



# STATUS REPORT

INSURANCE INSTITUTE  
FOR HIGHWAY SAFETY

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## ***HARD CORE***

### ***DRINKING DRIVERS***

have drawn extra attention in recent years as policymakers try to renew progress against alcohol-impaired driving and the deaths and injuries it causes. But the hard-core group isn't the whole DWI problem or even the biggest part, so it doesn't make sense to focus too narrowly on this group. The result is to overlook a lot of



other impaired drivers who escape the definition of hard core.

"We've all seen headlines about crashes of impaired drivers with multiple prior offenses. These are problem drivers, but they're a smaller part of a bigger problem. Focusing on them ignores the more numerous impaired drivers who never have been arrested," says Anne McCartt, Institute vice president for research and an author of a new report.

**Hard core is difficult to identify:** The Traffic Injury Research Foundation of Canada introduced this concept in the early 1990s to define people who resist deterrence efforts,

Recordkeeping on DWI offenses varies from state to state. Periods for counting prior offenses vary, and some drivers succeed in getting offenses removed from their records by, for example, completing alcohol education. The result is that repeat offender rates vary widely from state to state, and many hard-core offenders go unidentified.

Because repeaters are so difficult to identify, some people resort to using a BAC threshold of 0.15 percent to define the hard core. But this doesn't ensure identification, either, because the only motorists for whom BACs are reliably known are those killed in crashes or stopped

**Progress for a while and then a stall:** If hard-core drinking drivers are so difficult to define and identify, why is this group a focus of DWI policies and programs? The answer involves trends in alcohol-impaired driving over the years and, in particular, efforts in recent years to revive the progress that was made during the 1980s and 1990s.

In country after country, including the United States, sharp declines in crash deaths involving alcohol-impaired drivers began to be recorded in the early 1980s. In 1995 the Institute still was reporting that "alcohol involvement in fatal crashes is on the decrease" (see *Status Report*, Aug. 12, 1995).

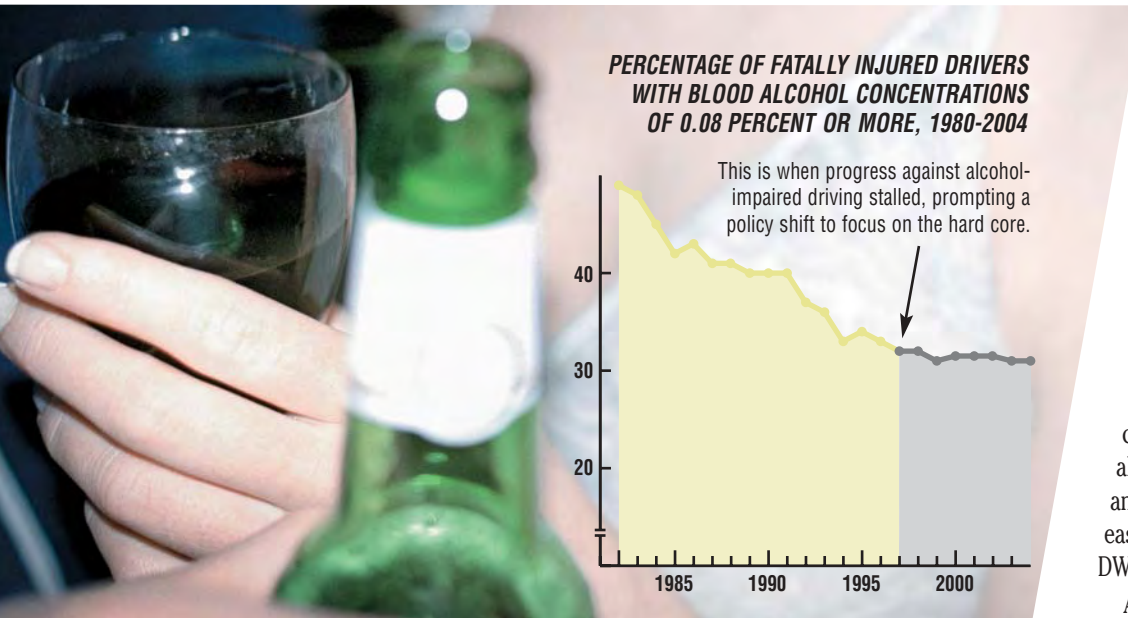
Continuing well into the 1990s, this progress was widely attributed to effective DWI laws, heightened enforcement, and increased public attention to the problem spurred by groups like MADD.

Among the best programs were sobriety checkpoints, characterized as "probably the most effective deterrence strategy we can apply" (see *Status Report*, April 2, 2005; on the web at [iihs.org](http://iihs.org)). Other effective measures included raising the minimum age for purchasing alcohol, reducing to zero the allowable BAC for young drivers (see p.5), and enacting laws making it quicker and easier to suspend or revoke the licenses of DWI offenders.

As these and other laws took effect, proportions of fatally injured drivers with BACs of 0.08 percent or more declined to about one-third in 1997 from about half in 1982. The declines were similar among drivers with BACs just above 0.08 percent and drivers with BACs of 0.25 percent or more.

Then the progress stalled. The ensuing search for new ways to reduce the alcohol-impaired driving problem led policymakers to focus on the hard core — that is, on the drivers who presumably are the most resistant to obeying DWI laws.

New laws began targeting this hard-core group. Under the 1998 Transportation Equity Act for the 21st Century, the federal government withheld highway construction funds from states that didn't enact provisions to impound the vehicles of second DWI offenders or make them use ignition interlocks. Li-



repeatedly driving after drinking a lot. The hard core usually is defined as drivers with more than one traffic offense involving alcohol or drivers with blood alcohol concentrations (BACs) of 0.15 percent or more.

"Chronic offenders fit an intuitive idea of what the hard core is, but these drivers don't account for many crashes," McCartt says. Among drivers with BACs of 0.15 to 0.19 percent who are killed in crashes, about 1 in 10 has a prior DWI conviction within the past 3 years. The proportion is slightly higher (12 percent) among fatally injured drivers with BACs of 0.20 to 0.24 percent. Even among drivers with extremely high BACs (0.25 percent or more), 16 percent of those killed in crashes have prior convictions on their records.

and tested at the time of alcohol offenses. Even then BACs are known only at the time of the specific offenses. It isn't known whether an offense was an aberration, a sometime occurrence, or a frequent behavior indicating a hard-core problem. There's evidence that many drivers with BACs of 0.15 percent or more drink this much on occasion but not routinely. A study of drivers with such BACs found that fewer than half were chronically heavy drinking drivers.

"Although 0.15 percent BAC hasn't turned out to be a very useful indicator of the hard core, the distinction doesn't matter for enforcement purposes," McCartt points out. "As a group, drivers with very high BACs respond about the same as drivers with lower but still impairing BACs to DWI enforcement strategies."

cense suspensions and jail terms were extended. A subsequent federal law initiated another round of sanctions against drivers identified with BACs of 0.15 percent or more. Most states have enacted such laws.

Some of the provisions have been effective. Interlocks, which indicate the alcohol in drivers' blood and keep people with specified BACs from starting their vehicles, reduce repeat offenses (see *Status Report*, Jan. 15, 2000; on the web at [iihs.org](http://iihs.org)). Yet the overall result of focusing on the hard core hasn't been impressive. Since 1997 about 31-33 percent of fatally injured drivers have had illegal BACs (0.08 percent or more). Proportions with higher BACs (0.15 percent or more) also have held steady.

This doesn't mean drivers with very high BACs aren't problems. They are, whether or not they're defined as part of a hard-core group. More than 60 percent of drinking drivers killed in crashes have BACs of 0.15 percent or more.

"The problem is targeting these drivers at the expense of programs aimed at other drivers with BACs high enough to elevate crash risk. Why let them off the hook? Why exclude any driver with a BAC high enough to impair driving? Target them all," McCartt says.

**Target every offender:** General deterrence programs like sobriety checkpoints target all drivers with laws and enforcement to convince them they'll pay a high price if they become impaired by alcohol and then get behind the wheel. Specific deterrence involves penalties especially for repeat offenders and drivers with very high BACs who are identified through general deterrence programs. Penalties for these drivers may include incarceration, vehicle impoundment, ignition interlocks, or other sanctions. While evaluations indicate that some of these strategies can reduce recidivism, they aren't as important as general deterrence because they don't target as many potential offenders.

"It's a matter of the probabilities," McCartt points out. "An estimated 90 million vehicle trips per year involve alcohol-impaired drivers, but only about 1.5 million of these end in driver arrest. Given such a low arrest likelihood, the first priority needs  
(continues on p.6)



**Drivers with very high BACs are problems on the road, whether or not they're defined as part of a hard-core group. It's important to deter them, but not at the expense of programs aimed at other drivers with BACs that are lower but still high enough to elevate crash risk. Why let them off the hook to focus on the so-called hard core? Why exclude any driver with a BAC that's high enough to impair driving? Target them all.**



## **CALIFORNIA'S GRADUATED LICENSING PROGRAM IS REDUCING CRASHES, ESPECIALLY ONES WITH LOTS OF TEENS IN A VEHICLE**

A new Institute study quantifies the benefits of provisions of California's graduated driver licensing program. Findings affirm those of previous studies by other researchers that also point to the success of this program.

California legislators were among the first in the nation to enact graduated licensing, which took effect in 1998. The law increased the learner's permit period and required parents or guardians to certify that learners get at least 50 hours of practice. Once licensed, 16 year-olds still are restricted. They may not drive unsupervised at night or any time with teen passengers.

Prompted by another study in 2003 that found no effects of these provisions, Institute researchers conducted their own evaluations. The main finding is a 23 percent overall reduction in the per-capita crash involvement rate of 16-year-old drivers. Crashes went down more in the high-risk situations specifically addressed by graduated licensing. Nighttime crash rates went down 27 percent, and crash rates with teen passengers decreased 38 percent.

Benefits of this law aren't being achieved by postponing the crash problem until 16 year-olds get a little older. That is, the law isn't shifting high crash rates from 16-year-old beginners to 17 year-olds, whose crashes also declined after graduated licensing.

Nor are crashes going up among beginners driving alone, despite concern that the passenger restriction would increase the risk by forcing groups of teens to travel in separate vehicles to the same destination. The Institute found reductions in crashes in which beginners drove alone, went as passengers, etc.

"To affirm these findings, we conducted our analyses several ways, all of which revealed positive results. So we know the law is successful," says Susan Ferguson, Institute senior vice president for research.

Multiple studies of the graduated licensing laws in other states also reveal benefits, including fatal crash reductions (see *Status Report*, Feb. 17, 2001; on the web at [iihs.org](http://iihs.org)). An exception is a study published in 2003 by the California transportation department, which found no overall effects of graduated licensing.

This result is out of line not only with findings in other jurisdictions but even with results of two other evaluations of the California law that were conducted before the Institute's analyses. One of these studied three years of data, concluding that graduated licensing reduced the per-capita crash rate of 16-year-old drivers by 28 percent. Other researchers reported a 17 percent reduction, based on comparison of data during 21 months before the California law took effect and an equal period afterward. Both studies were published in 2004.

The Institute's study relies on the same data sources as all of the previous studies. Institute researchers used time series to account for trends before graduated licensing took effect. Crashes of 24-55 year-olds also were considered to account for fluctuations in driving conditions, seasonal effects, and other factors that might have been influencing crash rates during the period of study, 1995-2003.

"Our analyses weren't all that different from the approach used by the researchers at the California transportation department, who found no effects of graduated licensing. In fact, there isn't anything inherently wrong with what they did. They used time series, just as we did. It's a routine statistical method, but in this case the California researchers didn't use time series to factor in all of the various trends in crashes of 16 year-olds that were occurring before the graduated licensing law took effect. For example, they didn't take into account some of the seasonal variations in the data,"



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Ferguson explains. "Once we took these other factors into account, the benefits of graduated licensing were clearly revealed."

California may be reaping even greater benefits since the Institute's study was conducted because the law itself has been strengthened. The new law has raised the minimum age for a learner's permit to 15-1/2 from 15, started the nighttime restriction an hour earlier (11 pm instead of midnight), and extended passenger restrictions to cover the first year of licensure instead of the first 6 months. These provisions make California's

## ZERO ALCOHOL TOLERANCE IS ENFORCED MORE EFFECTIVELY IN WASHINGTON THAN IN SOME OTHER STATES

In every US jurisdiction drivers younger than 21 may be arrested if they have any measurable alcohol in their blood, not just if it's enough to arrest them under DWI laws. Prompted by the threat of federal sanctions, state legislators put these zero tolerance laws on the books, but the results vary from state to state. Those in Washington are impressive.

An Institute study found 51 percent more arrests of 16-20-year-old drivers for alcohol violations in Washington state after the zero tolerance law took effect in 1994, compared with before. The biggest arrest increase was among young people who weren't driving illegally under the state's DWI law but did have measurable alcohol (0.02 percent or more) in their blood. Arrests more than doubled of drivers with BACs of 0.02-0.079 percent (the threshold for DWI is 0.08 in Washington and every other state). This increase is important because, while young drivers aren't as likely as older people to drink and drive, their crash risks increase more when they do, even at low BACs.

Results for recidivism aren't as impressive. More than 1 of 4 of the drivers younger than 21 who were arrested for alcohol violations in Washington state subsequently were arrested again. Those with higher BACs (0.10 percent or more) at the first arrest were even more likely to commit second offenses.

Drivers in Washington may be tested based on suspicion of violating either the DWI or the zero tolerance law. However, the policies in many other states aren't as strong. At the extreme is New Mexico, where the zero tolerance law is practically unenforceable (see *Status Report*, June 30, 2001; on the web at [iihs.org](http://iihs.org)). Young drivers are subject to testing only if they're suspected of DWI. Once tested, a driver may be charged under zero tolerance if the BAC is lower than 0.08 but still at least 0.02 percent. This reduces the chances that police will stop and arrest underage drivers to begin with.

Even in states like California, with its strong zero tolerance law, enforcement may not be a priority. Reasons aren't clear, but it could be that this simply isn't considered a serious offense. Whatever the reasons, lax enforcement has contributed to limited awareness of zero tolerance laws.

For a copy of "Implementation of Washington's zero tolerance law: patterns of alcohol-related arrests, judicial or administrative dispositions, and recidivism of drivers younger than 21" by K. Blackman et al., write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Road, Arlington, VA 22201, or email [publications@iihs.org](mailto:publications@iihs.org).



**16-year-old drivers in California decreased  
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drivers. Their crash rates went down too.**

one of the strongest graduated licensing laws in the United States. To compare its provisions with those of graduated licensing laws in other states, go to [iihs.org/laws/state\\_laws/grad\\_license](http://iihs.org/laws/state_laws/grad_license).

For a copy of "Evaluation of California's graduated licensing system" by T.J. Zwicker et al. write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Road, Arlington, VA 22201, or email [publications@iihs.org](mailto:publications@iihs.org).

"Evaluation of California's graduated driver licensing program" by S.V. Masten and R.A. Hagge is available from the California Department of Transportation (report no. 205, published in 2003).





(continued from p. 3) to be to raise the probability that all impaired people, including the hard core, will be deterred from driving or, if they do drive, will be arrested for the offense.”

A broader approach is to take steps to reduce overall alcohol consumption. This recognizes that many of society’s problems, including but not limited to deaths and injuries in crashes involving impaired drivers, result from alcohol consumption. But there are big challenges. One is that trying to reduce intake goes against vested interests including the corporations that produce and distribute alcoholic beverages. Another challenge involves public acceptance. Surveys show a clear preference for punishing DWI offenders over curbing everyone’s consumption.

A future approach might involve equipping every vehicle with technology that measures a driver’s BAC and prevents driving if the BAC is high. Such technologies, which will have to measure BACs more quickly and unobtrusively than

breath devices, are being developed (see *Status Report*, April 2, 2005; on the web at [iihs.org](http://iihs.org)). The potential is to keep all impaired drivers from starting their vehicles.

“Whatever approaches we develop or revive from the 1980s, it will be important to recognize that punishing the hard core won’t be enough to make a big difference — and it will be counterproductive to the extent that it draws attention away from the occasional heavy drinkers and the numerous impaired drivers with lower BACs and no priors,” McCartt concludes. “Targeting the broader group with general deterrence will net the hard core too.”

For a copy of “Hard-core drinking drivers and other contributors to the alcohol-impaired driving problem: need for a more comprehensive approach” by A. Williams et al., write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Road, Arlington, VA 22201, or email [publications@iihs.org](mailto:publications@iihs.org).

## **TRUCKERS’ DRIVING HOURS ARE SUBJECT OF MORE LITIGATION**

Federal rules about how many hours truck drivers should be allowed to work, how much rest should be required between shifts, and how to enforce the limits are back before federal judges. Contention about these issues goes back years, with this round of litigation dating to 2003 when the Federal Motor Carrier Safety Administration (FMCSA) revamped the work-hour rules. The effect was to increase rather than decrease truckers’ daily and weekly driving limits.

Resorting to strong language, a federal court struck down the rules, calling them “arbitrary and capricious” and chastising FMCSA for “questionable rationality” (see *Status Report*, Aug. 1, 2004; on the web at [iihs.org](http://iihs.org)). However, Congress allowed the agency to keep in place the rules the court had struck down until new rules could be issued — and when they were they reflected minimal changes.

Now Public Citizen, the group that successfully challenged FMCSA in court before, has taken the agency back to the US Court of Appeals for the District of Columbia. In July the Institute filed a brief in support of Public Citizen, and the language reflects the frustration of Institute staff at FMCSA’s obfuscatory response to the problem of truck crashes involving drivers who have worked too many hours with too little rest.

Citing FMCSA’s own estimate that fatigue is a factor in 15 percent of truck crashes involving deaths and injuries, the Institute told the court that the agency “has breached its duty to the public.” FMCSA “ignored competent research [on the hazards associated with driving while fatigued] and relied on its own unsound analysis” to justify increasing allowable driving hours by 28 percent in a trucker’s work week.



**An estimated 90 million vehicle trips per year involve alcohol impairment. Only about 1.5 million of these end in driver arrest, so the priority needs to be increasing the probability of deterring all offenders, not just the hard core.**



The Institute's brief targets the so-called restart provision, introduced in the 2003 rules, that allows truckers to drive up to 88 hours in an 8-day period. The Institute told the court this "ignores studies showing that drivers who report working longer than 60-70 hours ... were about 80 percent more likely to report falling asleep while driving."

The Institute has supplied FMCSA with detailed survey results indicating an increase in fatigued driving since truckers began using the restart provision. So well documented are the risks associated with driving while fatigued (see *Status Report*, July 16, 2005; on the web at [iihs.org](http://iihs.org)) that the Institute told the court there's only one outcome of the agency's

current policy on driving hours — more truck crashes.

The Institute has gone back and forth with FMCSA for years, trying to convince regulators to limit truckers to reasonable hours and ensure they get enough rest. So far this hasn't happened. FMCSA's "indifference to reports of drivers actually dozing while at the wheel speaks for itself," the Institute told the court.

**FMCSA ignored competent research and relied on its own unsound analysis to justify regulations allowing truckers to drive even more hours at a stretch, the Institute recently told a federal court in support of a pending lawsuit against the agency over work-hour rules.**

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