Ignition Interlock Installations

2019 State Data

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2019 IGNITION INTERLOCK INSTALLATIONS: STATE DATA

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Virginia Commonwealth's Attorneys' Services Council, Traffic Safety Resource Prosecutor
The Commission on Virginia Alcohol Safety Action Program
Washington Traffic Safety Resource Prosecutor, Municipal Research Services Center
West Virginia Division of Motor Vehicles Interlock Department
Wisconsin State Patrol, Chemical Test Section
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EXECUTIVE SUMMARY

- As of July 1, 2021, 34 states and Washington, D.C. required all alcohol-impaired driving offenders, including first offenders, to install an interlock device. There was a 5.3% decrease in alcohol-impaired driving fatalities in 2019 compared to 2018 (National Center for Statistics and Analysis 2020).
- As of June 1st, 2021, 2019 data were received from 27 states and Washington, D.C.
- Three measures were used in this study to measure trends in interlock installations:
  - **Total Installs Number (TIN):** Total number of *newly* installed interlocks between January 1st through to December 31st in a given year.
  - **Total Installs Number all (TINall):** Total number of interlocks in vehicles at any time between January 1st through to December 31st in a given year, including devices that may have been installed prior to January 1st but were still in the vehicle for any period of time during that year following January 1st.
  - **Active Installs Number (AIN):** Total number of interlocks in vehicles of active participants on December 31st of a given year.
- There were 147,027 new ignition interlock devices (TIN) installed in 19 states and Washington, D.C. in 2019. When comparing new interlock installations among the 14 states who provided TIN data for both 2018 and 2019 there was a 16% increase in installations from 101,559 in 2018 to 118,041 in 2019. Since 2014 there has been a 72% increase in TIN according to data available from three states.
- Based on TINall data, 212,752 installations were reported in 18 states and Washington, D.C. in 2019. When comparing total installations among the 13 states who provided TINall data for both 2018 and 2019 there was a 2% decrease from 157,933 in 2018 to 154,168 in 2019.
- As of December 31st, 2019, there were 137,602 active installations (AIN) reported in 19 states. When comparing active installations among the 10 states who provided AIN data for both 2018 and 2019 there was a 7% increase from 102,333 in 2018 to 109,264 in 2019. Further, when comparing data from three states that provided this information since 2014, there has been a 11% increase in AIN.
- In conclusion, the preponderance of the evidence shows continued growth in the industry yet confirms a relatively low installation rate among all eligible offenders.

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INTRODUCTION

Unprecedented declines in the drinking driving problem occurred during the 1980s. Based on declining trends in the percent of alcohol-related fatalities, progress continued through the 1990s, although the gains were far less impressive (Simpson and Robertson 2001). In the new millennium, data from the Fatality Analysis Reporting System (FARS) revealed alcohol-impaired driving fatalities in crashes involving drivers with a blood alcohol concentration (BAC) of at least .08 (the per se limit in the US) declined by 27% from 13,582 in 2005 to 9,943 in 2014. Since 2014, increases have been noted in this indicator, e.g., in 2015 it increased to 10,265 (NHTSA August 2016). According to NHTSA, alcohol-impaired driving fatalities decreased by 5.3% from 2018 to 2019 (NCSA, December 2020). In 2019, there were 10,142 alcohol-impaired driving fatalities which accounted for 28% of all 2019 traffic fatalities. This is the lowest percentage since 1982 when NHTSA started reporting alcohol data. The early estimate data of motor vehicle traffic fatalities for the first half (January-June) of 2021 revealed an estimated 20,160 people died in motor vehicle crashes, up 18.4% over 2020. This is the largest number of projected fatalities in that time period since 2006 (NCSA, October 2021).

Alcohol ignition interlock programs are an alcohol-impaired driving countermeasure proven to reduce recidivism among both first and repeat offenders, including those who repeatedly drive after drinking with extremely high BACs and are resistant to changing this behavior. A systematic review of 15 scientific studies conducted by the Centers for Disease Control and Prevention (CDC) revealed while interlocks were installed, the re-arrest rate of offenders decreased by 67% compared to groups that did not have the device installed (Elder et al. 2011). A study of New Mexico's interlock program showed offenders who participated in the program had a 61% lower recidivism rate while the device was installed and a 39% lower recidivism rate following the removal of the interlock compared to offenders who never had the device installed (Marques et al. 2010). Similar reductions were found by Vanlaar et al. (2017) when evaluating Nova Scotia's interlock program. A meta-analysis of interlock program evaluation studies conducted in 2005 found an average reduction of recidivism of 64% while the device was installed (Willis et al. 2004).

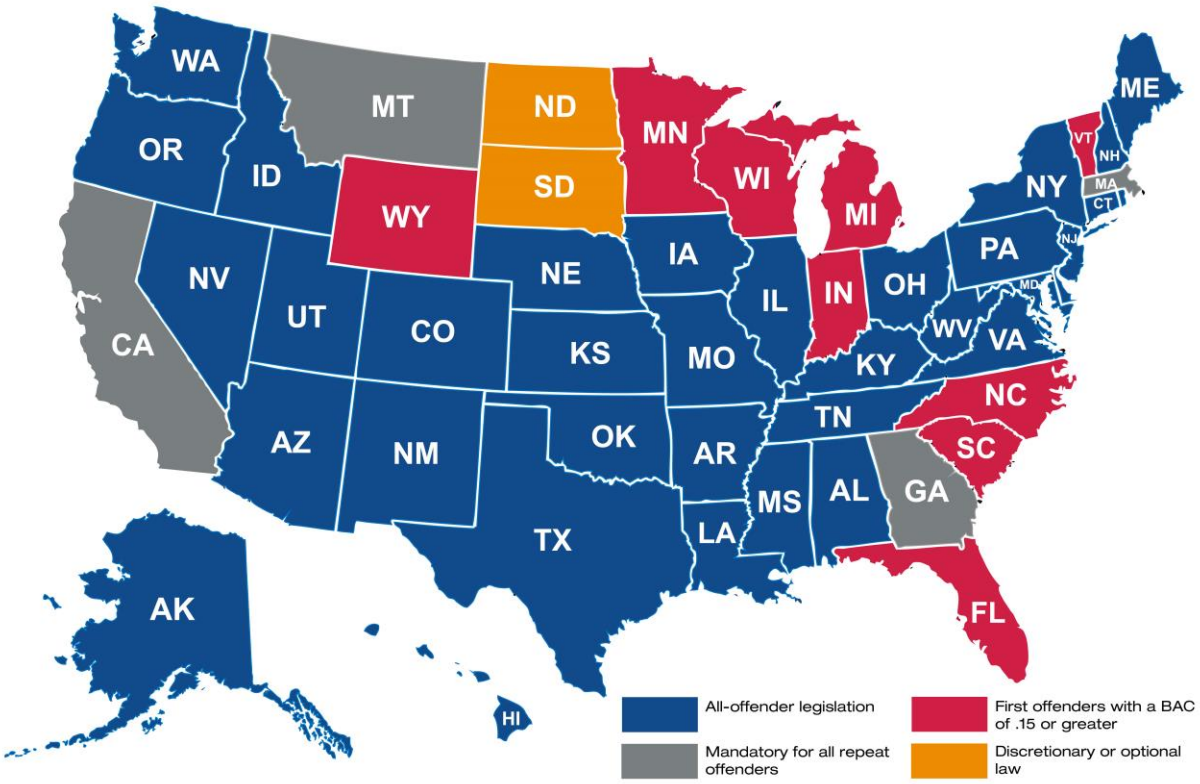
Furthermore, recent evaluations studying the impact of interlocks on crashes have also demonstrated interlock programs embedded in strong legislation can reduce alcohol-related fatalities (Marques et al. 2010; McCartt et al. 2013; Kaufman and Wiebe, 2016; Lucas et al. 2016; Vanlaar et al. 2017; McGinty et al. 2017; Teoh et al. 2018; 2021). Teoh et al. (2021) examined the differences in three interlock laws by comparing alcohol-impaired passenger vehicle drivers involved in fatal crashes between 2001-2019 in the U.S. Laws requiring interlocks for drivers convicted of driving while impaired (DWI)[1] covered repeat offenders, repeat offenders and high-BAC offenders,

[1] The abbreviation DWI (driving while intoxicated or impaired) is used throughout this report as a convenient descriptive label, even though some states use other terms such as OUI (operating under the influence) or DUI (driving under the influence), and in some states they refer to different levels of severity of the offense. DWI is used not only to maintain consistency throughout the report but also because it is more descriptive of the offense usually associated with drunk drivers.

all offenders, or none. All-offender laws were associated with 26% fewer drivers with 0.08+ BAC involved in fatal crashes, compared to no law. Repeat-offender laws were associated with a 9% reduction in impaired drivers, compared to no law, and repeat and high-BAC laws were associated with an 20% reduction in impaired drivers in fatal crashes, compared to no law (Teoh et al., 2021). Ultimately, results show laws requiring alcohol ignition interlocks, specifically for all alcohol-impaired drivers, are an effective impaired-driving countermeasure that reduces the number of impaired drivers in fatal crashes when compared to no law (Teoh et al., 2021).

Alcohol-impaired driving offenders, including first offenders, were required to install an interlock device in 34 states and Washington, D.C. as of July 1, 2021 (Figure 1). An additional nine states required interlocks for all first offenders with a BAC of .15 or greater, three states required mandatory interlocks for all repeat offenders, and two states had discretionary or optional laws.

Figure 1: Laws mandating alcohol ignition interlock devices (July 2021)



Given the evidence regarding interlocks, it is paramount they are utilized to the fullest by increasing participation rates, and thereby ensuring this effective road safety measure is also an efficacious one. It is therefore essential to monitor installation rates; such is the purpose of this data collection effort.

The Traffic Injury Research Foundation USA, Inc. (TIRF USA) in partnership with the Association of Ignition Interlock Program Administrators (AIIPA), and TIRF Canada collected data on interlock

installations in the US in 2019. Previous data collection for installations occurred in 2014, 2015, 2016, 2017, and 2018 (Casanova Powell et al. 2016, 2017; Robertson et al. 2018; Robertson et al. 2020). These data provide a comprehensive picture of interlock installations across the US and are a useful benchmark for state ignition interlock program administrators and stakeholders concerned with impaired driving to measure interlock usage and growth in interlock programs on an annual basis. This report contains results from the 2019 data collected from state agencies and compares these data to results from previous years.[2]

[2] Due to the timing of data collection, the 2017 data year is missing. Future versions of this report may include a completed time series, including the missing data year.

METHODS

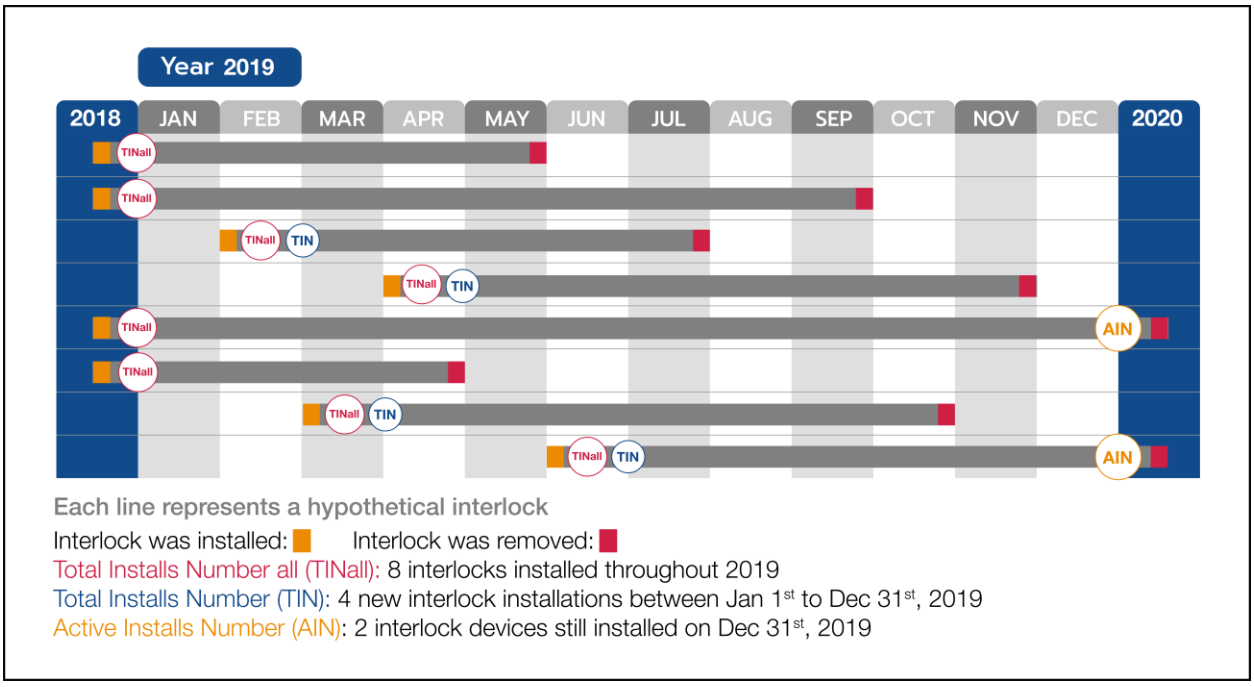
Installation counts

State alcohol ignition interlock program managers in all 50 states and Washington, D.C. were contacted by email in February through June 2021 to request relevant ignition interlock data for 2019. Three measures of installation were requested. Each indicator is useful to measure growth, as well as to gauge workload associated with administering these programs. Specific definitions of these measures were provided as follows:

- **Total Installs Number (TIN):** Total number of *newly* installed interlocks between January 1st through to December 31st in a given year.
- **Total Installs Number all (TINall):** Total number of interlocks in vehicles at any time between January 1st through to December 31st in a given year, including devices that may have been installed prior to January 1st but were still in the vehicle for any period of time during that year following January 1st.
- **Active Installs Number (AIN):** Total number of interlocks in vehicles of active participants on December 31st of a given year.

Figure 2 contains eight separate hypothetical interlock device installations to illustrate these definitions for 2019. In this example, all installs (TINall) in 2019 is equal to eight, whereas new installs (TIN) is four, and installs on December 31st, 2019 (AIN) is two.

Figure 2: Illustration of 2019 installation measures



At its core, there are two mechanisms driving growth in the interlock industry: first, an increased number of installations, and second, longer periods of installed devices. The former can grow if more interlocks are installed among eligible offenders or if the definition of eligible offenders is broadened. The latter can grow if the periods of installed devices are longer, for example as a result of non-compliance. The first mechanism is measured by TIN (i.e., new installations in a given year). The second mechanism is measured predominantly by TINall (i.e., all installed devices in a given year, including those installed in a previous year). It is possible there are fewer new installations in a year but TINall increased due to longer periods of installed devices, or vice versa.

AIN is defined because of its face validity (meaning it is easy to understand given it reports "on this day in this year, this number of devices were installed"). However, on its own it does not capture that interlocks are not just installed but also removed, and serviced over a period of time, which varies. Consequently, AIN may be more volatile from one year to the next; nevertheless, over time, it is expected to reflect trends seen in TIN and TINall.

Installation rates

To place the interlock installation counts in context, and to measure installation rates, other information about legislation and program features was gathered. Rates were calculated by comparing the TIN with DWI arrest and conviction data. Where available, data were examined for trends over time.

Installation rates were calculated by dividing the numerator TIN (number of new interlocks installed in a calendar year) by different denominators and expressed as a percentage. These denominators included DWI arrests, DWI convictions, and incoming DWI cases.

To calculate denominators, information about the total number of DWI arrests and convictions for the year 2019 was gathered via the online data collection questionnaire and state annual reports available online through state Highway Safety Offices.

Data were also collected from the National Center for State Courts (NCSC) on both felony and misdemeanor impaired driving cases for the past five years in 27 states.[3] For the purpose of national reporting, the NCSC requests states report a breakdown of their data by case types. Data are provided by the state court administrator's office and includes data from trial courts. The NCSC uses the following definitions:

- **Case:** Generally initiated by a complaint. In two-tiered court systems, proceedings at the second step of a felony case are usually initiated by an information or indictment.
- **Incoming cases:** Cases added to the court's caseload during the reporting period and include New Filing, Reopened, and Reactivated cases.
- **Outgoing cases:** Categories include Entry of Judgment, Reopened Dispositions, and Placed on Inactive Status.

[3] Alaska, Alabama, Arkansas, Arizona, Colorado, Connecticut, Hawaii, Idaho, Iowa, Indiana, Kansas, Kentucky, Massachusetts, Maryland, Maine, Missouri, Minnesota, North Carolina, New Hampshire, New Mexico, Nevada, Pennsylvania, Rhode Island, Utah, Vermont, Washington, Wisconsin

Alchemer online software (formerly SurveyGizmo; www.alchemer.com) was used to capture the data in combination with Microsoft Excel to calculate indicators and create tables and figures.

RESULTS

As of July 1st, 2021, data were received from 27 states[4] and the District of Columbia. Some states did not possess complete information needed to calculate each of the three indicators (TIN, TINall, AIN) while a few others only provided information related to program features and arrest/conviction data. Of these states, 15 states[5] and the District of Columbia also provided some or all of the data requested in 2018.

Number of new, total, and active installed interlocks

In terms of all interlocks installed in a vehicle at any time throughout the whole year, including devices that may have been installed in previous years (TINall), the data revealed 212,752 installed devices in 2019 within 18 states and Washington, D.C. (Table 1). When comparing total installed devices among the 13 states that provided TINall data for both 2018 and 2019 there was a 2% decrease, from 157,933 in 2018 to 154,168 in 2019.

According to the TIN data provided by 19 states and Washington, D.C.,147,027 new ignition interlock devices were installed in 2019. When comparing new interlock installations among the 14 states who provided TIN data for both 2018 and 2019 there was a 16% increase in installations, from 101,559 in 2018 to 118,041 in 2019.

An examination of the number of active installed devices (AIN) in a vehicle on December 31st revealed 129,505 devices installed at the end of 2019 within 19 states. When comparing active installed devices among the 10 states who provided AIN data for both 2018 and 2019 there was a 1% decrease, from 102,333 in 2018 to 101,167 in 2019.

Table 1: State reported installation data

State	TINall			TIN			AIN December 31st		
	2018	2019	% change	2018	2019	% change	2018	2019	% change
Arkansas	30,008	12,503	-58	5,375	8,996	67%	7,652	8,113	6%
California				27,207	37,642	38%			
Colorado	59,753	62,591	5%	17,493	17,754	1%	48,867	51,774	6%
Delaware	1,484	1,517	2%	706	694	-2%	834	858	3%
District of Columbia	37	65	76%	22	17	-23%			
Florida	18,514	22,749	23%	12,579	12,762	1%	11,846	12,911	9%
Illinois		12,241			3,379			4,262	
Iowa	7,105	13,311	87%	6,673	7,310	10%	6,673	7,297	9%

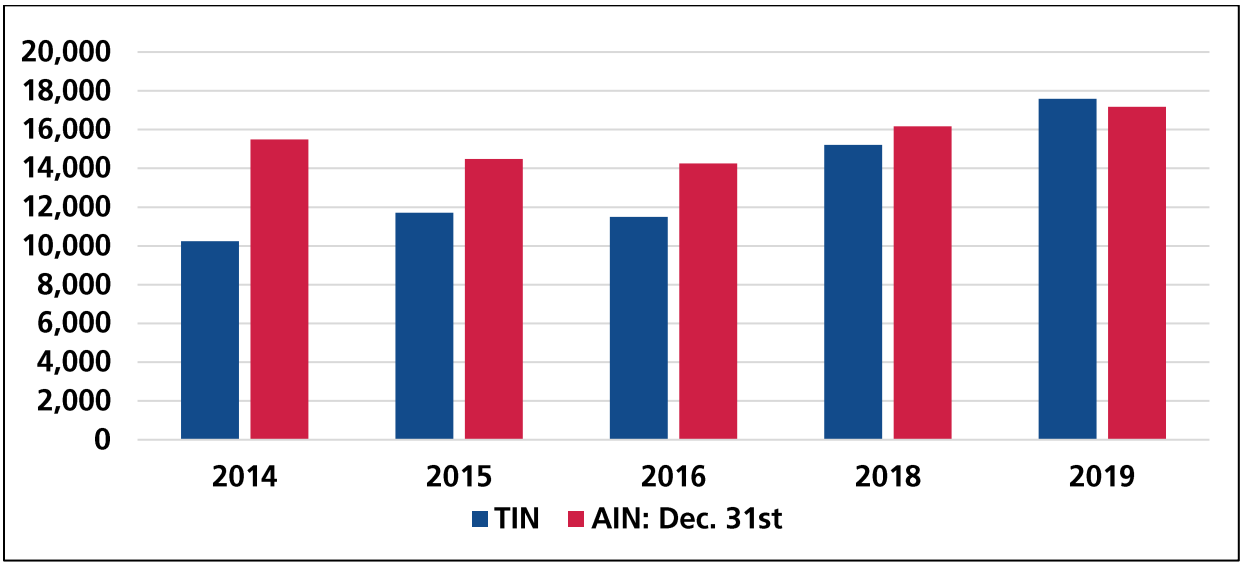
[4] Arkansas, California, Colorado, Delaware, Florida, Illinois, Iowa, Kansas, Kentucky, Maine, Minnesota, Missouri, New Jersey, North Carolina, North Dakota, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming

[5] Arkansas, California, Colorado, Delaware, Florida, Iowa, Kansas, Maine, Oregon, Pennsylvania, Tennessee, Utah, Virginia, West Virginia, Wyoming

State	TINall			TIN			AIN December 31st		
	2018	2019	% change	2018	2019	% change	2018	2019	% change
Kansas	9,570	9,067	-5%	8,764	7,474	-15%		10,504	
Kentucky		2,139			1,328			881	
Maine	2,084	1,489	-29%	726	834	15%	618	666	8%
North Carolina		10,949			10,862			16	
Oregon	10,620			7,631			6,672	7,991	20%
Pennsylvania	10,145	10,989	8%	8,172	9,989	22%	8,169	9,141	12%
Tennessee	8,590	10,072	17%		7,041			612	
Utah	3,938	3,551	-10%	1,852	1,693	-9%	2,275	2,052	-10%
Virginia		17,757		9,351	9,987	7%	7,394	7,725	4%
West Virginia	6,123	6,233	2%	2,280	2,595	14%		3,654	
Wisconsin		14,291			6,181			8,096	
Wyoming	582	841	45%	359	294	-18%	1,333	736	-45%
Totals	**223,223**	**212,752**	**N/A**	**145,202**	**147,027**	**N/A**	**141,480**	**137,602**	**N/A**
Totals based on states who reported in both 2018 and 2019									
Totals	**157,933**	**154,168**	**-2%**	**101,559**	**118,041**	**16%**	**102,333**	**109,264**	**7%**

Three states provided data for 2014, 2015, 2016, 2018, and 2019 (Figure 3). These three states (Iowa, Pennsylvania, and Wyoming) were used to compare trends in TIN and AIN (TINall has only been collected since 2016). Since 2014, in these three states there has been a 11% increase in AIN from 15,485 in 2014 to 17,174 in 2019. Further, TIN has increased 72% from 10,237 in 2014 to 17,593 in 2019.

Figure 3: Total new installs (TIN) and active installed (AIN) devices as reported by three states in 2014-2016, 2018-2019

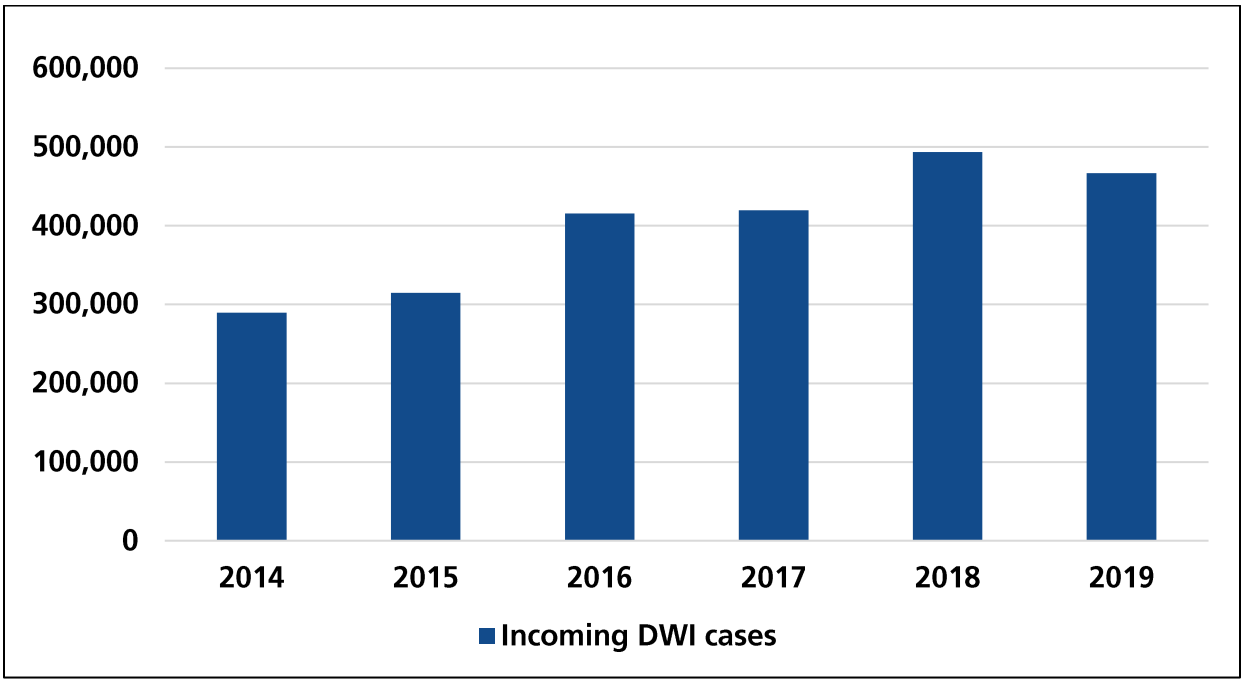


Nine states provided TINall data since its collection for 2016, 2018, and 2019. These nine states (Arkansas, Colorado, Delaware, Iowa, Kansas, Maine, Pennsylvania, West Virginia, and Wyoming) were used to compare trends. Since 2016, in these nine states there has been a 1% increase in TINall from 117,916 in 2016 to 118,541 in 2019.

Impaired driving felony and misdemeanors

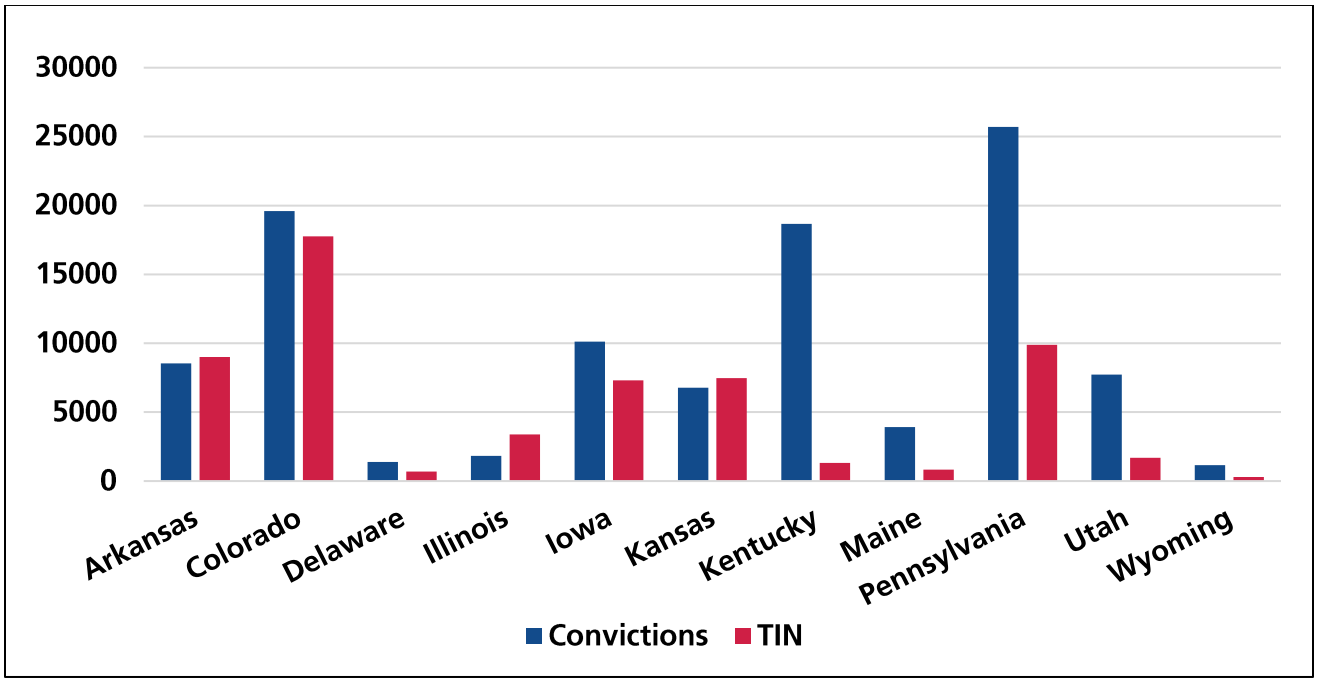
Data provided by NCSC revealed a steady increase in incoming DWI cases in 27 states from 289,583 in 2014 to 466,643 in 2019 (Figure 4). This represents an overall 61% increase since 2014. However, there was a 5% decrease in incoming DWI cases from 493,454 in 2018 to 466,643 in 2019.

Figure 4: Incoming DWI cases, 2014-2019 (source: National Center for State Courts)



The number of DWI convictions and TIN for 2019 were available in eleven states (Figure 5). In three states (Arkansas, Illinois, and Kansas), the number of newly installed interlocks surpasses the number of DWI convictions. Comparatively, in the remaining states convictions are greater than the number of newly installed interlocks. This is of particular interest as seven of the eight remaining states require interlocks for all impaired driving offenders. The gap in convictions and installations emphasizes the room for growth within interlock programs, specifically in terms of driver compliance.

Figure 5: DWI convictions and TIN, 2019



Installation rate of interlocks among eligible population of offenders

An accurate way to measure the efficacy of an interlock program within a state is to estimate the percentage of offenders who installed an interlock among those who were eligible or required to do so.

Dependent upon state legislation, the eligible population of offenders required to install an interlock may be either those offenders arrested for DWI (if an administrative license suspension or revocation requires an interlock) or those convicted of DWI. For the latter, this may be further dependent upon categories of offenses requiring an interlock. Furthermore, some states may include administrative per se cases. Some offenders may not be deemed eligible because of other driving or non-driving violations; for example, as a result of outstanding child support payments unrelated to DWI.

The percentage of new interlocks installed per DWI arrests and convictions was calculated where possible among states for which both the numerator and denominator were available. Figure 6 shows an increasing percentage of installations per DWI arrests and convictions since 2014. Notably, the decrease in installation rates is largely due to only three states reporting both arrest and conviction data for 2019 so direct comparisons cannot be made with previous years.

Figure 6: New interlock installations per DWI arrests and per convictions as a percentage in 2014-2016, 2018-2019

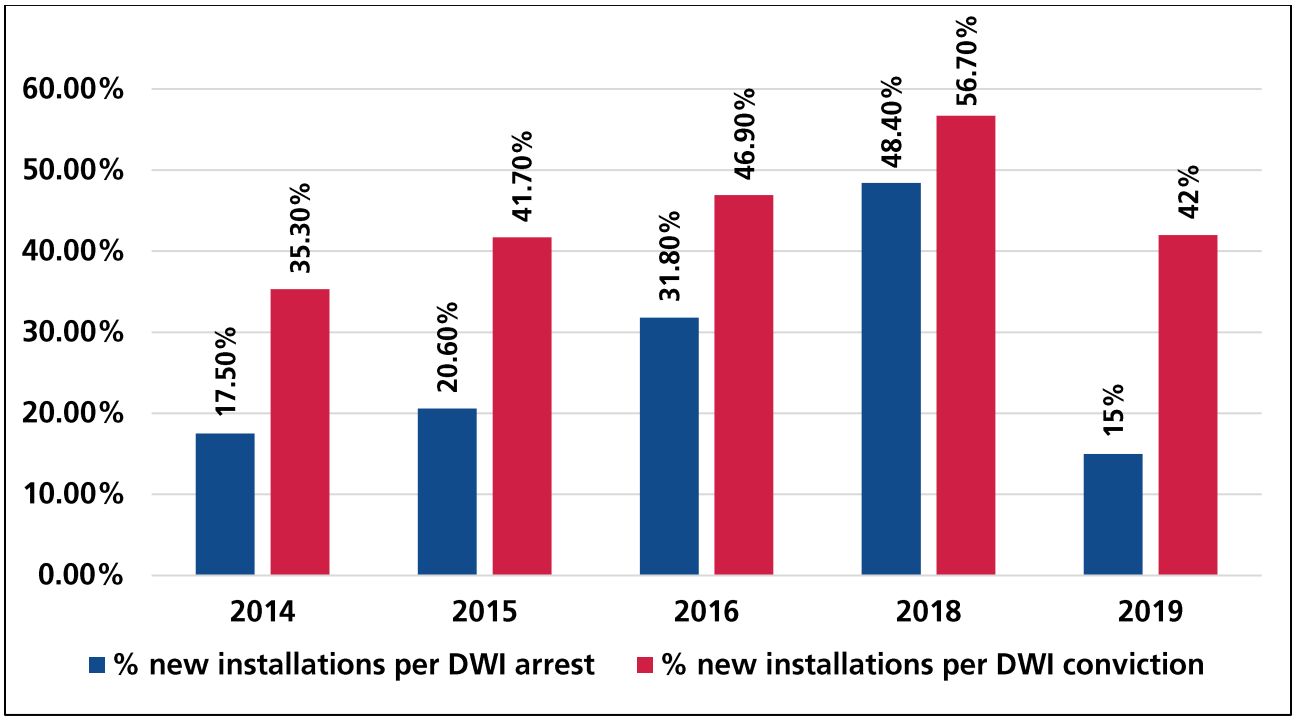


Table 2 presents 2019 percentages of new interlocks installed (TIN) per DWI arrests, per DWI convictions and per incoming DWI cases.

For context, Arkansas and Illinois (where numbers were above 100%) required an interlock for all offenders, including administrative per se cases (failure or refusal of chemical test at arrest). These results of over 100% are an overestimate because the correct denominator to accurately calculate the rate was not available (when calculating the national rates, a correction was used for these states).

Ideally there would be nearly a 100% installation rate. However, as presented below (Table 2), the installation rate ranges from 7.1% (%TIN per DWI convictions in Kentucky) to 90.6% (%TIN per DWI convictions in Colorado). Also, due to COVID-19, many states were unable to collect and provide arrest data when contacted in early 2021. This is primarily a result of staffing issues and competing priorities.

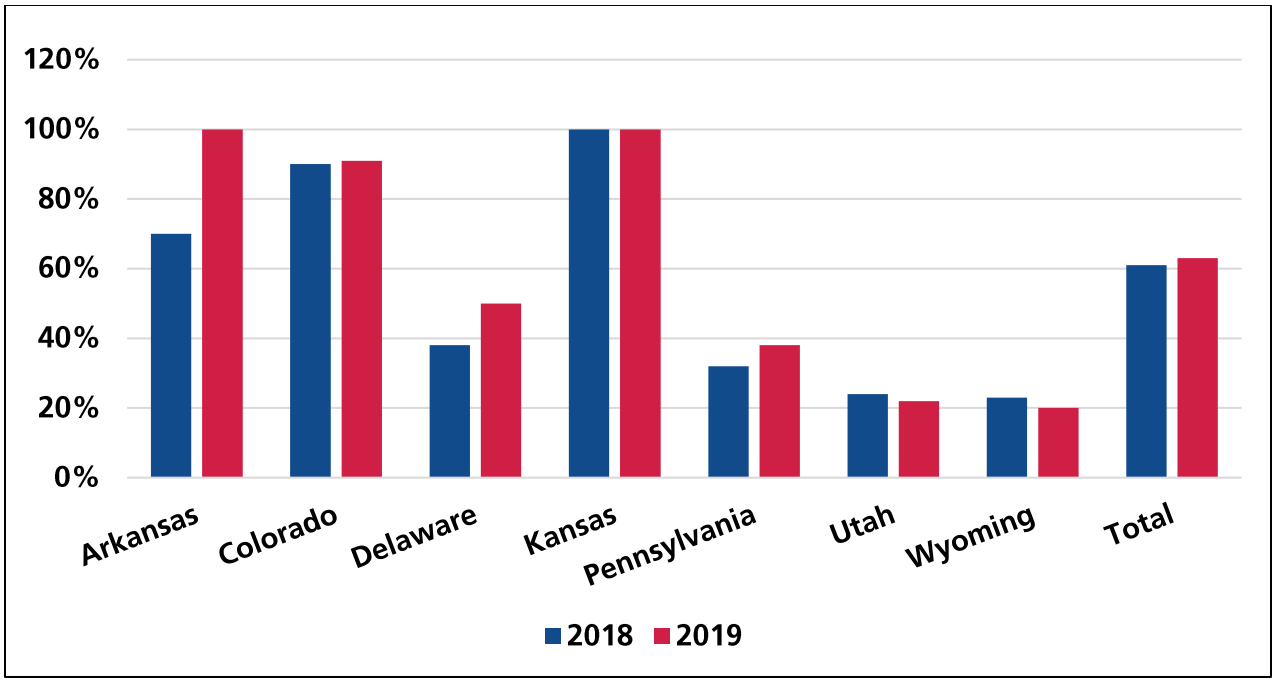
Table 2: 2019 percentage of interlocks installed (TIN) per DWI arrests, per DWI convictions and per incoming DWI cases

State	2019 Arrests	2019 Convictions	2019 Incoming DWI Cases	% convictions per DWI arrests	%TIN per DWI arrests	%TIN per DWI convictions	%TIN per incoming DWI cases
Arkansas		8,544				100%	
Colorado		19,590	21,353			90.6%	83.1%
Delaware		1,393				49.8%	
Illinois	26,224	1,837		7%	12.9%	100%	
Iowa		10,122	12,904			72%	56.6%
Kansas		7,474				100%	
Kentucky		18,669	15,715			7.1%	8.4%
Maine		3,927	5,315			21.2%	15.7%
Pennsylvania	61,346	25,710	85,834	41.9%	16.1%	38.5%	11.5%
Tennessee	19,538				36%		
Utah	9.995	7,725		77.3%	16.9%	21.9%	
Wyoming		1,484				19.8%	
Totals	**117,103**	**106,475**	**141,121**	**N/A**	**N/A**	**N/A**	**N/A**

[1] Calculation of total %TIN per DWI arrests, %TIN per DWI convictions and %TIN per incoming DWI cases capped the TIN value at the number of DWI arrests, convictions and incoming cases in case TIN values were higher than arrests, convictions or incoming cases (effectively reducing the % for Arkansas and Illinois to 100%).

The total number of interlock installations per DWI convictions was available in seven states for the years 2018 and 2019 (Figure 7). In four of the seven states, there was an increase in new installations per convictions from 2018 to 2019. In Arkansas and Kansas the installation rates remained at 100%, which is likely a result of the interlock requirement for all offenders, including administrative per se cases (failure or refusal of chemical test at arrest).

Figure 7: New interlock installations per DWI convictions, 2018-2019



CONCLUSIONS

Alcohol ignition interlock programs are essential to decrease the number of alcohol-impaired drivers, crashes, and fatalities. Their value as an alcohol-impaired driving countermeasure is evident in light of the strong body of evidence showing they not only reduce recidivism but can lead to a reduction in alcohol-related fatalities when the use of the device is embedded in strong legislation and programs. But to be efficacious, market penetration is crucial, and all offenders required to install a device must actually install a device. As such, the purpose of this annual data collection is to monitor installations and installation rates compared to arrests and convictions, and to report these findings to help strengthen interlock programs.

The state data shows growth in the use of interlocks, but not according to all indicators:

- There was a 16% increase in TIN according to data from 14 states (from 101,559 interlocks in 2018 to 118,041 interlocks in 2019).
- There was a 2% decrease in TINall according to data from 13 states (from 157,933 interlocks in 2018 to 154,168 interlocks in 2019).
- Among three states that provided TIN data from 2014 to 2019, there was a 72% increase (from 10,237 interlocks in 2014 to 17,593 interlocks in 2019).

Given the impact of the COVID-19 pandemic, many states expressed their inability to provide data due to staffing restraints and the inaccessibility of data for the 2019 data year. Despite this, data provided do show strong growth (16%) in the number of new alcohol interlock devices installed in 2019.

AIN also increased 7% between 2018 and 2019. However, caution is warranted given AIN is more volatile. Since AIN is a snapshot of one day (the number of installed devices on December 31st), it is subject to all the dynamics/market forces/mechanisms causing volatility. Conversely, indicators examining a year of data, notably TIN and TINall, are expected to be more stable because they represent a longer period of time. While year-to-year volatility is possible, over time, AIN is expected to follow trends in TIN and TINall.

Regardless of the observed increases in TIN and AIN since 2014, there remains a large contingent of eligible offenders on the road who are required to install an interlock but have not done so. This is demonstrated through the arrest and conviction data which shows the 2019 TIN per 2019 DWI arrests was 15%, and per 2019 DWI convictions was 42%. While the indicators for DWI arrests and convictions have increased over time, ultimately, they are not nearly close to 100% when it comes to interlock installations.

In conclusion, despite the lack of more complete data due to the pandemic, the preponderance of the evidence continues to show growth in the industry. Nevertheless, it also confirms a relatively low installation rate among all eligible offenders, providing opportunities among states for increased driver compliance strategies.

REFERENCES

Casanova Powell, T.D., Vanlaar, W.G.M., and Robertson, R.D. (2016). Annual Ignition Interlock Survey: United States. Connecticut: Traffic Injury Research Foundation USA, Inc.

Casanova Powell, T.D., Vanlaar, W.G.M., and Robertson, R.D. (2017). 2016 Annual Ignition Interlock Survey: United States. Connecticut: Traffic Injury Research Foundation USA, Inc.

Elder, R.W., Voas, R., Beirness, D., Shults, R.A., Sleet, D.A., Nichols, J.L., and Compton, R. (2011). Effectiveness of ignition interlocks for preventing alcohol-impaired driving and alcohol-relatedcrashes. American Journal of Preventative Medicine, 40(3), 362-376.

Kaufman, E.J. and Wiebe, D.J. (2016) Impact of State Ignition Interlock Laws on Alcohol-Involved Crash Deaths in the United States. American Journal of Public Health: May 2016, Vol. 106, No. 5, pp. 865-871.

Lucas, J.M, Casanova-Powell, T.D., Le, T., Scopatz, R. (2016). Minnesota Ignition Interlock Program Evaluation-Final Report. Minnesota Office of Traffic Safety.

Marques, P.R., Voas, R.B., Roth, R., and Tippetts, S.A. (2010). Evaluation of the New Mexico Ignition Interlock Program. Report No. DOT HS 811 410. Washington, D.C.: National Highway Traffic Safety Administration.

Marques, P.R., Voas, R.B., Roth, R., and Tippetts, S.A. (2010). Evaluation of the New Mexico Ignition Interlock Program. Report No. DOT HS 811 410. Washington, D.C.: National Highway Traffic Safety Administration.

McGinty, E. E., Tung G., Shulman-Laniel J., Hardy R., Rutkow L., Frattaroli S., and Vernick J.S. (2017) Ignition Interlock Laws: Effects on Fatal Motor Vehicle Crashes, 1982–2013. American Journal of Preventive Medicine, 52(4):417-423. https://doi.org/10.1016/j.amepre.2016.10.043.

National Center for Statistics and Analysis. (2021, October). Early estimate of motor vehicle traffic fatalities for the first half (January–June) of 2021 (Crash Stats Brief Statistical Summary. Report No. DOT HS 813 199). National Highway Traffic Safety Administration.

National Highway Traffic Safety Administration (NHTSA). (August 2016). Traffic Safety Facts. Research Note. 2015 Motor Vehicle Crashes: Overview. DOT HS 812 318.

National Highway Traffic Safety Administration (NHTSA). (October 2019). Traffic Safety Facts. Research Note. 2018 Fatal Motor Vehicle Crashes: Overview. DOT HS812 826.

Robertson, R. D., Vanlaar, W. G. M., and Hing, M. M. (2018). Annual Ignition Interlock Survey 2016 & 2017: United States. Traffic Injury Research Foundation USA, Inc.

Simpson, H.M., and Robertson, R.D. (2001). DWI System Improvements for Dealing with Hard Core Drinking Drivers: Enforcement. Ottawa, ON.: Traffic Injury Research Foundation. November.

Teoh, E., Fell, J., Scherer, M., and Wolfe, D.E.R. (2018). State alcohol ignition interlock laws and fatal crashes. Insurance Institute for Highway Safety, March 2018.

Teoh, E. R., Fell, J. C., Scherer, M., & Wolfe, D. E. (2021). State alcohol ignition interlock laws and fatal crashes. Traffic injury prevention, 1-4.

Vanlaar, W.G.M., Mainegra Hing, M., and Robertson, R.D. (2017). An evaluation of Nova Scotia's alcohol ignition interlock program. Accident Analysis and Prevention, 100, pp. 44-52.

Willis C., Lybrand S., and Bellamy N. (2004). Alcohol ignition interlock programmes for reducing drink driving recidivism. Cochrane Database Syst Rev.; (4): CD004168. DOI: 10.1002/14651858.CD004168.pub2.

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