Getting to Zero Alcohol-Impaired Driving Fatalities: A Comprehensive Approach to a Persistent Problem

Lifesavers Conference
Impaired Driving: Come Hear the Results
Making Progress in Eliminating Impaired Driving
April 22, 2018
The National Academies of Sciences, Engineering, and Medicine are nonprofit institutions that provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions.
The Committee’s Task

The National Highway Traffic Safety Administration requests that the committee examine:

- which interventions (programs, systems, and policies) are most promising to prevent injuries and deaths from alcohol-impaired driving;
- the barriers to action and approaches to overcome them; and
- which interventions need to be changed or adopted.
Committee Approach

- Public/population health approach
- Methodology
  - Comprehensive literature review to identify most promising interventions
    - Drew evidence from high-quality systematic reviews
- Embraced Vision Zero as a unifying philosophy
- Commissioned background papers on:
  - Data
  - News media
  - Alcohol industry
  - Global lessons
Conceptual Framework

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The Report in Brief: 8 chapters, 16 recommendations

• After decades of progress, alcohol-impaired driving remains the largest cause of death on roadways and is a complex, preventable problem that requires a comprehensive, multisector approach. (Chapter 1)

• Reducing alcohol-impaired driving requires an understanding of the current alcohol and driving environments. (Chapter 2)

• System-wide interventions that target different intervention points are needed, including drinking to impairment, driving while impaired, and postcrash and/or arrest events. (Chapters 3-5)

• Improvements to existing data and surveillance systems would contribute to a greater understanding of the problem and inform targeted solutions. (Chapter 6)

• Social movements, community-based approaches, media approaches, and engaging a range of stakeholders all play an important role in generating sustained action to reduce alcohol-impaired driving fatalities. (Chapters 7 and 8)
Magnitude of the Problem

• Each day, 29 people in the U.S. die in an alcohol-impaired driving crash.

• On average since 1982, 1/3 of all traffic fatalities were from alcohol-impaired driving fatalities.

• 10,497 people were killed in alcohol-impaired driving crashes in 2016.

• 214 children (≤14 years) were killed in alcohol-impaired driving crashes in 2016.
Magnitude of the Problem

- Second-hand effects of alcohol-impaired driving:
  - In 2016, almost 40% of alcohol-impaired driving fatalities were victims other than the drinking driver
  - By comparison, 8.5% of smoking-related deaths due to second-hand smoke

- Economic cost of alcohol-impaired driving crashes in 2010: $121.5 billion
  - Includes medical costs, legal expenses, and property damages

*Figure 2.1* Fatalities, by role, in crashes involving at least one driver with a BAC $\geq 0.08\%$, 2016. SOURCE: Data from NCSA, 2017b.
Current Environment

- Drivers ages 21-25 are disproportionately involved in fatal alcohol-impaired driving crashes when compared to other age groups.
- Rural areas are disproportionately affected by alcohol-impaired driving crashes and fatalities.
- Alcoholic beverages are now more affordable, of far greater variety, and more widely promoted.
- Inconsistent serving sizes and the combination of alcohol with caffeine and energy drinks undermine individuals’ ability to estimate their level of impairment.
- Per capita alcohol consumption and hazardous drinking are increasing.
Current Alcohol Environment:  
Binge Drinking

- Binge drinking is strongly associated with alcohol-impaired driving.
- Binge drinking accounts for 85% of alcohol-impaired driving episodes.

Conclusion:
- Policies to reduce binge drinking are also protective against alcohol-impaired driving.
- Adoption of a comprehensive set of effective interventions and population-based strategies that take advantage of synergies across interventions would further reduce binge drinking and related harms.

**FIGURE 1-7** Standard drinks in the United States.  
Committee Recommendations

Every alcohol-impaired driving crash represents a systems failure.

#StopDWildeaths
Interventions to Reduce Drinking to Impairment

**Recommendation:** To stop illegal alcohol sales (to already-intoxicated adults and underage persons i.e., <21 years old), federal, state, and local governments should:

– adopt and strengthen laws
– dedicate enforcement resources

**Conclusion:** As part of a comprehensive approach, well-funded media campaigns are an important component of alcohol-impaired driving enforcement policy interventions.

– Campaigns are more likely to be effective when rigorous formative research and behavior change theories inform their design and dissemination.
**Alcohol-Impaired Driving Interventions**

**Recommendation:** State governments should enact per se laws for alcohol-impaired driving at 0.05% blood alcohol concentration (BAC).

- The federal government should incentivize this change, and other stakeholders should assist in this process.
- The enactment of 0.05% per se laws should be accompanied by media campaigns and robust and visible enforcement efforts.

  - Effectiveness of this policy will be enabled by legislation such as use of sobriety checkpoints, administrative license revocation, and penalties for refusing preliminary breath or blood tests that are equal to or greater than penalties for alcohol-impaired driving offenses.
Conclusion: Consumer marketed personal breath-testing devices are an emerging technology with the potential to reduce alcohol-impaired driving by promoting more accurate BAC self-estimation.

However, these technologies require further investigation of their accuracy and effects on behavior before promoting widespread use.
Alcohol-Impaired Driving Interventions

**Recommendation:** States and localities should conduct frequent sobriety checkpoints in conjunction with widespread publicity to promote awareness of these enforcement initiatives.

**Recommendation:** When the Driver Alcohol Detection System for Safety (DADSS) is accurate and available for public use, auto insurers should provide policy discounts to stimulate the adoption of DADSS.

– Once the cost is on par with other existing automobile safety features and is demonstrated to be accurate and effective, NHTSA should make DADSS mandatory in all new vehicles.
Recommendation: Municipalities should support policies and programs that increase the availability, convenience, affordability, and safety of transportation alternatives for drinkers who might otherwise drive. This includes:

- permitting transportation network company ride sharing
- enhancing public transportation options (especially during nighttime and weekend hours)
- boosting or incentivizing transportation alternatives in rural areas
Postcrash and Arrest Interventions

**Recommendation:** Every state should implement DWI courts, guided by the evidence-based standards set by the National Center for DWI Courts.

- All DWI courts should include available consultation or referral for evaluation by an addiction-trained clinician.

**Recommendation:** All states should enact all-offender ignition interlock laws to reduce alcohol-impaired driving fatalities.

- An ignition interlock should be required for all offenders with a BAC above the limit set by state law.
- To increase effectiveness, states should consider increased monitoring periods based on the offender’s BAC or past recidivism.
Conclusion: A coordinated and continuous learning trauma care system is lacking in the United States.

Facilitating the linkage of crash, EMS, and hospital data to generate insights on areas for improvement in addition to greater coordination could substantially affect the number of deaths from alcohol-impaired driving, particularly in rural and tribal areas owing to longer response times to crashes and increased distances from trauma care facilities.
Data and Surveillance Needs and Opportunities

Recommendation: NHTSA should:

– ensure timely standardized data on alcohol-impaired driving, crashes, serious injuries, and fatalities are collected and accessible for evaluation, research, and strategic public dissemination

– ensure data from other government agencies and private organizations are included as needed

– explore the usefulness of big data for inclusion in alcohol-impaired driving information strategies

FIGURE 6-1 Indiana daily crash prediction map. Source: Indiana State Police and Indiana Management Performance Hub, 2017.
Data and Surveillance Needs and Opportunities

**Recommendation:** To facilitate surveillance of alcohol-impaired driving that is timely, ongoing, concise, and actionable, NHTSA should convene a diverse group of stakeholders that includes academic researchers, law enforcement, city and state public health, transportation sector, and other federal agency representation to:

- create and maintain a metrics dashboard
- publish brief, visually appealing quarterly and annual national and state-by-state reports that analyze and interpret progress in reducing alcohol-impaired driving
Generating Action

**Conclusion**: Alcohol companies and alcohol-related businesses could assist efforts to reduce alcohol-impaired driving fatalities by:

– reducing the alcohol content of existing products
– refraining from marketing including sponsorships that are likely to influence excessive alcohol use
– supporting or at least not opposing effective alcohol-impaired driving countermeasures
Generating Action

**Recommendation:** NHTSA should create a federal interagency coordinating committee to:
- develop and oversee an integrated strategy for reducing alcohol-impaired driving
- assure collaboration
- maintain accountability
- share information among organizations committed to reducing alcohol-impaired driving

**Recommendation:** NHTSA, other federal partners, and private funding sources free of conflicts of interest should:
- support training, technical assistance, and demonstration projects in the implementation of effective strategies, including policy changes, for reducing alcohol-impaired driving
Conclusion: To achieve the goal of zero alcohol-related crash fatalities a systematic multipronged approach with clear roles and accountabilities across sectors (including public health, transportation, law enforcement, and health care providers, among others) is needed.
Thank you!

For the report and related resources, see: http://www.nationalacademies.org/StopDWILdeaths

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