



January 2018

## Getting to Zero Alcohol-Impaired Driving Fatalities

### A Comprehensive Approach to a Persistent Problem

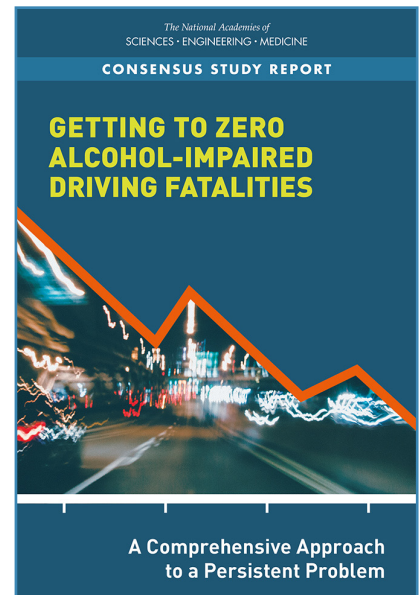
Alcohol-impaired driving remains the deadliest and costliest danger on U.S. roads today. Every day in the United States, 29 people die in an alcohol-impaired driving crash—one death every 49 minutes—making it a persistent public health and safety problem. Furthermore, progress in addressing the issue has stalled, with the number of fatalities from 2009 to 2015 leveling off at about 10,000 deaths each year.

Though the causes of alcohol-impaired driving are complex and multifaceted, these deaths are entirely preventable, and many evidence-based and promising strategies exist to address alcohol-impaired driving. Many underused interventions and promising new technologies can be utilized to reach a bold goal: zero deaths from alcohol-impaired driving.

Each alcohol-impaired driving crash represents a failure of the system, whether that is excessive alcohol service, lack of transportation alternatives, lack of clinical services, or lack of effective policies or enforcement. A coordinated, systematic, multi-level approach spanning multiple sectors is needed to accelerate change. With support from the National Highway Traffic Safety Administration, the National Academies of Sciences, Engineering, and Medicine convened a committee to help identify promising strategies to reduce deaths caused by alcohol-impaired driving in the United States. The resulting report, *Getting to Zero Alcohol-Impaired Driving Fatalities: A Comprehensive Approach to a Persistent Problem*, highlights interventions and actions to reduce alcohol-impaired driving fatalities—including ways to improve important existing interventions—and presents ideas for reviving public and policymaker attention, thereby turning concern into decisive action to address this tragic and preventable problem.

### OVERVIEW OF THE PROBLEM

In the early 1980s, alcohol-impaired driving rose to the forefront of the public's attention. New laws were passed, including those making it illegal to purchase alcohol under the age of 21 or to drive with a blood alcohol concentration (BAC) of 0.10 percent or greater. From the 1980s through the early 2000s, alcohol-related driving fatalities steadily decreased.



Although progress was made as states passed and implemented policies, these heterogeneous policies lacked benchmarks, and they have been enforced with varying intensity. Progress has since stagnated. Plateauing fatality rates indicate that what has been done to decrease deaths from alcohol-impaired driving has been working but is no longer enough.

More than 10,000 people were killed in alcohol-impaired driving crashes in 2016; 214 of those deaths were among children aged 14 years or younger. In economic terms, the total cost of alcohol-impaired driving crashes was \$121.5 billion in 2010 (including medical costs, earnings losses, productivity losses, legal costs, and vehicle damage, among others).

### THE COMMITTEE'S RECOMMENDATIONS

In recommending ways forward, the committee took a holistic public health approach, including exploration of the complex intersections of social, cultural, political, economic, legal, and systems-level influences on health and safety.

The committee supports Vision Zero, a bold, aspirational approach in which no alcohol-impaired driving deaths are acceptable and every stakeholder has a role in preventing these deaths. The Vision Zero philosophy places the responsibility for traffic safety problems on infrastructure system designers and other stakeholders instead of only on drivers. Such bold objectives can be used to galvanize action, change social norms, and

bring stakeholders together around a common vision and goal.

The committee developed a conceptual framework (below) to illustrate the sequence of behaviors leading to an alcohol-impaired driving fatality, potential intervention opportunities, and important factors that shape the outcomes. Driving while impaired does not always lead to a collision, and an alcohol-related collision does not always result in an injury or fatality: These are *potential* outcomes of impaired driving. The intervention opportunities interact with one another and target multiple levels (e.g., individual, interpersonal, institutional, community, and societal).

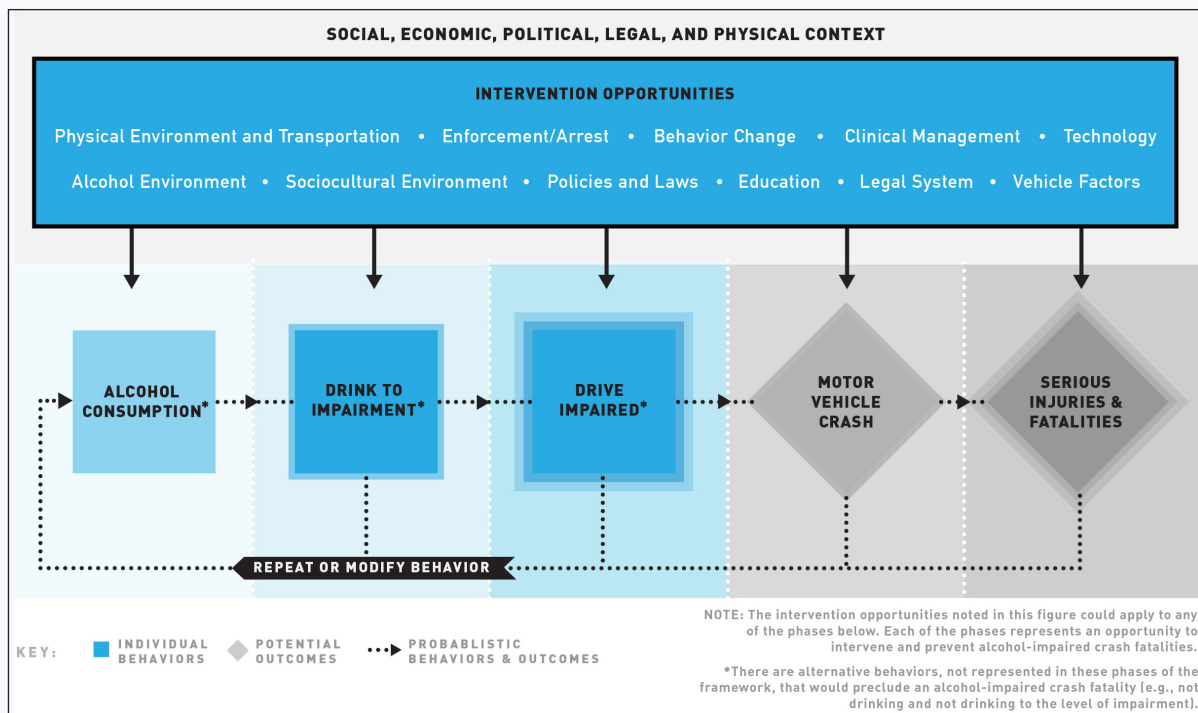
**To download the report and read the full text of the committee's recommendations, please visit [nationalacademies.org/StopDWIdeaths](http://nationalacademies.org/StopDWIdeaths).**

### Interventions to reduce drinking to impairment

Strong, direct evidence shows that higher alcohol taxes reduce alcohol-impaired driving and motor vehicle crash fatalities. Yet alcohol taxes have declined in inflation-adjusted terms at both federal and state levels. Federal and state governments should raise alcohol taxes enough to have a meaningful impact on price to reduce alcohol-related crash fatalities.

Government should also take appropriate steps to limit or reduce alcohol availability, including restricting the number of on- and off-premises alcohol outlets and

### THE COMMITTEE'S CONCEPTUAL FRAMEWORK



the days and hours of alcohol sales. As a common sense measure, states can reduce or eliminate alcohol sales concurrent with driving, such as drive-through retailers or sales at gas stations.

To reduce excessive alcohol consumption prior to driving at the population level, there is a need for a comprehensive set of policies to minimize the illegal sale of alcohol to underage persons and already intoxicated persons—beyond the laws currently in place.

Young people are at higher risk of alcohol-impaired driving, and substantial evidence shows that they are strongly influenced by alcohol marketing. Government should use existing regulatory powers to strengthen and implement standards for permissible alcohol marketing content and placement across all media, establish consequences for violations, and promote and fund counter-marketing campaigns.

### ***Interventions to reduce driving while impaired***

BAC laws have been a key intervention for reducing alcohol-impaired driving and reducing injuries and fatalities in the United States and internationally. Research indicates that a person's ability to operate a motor vehicle begins to deteriorate at a BAC below 0.05 percent. The committee recommends that state governments enact per se laws for alcohol-impaired driving at 0.05 percent because this has been shown to be an effective strategy in other developed countries and has the greatest potential impact on those at the highest risk of alcohol-impaired driving. The effectiveness of this policy would be enabled by applying the same laws and sanctions currently used to enforce the 0.08 percent BAC laws.

Municipalities should support policies and programs that increase the availability, convenience, affordability, and safety of transportation alternatives for drinkers who may drive. This includes permitting transportation network company ridesharing; enhancing public transportation options (especially during nighttime and weekend hours); and boosting or incentivizing transportation alternatives in rural areas, which are disproportionately impacted by alcohol-impaired driving crashes and fatalities.

Other highly effective interventions include sobriety checkpoint programs that are widely publicized and paired with systematic enforcement to reduce alcohol-impaired driving fatalities in both urban and rural areas through general deterrence. The Driver Alcohol Detection System for Safety (DADSS) is a promising in-vehicle technology that prevents a

vehicle from operating when the driver's BAC exceeds the legal limit. Its use could be enhanced through insurance policy discounts for drivers who adopt it.

### ***Post-arrest and post-crash interventions***

There were more than 1 million arrests for driving under the influence in 2015. About 20 to 28 percent of first-time DWI offenders will repeat the offense, and repeat offenders are 62 percent more likely to be involved in a fatal crash. DWI courts, which are specialized courts aimed at changing behavior of high-need DWI offenders through comprehensive monitoring and substance abuse treatment, have been shown to reduce repeat offense rates and should be implemented by all states.

Health care systems and insurers should cover and facilitate effective prevention, evaluation, and treatment strategies for binge drinking and alcohol use disorders, including the practice of screening, brief intervention, and referral to treatment (SBIRT); cognitive behavioral therapy; and medication-assisted therapy.

All states should also enact all-offender ignition interlock device laws. States that have done so appear to have experienced reductions in alcohol-related motor vehicle crash deaths.

### ***Data and surveillance systems***

A comprehensive understanding of alcohol-impaired driving, including rates of occurrence, traffic crashes, injuries, fatalities, arrests and convictions, as well as qualitative data on when and why people drive impaired, is vital to create specific and targeted interventions. There are numerous data gaps (such as lack of data on place of last drink), methodological issues (such as inconsistent data collection); and a lack of integration of data sets (for example, how many people are arrested, outcomes of arrest, and long-term outcomes in terms of repeat offense rates). Timely, standardized data should be collected and made available for research, evaluation, and dissemination.

### ***Generating action***

To initiate and sustain progress, a strategic and comprehensive effort engaging stakeholders across many sectors is needed, as is public will to address alcohol-impaired driving and allocate the needed resources. Federal agencies should coordinate to support training, technical assistance, and community-level demonstration projects in implementing effective strategies for reducing alcohol-

## Committee on Accelerating Progress to Reduce Alcohol-Impaired Driving Fatalities

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impaired driving. A federal interagency group could also collaborate to develop and oversee an integrated strategy for reducing alcohol-impaired driving.

The development of draft model legislation for alcohol-impaired driving laws—to provide benchmarks for states—would ensure such laws are based on best practices.

## CONCLUSION

People die each day due to alcohol-impaired driving. Although substantial progress has been made in the past to lower the number of these deaths, efforts to do so should be reinvigorated.

To achieve the goal of zero alcohol-impaired driving fatalities, a multi-pronged approach with clear roles and accountabilities across sectors is needed. Systematic implementation of these policies, programs, and systems changes could accelerate progress to eliminate injuries and deaths from alcohol-impaired driving, improve the safety of communities, decrease associated health care costs, and save lives.

To read the full report, please visit  
[nationalacademies.org/StopDWIdeaths](https://nationalacademies.org/StopDWIdeaths)

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