island, Washington State and West Virginia. These nine states all routinely perform toxicological tests on the blood or urine specimens of drivers who die in car crashes. Information was drawn from the Fatality Analysis Reporting System, a census of fatal traffic crashes occurring within the U.S. More than half of the crashes (54.7 percent) for the period between 1999 to 2011 occurred in California.

Overall, 50.3 percent of the deceased tested positive for alcohol, marijuana or both. Of these, 36.8 percent were under the influence of alcohol, 5.9 percent used only marijuana and 7.6 percent used both substances.

The researchers further tested whether there were any changes in patterns of alcohol and marijuana use among those aged 21 years and older who were legally allowed to consume alcohol, versus those less than 21. It was found that alcohol consumption increased by 14 percent, but such prominent changes in marijuana use were not seen. Keyes does note that marijuana use decreased among those aged 21 years and older who used this drug alone. After reaching age 21, use of alcohol in combination of marijuana increased slightly.

"Policies related to the use of substances in the United States remain in flux; the rapid changes in marijuana use policy are a good example of this," said Dr. Keyes. "It's imperative to know whether there will be

unintended consequences of changes in policies, including increases or decreases in harm related to other substances that are not the focus of the policy.”

“Taken together, we found no significant substitution effect between alcohol and marijuana,” noted co-author Guohua Li, MD, DrPH, Mailman School professor of Epidemiology and director of the Center for Injury Epidemiology and Prevention. “Rather, an uptick in availability seems to increase the prevalence of concurrent use of alcohol and marijuana.”

The study was supported by the National Institute on Alcohol Abuse and Alcoholism (K01AA021511), National Institute on Drug Abuse (R21DA029670), and CDC (1R49CE002096-01). The authors declare no conflicts of interest.

About Columbia University’s Mailman School of Public Health

Founded in 1922, Columbia University’s Mailman School of Public Health pursues an agenda of research, education, and service to address the critical and complex public health issues affecting New Yorkers, the nation and the world. The Mailman School is the third largest recipient of NIH grants among schools of public health. Its over 450 multi-disciplinary faculty members work in more than 100 countries around the world, addressing such issues as preventing infectious and chronic diseases, environmental health, maternal and child health, health policy, climate change & health, and public health preparedness. It is a leader in public health education with over 1,300 graduate students from more than 40 nations pursuing a variety of master’s and doctoral degree programs. The Mailman School is also home to numerous world-renowned research centers including ICAP (formerly the International Center for AIDS Care and Treatment Programs) and the Center for Infection and Immunity. For more information, please visit www.mailman.columbia.edu

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