Not too long ago it was common for party hosts to send their guests home with a “traveler”—a paper cup with one last cocktail. Driving while drinking was commonplace and socially acceptable behavior.

In the early 1980s, just before Mothers Against Drunk Driving was founded, more than 21,000 people were killed every year in alcohol-related crashes.

Flash forward to 2009. Annual alcohol-related traffic crash fatalities are down to just under 12,000, thanks in part to public education campaigns and state laws enacted to penalize drunken drivers. Nonetheless, alcohol is still estimated to be a factor in nearly 32 percent of vehicle-related deaths.

Over the years, state legislatures have passed all kinds of laws with the goal of putting an end to drunken driving. Special courts have been established. All states have passed laws declaring that a blood alcohol level of .08 or higher constitutes driving under the influence. Law enforcement DUI checkpoints have been erected. Public education campaigns have been rolled out on major holidays.

The battle against drunken driving now is moving into a new phase. Ignition interlock devices are already in use in most states for repeat offenders or those with high blood alcohol content. The debate now in many states is whether or not to require the devices for all convicted drunken drivers. Traffic safety advocates are at odds on whether the research exists to support such policy, but advanced technology may make the debate irrelevant.

This new technology is now being seen as a more surefire way to keep intoxicated drivers off the road. And high-tech devices are being developed that could be installed in all new cars. The trend, however, is provoking debate because of the cost and the appropriateness of using such technology.

LOCKED OUT

Ignition interlock devices, installed in vehicles and connected to the starter system, detect alcohol in the breath and block power to the starter system if the driver is over a preset level, typically well below the illegal .08 legal limit. About 180,000 ignition interlocks are currently in use in the United States, usually mandated by the courts following a conviction for driving under the influence.

Forty-seven states have some form of ignition interlock law, 11 states require them for all offenders and seven others require them for repeat offenders or those whose blood

Melissa Savage and Anne Teigen track traffic safety issues for NCSL.
alcohol level was .15 or higher when they were arrested. The rest of the states allow judicial discretion in requiring the interlock devices.

Research shows that when interlock devices are used, the likelihood of re-offending goes down by an average of 64 percent. An Illinois study found offenders who used the devices were 20 percent less likely to be arrested for drunken driving during the first year, compared to offenders without the device. Traffic safety experts caution that the rate of re-offending creeps back up to the rate of everyone else when the devices are removed.

In New Mexico, offenders with a high blood alcohol level and repeat offenders have been required to install ignition interlock devices since 2003. In 2005, New Mexico implemented a number of measures aimed at reducing alcohol-related traffic deaths, including a requirement that all convicted drunken driving offenders must install interlocks.”

Between 2002 and 2007, alcohol-related crashes were reduced by 31 percent. There are currently about 9,000 interlocks installed in vehicles throughout New Mexico.

The devices record the number of attempts made to start the vehicle, date and time of the attempted starts, and the blood alcohol level at each attempt. Research in Canada has shown that information from data logs can be used to estimate the likelihood of a driver again driving drunk.

**HIGH-TECH DETECTION**

New technology to combat drunken driving, however, goes far beyond the ignition interlock. Some devices even have a science-fiction feel about them.

Born from a research agreement between the Automotive Coalition for Traffic Safety and the National Highway Traffic Safety Administration, a group called the Driver Alcohol Detection System for Safety is exploring advanced technologies that would disable a vehicle when the driver’s blood alcohol level is over the legal limit. This technology would fit seamlessly into cars, like safety belts or air bags, and could be in new cars at your local dealership within the next eight to 10 years.

Researchers are focusing on three possible systems that would detect driver blood alcohol levels easily, quickly and accurately.

The first is a tissue spectrometry system that measures alcohol level by touch. Applying near-infrared light directly onto a person’s skin, molecules in the body absorb some of light and by measuring the portion of the light reflected back by the skin, it can be determined if any alcohol is present in the body. It was developed by Albuquerque-based TruTouch Technologies.

New Mexico Senator Kent Cravens has been following TruTouch’s progress. “Once this technology is developed, it could eliminate drunken driving forever,” he says. “It will keep dangerous drivers off the road.”

Another promising technology undergoing research is distant spectrometry, which can measure the amount of alcohol in the air inside a car. These devices can “sniff” how much alcohol a person is exhaling. Work is being done so the device will even be able to tell the difference between the driver and other passengers.

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**IGNITION INTERLOCK LAWS**

- Require ignition interlock devices after the first offense.
- Require the devices for those arrested with extremely high blood alcohol levels and repeat offenders.
- Do not require ignition interlock devices for any offenders.
- Allows the court has discretion to require offenders to install ignition interlock devices.

Note: The Colorado law is not mandatory but provides strong incentives. Hawaii’s law goes into effect in 2011.
Researchers in the Driver Alcohol Detection System for Safety program hope to receive prototypes from technology developers and perform testing with human subjects within the next year. In-vehicle testing of prototypes could begin by 2013. Testing will involve different temperatures and environments, and whether the devices can sustain a reasonable amount of wear and tear and remain functional for the life of the vehicle.

“We could save 9,000 lives a year with these devices,” says Susan Ferguson with the safety program. “In just a few years, we could remove all drunk drivers from the road.”

Ferguson says it’s too early to talk about costs but notes that one of the criteria of the project is that it must be affordable and in-line with the cost of other in-vehicle technologies. Most experts think the technology, if it was mandated, would fall under the authority of the National Highway Traffic Safety Administration. That’s the agency that has required seat belts and air bags in the past.

The public appears solidly behind a technology-based approach.

Both the AAA Foundation for Traffic Safety and the Insurance Institute for Highway Safety have recently surveyed the public. The institute’s survey found 64 percent of respondents support the use of advanced technology to prevent drunken driving. Respondents underscored the importance of the technology reliability and 40 percent said they would want such a device in their own car if it was offered.

The AAA Foundation survey found 78 percent of respondents support the use of an in-vehicle device to stop people from driving when they’ve had too much to drink.

WHO DESERVES A SECOND CHANCE?

While the public may support the notion of new devices to stop drunken driving, there is still plenty of debate in statehouses around the country on how to use the technology available now.

One issue is whether ignition interlock devices should be required for all drunken driving offenders, or only repeat offenders and those with high blood alcohol levels. If ignition interlock devices are appropriate for all offenders, can states bear the costs of requiring them?

Proponents argue they are worth the cost.

“It teaches people that they cannot drink and get into their cars and drive,” says Wisconsin Representative Tony Staskunas. “It separates drinking from driving. It is a prime example of behavior modification.”

Some supporters see the devices as a better alternative to vehicle forfeiture or jail time.

“Immobilization is a sanction. Jail and fines are sanctions,” says New Mexico’s Cravens. “These devices allow convicted offenders to drive legally and contribute to society. Offenders still can go to work and support their families.”

License suspension—a common sanction for drunken drivers—doesn’t usually work. Eighty percent of people with suspended drivers licenses drive regardless because they need to get to work, school and run errands.

Stephen Talpins, chief executive of the National Partnership on Alcohol Misuse and Crime, believes “ignition interlock devices can keep these drivers safely on the roads.”

Regardless of whether the laws apply to all offenders or only high risk offenders, he says, “the devices do nothing if not installed. The unfortunate reality is that only 10 percent to 20 percent of offenders required to install interlocks actually do so.

“That’s why it is so important that the state legislature takes its time.”

If the possibility of in-vehicle, high-tech alcohol detection systems seems like something out of a “Jetsons” cartoon, consider the path to widespread use of the seat belt and the air bag.

Swedish inventor Nils Bohlin invented the three-point seat belt, which was installed in a 1959 Volvo. By 1967, the first U.S. rules for vehicle safety called for seat belts in all new passenger vehicles. As of 1995, every state except New Hampshire had a seat belt law.

The air bag ran into more than one obstacle on its way to becoming a standard feature in every car. The first air bag prototype was developed in 1953, but it wasn’t until 1973 that the Oldsmobile Toronado became the first car with a passenger side air bag. By 1999, the federal government required all new model vehicles to have front air bags.

Air bag technology had a rough start—68 people were killed by air bags in 1995 vehicles because they inflated with too much force. The bags have since been redesigned to inflate with less force.

The main reason drunk drivers keep driving under the influence is because they know they can.”

CHUCK HURLEY CHIEF EXECUTIVE OF MOTHERS AGAINST DRUNK DRIVING

Sen. Kent Cravens, New Mexico; Rep. Tony Staskunas, Wisconsin; Assemblyman Reed Gusciora, New Jersey

“Safety Takes Its Time”

![Image](image1.png)

![Image](image2.png)

![Image](image3.png)
properly implement their programs,” he says. “The bottom line is we need to drive up compliance rates for interlock laws.”

Others contend that existing interlock programs, operated either by a state’s licensing agency or the courts, do not have the resources to support a broader program. They argue that hiring enough staff and ensuring adequate funding is necessary before requiring the devices for first-time offenders. Although the actual device is paid for by the offender, establishing and maintaining an ignition interlock program requires money to pay for staff and data management technologies.

“Many licensing agencies are understaffed and are unable to install and monitor ignition interlocks for offenders who are already required to have them,” says Robyn Robertson, president of the Canada-based Traffic Injury Research Foundation.

There is also concern that sentencing first-time offenders is too severe, and the law could do more harm than good. New Jersey Assemblyman Reed Gusciora says fines and ignition interlock charges amount “to more than $10,000 for a first-time offender over three years. While I do not feel sorry for the offender, my point is simply this: The convicted DUI offender’s car will become ‘toxic’ due to the penalties being assessed.”

The offender is then more likely to give the car to a spouse, child or family friend, Gusciora says. They then could remove the device and continue driving.

On a broader level, some argue the justice system is never a one-size-fits-all system. Just as jail time or treatment may not be appropriate for all offenders, some offenders may not benefit from mandatory ignition interlock laws.

Other traffic safety groups such as AAA believe ignition interlock devices have their place, but research on whether these devices work for all offenders needs to be beefed up before they can support their use for all offenders.

“The data simply don’t exist right now to support the use of ignition interlock for all offenders,” says Jake Nelson, director of Traffic Safety Policy for the organization. “Interlocks alone represent a promising but incomplete solution to drunken driving.”

Treatment and helping to change the underlying behavior is something AAA believes is paramount to any successful system to combat drunken driving.

“It’s like treating the symptoms of a disease without offering a cure. In the case of ignition interlocks, while the drivers use the devices, DUI behavior is controlled; once the device comes off, however, many drivers go back to driving under the influence.”

While MADD continues to push ignition interlock devices for all offenders, Chuck Hurley, the group’s chief executive, believes the real promise is in advanced technology.

“In 10 years it’s completely possible that the car will know when the driver is drunk,” he says.

The advanced technology also gets at the heart of the problem, Hurley believes.

“The main reason drunken drivers keep driving under the influence is because they know they can. We’re only catching about 1 percent to 2 percent of the drunk drivers out there. If we pair this advanced technology with law enforcement efforts, we could put an end to drunk driving.”

CHECK OUT efforts states are making to stop people from driving under the influence and additional resources on the topic at www.ncsl.org/magazine.