



Ignition Interlock Installations

2020 State Data

TRAFFIC INJURY RESEARCH FOUNDATION USA INC.



THE KNOWLEDGE SOURCE FOR SAFE DRIVING

The Traffic Injury Research Foundation USA, Inc.

Traffic Injury Research Foundation USA, Inc. (TIRF USA) is an independent road safety research institute that obtained 501(c)3 non-profit status in the US in 2014. The mission of TIRF USA is to develop and share the knowledge that saves – preventing injuries and loss of life on the roads, reducing related social, health and insurance costs, and safeguarding productivity.

Corporate Office
20 F Street, 7th Floor
Washington, DC 20001
T: 202-507-6334 | F: 202-507-6101
Email: tirf@tirf.us

www.tirf.us

May 2023

2020 IGNITION INTERLOCK INSTALLATIONS: STATE DATA

Hannah Barrett, Robyn D. Robertson & Ward G.M. Vanlaar



ACKNOWLEDGEMENTS

This study was conducted in partnership with the Association of Ignition Interlock Program Administrators (AIIPA). The Traffic Injury Research Foundation USA, Inc. (TIRF USA) gratefully acknowledges AIIPA for their partnership and cooperation in producing this report.



**ASSOCIATION OF IGNITION INTERLOCK
PROGRAM ADMINISTRATORS**

TIRF USA extends its appreciation to the following agencies that shared their time, knowledge, and expertise to contribute to this report.

National Center for State Courts

Arkansas Department of Health

Arkansas Department of Finance and Administration, Office of Driver Services

Colorado Department of Revenue, Division of Motor Vehicles, Driver Control Section

District of Columbia Department of Motor Vehicles

Florida Department of Highway Safety and Motor Vehicles

Illinois Secretary of State

Iowa Department of Justice, Traffic Safety Resource Prosecutor

Iowa Department of Transportation, Driver Services-Records

Kansas Department of Revenue, Division of Vehicles

Kentucky Office of Highway Safety

Louisiana Department of Public Safety, Office of Motor Vehicles

Minnesota Department of Public Safety

New Jersey Division of Highway Traffic Safety

New Mexico Department of Transportation

North Carolina Traffic Safety

Ohio Traffic Safety Office

Oregon Department of Transportation – Department of Motor Vehicles, Driver Control Program

Pennsylvania DUI Association Ignition Interlock Quality Assurance

Tennessee Department of Safety and Homeland Security, Tennessee Highway Patrol, Driver Services

Tennessee District Attorneys General Conference, Traffic Safety Resource Prosecutor

Utah Department of Public Safety, Highway Safety Office Impaired Driving Program

Vermont Department of Motor Vehicles Ignition Interlock Unit

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

Wyoming Department of Transportation, Driver Services



EXECUTIVE SUMMARY

- > Thirty-four states and Washington, D.C. required all first and repeat alcohol-impaired driving offenders to install an interlock device as of July 1st, 2022.
- > Alcohol-impaired driving fatalities increased 14.3% in 2020 (11,654) compared to 2019 (10,196) according to the National Center for Statistics and Analysis (NCSA 2022).
- > Twenty states and Washington, D.C. reported 2020 interlock installation data as of September 1st, 2022, which represents a decline from 27 states and Washington, D.C. reporting 2019 installation date in 2021. The impact of the COVID-19 pandemic may have affected the ability of some agencies to provide data for this report.
- > Trends in interlock installations in this report are measured using three data points:
 - » **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 99,570 new ignition interlock devices installed among the 13 states and Washington, D.C. providing data for new installations (TIN) in 2020. A comparison of new interlock installations among the 11 states and Washington, D.C. reporting TIN data for both 2019 and 2020 showed a 21% decrease in installations from 96,899 in 2019 to 76,836 in 2020. However, an analysis of data from the two states (Iowa & Pennsylvania) reporting annual data since 2014 showed a 26% increase in TIN.
- > A total of 202,906 installations were reported among the 14 states and Washington, D.C. reporting TINall data for 2020. A comparison of total installations from the 11 states providing TINall data for both 2019 and 2020 revealed a 7% decrease from 176,207 in 2019 to 163,323 in 2020.
- > There were 135,648 active installations (AIN) reported in 12 states in 2020. A comparison of active installations in the 10 states providing AIN data for both 2019 and 2020 showed a 5% decrease from 110,095 in 2019 to 105,112 in 2020. However, there was a 21% increase in AIN revealed in an analysis of data from five states (Arkansas, Colorado, Florida, Iowa, & Pennsylvania) providing this information since 2018.



TABLE OF CONTENTS

ACKNOWLEDGEMENTS i

EXECUTIVE SUMMARYiii

INTRODUCTION..... 1

METHODS 4

 Installation counts..... 4

 Installation rates 5

RESULTS 7

 Number of new, total, and active installed interlocks..... 7

 Impaired driving felony and misdemeanors 9

 Installation rate of interlocks among eligible population of offenders 10

CONCLUSIONS 15

REFERENCES 16



TABLE OF FIGURES AND TABLES

Figure 1: Laws mandating alcohol ignition interlock devices (July 2022)..... 2
Figure 2: Illustration of 2020 installation measures 4
Figure 3: Total new installs (TIN) and active installed (AIN) devices as reported by five states in 2018-2020..... 9
Figure 4: Incoming DWI cases, 2014-2020 (source: National Center for State Courts)..... 10

Table 1: State reported installation data 7
Table 2: 2020 percentage of interlocks installed (TIN) per DWI arrests, per DWI convictions and per incoming DWI cases 12



INTRODUCTION

Following sharp declines in the percent and number of alcohol-related fatalities during the 1980s, impaired driving fatalities continued to decrease through the 1990s, although 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.

However, since 2016, a trend has been reported with more pronounced increases in more recent years. In 2020, there were 11,654 alcohol-impaired driving fatalities which accounted for 30% of all 2020 traffic fatalities (NCSA 2022), representing a 14.3% increase in alcohol-impaired driving fatalities from 10,196 in 2019 (NCSA 2022). Furthermore, of the 11,654 alcohol-impaired-driving fatalities, 7,831 (67%) occurred in crashes involving a driver with a BAC of .15 g/dL or higher (NCSA 2022).

Alcohol ignition interlock programs are an effective and proven alcohol-impaired driving countermeasure. Interlocks have been shown to reduce recidivism among first and repeat offenders, including those who repeatedly drive after drinking with extremely high-BACs and are resistant to changing this behavior (Willis et al. 2004; Marques et al. 2010; Elder et al. 2011; Vanlaar et al. 2017). Recent evaluations studying the impact of interlocks on crashes have also demonstrated interlock programs embedded in clear 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).

In 2021, Teoh et al. examined differences in three interlock laws by comparing alcohol-impaired passenger vehicle drivers involved in fatal crashes between 2001-2019 in the US. In particular, this study compared the effectiveness of laws requiring interlocks for *all* drivers convicted of driving while impaired (DWI)¹, laws for only repeat offenders, laws for repeat and high-BAC offenders, or no law. It revealed all-offender laws were associated with 26% fewer drivers with a BAC of .08 or higher 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 a 20% reduction in impaired drivers in fatal crashes, compared to no law (Teoh et al. 2021). Ultimately, results demonstrated laws requiring alcohol ignition interlocks for *all* alcohol-impaired drivers were effective in reducing the number of impaired drivers in fatal crashes when compared to no law (Teoh et al. 2021).

This is the first interlock installation report including the timeframe coinciding with the beginning of the COVID-19 pandemic. On March 11, 2020, the World Health Organization declared COVID-19 a

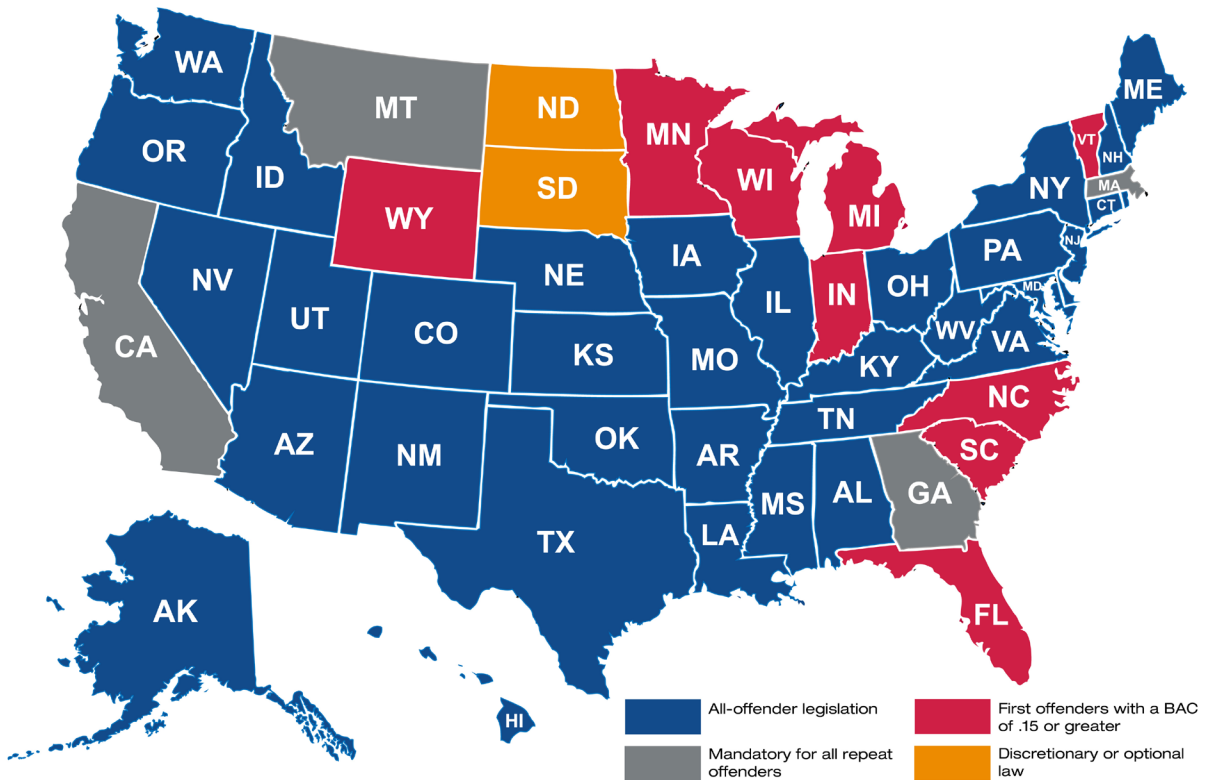
¹ The abbreviation DWI (driving while intoxicated or impaired) is used throughout this report as a convenient descriptive label, even though some states use other terms such as OUI (operating under the influence) or DUI (driving under the influence), and in some states they refer to different levels 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.

pandemic which was followed by the President of the United States declaring the pandemic a National Emergency on March 13, 2020. At this time, states implemented stay-at-home orders lasting for a significant period of 2020 to prevent the spread of COVID-19. Residents were advised to remain in their homes except to conduct essential activities. In response, businesses closed or moved to remote working, schools closed and moved to online platforms, malls, gyms, theaters, restaurants, bars, and other forms of entertainment closed.

Police agencies also adopted a range of preventive measures limiting interactions with the public and roadside interactions. These practices drastically reduced traffic stops, DWI arrests, and speeding citations, as well as high-visibility enforcement actions which may have eroded the deterrent effect of laws (NHTSA 2022). Additionally, court cases were halted in many jurisdictions until online measures were put in place, or until it was safe to resume in-person proceedings with appropriate safety protocols (i.e., masks, social distancing). As a consequence, courts continued to face a backlog into 2022 resulting from trial delays due to the nationwide stay-at-home order. This has been reported as the longest case backlog in living memory (Witte & Berman 2021). These reductions in impaired-driving enforcement and delays in court processing have also impacted interlock installations in 2020 as compared to 2019 which are described in this report.

The status of laws in 2022 provides important context for the data reported here. An overview of interlock laws as of July 2022 is summarized below.

Figure 1: Laws mandating alcohol ignition interlock devices (July 2022)





Traffic Injury Research Foundation, USA Inc.

Source: TIRF's Alcohol Interlock Program Inventory (aic.tirf.ca/alcohol-interlock-program-inventory)

In light of very compelling evidence that ignition interlocks reduce alcohol-impaired driving, recidivism, and alcohol-related crashes, it is paramount this tool is consistently implemented to the fullest to increase participation rates. This will ensure this effective road safety measure is also an efficacious one. As such, monitoring installation rates 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 interlock installation data in the US in 2020. Previous installation data were collected in 2014, 2015, 2016, 2017, 2018, and 2019 (Casanova Powell et al., 2016, 2017; Robertson et al., 2018, 2020, and 2021). 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 2020 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

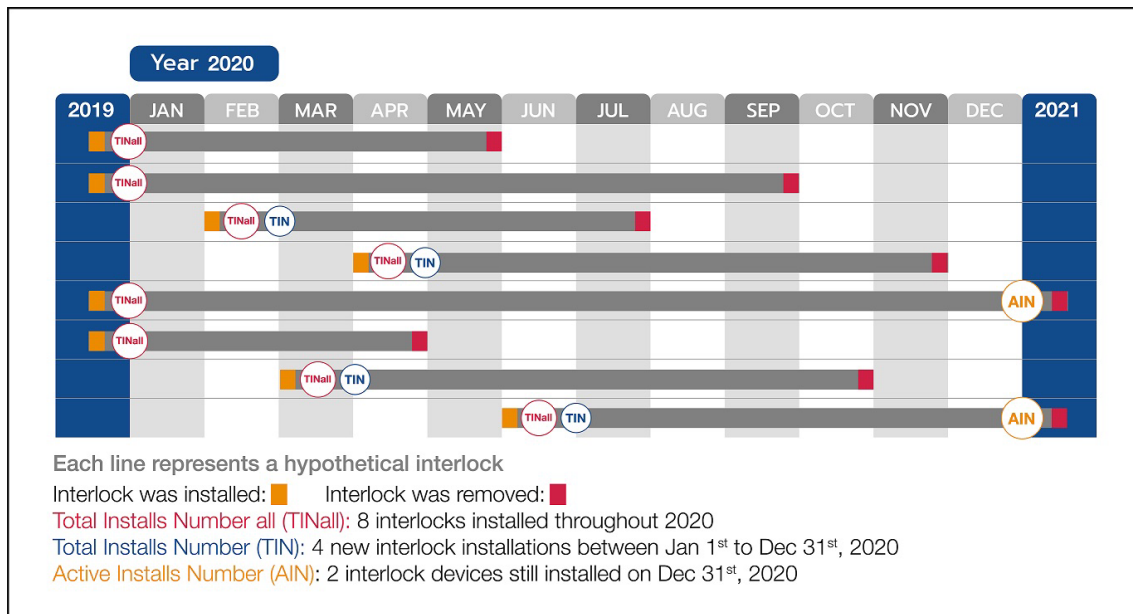
Installation counts

State alcohol ignition interlock program managers in all 50 states and Washington, D.C. were contacted by email between February and June 2022 to request relevant 2020 ignition interlock data. 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 are below:

- > **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 2020. In this example, all installs (TINall) in 2020 equal eight, whereas there are four new installs (TIN), and two installs on December 31st, 2020 (AIN).

Figure 2: Illustration of 2020 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 grows when



installation rates among eligible offenders increase or as the definition of eligible offenders is broadened. The latter grows when devices are installed for longer periods (i.e., non-compliance with program guidelines). 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 to have fewer new installations in a year but for the TINall to still increase due to longer installation periods, 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, alone 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 general 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 2020 was gathered via TIRF’s online data collection tool and state annual reports available online through state Highway Safety Offices.

Data were also collected from the National Center for State Courts (NCSC) on misdemeanor and felony 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 categories. Data are collected from state court administrator offices 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 request or indictment.
- > **Incoming cases:** Cases added to the court’s caseload during the reporting period and include New Filing, Reopened, and Reactivated cases.

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.

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



RESULTS

Data were received from 20 states⁴ and the District of Columbia as of September 1st, 2022. Some states did not possess complete information needed to calculate each of the three indicators (TIN, TINall, AIN) while a few others could only provide information about program features and arrest/conviction data. Of these states, 12 states⁵ and the District of Columbia also provided some or all of the data requested in 2019.

Number of new, total, & active installed interlocks

There were 202,906 total interlock devices installed (TINall) in 14 states and Washington, D.C. in 2020. This number includes all interlocks installed in a vehicle at any time throughout the whole year, including those installed in a previous year (Table 1). A comparison with the total installed devices among the 11 states and Washington, D.C. providing TINall data for both 2019 (176,207) and 2020 (163,323) showed a seven percent decrease.

There were 99,570 new ignition interlock devices (TIN) were installed in 2020 according to TIN data provided by Washington, D.C. and 13 states. A comparison of new interlock installations among the 11 states and Washington, D.C. providing TIN data for both 2019 (96,899) and 2020 (76,836) indicated a 21% decrease in installations.

There were 135,648 active installed devices (AIN) in a vehicle on December 31st reported at the end of 2020 in 12 states and Washington, D.C. A comparison of active installed devices in the 10 states providing AIN data for both 2019 (110,095) and 2020 (105,112) showed a five percent decrease.

Table 1: State-reported installation data

State	TINall			TIN			AIN December 31 st		
	2019	2020	% change	2019	2020	% change	2019	2020	% change
Arkansas	12,503	8,124	-35%	8,996	5,518	-39%	8,113	7,717	-5%
California				37,642					
Colorado	62,591	59,496	-5%	17,754	14,059	-21%	51,774	49,456	-4%
Delaware	1,517			694			858		
District of Columbia	65	19	-71%	17	2	-88%		3	
Florida	22,749	19,618	-14%	12,762	10,600	-17%	12,911	15,837	23%
Illinois	12,241	10,867	-11%	3,379	2,090	-38%	4,262	4,234	-1%
Iowa	13,311	12,312	-8%	7,310	5,543	-24%	7,297	1,814	-75%
Kansas	9,067			7,474	6,778	-9%	10,504		

⁴ Arkansas, Colorado, Florida, Illinois, Iowa, Kansas, Kentucky, Louisiana, Minnesota, New Jersey, New Mexico, North Carolina, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming

⁵ Arkansas, Colorado, Florida, Illinois, Iowa, Kansas, Kentucky, North Carolina, Pennsylvania, Tennessee, Vermont, and Wyoming



State	TINall			TIN			AIN December 31 st		
	2019	2020	% change	2019	2020	% change	2019	2020	% change
Kentucky	2,139	2,075	-3%	1,328	1,095	-18%	881	1,137	29%
Maine	1,489			834			666		
Minnesota								10,547	
New Mexico		10,192						10,192	
North Carolina	10,949	13,715	25%	10,862	6,524	-40%	16		
Oregon		6,919			6,469		7,991	6,424	-20%
Pennsylvania	10,989	20,919	90%	9,989	9,701	-3%	9,141	11,990	31%
Tennessee	10,072	7,546	-25%	7,041	7,546	7%	612	9,794	100%
Utah	3,551			1,693			2,052		
Virginia	17,757	8,000	-55%	9,987	7,300	-26	7,725	6,503	-16%
Washington		22,004			16,265				
West Virginia	6,233			2,595			3,654		
Wisconsin	14,291			6,181			8,096		
Wyoming	841	632	-25%	294			736		
Totals	212,752	202,906	N/A	147,027	99,570	N/A	137,602	135,648	N/A
<i>Totals based on states who reported in both 2019 and 2020</i>									
Totals	176,207	163,323	-7%	96,899	76,836	-21%	110,095	105,112	-5%

Only five⁶ of the 21 states and the District of Columbia showed growth in interlock installations in 2020. Pennsylvania had the most growth according to two measures. First, there was a 90% increase in TINall between 2019 (10,989) and 2020 (20,919) in 2020, and a 31% increase in AIN, from 9,141 in 2019 to 11,990 in 2020.

Pennsylvania's considerable increase may be attributed to legislative changes in 2017 and 2018. On August 25, 2017⁷ nearly all drivers convicted of DWI, including first offenders (except in limited circumstances) were required to install an ignition interlock for 12 months following their suspension as a condition of license reinstatement. On October 20, 2018⁸ the Legislature further expanded limited interlock licenses to include immediate interlock eligibility for license suspensions associated with the Accelerated Rehabilitative Disposition program. This was in addition to licenses already permitted (i.e., ignition interlock limited licenses for DWI suspensions and chemical test refusal suspensions). As a consequence, many more drivers were eligible for an interlock sentence. While these changes occurred in 2017 and 2018, the length of time required for impaired drivers to be arrested, charged, convicted and sentenced, and delays in court processing may have influenced 2020 installation numbers.

Finally, five states provided data for 2018, 2019, and 2020 (Figure 3). These five states (Arkansas, Colorado, Florida, Iowa, and Pennsylvania) were used to compare trends in TIN and AIN. Since

⁶ Florida, Kentucky, North Carolina, Pennsylvania, and Tennessee

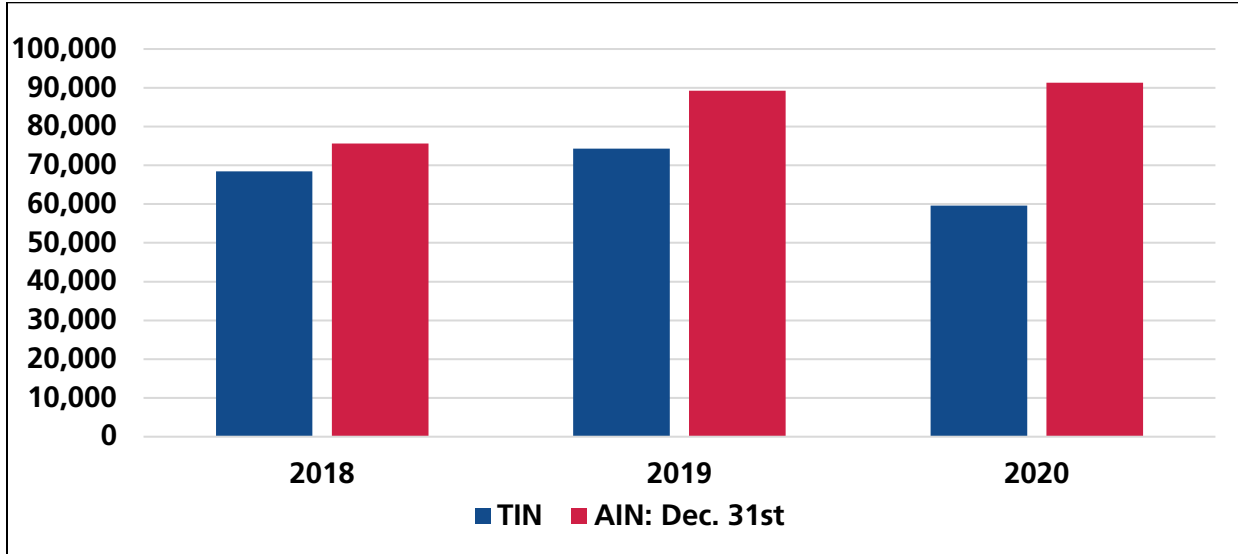
⁷ Statute 75 Pa. C.S. 3805

⁸ Statute 75 Pa. C.S. 1556



2018, there has been a 21% increase in AIN in these five states from 75,595 (2018) to 91,292 (2020). However, TIN decreased 13% in these jurisdictions from 68,407 (2018) to 59,579 (2020).

Figure 3: Total new installs (TIN) & active installs (AIN) reported in five states in 2018-2020

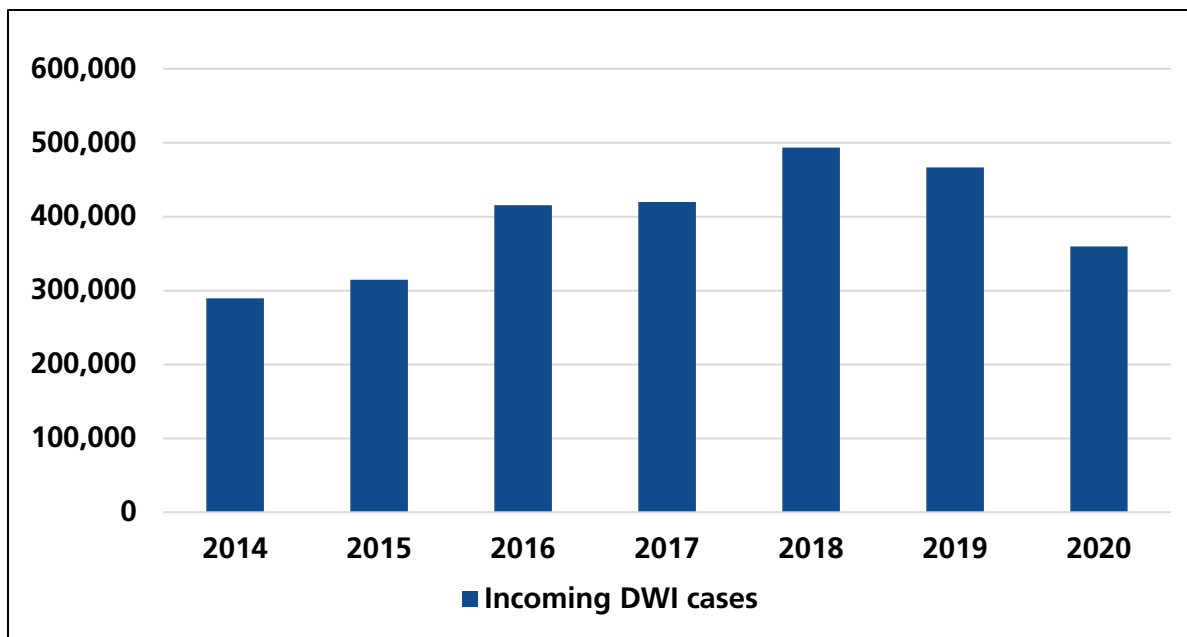


In addition, five states provided TINall data for 2016, 2018, 2019, and 2020 and a trend analysis was performed with these five states (Arkansas, Colorado, Iowa, Pennsylvania, and Wyoming). Since 2016, there has been a three percent increase in TINall from 90,405 (2016) to 92,727 (2020).

Impaired driving felony and misdemeanors

Data provided by National Center for State Courts (NCSC) revealed a steady increase in incoming DWI cases in 27 states from 289,583 in 2014 to 359,524 in 2020 (Figure 4). This represents an overall 24% increase since 2014. Unsurprisingly, a 23% decrease in incoming DWI cases was reported from 466,643 (2019) to 359,524 (2020) due to shifts in traffic enforcement during the COVID-19 stay-at-home orders.

Figure 4: Incoming DWI cases, 2014-2020



Source: National Center for State Courts

Interlock installation rate among the eligible population of offenders

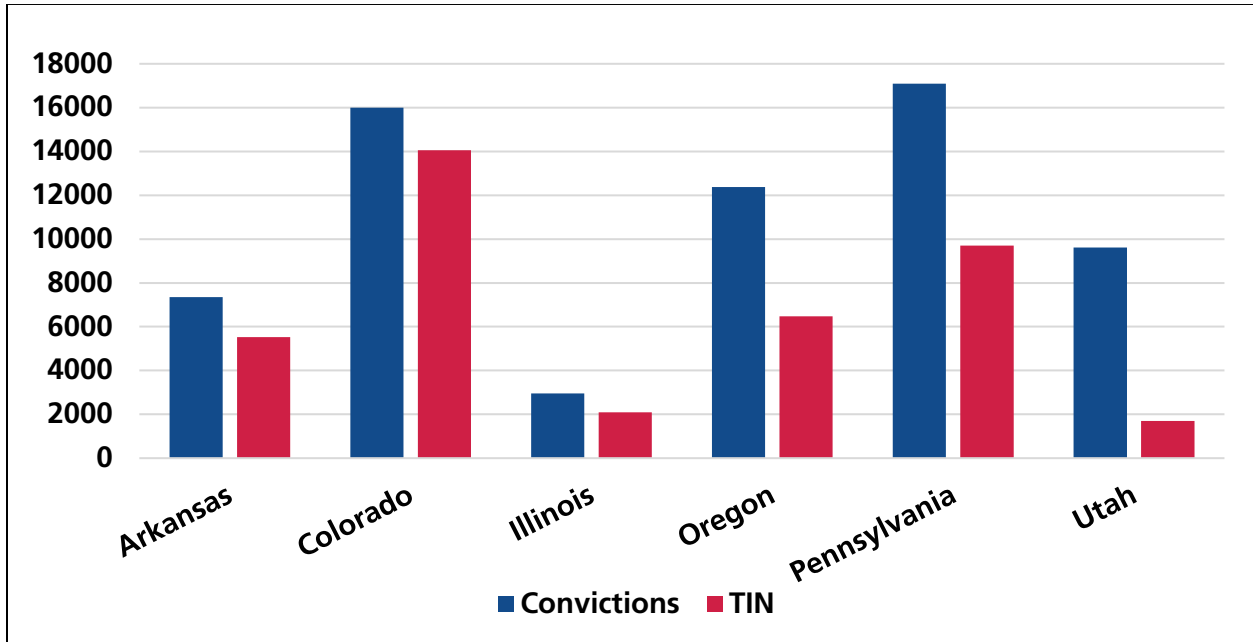
An accurate way to measure growth in interlock programs (i.e., how many impaired drivers actually install the device as required) within a state is to estimate the percentage of offenders who installed an interlock among those who were eligible or required to do so.

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, depending on legislation in each state. For the latter, this may be further dependent upon categories of offenders requiring an interlock. Furthermore, some states may include administrative per se cases. However, some offenders may be deemed ineligible because of other driving or non-driving violations resulting in license suspension; for example, outstanding child support payments unrelated to DWI.

Due to COVID-19, many states were unable to collect and provide 2020 arrest data when contacted in early 2022. This is primarily a result of staffing issues and competing priorities. As such, limited arrest data are reported here. Three states (AR, PA, UT) did report arrest data.

The number of DWI convictions and TIN for 2020 were available in six states (Figure 5). Given each of these six states have all-offender interlock installation legislation, the percentage of TIN per DWI conviction would be 100% if every convicted impaired driver installed an interlock device. However, this is not the case in any of the six states, although Colorado was closest at 88%. Combined, these states have installed 60% TIN per DWI convictions. This gap between installations and convictions emphasizes there is room for growth within interlock programs, specifically in terms of driver compliance.

Figure 5: DWI convictions and TIN, 2020



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 and 2020 so direct comparisons cannot be made with previous years.

Figure 6: New interlock installations per DWI arrests & per convictions as a percentage in 2014-2016, 2018-2020

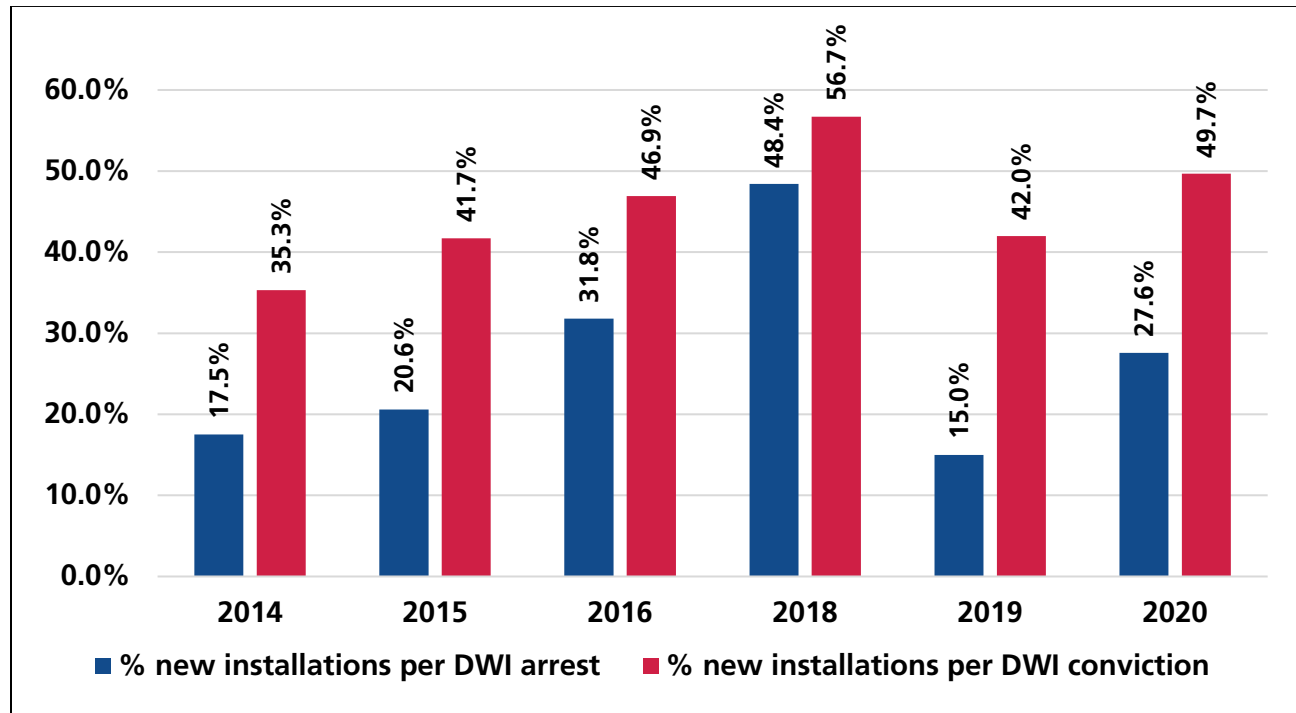


Table 2 presents percentages of new interlocks installed (TIN) per DWI arrests, per DWI convictions and per incoming DWI cases in 2020.

For context, Arkansas and Illinois have installations exceeding 100% because interlocks are required for offenders, including administrative per se cases (failure or refusal of chemical test at arrest). These results 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 17.6% (%TIN per DWI convictions in Utah) to 87.9% (%TIN per DWI convictions in Colorado).

Table 2: 2020 percentage of interlocks installed (TIN) per DWI arrests, per DWI convictions & per incoming DWI cases

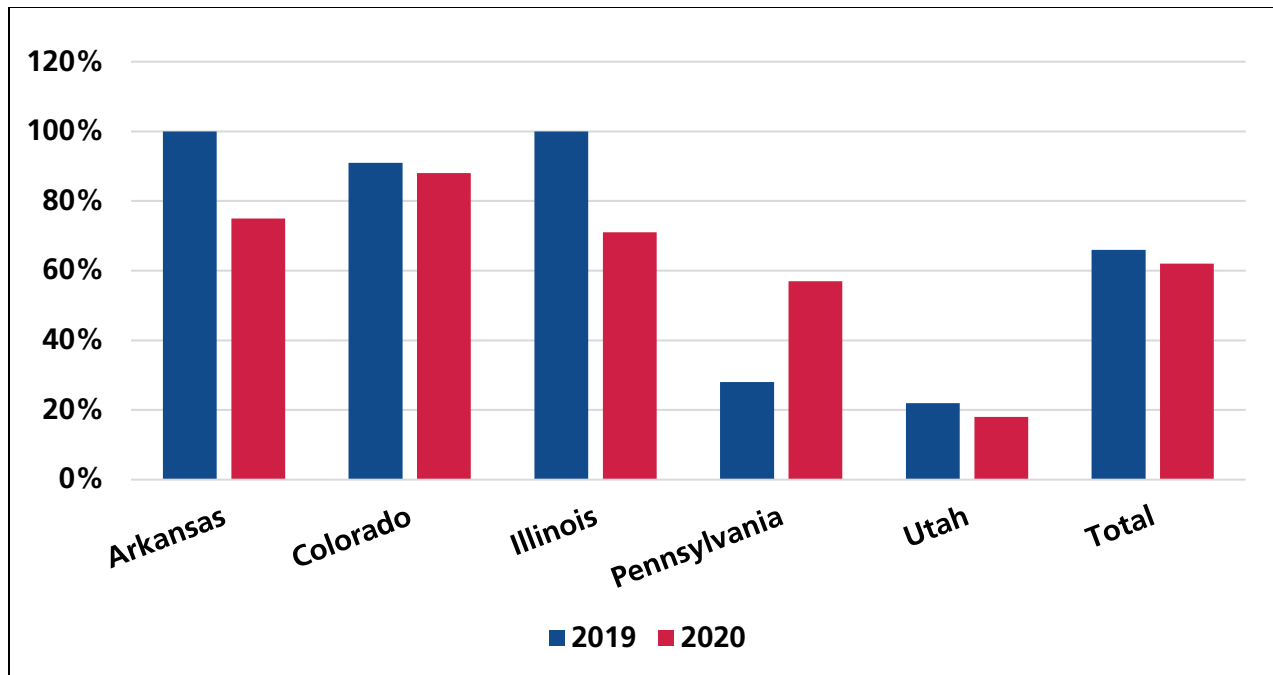
State	2020 Arrests	2020 Convictions	2020 Incoming DWI Cases	% convictions per DWI arrests	%TIN per DWI arrests	%TIN per DWI convictions	%TIN per incoming DWI cases
Arkansas	10,699	7,356	100	68.7%	51.5%	75%	100%
Colorado		15,955	18,868			87.9%	74.5%
Illinois		2,951	26,405			70.8%	7.9%
Louisiana	11,315						

State	2020 Arrests	2020 Convictions	2020 Incoming DWI Cases	% convictions per DWI arrests	%TIN per DWI arrests	%TIN per DWI convictions	%TIN per incoming DWI cases
North Carolina	34,810		37,626		18.7%		17.3%
Oregon		12,374	9,436				68.6%
Pennsylvania	40,237	17,087	64,786	42.4%	24.1%	56.8%	15%
Utah	10,380	9,610	17,931	92.6%	16.3%	17.6%	9.4%
Vermont		510	2,191				
Totals	107,441	65,883	82,814	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 five states for the years 2019 and 2020 (Figure 7). All states, except Pennsylvania, experienced a decrease in new installations per conviction from 2019 to 2020.

Figure 7: New interlock installations per DWI convictions, 2019-2020



CONCLUSIONS

Alcohol ignition interlock programs are effective in decreasing the number of alcohol-impaired drivers, crashes, and fatalities. Their value as an alcohol-impaired driving countermeasure is evident based on the compelling body of evidence demonstrating reductions in impaired driving recidivism, and also reductions in alcohol-related fatalities when devices are embedded in clear legislation and strong programs. But to achieve their full potential in reducing impaired driving recidivism, greater market penetration is critical. All offenders required to install a device must actually do so. 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 a decrease in growth in the use of interlocks according to all indicators:

- > There was a 21% decrease in TIN according to data from 11 states and Washington, D.C. (from 96,899 interlocks in 2019 to 76,836 interlocks in 2020).
- > There was a seven percent decrease in TINall according to data from 11 states and Washington, D.C. (from 176,207 interlocks in 2019 to 163,323 interlocks in 2020).
- > There was a decrease in AIN according to data from 10 states (from 110,095 in 2019 to 105,112 in 2020).
- > There has been a 21% increase (from 75,595 in 2018 to 91,292 in 2020) among five states providing AIN information since 2018.

The impact of the COVID-19 pandemic adversely affected agency staffing and the ability of many states to collect and report 2020 data. In addition to COVID-19, the Defund the Police movement across the US had a massive impact on agency staffing and public morale. The pandemic also shifted the emphasis on traffic enforcement as officers dealt with competing priorities and worked to implement new safety protocols. As such, declines in interlock installations across all states was not unanticipated.

Even before this pandemic-related decline, data showed there remained a large contingent of eligible offenders failing to install an interlock; and this is perhaps more pronounced in arrest and conviction data which shows the 2020 TIN per 2020 DWI arrests was 27.6%, and per 2020 DWI convictions it was 79.7%. While the indicators for DWI arrests and convictions have increased over time, ultimately, they have not yet achieved close to 100% when it comes to interlock installations.

In conclusion, in light of the unprecedented year in 2020 due to the pandemic, data revealed a decline across all interlock programs within the reporting states, however, fewer states were able to report data. Despite increases in interlock installations since 2014, the data continue to confirm 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-related crashes. *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. (2022, April). Alcohol-impaired driving: 2020 data (Traffic Safety Facts. Report No. DOT HS 813 294). 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.

Witte, G., and Berman, M. (December 19, 2021). Long after the courts shut down for covid, the pain of delayed justice lingers. *The Washington Post*.



Corporate office

20 F Street, 7th Floor
Washington, DC 20001

www.tirf.us

Email: **tirf@tirf.us**

TRAFFIC INJURY RESEARCH FOUNDATION USA INC.



THE KNOWLEDGE SOURCE FOR SAFE DRIVING