

# Ignition Interlocks: What you should know.



## INTRODUCTION

In 2007 60% of drivers involved in alcohol-related traffic fatalities, where there is a known alcohol test result for the driver, involved a high Blood Alcohol Concentration (BAC) driver at .15 or above (*NHTSA, 2008*) – an incidence level that has remained relatively unchanged for more than a decade. Furthermore, drivers with a BAC of .15 or higher are 380 times more likely to be involved in a fatal crash than a non-drinking driver (*Zador, 1991*).

Unfortunately, no single tactic, alone, will solve the complex problem of drunk driving. However, research shows that the alcohol ignition interlock device is effective in preventing drunk driving while installed on the vehicle, and when the device is used in combination with treatment and with other sanctions as appropriate. Research has clearly demonstrated that ignition interlocks are an effective tool to prevent individuals from driving drunk and to reduce the incidence of recidivism (*Voas and Marques, 2003*). Unfortunately, the public is not familiar with ignition interlocks and much of the research regarding the performance of these devices is not well known outside of the traffic safety community.

## IGNITION INTERLOCK DEVICES – WHAT THEY ARE AND HOW THEY WORK

An ignition interlock device is an electronic breath alcohol test or analyzer that connects to the vehicle's ignition via the starter system or other on board computer systems of a motor vehicle. It is not connected to the engine and therefore cannot stop the car once it has been started. The interlock device measures the breath alcohol concentration (BAC) of the intended driver and prevents the vehicle from being started if the BAC exceeds a pre-set limit. The National Highway Traffic Safety Administration (NHTSA) standards require the “failure” to be within  $\pm .01$  of the pre-set limit. Most devices are pre-set to a BAC level of .02, with the threshold for lockout set at .025 (*NHTSA, 2007*).



To start the motor vehicle, the driver blows into a mouthpiece attached to the device, which measures the individual's BAC level at that moment in time. If the driver does not have alcohol above the measurable level in their system, the vehicle will start normally. However, if the device measures alcohol above the predetermined level then the vehicle will not start. Interlocks may be set for “running” retests, which require a driver to provide additional breath tests at regular intervals once they start driving. This prevents drivers from asking a sober friend to start the car, or from starting the car and then drinking while driving. A running retest failure is logged in the device's data recorder and provides an audible warning for the driver to stop the vehicle (pull over notice). It also initiates audible and visible warnings (e.g., flashing lights or honking horn) so other drivers, including the police, will notice the vehicle if the driver continues to drive.

- A breath test failure during a running retest, that is after the car has initially been started, allows the driver ample time to safely pull over and get out of traffic. Because ignition interlock devices are connected to the ignition switch, a running retest failure cannot automatically shut off a running engine, that is, the car does not automatically stop in traffic.

Ignition interlocks are not designed to or capable of changing a convicted DUI offender's behavior directly. The purpose of the device is to control and monitor vehicles driven by convicted DUI offenders, thus enhancing public safety while still allowing these offenders to remain productive members of society with appropriate limits on their use of motor vehicles.

Professionally installed, the devices include a range of features which vary by manufacturer. One notable strength of today's interlock technology is that the devices can be customized to the offender and/or specific jurisdictions. Additionally, many ignition interlocks include a data recording device which is used to capture information about the use of the vehicle (e.g., number of attempts to start vehicle, date and time of start, BAC readings, failures, mileage driven, etc.). This record can be used by probation officers, court officers, or judges to monitor compliance with the sanction, make judgments about the likelihood of future offenses, evaluate the risk and level of threat the offender would pose on the road if removed from the interlock program. A relatively inexpensive, and often offender-paid sanction, the ignition interlock, has an estimated average cost of less than \$3 per day (*NHTSA, 2007*).

## WHERE ARE INTERLOCK DEVICES BEING USED?

According to a 2008 report by Richard Roth, Ph.D. (traffic safety researcher, and member of the New Mexico Governor's DWI Leadership team) an estimated 146,000 ignition interlock devices are installed in vehicles in the United States today, an increase of nearly 48% from the estimated 99,000 in 2006 (*Roth, 2008*). Currently, 47 states and the District of Columbia have either a mandatory or discretionary ignition interlock law. However, of the approximately 1.4 million drunk driving offenders arrested and convicted each year, only ten percent of convicted DWI drivers ordered to install an interlock device on their vehicle have done so. Furthermore, research shows more than 40% of convicted drunk driving offenders fail to complete the terms and conditions of their sentencing (*Robertson and Simpson, 2003*). Interlocks are only effective if installed, and many offenders are able to avoid installation and monitoring. This needs to be improved with consistent follow-up to ensure installation and compliance. Much of this may be accomplished with good coordination between courts, licensing agencies, law enforcement, and service providers.

Each year an estimated 300,000-400,000 drunk drivers are convicted as repeat offenders. Among this group of hardcore drunk driving offenders the use of interlocks now stands at approximately 25-33% (*Fell, 1995 and 2006*).

- For current state policy and implementation data visit [www.centurycouncil.org](http://www.centurycouncil.org).

## HOW EFFECTIVE ARE INTERLOCK DEVICES?

There have been more than a dozen peer-reviewed studies conducted on the effectiveness of ignition interlock devices in reducing recidivism. Overwhelmingly, the research studies have demonstrated a significant reduction – ranging from 50% to 90% – in recidivism while the devices are installed (*Voas and Marques, 2003*). Among repeat offenders, ignition interlock devices are an extremely effective tool in reducing drunk driving (*Robertson, et al., 2006*). A study in Maryland among repeat offenders showed a significant reduction in recidivism of 64% among these multiple offenders while the interlock was in place (*Beck, et al., 1999*). Furthermore, participants with an interlock in this study had a significantly lower arrest rate for alcohol traffic violations one year after the interlock program.

A number of these research studies have also shown significant increases in the rate of recidivism following the removal of the ignition interlock devices from the offender's vehicle (*Robertson, et al., 2006*). Such increases should not be interpreted to mean the interlock is ineffective. To the contrary, these research findings further demonstrate

the effectiveness of the devices by preventing drunk driving offenders from drinking and driving while the interlock is installed. It also clearly demonstrates that these offenders continue to drive, even after their driver's license has been suspended or revoked.

## WHAT DO OFFENDERS THINK?

Convicted drunk driving offenders support the use of interlocks as a sanction for preventing drunk driving. An unpublished survey by Richard Roth, Ph. D. revealed offenders believe interlocks are a fair sanction that reduced driving after drinking (*Robertson, et al., 2006*). A survey among hardcore drunk drivers revealed that 70% of convicted high BAC and repeat offenders think ignition interlock devices are an effective deterrent and would have definitely made them stop drinking and driving (*The Century Council, 2007*). Additionally, an evaluation of ignition interlock participants in California revealed that 88% of offenders claimed the device prevented them from drinking and driving (*DeYoung, 2002*).

## WHAT DOES THE PUBLIC THINK?

The general consensus among the American public is that ignition interlocks prevent drunk driving. A national survey of American adults found that seven out of ten American adults (74%) believe ignition interlock devices would be an effective device in reducing repeat drunk driving and 66% strongly favor the mandatory use of these devices for all repeat drunk driving offenders (*The Century Council, 2008a*). Recent focus groups among adults with a valid driver's license, found support for the use of ignition interlock devices as a sanction against drunk drivers. Specifically, participants supported requiring interlocks for hardcore drunk drivers, including high BAC and repeat offenders. However, they were not convinced the sanction should be applied to all drunk driving offenders, especially first-time offenders, and they strongly supported judicial discretion in establishing appropriate penalties (*The Century Council, 2008b*).

## THE CENTURY COUNCIL'S POSITION AND RECOMMENDATIONS

- The Century Council strongly supports mandatory use of ignition interlock devices for first offenders with BACs of .15 or above and repeat offenders (hardcore drunk drivers), and for those who refuse to submit to a BAC test. The Century Council is neutral regarding the mandatory use of ignition interlocks for first time/non-hardcore offenders and prefers judicial discretion for these offenders.
- The Century Council believes interlock programs must include treatment for the offender while the device is installed to allow behavioral changes and long term fatality reductions. Ignition interlocks prevent drunk driving but are not an effective means of rehabilitation.
- The Century Council recommends that a mandatory alcohol assessment be conducted for all offenders prior to sentencing so that judges can sentence offenders to alcohol education or treatment based on rehabilitation needs.
- The Century Council supports probationary and/or court monitoring of offenders ordered to use interlocks so judges can ensure the devices are actually installed and evaluate how long the devices need to remain on the vehicle.
- The Century Council recommends ignition interlock restrictions be clearly marked on the driver's license of all program participants.
- The Century Council believes states should develop an infrastructure capable of managing a comprehensive and coordinated system that requires all state and local agencies with a role in the implementation of ignition interlock programs to communicate and cooperate with one another.
- The Century Council maintains that the costs of ignition interlock installation and usage should be funded by the offender wherever possible.

## RESEARCH REFERENCES

Beck, K., Rauch, W., Baker, E., Williams, A. (1999). Effects of ignition interlock license restrictions on drivers with multiple alcohol offenses: A random trail in Maryland. *American Journal of Public Health* 89: 1696-1700.

The Century Council. (2007). Stopping Hardcore Drunk Driving: Offender's Perspective on Deterrence. Washington, D.C.: The Century Council.

The Century Council. (2008a). National Omnibus Poll conducted by RT Strategies for The Century Council. Washington, D.C.: The Century Council.

The Century Council. (2008b). General Public Attitudes Towards Ignition Interlock Devices. Focus Groups conducted for The Century Council. Washington, D.C.: The Century Council.

DeYoung, D.J. (2002). An evaluation of the implementation of ignition interlock in California. *Journal of Safety Research* 33:473-482.

Fell, J. (2006). International Technology Symposium: A Nation Without Drunk Driving presentation. Albuquerque, New Mexico.

Fell, J. (1995). Repeat DWI Offenders in the United States. *Traffic Tech – Technology Transfer Series, Number 85*. Washington, D.C.: National Highway Traffic Safety Administration, U.S. Department of Transportation.

National Highway Traffic Safety Administration (NHTSA). (2007). Reducing Impaired-Driving Recidivism Using Advanced Vehicle-Based Alcohol Detection Systems: A Report to Congress (DOT HS 810 876). Washington, D.C.: National Highway Traffic Safety Administration, U.S. Department of Transportation.

National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Report System (FARS) 2007 Alcohol Results File, October 2008. Washington, D.C.: National Highway Traffic Safety Administration, U.S. Department of Transportation.

Robertson, R.D., and Simpson, H.M. (2003). DWI System Improvements for Hard Core Drinking Drivers: Monitoring. Traffic Injury Research Foundation. Ottawa, Canada.

Robertson, R., Vanlaar, W., Simpson, H. (2006). Ignition Interlocks from Research to Practice: A Primer for Judges. Traffic Injury Research Foundation. Ottawa, Canada.

Roth, R. (2008). *Estimates of Currently Installed Interlocks in the U.S.*

Voas, R. B. and Marques, P. R. (2003). Commentary: Barriers to Interlock Implementation. *Traffic Injury Prevention* 4(3): 183-187.

Zador, P.L. (1991). Alcohol-related relative risk of fatal driver injuries in relation to driver age and sex. *Journal of Studies on Alcohol* 52(4):302-310.



**For additional information about ignition interlocks** and an updated listing of state legislation, please visit The Century Council's website at [www.centurycouncil.org](http://www.centurycouncil.org) or the Traffic Injury Research Foundation at [www.tirf.org](http://www.tirf.org).

## ABOUT US

For nearly two decades The Century Council, funded by distillers, has been a leader in the fight to eliminate drunk driving and underage drinking. In 1997, The Century Council released a comprehensive resource and launched its initiative to address the hardcore drunk driver problem in this country. The National Hardcore Drunk Driver Project was based on sound research and alarming statistics, and has called for a comprehensive approach based on swift identification, certain punishment, and effective treatment for drunk drivers who drive at high blood alcohol concentration (BAC) levels (.15 or above), do so repeatedly as demonstrated by having more than one drunk driving arrest, and are highly resistant to changing their behavior despite previous sanctions, treatment, or education efforts. The Council, along with the National Transportation Safety Board, Mothers Against Drunk Driving and AAA founded the National Hardcore Drunk Driving Coalition in 2000, and along with new members, Nationwide Insurance and the National District Attorney's Association, work together for tougher penalties and sanctions designed to reduce the tragic consequences caused by hardcore drunk drivers on our nation's highways.

THE  
**CENTURY COUNCIL**  
DISTILLERS FIGHTING DRUNK DRIVING & UNDERAGE DRINKING

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