Texas Ignition Interlock Training, Outreach, & Evaluation

FY21 Case Study Technical Memorandum

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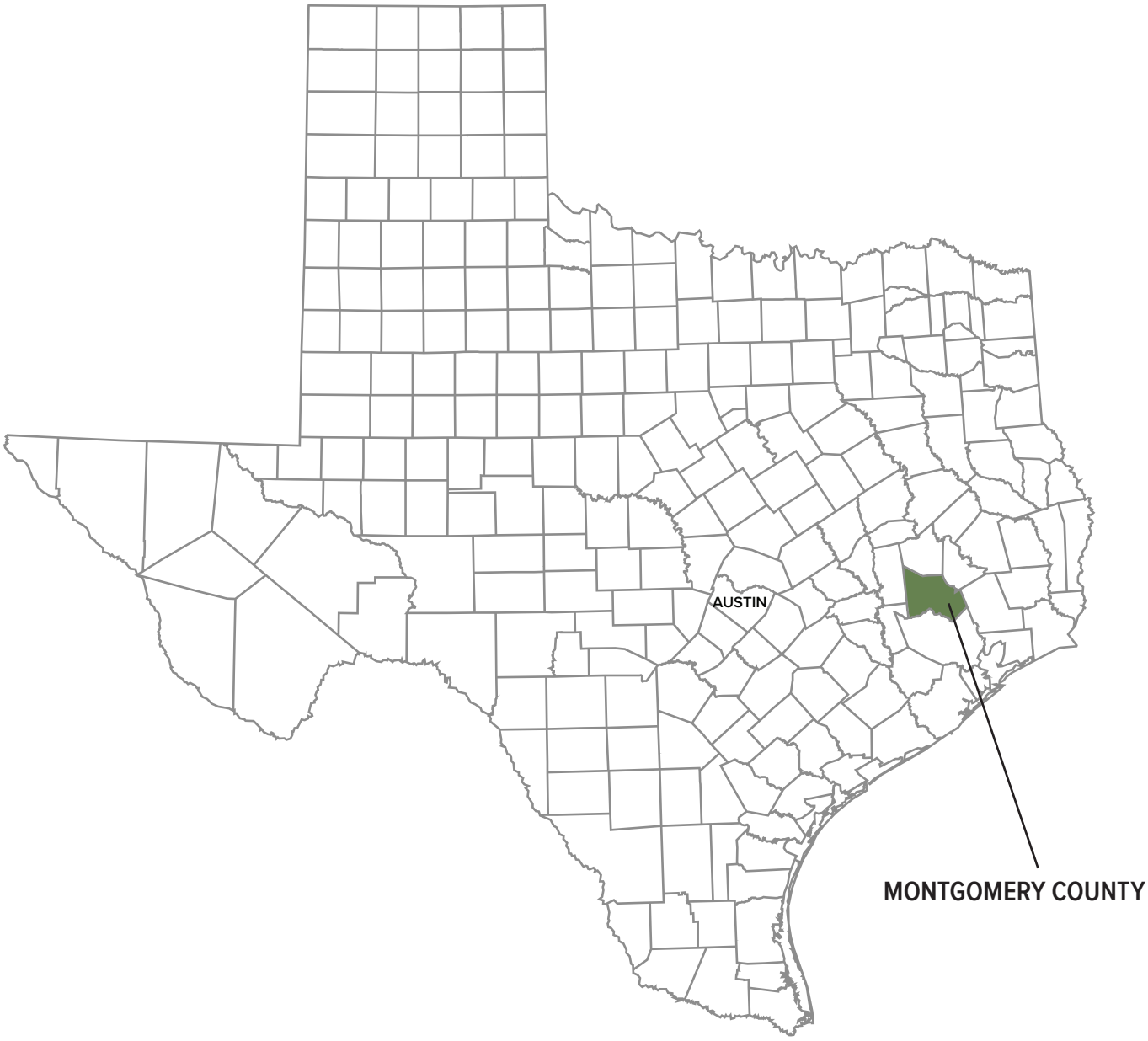
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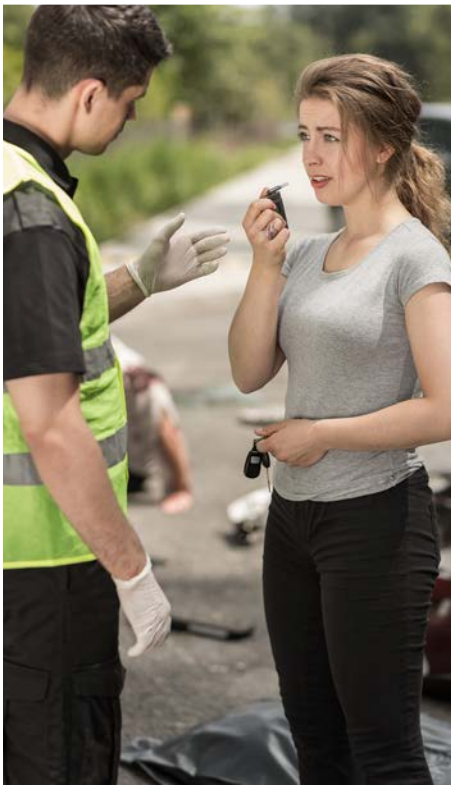

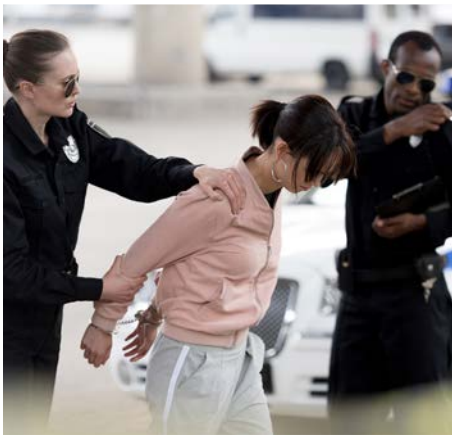

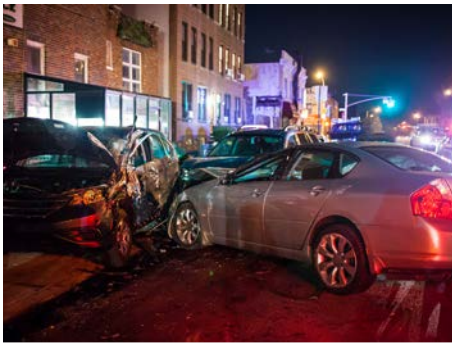

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Introduction

Ignition interlock devices (IIDs) are designed to prevent a vehicle from starting if alcohol is detected above a pre-set level in the driver's breath sample (Centers for Disease Control and Prevention, 2015). The National Highway Traffic Safety Administration (NHTSA) has identified IIDs as one of the *Countermeasures That Work* for their ability to reduce Driving While Intoxicated (DWI) recidivism (Richard, Magee, Bacon-Abdelmoteleb, & Brown, 2018).

Literature indicates that IIDs may reduce DWI crashes as well as recidivism. A systematic review explored IID effectiveness, which found that recidivism rates were 75% lower amongst offenders with IIDs than those without IIDs installed (Elder et al., 2011). Another systematic review found that once the ignition interlock is removed, recidivism rates are similar to those who did not have an ignition interlock order (Blais, Sergerie, & Maurice, 2013). Regarding DWI crashes, states requiring IIDs for all offenders resulted in an 8% decrease in fatal crashes BAC>0.15 and a 7% decrease in fatal crashes with BAC>0.08 (McGinty et al., 2017). These findings are consistent with a later study that found a 15% reduction in alcohol-involved fatalities following 18 states mandating IIDs for all DWI convictions (Kaufman & Wiebe, 2016).

Literature is limited on the impacts of different IIDs statutes at the state level for different offenses, such as repeat or high BAC offenders. Laws mandating IIDs for limited groups of high-risk offenders may also result in reduced fatal crashes following implementation (McGinty et al., 2017). Texas currently falls into this group since its laws do not require IIDs for all DWIs. However, IIDs are currently required as a condition of bond and probation for specific offenses as outlined below (Texas Constitution and Statutes, 2020)

1. Condition of bond for the following:
    a. subsequent offenses
    b. intoxication assault charges
    c. intoxication manslaughter charges
    d. DWI with a child passenger
2. Condition for probation for the following:
    a. DWI with BAC >=0.15
    b. 50% of probation term for subsequent offenses
    c. 50% of probation term for defendants under 21 years old.

It is important to note that a judge may waive the ignition interlock requirement in Texas if they find it is not in the best interest of justice.

The purpose of this technical memorandum is to present the findings of an impact analysis of ignition interlock devices (IIDs) relative to recidivism (repeat DWI offenses and post-DWI crashes) among DWI offenders in Montgomery County, Texas.

Approach

Data Collection

There were three primary data sources utilized to explore DWI recidivism for DWI offenders in Montgomery County.

3. Montgomery County DWI cases from their internal databases [DWI Cases]
4. Texas Department of Public Safety Computerized Criminal History (CCH) System [CCH]
5. Texas DWI crashes from TxDOT's Crash Records Information System (CRIS) [DWI Crashes]

For recidivism, both DWI cases and DWI crashes were examined. DWI cases were used to identify individuals with a DWI and if they had an ignition interlock device (IID) ordered. To explore recidivism, criminal history data and DWI crashes were examined. DWI criminal history allows us to see instances in which the individual was charged with a DWI; however, this may not encompass all instances as not every arrest result in charges being filed. Exploring DWI crashes allows for an understanding of how many individuals crashed while intoxicated but maybe did not have a DWI case disposed of (e.g., case dismissed). The following sections briefly describe each three data sources in greater detail.

Montgomery County DWI Cases

The Montgomery District Attorney's Office provided the project team with a list of DWI cases for 2015 and 2016. This list was used to access case information from the Montgomery County Clerk and the District Clerk's electronic case databases (Montgomery County, 2021; Montgomery County, 2021). The County Clerk's system is publicly available and used for misdemeanor cases. However, the District Clerk's system requires a login to view case information and is used for felony cases. A web-based survey tool called Qualtrics was used to extract information from both case search systems.

Texas Department of Public Safety Computerized Criminal History System

Data from DPS's Computerized Criminal History System (CCH) were obtained for the Montgomery County DWI cases to determine if the individual had additional DWI cases (Texas Department of Public Safety, 2021). CCH data were manually matched to Montgomery County DWI cases based on name, date of birth fields, and aliases.

Texas Department of Transportation Crash Records Information System

Crash data were obtained using MicroStrategy, a secure data portal to access the Texas Department of Transportation Crash Records Information System (CRIS). Individuals involved in crashes from 2015 to 2021 involving a DWI were compared to individuals that had a DWI offense in Montgomery County. Crash data is a secondary source that may capture instances where a person may have had a DWI that did not result in a case being filed. In addition, crash data helps to understand recidivism through DWIs that may have resulted in fatalities, injuries, or property damage. Crash data were matched to Montgomery County DWI cases by matching the date of birth and matching the first four letters of names across datasets.

It is important to note that a judge may waive the ignition interlock requirement in Texas if they find it is not in the best interest of justice.

Of the 3,709 remaining cases, there were 3,608 individuals involved. Of these individuals, 3,511 had one case, 97 had two cases, and four had three cases.

Data Analysis

The data sources were linked to explore the impacts of IIDs on DWI recidivism in Montgomery County, Texas. Descriptive statistics were utilized to explore recidivism for both DWI cases and crashes.

Findings

DWI Case Overview

Montgomery County provided 4,365 unique DWI cases for 2015 and 2016. 106 (2.4%) cases not found in the electronic database were excluded from the analysis. Of the 4,259 cases, 530 (12%) were dismissed, and 20 (0.5%) had not been disposed of at the time of analysis. The top reasons for dismissal included cannot prove beyond a reasonable doubt (n=128; 24%); pre-trial diversion (n=102; 19.2%); and convicted in another case (n=99; 19%). Dismissed and non-disposed cases were not further included in the analysis, which resulted in 3,709 cases being included.

Demographics

Of the 3,709 remaining cases, there were 3,608 individuals involved. Of these individuals, 3,511 had one case, 97 had two cases, and four had three cases. Multiple cases could have been indicative of an individual receiving multiple charges in 2015 and 2016 or an individual who was caught driving while intoxicated with multiple children in the vehicle. A majority were males (75%). The most common reported race was white (90%). The two most common age categories were 25 to 34 years old (34%) and 35 to 44 years old (23%). The average defendant's age was 36 years old with a range of 16 to 77 years old. The median age was 34 years old, whereas 24 years old was the mode age. A majority of respondents reported an urban zip code (96%).

Table 1 summarizes the demographics of the individuals in Montgomery County, Texas DWI cases.

TABLE 1. Demographics of Individuals with A DWI Case in Montgomery Texas, 2015–2016.

	n (%)[1]
Gender	
Female	899 (24.9%)
Male	2,709 (75.1%)
Race/Ethnicity	
White	3,252 (90.1%)
Other	298 (8.3%)
Unknown	58 (1.6%)
Age at Offense	
24 years or younger	701 (19.4%)
25 to 34 years old	1,224 (33.9%)
35 to 44 years old	824 (22.8%)
45 to 54 years old	561 (15.6%)
55 to 64 years old	243 (6.7%)
65 years or older	53 (1.5%)
Missing	2 (0.06%)
Rural Status	
Urban	3,456 (95.8%)
Rural	152 (4.2%)

[1]Due to rounding, percentages may be greater than 100%

Application of Countermeasure

To understand the impact of IIDs on recidivism, it is important that we understand if they were used as required under Texas law. There were 430 cases identified that required an IID under Texas law for a condition of bond. A majority of these had an IID ordered as a condition of bond (91%; n=392). Offenses for those who should have an IID ordered as a condition of bond, but did not have one installed, included:

76% (n=29) DWI subsequent offense and 24% (n=9) DWI with child. Of those that did not have an IID ordered as a condition of bond, 100% had an IID ordered as a condition of probation.

There were 356 cases identified that required an IID under Texas law for a condition of probation. A majority of these had an IID ordered as a condition of probation (94%; n=335). Offenses for those who should have had an IID ordered as a condition of probation, but did not, included: 71% (n=15) BAC Greater than 0.15 and 28% (n=6) subsequent offense. Of those that did not have an IID ordered as a condition of probation, 76% had an IID ordered as a condition of bond.

Recidivism

The team then identified whether individual offenders had a subsequent DWI case(s) or DWI crash(es) following the DWI case they were involved in during 2015 or 2016.

Subsequent DWI Case(s)

Approximately 14% of the individuals with a disposed of DWI case has another case following their 2015 or 2016 DWI offense. A majority of individuals with a repeat offense were male (80%), white (88%), and 25 to 34 years old (39%). The average age was 34 years old with a range of 18 to 75 years old. The median age was 32 years old, whereas 26 years old was the mode age. Table 2 summarizes the demographics of the individuals in Montgomery County, Texas, with a repeat DWI case. In addition, a majority of individuals with a repeat DWI offense reported an urban zip code (95%).

TABLE 2. Demographics of Individuals with a Repeat Offense, 2015–2016.

	Responses (%)
Gender	
Female	102 (20.1%)
Male	405 (79.8%)
Race/Ethnicity	
White	444 (87.6%)
Other	57 (11.2%)
Unknown	6 (1.2%)
Age	
24 years or younger	111 (22.2%)
25 to 34 years old	195 (38.5%)
35 to 44 years old	113(22.3%)
45 to 54 years old	62 (12.2%)
55 to 64 years old	22 (4.3%)
65 years or older	4 (0.8%)
Rural Status	
Urban	483(95.3%)
Rural	24 (47%)

[1]Due to rounding, percentages may be greater than 100%

Figure 1 shows the offense at disposition for individuals with a repeat offense (Note: shows the 2015 or 2016 case, not the subsequent offense). The top two offenses were for DWI first (66%) and DWI Subsequent Offenses (e.g., DWI second or greater) (24%).

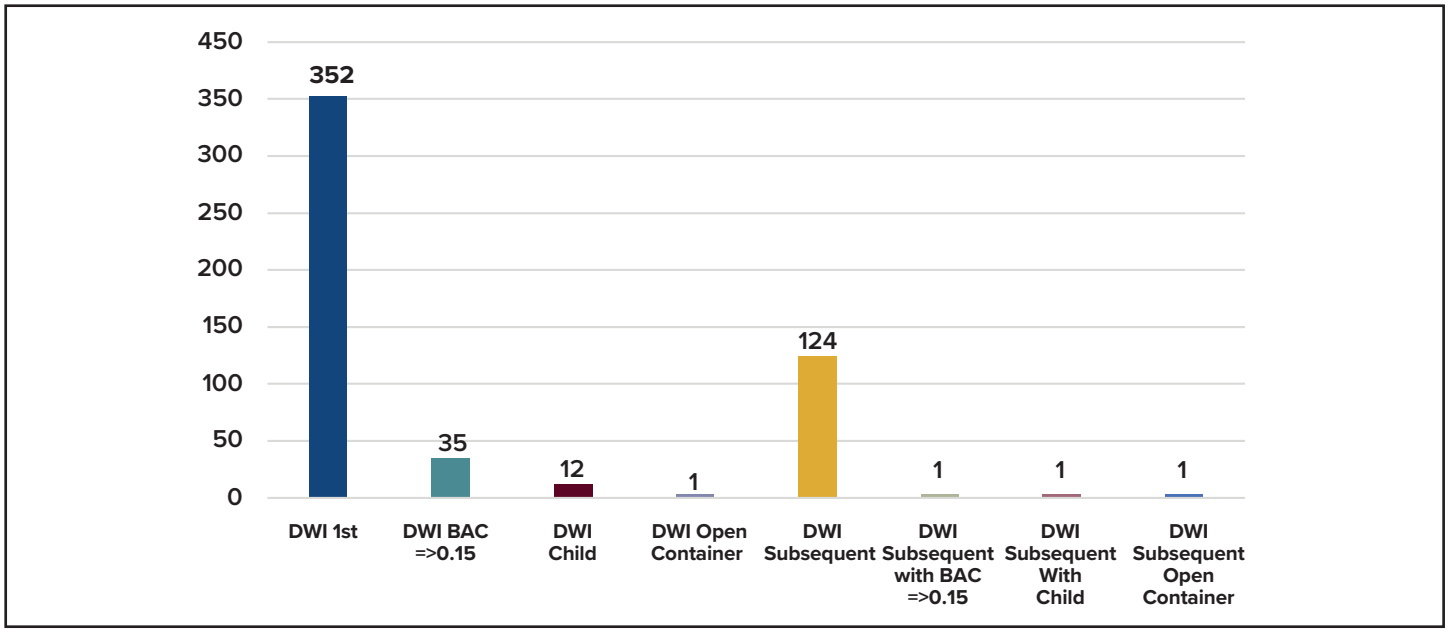

FIGURE 1. Offense at Disposition for Cases With Repeat DWI Offenses.

For individuals with a repeat offense, 46% had an IID ordered as a condition of bond for at least one of their cases. Whereas only 15% had an IID ordered as a condition of probation for at least one of their cases. For individuals who had IIDs ordered for the 2015 or 2016 case, approximately 13% without an ignition interlock as a condition of bond had a repeat offense; whereas, 15% of individuals ordered an ignition interlock as a condition of bond had a repeat offense. Regarding conditions of probation, 14% of individuals without an ignition interlock as a condition of probation had a repeat offense, compared to 15% of individuals ordered an ignition interlock as a condition of probation having a repeat offense. On the surface, the deployment of IIDs as a condition of bond and/or probation seemed not to decrease recidivism. When the data is examined relative to the Texas statutes, a reasonable assumption is that those who have an IID ordered are drivers who may be repeat offenders or require more than punitive countermeasures to address possible underlying issues.

In order to fully understand the complexities of how IIDs impact recidivism, it is recommended that the data sets be partitioned into subsets based on previous and current charges. Depending on the sizes of the data sets, the analysis may only yield anecdotal conclusions, but even these results can inform the practice of ordering IIDs in required cases. This approach can also help establish an approach for including data from additional years and/or counties.

DWI Crashes

The team examined how many individuals with a 2015 or 2016 DWI disposed of case had a post-DWI crash. Approximately 3% of individuals with disposed of cases had a post-DWI crash. The mean number of post-DWI crashes was one per person with a range of one to three DWI crashes. This means that individuals with a post-DWI crash typically only had one post-DWI crash following their 2015 or 2016 DWI case; however, we did have individuals with up to three DWI-post-crashes. Overall, 69% of individuals with a DWI-post crash were male.

Regarding ethnicity, most individuals with a DWI-post crash were white (83%). It is important to note that 15% of those in a DWI-post crash were non-white, compared to only 8.3% of all cases. The top age category was 25 to 34 years old (32%). The average age was 35 years old with a range of 18 to 74 years old. The median age was 32 years old, whereas 20 years old was the mode age. Rural status was also examined, which found that 7% of those with a DWI-post crash report a rural zip code. This is slightly higher than the 4% among all cases. Table 3 summarizes the demographics of the individuals in Montgomery County, Texas DWI cases with a post-DWI crash.

TABLE 3. Demographics of Individuals with a Post-DWI Crash, 2015–2016.

	n (%)[1]
Gender	
Female	38 (30.7%)
Male	86 (69.4%)
Race/Ethnicity	
White	103 (83.1%)
Other	19 (15.3%)
Unknown	2 (1.6%)
Age at Offense	
24 years or younger	30 (24.2%)
25 to 34 years old	40 (32.3%)
35 to 44 years old	29 (23.4%)
45 to 54 years old	13 (10.5%)
55 to 64 years old	8 (6.5%)
65 years or older	4 (3.2%)
Rural Status	
Urban	115 (92.7%)
Rural	9 (7.3%)

[1]Due to rounding, percentages may be greater than 100%

Figure 2 shows the offense at disposition for individuals with a post-DWI crash. The top two offense was DWI first (77%) and DWI Subsequent Offenses (20%).

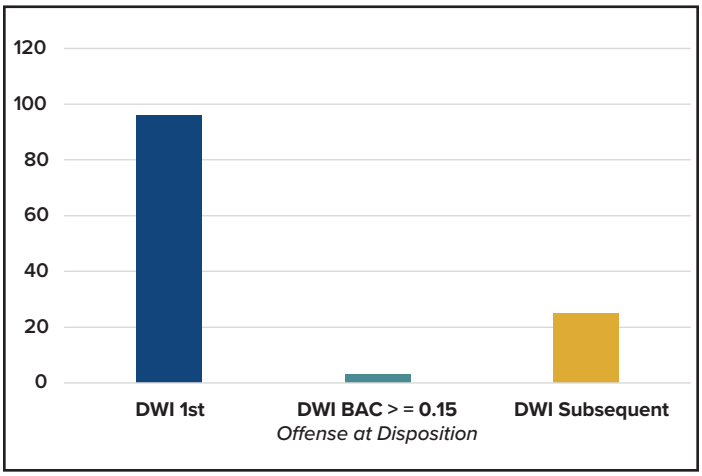

FIGURE 2. Offense at Disposition for Cases With Post-DWI Crash.

The role of IIDs on post-DWI crashes was then explored. Of individuals with a post-DWI crash repeat offense, 44% had an IID ordered as a condition of bond for at least one of their cases. Whereas only 13% had an IID ordered as a condition of probation for at least one of their cases. The project team then explored differences in recidivism if IIDs were ordered for the 2015 or 2016 case. Approximately 13% of individuals without an IID as a condition of bond had a post-DWI crash; whereas, 15% of individuals ordered an IID as a condition of bond had a post-DWI crash. Regarding conditions of probation, 14% of individuals without an IID as a condition of probation had a post-DWI crash, compared to 15% of individuals ordered an IID as a condition of probation having a post-DWI crash.

Summary

The technical memorandum summarizes the impact analysis of IIDs relative to recidivism (repeat DWI offenses and post-DWI crashes) among DWI offenders in Montgomery County, Texas. The study found that:

- 14% of individuals with a DWI case had another case by July 2021
- Of those with a repeat offense, almost half had an IID as a condition of bond
- Of those with a repeat offense, 15% had an IID as a condition of probation
- Individuals ordered an IID as a condition of bond or probation had higher percentages of recidivism compared to those who were not ordered an IID
- 3% of individuals with a DWI case had a post-DWI crash
    - Individuals ordered an IID as a condition of bond or probation had higher percentages of post-DWI crashes compared to those who were not ordered an IID.

The results of the case study show that overall, individuals ordered an IID had higher percentages of repeat DWI offenses and DWI crashes compared to individuals not ordered an IID, which goes against what is expected traditionally with IIDs. This may be a result of Texas IID statutes, which do not require interlocks for all offenses but focus on repeat offenses, which are associated with higher recidivism. There were 3.4 alcohol violations among individuals with no prior violations, compared to 50.8 per 1,000 drivers among individuals with three or more prior violations (Rauch et al., 2010).

There are a few limitations that should be considered when interpreting the results of this study, including limitations with linking the three data sources together. Specifically, DPS states they cannot confirm their data matches as identifiers, including names and dates of birth, are not always accurate (Texas Department of Public Safety, 2020). In addition, the process used for matching data sources was largely manual (e.g., human), which could result in mistakes being made; however, probabilistic or other methods of linkage are not feasible with the data sources and project timeline. Another limitation is that the case information does not show if that order was complied with, and the interlock was installed. More research is needed to build on this project to understand compliance with IID orders, such as working with interlock providers to understand compliance. Despite these limitations, this case study provides information on the recidivism and the use of IIDs throughout Montgomery County, Texas.

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