More than 90 percent of transportation-related deaths each year occur on our roadways. In a 2016 AAA Foundation for Traffic Safety report, an estimated 14.0 percent of drivers drove with a blood alcohol concentration (BAC) close to or over the legal limit in the previous year, and 4.6 percent drove within an hour of using marijuana. According to the National Highway Traffic Safety Administration (NHTSA), alcohol-impaired driving fatalities (in which at least one driver had a BAC of .08 g/dL or greater) increased by 3.2 percent, from 9,943 in 2014 to 10,265 in 2015.

NHTSA found that the proportion of fatally injured drivers who had drugs in their system rose from 13 percent in 2005 to 18 percent in 2009. In 2012, 10.3 million people reported driving under the influence of illicit drugs in the prior year. In a 2014 roadside survey of alcohol and drug use by drivers, NHTSA found that nearly one in four drivers tested positive for at least one drug that could affect safety. The NHTSA National Sobriety Testing Resource Center reported that marijuana was the most commonly used drug in the United States in 2014, and evidence shows that the legalization of marijuana in some states has led to an increase in use by drivers. In a recent AAA Foundation for Traffic Safety report about cannabis use in Washington state, the percentage of drivers in fatal crashes who recently used marijuana more than doubled between 2013 and 2014.

For decades, our investigations have found substance impairment to be a cause or contributing factor in transportation accidents across all modes. As over-the-counter (OTC), prescription, and illicit drug use increases in the United States, so does our concern about the safety implications of this phenomenon. In recent years, we investigated two notable fatal commercial motor vehicle crashes in Davis, Oklahoma, and Chattanooga, Tennessee, in which drivers were impaired by synthetic cannabinoids and methamphetamine, respectively.
What can be done?

When it comes to alcohol use, we know that impairment begins well before a person’s BAC reaches 0.08 percent, the current limit in the United States at which a driver is presumed to be impaired. In fact, by the time BAC reaches that level, the risk of a fatal crash has more than doubled. That’s why we believe states should lower legal BAC levels to 0.05 percent—or even lower. Although impairment from alcohol begins with the first drink, many drivers don’t realize that even low levels of alcohol can degrade skills and increase crash risk.

Certain countermeasures have been shown to reduce the rate of alcohol-impaired driving and alcohol-related crashes, including stronger impaired driving laws and increased use of high-visibility enforcement, such as sobriety checkpoints. Other countermeasures are needed to ensure that people who are caught driving while impaired (DWI) do not do so again. For example, requiring ignition interlocks for all alcohol impaired-driving offenders can ensure that vehicles will not start if the driver has been drinking. For repeat offenders, DWI courts (modeled after drug courts) provide a tailored approach that involves treatment and supervision. Emerging in-vehicle technology such as the Driver Alcohol Detection System for Safety, which will use touch-based or breath-based systems to detect driver alcohol use, may one day ensure no drivers operate impaired.

Unfortunately, for most drugs, the relationship between the amount consumed and crash risk is still not well understood. We need more and better data to understand the scope of the problem and the effectiveness of countermeasures. States should increase the collection, documentation, and reporting of driver breath and blood test results for alcohol and drugs following crashes.

Although many drivers recognize the impairment potential of illicit drugs, they may not appreciate the potentially impairing effects of prescribed or OTC medications, especially in combination. Drivers should discuss their transportation activities with their doctors before taking a medication and should clarify the impairing effects of any medical conditions they have. Then, a driver’s medical conditions and medications need to be monitored. When a medication label warns against operating heavy machinery while using the medication, drivers need to understand that warning includes vehicles.

Ultimately, advocacy groups, industry, and the public need to work together to increase awareness of drug and alcohol impairment and its effects on safe driving. New laws should be enacted in response to the increase in drug use across the United States, and new research should be used to reexamine old conceptions, like the one that defines impairment as a BAC of 0.08 percent. Finally, drivers need to communicate with their health care providers to fully understand the risks posed by medications they may be taking and by medical conditions with which they’ve been diagnosed.

Related Accidents*

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*For detailed accident reports visit www.ntsb.gov