Hand-outs for Workshop:
Leveraging New Research to Combat Impaired Driving
Sunday, April 22, 2018, 1:30-3:00 pm

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Effects of Alcohol Ignition Interlock Laws on interlock Installation Rates, Recidivism, and Fatal Crashes

2018 Lifesavers Conference
San Antonio, Texas ✦ April 22, 2018
Percent of U.S. crash deaths involving at least one driver with BAC ≥ 0.08 g/dL, 1982-2016
Alcohol ignition interlocks for convicted DUIs

- Driver blows into a tube to test breath for alcohol
- Vehicle won’t start if certain amount of alcohol detected
- Periodic retests while vehicle is in motion
- BAC $\leq 0.025$ g/dL is typical threshold for DUI offenders
Mounting evidence of effectiveness of mandating ignition interlocks for all DUI offenders

- According to CDC research review, DUI re-arrest rates declined by an average of 67 percent for offenders with interlocks relative to offenders with suspended driver’s license
  - Reductions for both repeat and first offenders
- Two recent national studies found that all-offender interlock laws reduced alcohol-involved crash deaths by 7-15 percent, suggesting a "general deterrence" effect
- MADD estimates that interlocks have prevented more than 2.33 million attempted drunk driving trips since 2006
- Safety groups recommend laws that cover all DUI offenders and provide incentives to install interlocks
- However, interlock laws vary widely, and many offenders ordered to install interlocks do not do so
Laws mandating alcohol ignition interlock orders

April 2018

[Map of the United States indicating states with different alcohol ignition interlock laws, categorized as follows:
- **Dark Orange**: All offenders
- **Yellow**: High-BAC first and repeat
- **Green**: Judicial discretion only
- **Gray**: Repeat offenders
- **Blue**: All offender pilot, 4 counties
]
All-offender alcohol ignition interlock law provisions
April 2018

- Spend time with interlock installed before having license reinstated
- Install interlock to drive during post-conviction license suspension

CA: 4 counties both provisions
State alcohol ignition interlock laws and fatal crashes

Eric Teoh, IIHS
Jim Fell, National Opinion Research Center, University of Chicago
Michael Scherer, Pacific Institute for Research and Evaluation
Danielle Wolfe, IIHS
## Interlock law effects on impaired drivers in fatal crashes
Estimated percent changes in number of impaired drivers, 49 states and DC, 2001-14

<table>
<thead>
<tr>
<th>Law type</th>
<th>0.08+ g/dL drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-offender vs. none</td>
<td>-15.9*</td>
</tr>
<tr>
<td>High-BAC + repeat offender vs. none</td>
<td>-8.0*</td>
</tr>
<tr>
<td>Repeat-only offender vs. none</td>
<td>-2.6</td>
</tr>
</tbody>
</table>

* Statistically significant at 0.05 level
### Are some drivers more affected by laws?
Estimated percent changes in impaired drivers in fatal crashes, 49 states and DC, 2001-14

<table>
<thead>
<tr>
<th>Law type</th>
<th>Drivers with prior DUI</th>
<th>Drivers without prior DUI</th>
<th>All drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-offender vs none</td>
<td>-31.2*</td>
<td>-13.8*</td>
<td>-15.9*</td>
</tr>
<tr>
<td>High-BAC + repeat offender vs none</td>
<td>-23.6*</td>
<td>-6.1*</td>
<td>-8.0*</td>
</tr>
<tr>
<td>Repeat-only offender vs none</td>
<td>-9.8*</td>
<td>-1.8</td>
<td>-2.6</td>
</tr>
</tbody>
</table>

* Statistically significant at 0.05 level
Conclusions

- All-offender laws and laws covering repeat and high-BAC offenders are associated with significant benefits.
- Stronger results for drivers with prior DUIs, suggesting possible specific deterrence effect.
- If every state had an all-offender interlock law, an estimated 543 deaths could have been prevented in 2016.
Alcohol ignition interlocks in Washington state

Anne McCartt, Preusser Research Group, Inc.; formerly IIHS
Bill Leaf, Preusser Research Group, Inc.
Chuck Farmer, IIHS
Timeline of Washington state interlock laws

- **Jan. 1, 1999**: Issuance of interlock orders moves from courts to Department of Licensing.
- **July 23, 2003**: Interlock available immediately after arrest in lieu of administrative license suspension.
- **June 10, 2004**: Interlocks required for first offenders with BACs < 0.15.
- **Jan. 1, 2009**: Courts must order interlocks for repeat offenders and first offenders with BACs ≥ 0.15 or alcohol test refusal to drive during post-conviction license suspension.
- **Jan. 1, 2011**: Minimum 4-month interlock installment required for license reinstatement.
Counts of DUI convictions in Washington
By quarter of arrest, 1999 – 2012

Dept. of Licensing issues interlock orders $\rightarrow$

$\leftarrow$ All-offender interlock law

Interlock available after arrest $\rightarrow$

$\leftarrow$ License restored only after interlock installed
Finding 1: As interlock laws were strengthened, there was a steady and large increase in the proportion of first offenders pleading down to alcohol-related negligent/reckless driving, which has no interlock requirement.
Percent distribution of first DUI offenses by conviction type
By quarter of arrest, 1999 – 2012
Finding 2: As interlock laws were strengthened, there were large increases in the percentage of offenders who installed interlocks.
Percent of DUI offenders who installed interlocks
By quarter of arrest, 1999 – 2012

Dept. of Licensing issues interlock orders → Interlock available after arrest → License restored only after interlock installed

First Offenders

Repeat Offenders
Percent of each first DUI offender type with interlock installation
By quarter of arrest, 1999 – 2012
Percentage of first DUI offenders installing interlocks compared to expected rate absent law changes

By quarter of arrest, 1999 – 2012

Dept. of Licensing issues interlock orders →

All-offender interlock law

Interlock available after arrest →

License restored only after interlock installed

Actual values

Expected values

+8.8

+6.5

+3.4
Percentage of repeat DUI offenders installing interlocks compared to expected rate absent law changes

By quarter of arrest, 1999 – 2012

Dept. of Licensing issues interlock orders → Actual values

All-offender interlock law

Interlock available after arrest →

License restored only after interlock installed

Actual values

Expected values

+3.0

+2.8

+7.9
Finding 3: Among first offenders, significant declines in recidivism were associated with the combined effect of the law changes, the all-offender law, and allowing interlocks in lieu of the administrative license suspension; requiring an interlock installation for license reinstatement was marginally significant.
Percentage of first DUI offenders recidivating within two years compared to expected rate absent law changes

By quarter of arrest, 1999 – 2012

Dept. of Licensing issues interlock orders

← All-offender interlock law

Interlock available after arrest

← License restored only after interlock installed
Percentage of repeat DUI offenders recidivating within two years compared to expected rate absent law changes
By quarter of arrest, 1999 – 2012

- License restored only after interlock installed

Dept. of Licensing issues interlock orders → All-offender interlock law
Interlock available after arrest →

Actual values
Expected values

-2.5 (not significant)
Finding 4: There was a strong and significant inverse association between the interlock installation rate and the recidivism rate.
Cumulative 2-year recidivism rate and projected rate with 100 percent interlock use
Arrests October-December 2012
Recommendations to states

- Extend interlock laws to all DUI offenders
- Seek ways to increase interlock use rates
- Close loopholes that permit reductions in DUI charges to other traffic offenses without interlock requirements
- Publicize interlock laws to deter all drivers from driving when impaired
Interviews with offenders suggest some reasons why offenders may not install interlocks

Interviews with Washington DUI offenders, 2014-15

- Inability to obtain license with interlock due to license revocation for prior offenses, chronic traffic offender status, etc.
- Serious outstanding fines, failures to appear, etc., that must be addressed before license reinstatement
  - Relatively high rates of unemployment or part-time employment among offenders may limit ability to settle outstanding fines
- Preference to take alternative transportation rather than driving with interlock
- Plan to drive illegally without interlock
More information and links to our YouTube channel, Twitter feed and Facebook page at iihs.org
Please use the Lifesavers Conference Mobile App to evaluate this presentation.