LONGITUDINAL OUTCOMES OF THE SAN JOAQUIN DUI MONITORING COURT

OCTOBER 2019

Submitted by

Charlene E. Zil, M.P.A.
Wendy Nuzzo, M.S.
Marny S. Rivera, Ph.D.
Shannon M. Carey, Ph,D.

TABLE OF CONTENTS

List of Tables

List of Figures

OUTCOME EVALUATION

Executive Summary

Background

In 2008, San Joaquin County implemented a system change where all repeat DUI offenders in the largest judicial district (mainly the City of Stockton) were required to participate in a DUI Monitoring Court program. This program was designed to treat all repeat DUI offenders, some of whom are high risk and high need (the key target population for the traditional treatment court model), while others are not. For this reason, there are two tracks to the San Joaquin DUI Monitoring Court (SJDMC). Participants in Track 1, the "monitoring track," are required to come to court infrequently to report on progress in completing the terms of their probation, including DMV requirements to qualify to get their license returned. Track 2, the "DUI Treatment Court track," is for those participants who demonstrate that they are unable to comply with Track 1 requirements and are assessed as needing drug and alcohol treatment.

In 2012, NPC Research completed an outcome evaluation of the SJDMC. The focus of the evaluation was on outcomes related to public safety, particularly traffic safety including new DUIs and traffic crashes, especially those that resulted in injury or fatalities. The study population included all SJDMC participants who entered the program between 2008 through 2010 and a comparison group of the population of repeat DUI offenders convicted of a DUI in 2006 (2 years before the program was implemented). These individuals were tracked in DMV data for recidivism events, including new DUI convictions and traffic crashes, for 18 months after their "index DUI" (the DUI that led to their participation in the program). Results showed that program participants were 25% less likely to have a new DUI charge in the 18 months after their index DUI. More importantly, program participants had significantly fewer crashes, including those related to drug and alcohol consumption and those resulting in injury. Program participants were also significantly more likely to comply with court, probation, and DMV requirements.

The original design for the SJDMC was for all repeat offenders to start in Track 1 and then move to Track 2 only if they were unable to comply with the Track 1 requirements. No risk or need assessment tools were used in the eligibility and placement process. Based on recommendations from the previous evaluation, and on the availability of a quick alcohol risk and need screening tool, in 2015, the SJDMC began screening all repeat DUI offenders using the Risk and Need Triage tool designed to measure risk and need specifically for new DUI offenses (the DUI-RANT) to determine appropriate placement of participants in Track 1 or Track 2.

In late 2017, NPC Research was contracted by the San Joaquin County Court to conduct an updated process as well as an outcome and cost evaluation of the SJDMC. The process evaluation led to the development of a "how to" manual that provides guidance on how to develop a multi-track DUI-Court model. There are two components to the outcome evaluation. The first component involves an analysis of long-term outcomes associated with the SJDMC participants from the first evaluation. The second component is an evaluation of outcomes associated with the use of a risk and needs assessment to determine the appropriate track for DUI court participants. This report contains the results of the first component of the evaluation, the longitudinal outcome results. The same DUI court participant and comparison group members from the 2012 study were used for this longitudinal analysis (i.e., those entering the program between 2008 and 2010). Where outcomes were tracked for 18 months in the prior study, cumulative outcomes were tracked for up to 6 years after the DUI index conviction date in the current longitudinal study, allowing us to determine long-term program impacts.

Key Evaluation Findings

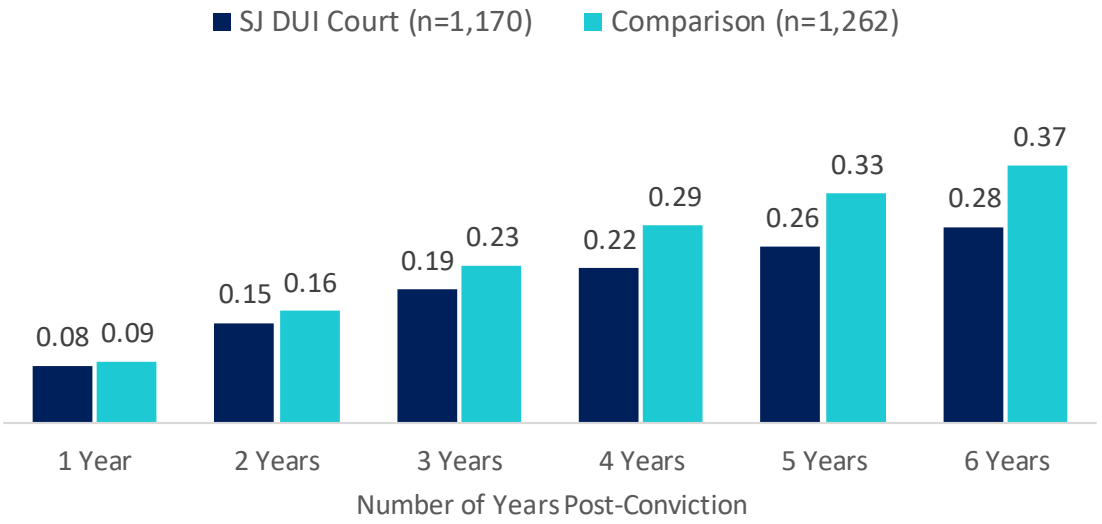
Does participation in the DUI Monitoring Court reduce recidivism (the number of new DUI convictions)?

Result: YES. SJDMC participants were significantly less likely to have a new DUI conviction than the comparison group at 6 years after index conviction.

Six years after the index conviction, participants in the DUI Monitoring Court had an average of 0.28 new DUI convictions (versus 0.37 in the comparison group), representing a 24% decrease in DUI recidivism. After controlling the groups for age, gender, and prior number of DUI convictions, we determined that the program group had significantly fewer new DUI convictions than comparison group ($p < 0.05$).[1] Figure A shows the average number of DUI reconvictions for the program and comparison groups, at each year after index conviction.

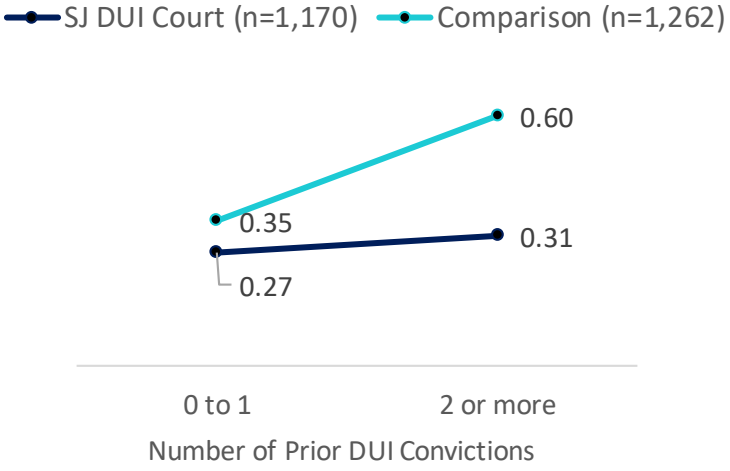
[1] At 6 years, adjusted means are 0.24 reconvictions for the program group and 0.32 for the comparison from a negative binomial count model with one interaction between group and prior DUI convictions, resulted in $p < 0.05$. Covariates in the model are evaluated at the following value Age at Entry = 35.2, and 2 years Prior Number of Alcohol/Drug Major conviction= 1.21, and Gender = Female.

Figure A. Average Number of New Major Alcohol or Drug DUI Convictions



In addition to an overall decrease in the number of cumulative DUI reconvictions, DUI Monitoring Court participants with two or more prior DUIs exhibited the greatest reductions in recidivism. As depicted in Figure B, DUI Monitoring Court participants with zero or one DUIs in the 2 years prior to index conviction (the conviction that led to SJDMC entry) had a 23% lower DUI conviction rate than the comparison group at 6 years post-conviction, whereas participants with an average of two or more prior DUIs had a 48% lower DUI conviction rate than the comparison group. This indicates that the SJDMC has greatest impact on higher risk DUI participants.

Figure B. Average Number of New Major Alcohol or Drug DUI Convictions after 6 Years by Number of Prior Convictions

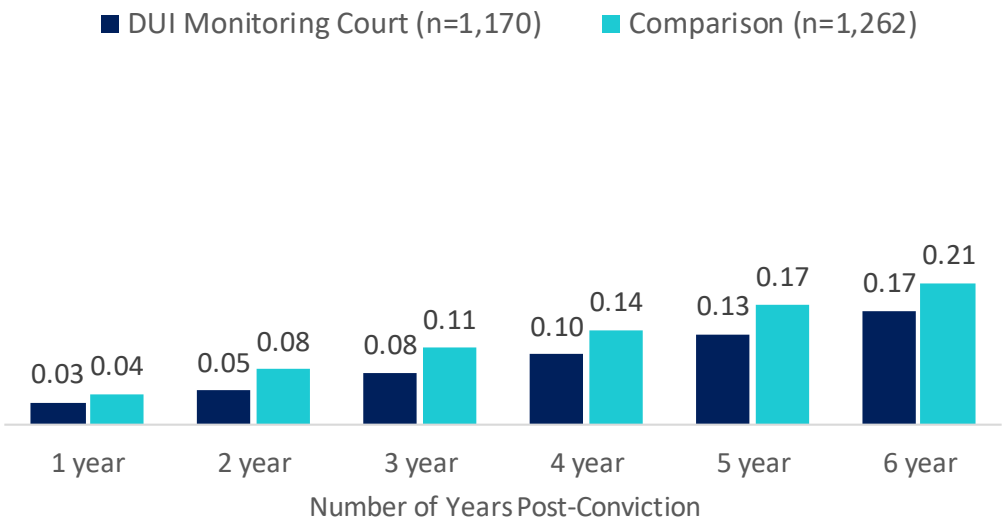


Does participation in DUI Monitoring Court lead to fewer total crashes compared to the traditional court and probation process?

Result: YES. SJDMC participants were significantly less likely to have a new crash than the comparison group at 6 years after index conviction.

Six years after the index conviction, the average number of alcohol- or drug-related crashes was 0.21 for the comparison group and 0.17 for the program group—a 19% reduction in the number of crashes. After controlling the groups for age, gender, and prior number of DUI convictions, we determined that the program group had significantly fewer new crashes than comparison group ($p < 0.05$).[2] Figure C shows the average number of crashes for the program and comparison groups, at each year after index conviction DUI Monitoring Court.

Figure C. Average Number of Total Crashes



[2] At 6 years, adjusted means are 0.17 crashes for the program group and 0.19 for the comparison from a negative binomial count model with one interactions between group and prior DUI convictions, resulted in $p < 0.05$. Covariates in the model are evaluated at the following value Age at Entry = 35.2, and 2 years Prior Number of Alcohol/Drug Major conviction= 1.21, and Gender = Female.

Summary: Results showed that in the 6 years following their index DUI (the event that lead to participation in DUI Monitoring Court) and subsequent entry into the SJDMC program, DUI Monitoring Court Participants:

- Had a significantly lower DUI recidivism rate,
- Had significantly fewer new DUI convictions,
- Exhibited the greatest reduction in recidivism for higher risk repeat DUI offenders (those participants with 2 or more DUIs in the two years before program entry),
- Had significantly fewer total crashes, and
- Were significantly less likely to fail to appear before the court than individuals that did not participate in the DUI Monitoring Court.

In addition, although not statistically significant, trends showed that SJDMC participants had fewer crashes associated with drinking or using drugs, DUI convictions, and injuries.

Lastly, SJDMC DUI Monitoring Court Participants in Track 1 (in the "monitoring track") were less likely than participants in Track 2 ("DUI Treatment Court Track") to have another DUI conviction, crash while drinking or using drugs, or crash that involved injury.

Introduction and Background

For the past 30 years in the United States, there has been a trend toward guiding nonviolent drug and alcohol offenders into treatment rather than incarceration. The original drug court model links the resources of the criminal system and substance treatment programs to increase treatment participation and decrease criminal recidivism.

In a typical drug court program, participants are closely supervised by a judge who is supported by a team of agency representatives that operate outside of their traditional adversarial roles. These include substance use treatment providers, district attorneys, public defenders, law enforcement officers, and parole and probation officers who work together to provide needed services to drug court participants. Generally, there is a high level of supervision and a standardized treatment program for all the participants within a particular court (including phases that each participant must pass through by meeting certain goals and regular and frequent drug testing).

The drug court model expanded over time to include other populations (e.g., juveniles) and other systems (e.g., child welfare and mental health). The model has also been used with a special focus on specific types of offenders (e.g., DUI offenders).

> DWI courts specifically target repeat driving-while-intoxicated (DWI) offenders with the main goal of protecting public safety. Benefits to society take the form of reductions in crime and future DWIs, resulting in reduced costs to taxpayers and increased public safety. DWI courts, specifically, have been shown to be effective in reducing recidivism (both of DWIs and other crimes) and in reducing taxpayer costs due to positive outcomes for DWI court participants, including fewer re-arrests, less time in jail and less time in prison (Carey, Fuller, Kissick, Taylor, & Zold-Kilbourn, 2008[3]).

The San Joaquin DUI Monitoring Court (SJDMC) was established in 2008 to deal with the large number of impaired driving fatalities in the county. There were nearly as many impaired driving fatalities in San Joaquin as homicide victims in the state. In 2008, there were 2,143 homicides[4] in California and there were 1,732 alcohol and drug involved crash fatalities in San Joaquin.[5] The SJDMC program was designed to achieve the maximum possible decrease in fatalities and injuries caused by impaired driving by targeting all repeat offenders. In 2008 in California, repeat offenders constituted 26.9% of all DUI convictions, but were involved in 62.1% of California's injuries and fatalities from impaired driving.[6] People with repeat offenses have demonstrated a need for intervention as their prior convictions were

[3] Carey, S. M., Fuller, B., E., Kissick, K., Taylor, E., & Zold-Kilbourn, P. (2008). *Michigan DUI Courts Outcome Evaluation*, final report. Submitted to Michigan Supreme Court.
[4] *Homicide in California 2008* (2010).
[5] State of California Department of Motor Vehicles. (2011). *2011 Annual Report of the California DUI Management Information System*.
[6] Ibid.

not sufficient deterrents to engaging in dangerous behavior such as drinking and driving. At the time of the implementation of the multi-track program (2008), San Joaquin County had approximately 1,000 individuals arrested for their second or higher DUI offense.

Many of the individuals who entered the SJDMC did not have a substance use disorder and would not have scored as high-need on traditional assessment tools. Those who are low-need do not need intensive substance use or mental health treatment and those who score low-risk do not need the same kind of supervision or other services appropriate for high-risk offenders. For this reason, Judge Richard Vlavianos developed a DUI Monitoring Court program with two tracks, a DUI court track for high-risk/high-need repeat DUI offenders designed to follow the full drug court model as described in the 10 Key Components of Drug Court and the 10 Guiding Principles of DWI Courts and a "monitoring" track for those at other risk and need levels. Both tracks are designed to take a minimum of 1 year to complete.

Track 1 participants (in the "monitoring track") are under intensive alcohol monitoring for 1 year, which consists of several different alcohol monitoring methods according to each participant's work schedule and ability to pay. These methods include some combination of interlock devices installed in the participants' vehicle, transdermal monitoring (SCRAM bracelet), remote testing (a portable breath testing device), daily testing, and urine EtG testing. Track 1 participants attend court hearings at program entry (for orientation from the judge), and then at 1 month, 6 months and 1 year to report to the judge on their progress with their Department of Motor Vehicles requirements, monitoring device, license status, jail sentence/alternative work program, and other probation conditional requirements. **Track 2** participants attend court sessions once every 2 weeks, have regular check-ins with probation and their case managers and receive the same intensive alcohol monitoring as Track 1 participants. This multi-track DUI court model expands the court's capacity and makes the best use of limited resources.

Outcome Evaluation Methods

Sample Selection

DUI Monitoring Court Participants. The San Joaquin County DUI Monitoring Court was implemented in January 2008. Beginning in 2008, all individuals with a new DUI conviction in the Stockton Judicial District who had at least one previous DUI conviction within the last 10 years were required to participate in the DUI Monitoring Court. The entire population of SJDMC participants that entered the program between 2008 and 2010 were included in the study analysis. Between 2008 and 2010, a total of 1,861 unique participants were enrolled in the DUI Monitoring Court. Of these participants 1,170 had complete information (demographics, driver's license number, and criminal history) for inclusion in this study.

***Comparison Group*.** Because SJDMC participants include the entire population of individuals convicted of a DUI in Stockton with at least one previous DUI conviction in the last 10 years, the comparison group chosen as the best match for the participants was the population of individuals convicted of a DUI in the City of Stockton with at least one DUI conviction in the last 10 years from the time period 2 years before the DUI Monitoring Court was implemented (i.e., in 2006). This comparison group numbered 1,262.

These samples are described in more detail later in this section and in the results section of this report.

Data Collection and Sources

DUI Monitoring Court Database

An Excel spreadsheet is kept by the SJDMC program on participant demographics as well as program start and end dates, status in the program, and case numbers and charges for the DUI that led to participation in the program. This data allowed us to confirm who was participating in the program and to describe the program participant population in more detail.

Criminal Justice Information System (CJIS)

CJIS is a database that combines data from the Sheriff, probation, and the courts. The CJIS database provided us with all individuals with a second or greater DUI charge during the 2 years prior to the implementation of the SJDMC program. The data were provided electronically from the court using a query.

Department of Motor Vehicles (DMV)

The DMV keeps data on dates of DUI convictions (misdemeanor and felony), crashes (including crashes involving drugs or alcohol), dates of license reinstatement, failures to appear, and driving history. Based on a specified DUI conviction date for each individual in our sample, the DMV was able to query driving history (e.g., prior DUI convictions, prior crashes) and recidivism events (e.g., new DUI convictions, crashes, etc.) up to the present.

Analysis Design

The original 2012 analysis of the San Joaquin DUI Monitoring Court data includes only persons whose ***index DUI*** occurred in Stockton. The *Index DUI* is defined as the conviction that led to participation in the SJDMC, or in the case of the comparison group, the DUI conviction that would have led to participation in the SJDMC if it had existed in 2006. (The intake process for the SJDMC is extremely efficient and individuals commonly have a program entry date within 7 days or less of their index DUI, therefore, program entry date and index DUI date are roughly equivalent.) This approach was used again in this report and is described below.

This approach compares all persons who have a DUI index date in Stockton in 2006 (i.e., the comparison group) with all persons who have a DUI reference date between 2008 through 2010 (i.e., the program group). This approach measures whether all offenders who received their second or greater DUI in the time period before the implementation of DUI Court did better than people who received their second or greater DUI after the implementation of the program (i.e., the analyses examine whether the implementation of DUI Monitoring Court potentially impacted the population of repeat DUI offenders).

The analyses of count data (for the averages) were conducted using negative binomial regression, and the analyses of categorical data (the percentages) were conducted using chi-squared analysis. The aim of these analyses was to examine differences on cumulative outcomes 6 years after the DUI conviction date while controlling for all demographics available in the data—the number of DUIs in the prior 2 years, age at DUI reference date, and gender. Note that the 6-year means presented in these results have been adjusted by controlling for the covariates described above.

Demographics of Program and Comparison Samples

The program group participated in the DUI Monitoring Court, whereas the comparison group was comprised of individuals convicted of DUI who experienced the traditional court process prior to implementation of the monitoring court. The two groups were similar in gender distribution (about 82% - 83% male). However, on average DUI Court participants were 3 years older (36.5 years vs. 33.9 years of age), had more prior misdemeanor DUIs (1.17 vs. 1.08), and had more prior felony DUIs (0.01 vs. 0.00).[7] As noted above, these differences were controlled for in the outcome analyses of cumulative counts. Table 1 presents demographic characteristics for the two groups.

Table 1. Participant and Comparison Group Demographics and Prior DUI Conviction Data

Characteristic	DUI Court *N* = 1,170	Comparison *N* = 1,262	Significant?
Average Age at Index DUI	36.5	33.9	Yes***
Gender			
Male	82.9%	82.3%	No
Female	17.1%	17.7%	
Average Number of 2 Year Prior DUI			
Misdemeanor convictions	1.17	1.08	Yes***
Felony convictions	0.01	0.00	Yes*

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Additional demographic information, such as race/ethnicity and education, collected on the SJDMC participants allowed analysis of those population characteristics. Table 2 describes the population of individuals that entered the SJDMC between 2008 and 2010 and illustrates the differences between the two tracks of participants. Track 2 (treatment track) consists of those who were unable to comply with the Track 1 (monitoring track) requirements and were assessed as having a substance use disorder. Track 2 participants are significantly more likely to be Black or White, while Track 1 participants are significantly more likely to Hispanic. Track 2 participants also have significantly more DUIs in the 2 years prior to entering the SJDMC.[8] These findings, particularly the more extensive DUI history for Track 2, are consistent with high-risk, high-need individuals.

[7] Comparisons of categorical variables were made using chi-square analyses. Comparisons of continuous variables were made using t-tests.
[8] Comparisons of categorical variables were made using chi-square analyses. Comparisons of continuous variables were made using t-tests.

Table 2. Track 1 and Track 2 Demographic and Prior DUI Conviction Data

Participant Characteristic	Track 1 *N* = 1,028	Track 2 *N* = 142	Significant?
Average Age at Index DUI	36.6 years	36.5 years	No
Gender			
Male	82.8%	83.8%	No
Female	17.2%	16.2%	
Race and Ethnicity			
Asian	7.4%	3.5%	Yes*
Black or African American	14.0%	20.4%	
Hispanic	48.3%	39.4%	
Native American	0.6%	1.4%	
Pacific Islander	1.5%	0.7%	
White	23.1%	31.0%	
Other	1.8%	2.8%	
Unknown	3.4%	0.7%	
Marital Status			
Single	48.8%	49.3%	No
Married	22.5%	23.2%	
Not Married	13.7%	9.2%	
Unknown	15.0%	18.3%	
Highest Education			
No HS or did not complete	28.1%	34.5%	No
HS graduate or GED	29.7%	26.8%	
Some college or more	29.5%	25.4%	
Unknown	12.7%	13.4%	
Employment Status			
Employed	44.5%	37.3%	No†
Unemployed	41.3%	50.0%	
Unknown	14.2%	12.7%	
Average Number of 2-year Prior DUI			
Misdemeanor Convictions	1.16	1.38	Yes**
Felony Convictions	0.00	0.02	No

†$p = 0.058$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Outcome Results

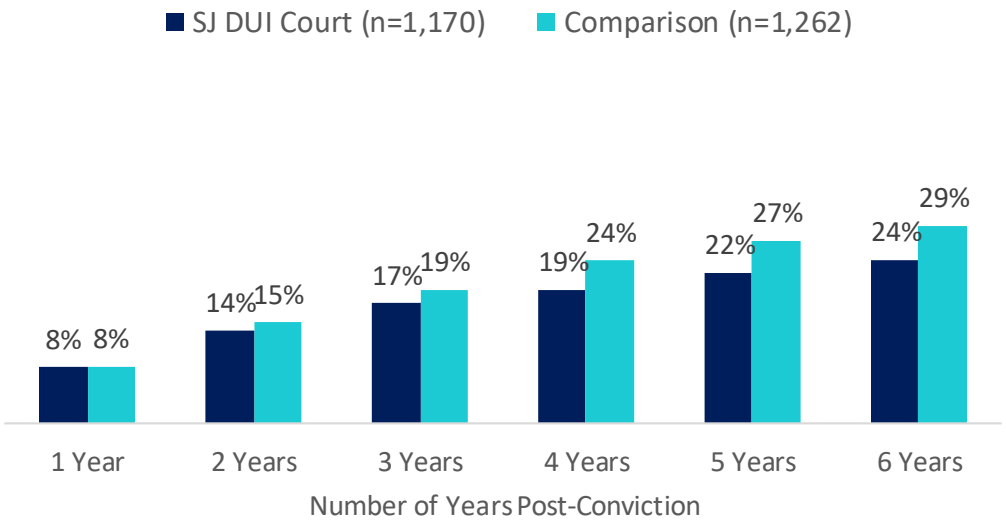
This section presents the outcome results of the San Joaquin County DUI Monitoring Court from analysis of the data used to answer four research questions. The first three research questions involve differences between the population of DUI offenders who entered the SJDMC and the population of DUI offenders in the 2 years prior to SJDMC implementation on: (1) DUI convictions, (2) crashes, and (3) compliance with court conditions (e.g., license reinstatements). The fourth research question inquires as to whether there are any participant characteristics associated with recidivism (for the program sample only). Each one of these outcomes will be described in further detail in each section.

Research Question #1: What is the impact of participation in the DUI Monitoring Court on recidivism (the rate and number of new DUI convictions) compared to traditional court processing?

1a. Does participation in DUI Monitoring Court lead to a lower recidivism rate (the percent of participants who were reconvicted) compared to traditional court processing?

Result: YES. Fewer SJDMC participants than the comparison group were reconvicted for any DUI in the 6 years after their index DUI conviction. At 6 years post DUI conviction, 24% of the DUI Monitoring Court participants were reconvicted for a new DUI offense, versus 29% of the comparison group. Although the difference is not large, this represents a 17% reduction in the number of individuals reconvicted for a new DUI.[9] Figure 1a shows the cumulative percent of SJDMC participants and comparison group members reconvicted for a new DUI, by number of years post index conviction.

Figure 1a. Percent Convicted for Any Major Drug or Alcohol DUI Offense

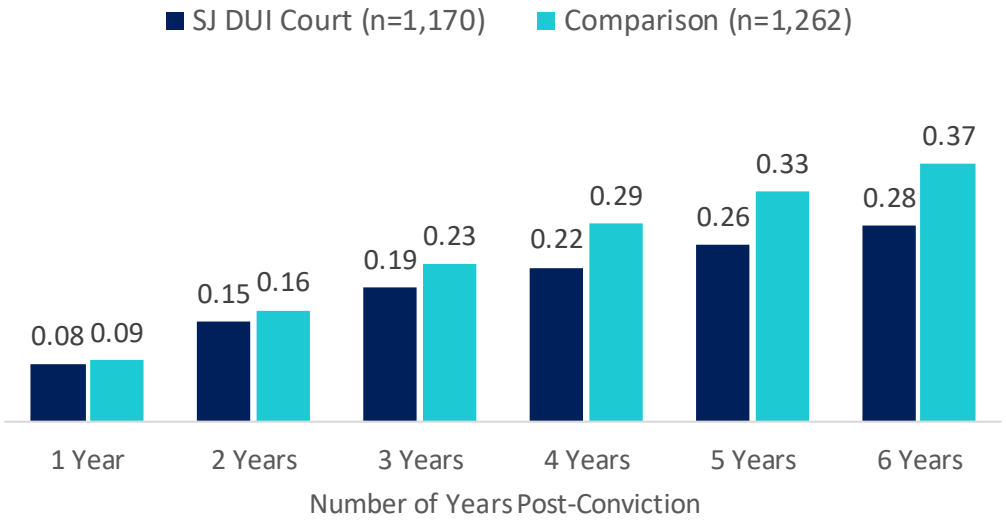


[9] At 6 years, a Chi-Squared test resulted in a significant difference ($p < 0.01$) between groups.

1b. Does participation in the DUI Monitoring Court reduce recidivism (the number of new DUI convictions)?

Result: Yes. SJDMC participants had a significantly smaller number of new DUI convictions per person than the comparison group. The average number of new DUI convictions that occurred within 6 years after the index conviction (the conviction that led to SJDMC entry)[10] was 0.28 for program group and 0.37 for the comparison group, representing a 24% decrease in DUI recidivism. After controlling the groups for age, gender, and prior number of DUI convictions, we determined there was a significant difference between the two groups in the number new DUI convictions (p <0.05).[11] Figure 1b shows the average number of cumulative DUI reconvictions for the program and comparison groups, at each year after index conviction.

Figure 1b. Average Number of New Major Alcohol or Drug DUI Convictions

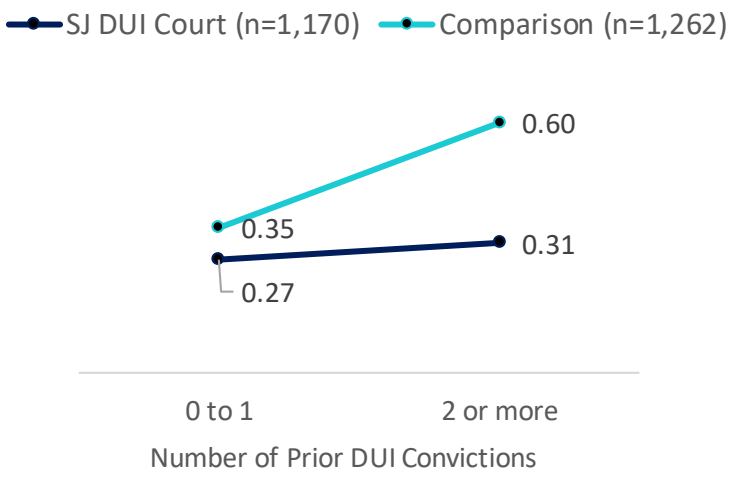


[10] In the comparison population, the index conviction was the DUI conviction that would have led to the offender entering the SJDMC had the SJDMC existed at the time.

[11] At 6 years, adjusted means are 0.24 reconvictions for the program group and 0.32 for the comparison from a negative binomial count model with one interaction between group and prior DUI convictions resulted in p < 0.05. Covariates in the model are evaluated at the following value Age at Entry = 35.2, and 2 years Prior Number of Alcohol/Drug Major conviction= 1.21, and Gender = Female.

In addition to an overall decrease in the number of cumulative DUI reconvictions, DUI Monitoring Court participants with two or more prior DUIs exhibited the greatest reductions in recidivism. As depicted in Figure 1c, DUI Monitoring Court participants with zero or one DUIs in the 2 years prior to index conviction had a 23% lower DUI conviction rate than the comparison group at 6 years post-conviction, whereas participants with an average of two or more prior DUIs had 48% lower DUI conviction rate than the comparison group.

Figure 1c. Average Number of New Major Alcohol or Drug DUI Convictions after 6 Years by Number of Prior Convictions

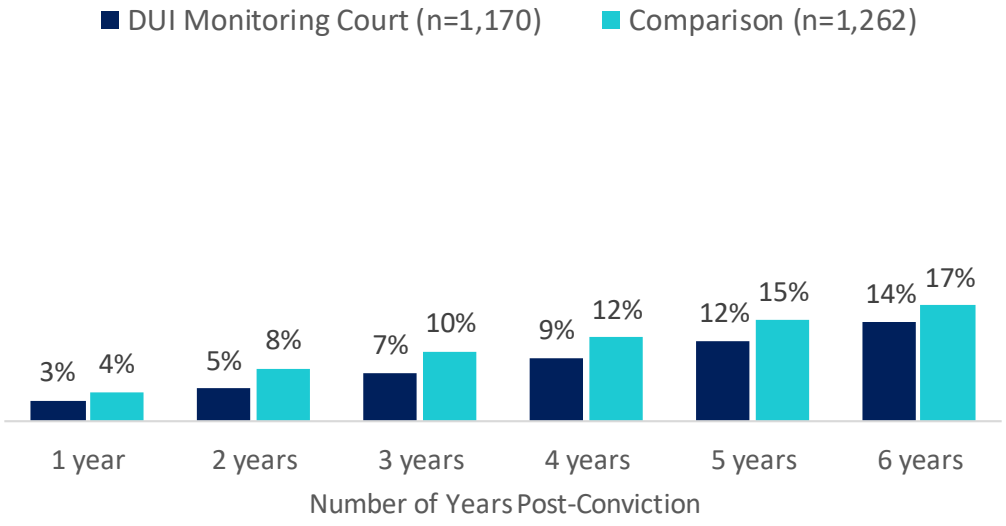


Research Question #2. What is the impact of participation in the DUI Monitoring Court on crashes (the rate and number of new traffic crashes) compared to traditional court processing?

2a. Does participation in DUI Monitoring Court lead to a lower rate of crashes (the percent of participants who have a crash), in general (regardless of if they are alcohol related), compared to the traditional court process?

Result: MAYBE. Figure 2a shows that people participating in DUI Monitoring Court had a slightly lower likelihood of any crash, regardless of its relationship to being under the influence of intoxicants, 6 years after their index conviction than did those in the comparison group. Of the comparison group members, 17% had a crash 6 years after their index conviction, compared to 14% of the DUI Monitoring Court participants—an 18% decrease in the number of individuals involved in a crash (not statistically significant).[12]

Figure 2a. Percent of Individuals with Crashes of Any Kind

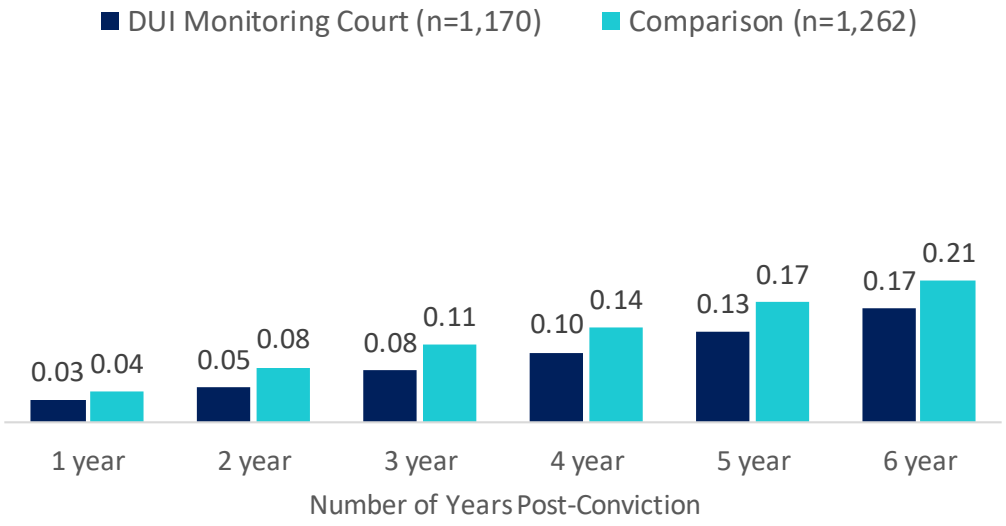


[12] At 6 years, the Chi-Squared test did not result in a significant difference between groups, although the significance level indicates a possible trend ($p = 0.098$).

2b. Does participation in DUI Monitoring Court lead to fewer total crashes compared to the traditional court process?

Result: YES. SJDMC participants had significantly fewer crashes than the comparison group at 6 years after index conviction. At 6 years, the average number of alcohol- or drug-related crashes was 0.21 for the comparison group and 0.17 for the program group—a 19% reduction in the number of crashes. After controlling the groups for age, gender, and prior number of DUI convictions, we determined that the program group had significantly fewer new crashes than comparison group ($p < 0.05$).[13] Figure 2b shows the average number of crashes for the program and comparison groups at each year after index conviction.

Figure 2b. Average Number of Total Crashes



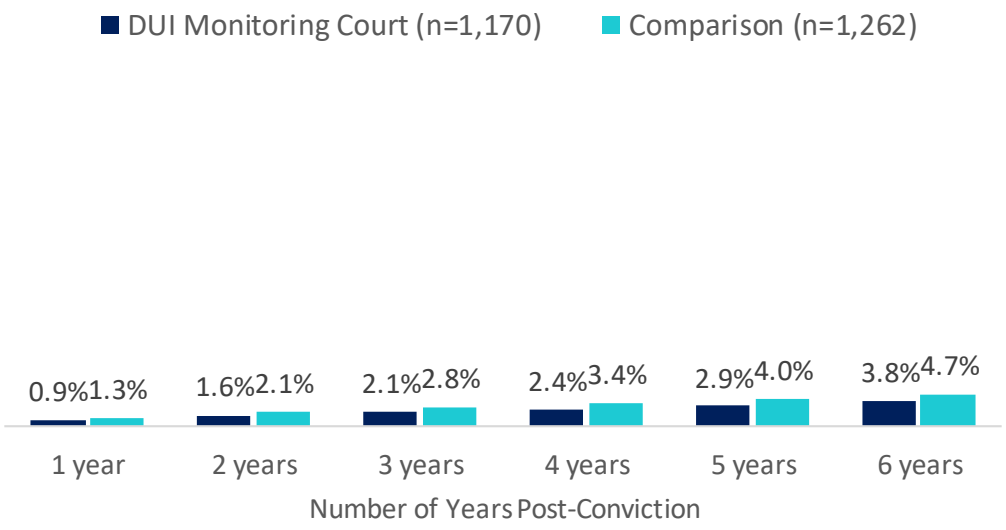
[13] At 6 years, adjusted means are 0.17 crashes for the program group and 0.19 for the comparison from a negative binomial count model with one interactions between group and prior DUI convictions, resulted in $p < 0.05$. Covariates in the model are evaluated at the following value Age at Entry = 35.2, and 2 years Prior Number of Alcohol/Drug Major conviction= 1.21, and Gender = Female.

2c. Does participation in DUI Court lead to a lower rate of alcohol- or drug-involved crashes (percent of people who get in crashes where alcohol or drugs were involved) compared to the traditional court process?

Result: MAYBE. Figure 2c shows that fewer SJDMC participants were involved in crashes related to had been drinking or using drugs, although the difference was very small. Crashes involving the presence of alcohol- or drugs are called "had been drinking or using drugs (HBD)" offenses by the DMV. These offenses differ from *per se* DUI offenses, in that the officer determines whether the individual is impaired (e.g., observing the driver's driving performance or using field sobriety tests), whereas the former is based on the results of a blood alcohol content measurement.

Figure 2c shows that individuals participating in the DUI Monitoring Court had, again, a slightly lower likelihood of an alcohol- or drug-involved crash 6 years after their index conviction than did those in the comparison group. Of the comparison group members, 5% had an alcohol- or drug-involved crash in the 6 years after their index conviction, compared to 4% of the participants. [14] This small difference continues to be fairly consistent over time. Again, although these numbers are small and not statistically significant, they represent events that can have serious social and financial costs and thus are important to reduce to as small a rate as possible.

Figure 2c. Percent of Crashes Designated as "Had Been Drinking or Using Drugs" (HBD)



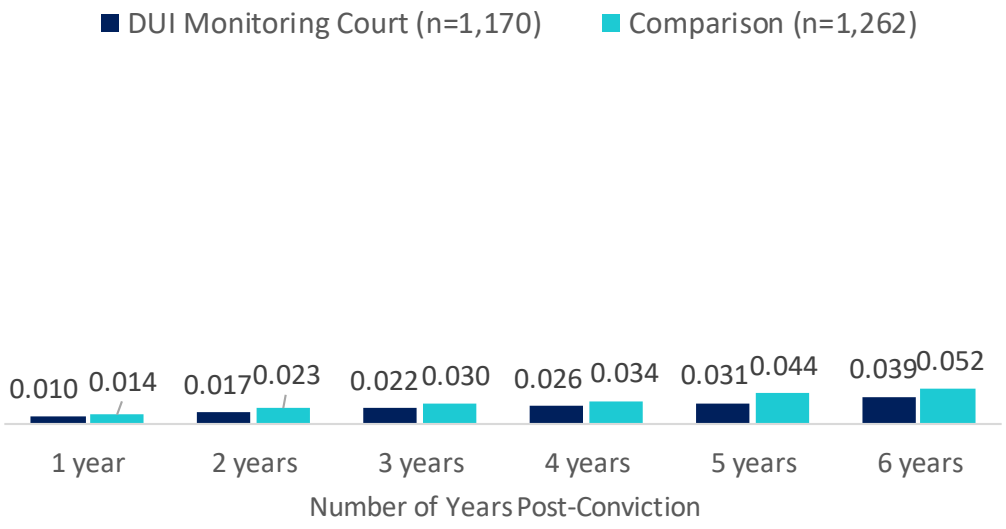
[14] At 6 years, a Chi-Squared test resulted in no statistical difference between groups ($p = 0.263$).

2d. Does participation in DUI Monitoring Court lead to fewer alcohol- or drug-involved crashes compared to the traditional court and probation process?

Result: MAYBE. SJDMC participants had about the same number of alcohol- or drug-involved crashes than those in the comparison group at 6 years post index conviction. This question relates to the average number of these types of crashes whereas 2c (above) describes the rate/percentage. As in question 2c, this category of offense indicates that the officer assesses that the driver is impaired, regardless of any blood alcohol tests.

Figure 2d shows that people participating in the DUI Monitoring Court had a fewer alcohol- or drug-involved crashes 6 years after their index conviction than did those in the comparison group, although the difference was very small and not statistically significant.[15] The average number of alcohol- or drug-related crashes was 0.05 for the comparison group (representing 63 crashes), and 0.04 for the program group (representing 47 crashes). Although these numbers are small, they represent events that can have serious social and financial costs, and thus are important to reduce to as small a number as possible.

Figure 2d. Average Number of Crashes with the Designation "Had Been Drinking or Using Drugs" (HBD)

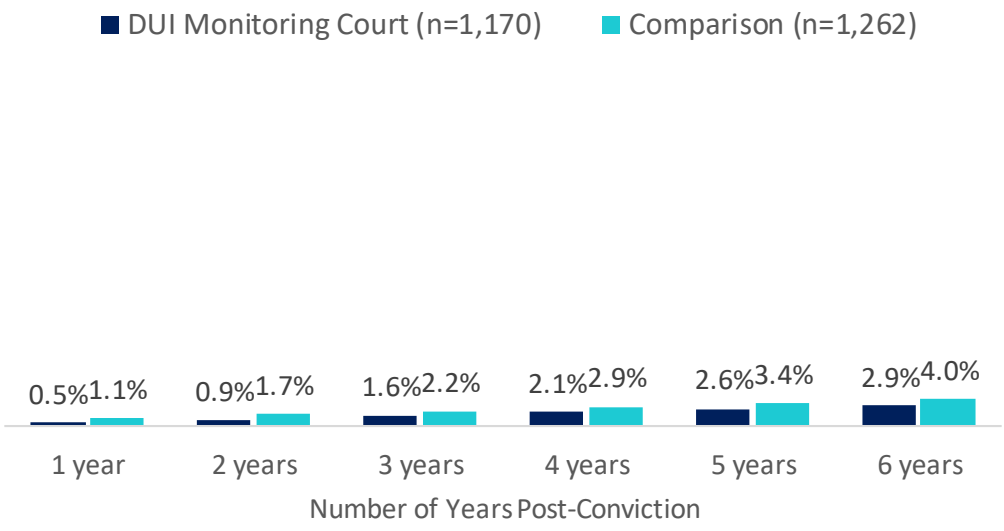


[15] At 6 years, the negative binomial count model with one interaction between group and priors did not result in a significant difference for the group variable ($p = 0.582$). The adjusted means for are 0.032 for the program and 0.041 for the comparison. For the adjusted means, covariates in the model are evaluated at the following values: Age at Entry = 35.2, 2 years Prior Number of Alcohol/Drug Major conviction= 1.21, and Gender = Female.

2e. Does participation in DUI Court lead to a lower rate of crashes associated with DUI conviction (the percent of participants who have a crash associated with DUI conviction) compared to the traditional court process?

Result: MAYBE. A smaller proportion of SJDMC participants were involved in crashes associated with DUI convictions than the comparison group, although the difference was very small. This measure involves a search within DMV records for DUI arrests that fall on the same date as a crash. Figure 2e shows that people participating in the DUI Monitoring Court had a slightly smaller rate of crashes associated with DUI conviction 6 years after their index conviction than did those in the comparison group. Of the comparison group members, 4% had a crash in the 6 years after their index conviction, compared to 3% of the DUI Monitoring Court participants, though this difference was not statistically significant.[16]

Figure 2e. Percent of Individuals with Crashes Associated With DUI Conviction

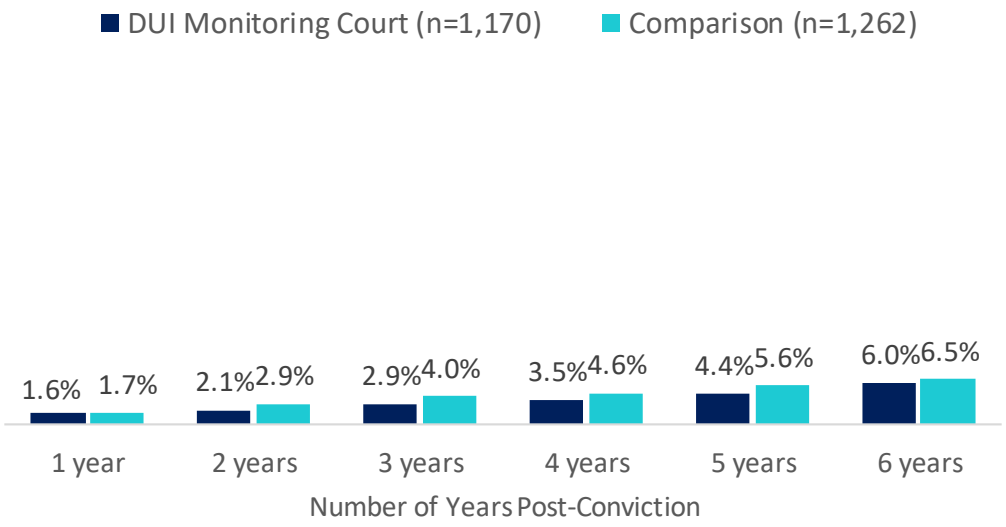


[16] At 6 years, a Chi-Squared test indicated no statistical difference between groups ($p = 0.154$).

2f. Does participation in DUI Court lead to a lower rate of crashes with injury compared to the traditional court process?

Result: MAYBE. A smaller proportion of SJDMC participants were involved in injury crashes (regardless of alcohol or drug involvement) than the comparison group, although the difference was very small. At 6 years post entry, 7% of the comparison group was involved in at least one injury crash, compared to 6% in the program group (not statistically significant).[17] Figure 2f shows the cumulative percent of program and comparison group members involved in injury crashes for each year after index conviction.

Figure 2f. Percent of Individuals with Injury-Involved Crashes



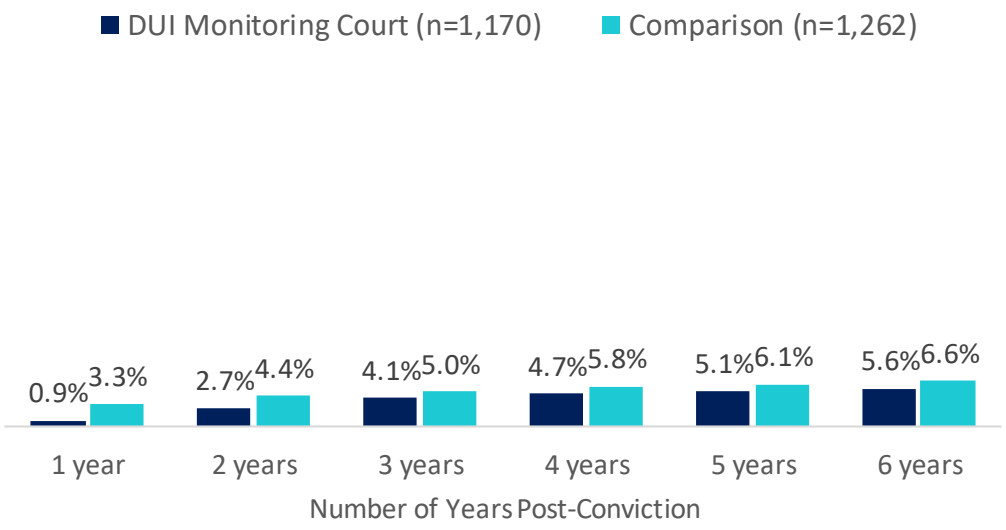
[17] At 6 years, a Chi-Squared test indicated no statistical difference between groups ($p = 0.600$).

Research Question #3. Does participation in DUI Court lead to greater compliance with the requirements of the court?

3a. Does participation in DUI Monitoring Court lead to a lower rate of driver's license suspensions or revocations compared to the traditional court process?

Result: MAYBE. Figure 3a shows that the program group had a slightly lower rate of driver's license suspensions or revocations (as a result of noncompliance with a DUI program) 6 years after their index conviction as the comparison group. In the State of California, when a person is convicted for a second or subsequent DUI offense within 10 years, the individual will typically have his or her license suspended for at least 1 year. After completion of a prescribed period, and in order to reinstate their license, individuals must enroll in a DUI program, as well as complete any other requirements as identified by the court.[18] We analyzed the proportion of DUI Monitoring Court participants and comparison group members that had their license suspended or revoked due to failure to comply with DUI program requirements. At 6 years post index conviction, 7% of the comparison group had their license suspended or revoked, compared to 6% of the DUI Monitoring Court participants, though that difference was not significant.[19] Figure 3a shows the cumulative percent of program and comparison group members with suspended or revoked licenses due to noncompliance with DUI program requirements.

Figure 3a. Percent of Suspensions or Revocations Due to Noncompliance with the DUI Program



[18] Note, this option is available to all individuals, not just participants in DUI Monitoring Court.
[19] At 6 years, a Chi-Squared test indicated no statistical difference between groups ($p = 0.293$)

3b. Does participation in DUI Court lead to increased rate of license reinstatement (the percent of people whose license is reinstated) compared to the traditional court process?

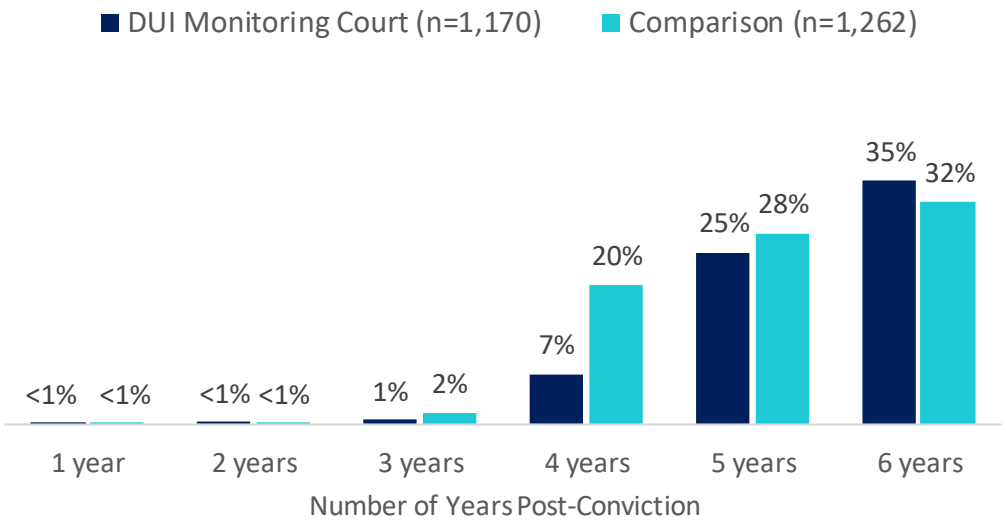
Result: MAYBE. SJDMC participants had a higher rate of license reinstatement at 6 years post index conviction, compared with individuals in the traditional court process, though the difference was not statistically significant. As previously mentioned, in order to reinstate a license after a suspension related to a DUI conviction, individuals in California must complete certain requirements. Individuals can obtain a *restricted* driver's license which permits them to drive to specific locations, under certain conditions (e.g., installing an ignition interlock device in their car), after enrolling in a DUI program. In order to obtain a *full* license reinstatement, the driver must pay a fee and complete all of the court and DMV requirements, which includes maintaining a California Insurance Proof Certificate (SR 22) for a period of 3 years.

We analyzed the proportion of DUI Monitoring Court participants and comparison group members that were successfully able to reinstate their California driver's license. Figure 3b includes both restricted and full license reinstatements combined; however, at 6 years post index conviction, less than 1% (*n*=4) of all license reinstatements were restricted licenses. [20] Of the comparison group members, 32% had their license reinstated, compared to 35% of the DUI Monitoring Court participants—a 9% increase in the rate of license reinstatements (not statistically significant). [21] Although this difference is not significant at 6 years, the trend of the program group appears to be heading in a positive direction. Figure 3b shows the percent of program and comparison group members with any license reinstatement at each year after index conviction.

[20] In the DMV dataset, when a person obtains a *full* license reinstatement, the date (if applicable) of the *restricted* license reinstatement is overwritten. In the DMV dataset obtained in 2012, 1% of the DUI Monitoring Court had a *full* license reinstated at 18 months post index conviction, and 10% had a *restricted* license. Less than 1% of the comparison group had a *full* license and none had a *restricted* license (Chi-Squared test resulting in $p < .001$). The original 2012 incorrectly reported the percent of individuals with any license reinstatement as 19% for the DUI Monitoring Court and 8% for the comparison group, which represented a license reinstatement at any time since index conviction, and not necessarily within 18 months of index conviction.

[21] At 6 years, a Chi-Squared test resulted in no significant difference between groups ($p = 0.121$).

Figure 3b. Percent of Individuals Whose License Was Reinstated (Restricted and Full)



Research Question #4: Are there participant characteristics related to recidivism (DUI reconvictions and new crashes)?

4a. Are there any participant demographics and background characteristics related to DUI recidivism (being reconvicted of a subsequent DUI)?

Result: YES. DUI Monitoring Court participants that were reconvicted for a new DUI within 6 years of index conviction were more likely to have been in Track 2, be Black or African American, and be younger (after controlling for all other factors). For this analysis, we examined whether there were any participant demographics or background characteristics associated with a new DUI conviction.[22] At 6 years post index conviction, 24% (*n*=278) of DUI Monitoring Court participants were reconvicted for at least one new DUI. As can be seen in Table 3a, on average, those that were reconvicted were 2 years younger (35 years vs. 37), and a slightly higher proportion were Black or Hispanic (compared to White participants). There were no significant differences by gender or marital status of participants.

Table 3a. DUI Monitoring Court Participant Demographics by Reconviction Status

Participant Demographics	Not reconvicted *N* = 892	Reconvicted *N* = 278	Significant?
Average Age at Index DUI	37 years	35 years	Yes*
Gender			
Male	82.2%	85.3%	No
Female	17.8%	14.7%	
Race and Ethnicity			
Asian	7.6%	4.7%	Yes*
Black or African American	14.1%	16.9%	
Hispanic	46.1%	51.1%	
Native American	0.9%	0.0%	
Pacific Islander	1.6%	0.7%	
White	24.9%	21.2%	
Other	1.5%	3.2%	
Unknown	3.4%	2.2%	
Marital Status			
Single	48.8%	49.3%	No
Married	23.4%	19.8%	
Not Married	12.8%	14.4%	
Unknown	15.0%	16.5%	

Note. Comparisons of categorical variables were made using chi-square analyses. Comparisons of continuous variables were made using t-tests. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

[22] The prevalence of traffic crashes was too low for a thorough analysis.

In terms of other participant characteristics, participants that were reconvicted of a new DUI tended to have more prior DUIs in the 2 years prior to index conviction (1.24 convictions vs. 1.15), and more likely to have been placed in Track 2 (the treatment track) while participating in DUI Monitoring Court. There were no significant differences in terms of education or employment status of those that were reconvicted. Table 3b shows the background characteristics of DUI Monitoring Court participants, split by reconviction status.

Table 3b. DUI Monitoring Court Participant Background Characteristics by Reconviction Status

Participant Characteristic	Not reconvicted *N* = 892	Reconvicted *N* = 278	Significant?
Highest Education			
No HS or did not complete	29.0%	28.4%	No
HS graduate or GED	28.9%	30.6%	
Some college or more	29.9%	25.9%	
Unknown	12.1%	15.1%	
Employment Status			
Employed	43.8%	42.8%	No
Unemployed	42.2%	43.2%	
Unknown	14.0%	14.0%	
Average Number of 2-year Prior DUI			
Misdemeanor Convictions	1.15	1.24	Yes*
Felony Convictions	0.00	0.01	No
Track			
Track 1	91.4%	76.6%	Yes***
Track 2	8.6%	23.4%	

Note. Comparisons of categorical variables were made using chi-square analyses. Comparisons of continuous variables were made using t-tests. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

All participants with complete information (i.e., not missing or unknown) for demographics and background characteristics were analyzed to see which, if any, characteristics were associated with reconviction, while controlling for all other factors. Of the 1,170 DUI Monitoring Court participants in the study, 75% (*n*=879) had complete information for analysis. Of these, 23% (*n*=205) were convicted of a new DUI within 6 years, which is similar to the overall SJDMC recidivism rate of 24%. Above and beyond all other characteristics, participation in Track 2 (the treatment track) was the largest factor associated with a new DUI conviction ($p<0.001$).[23] Black participants were also more likely to be

[23] A binary logistic regression was performed with the following factors included: age at index conviction, gender, race/ethnicity, marital status at program entry, employment status at entry, highest education at entry, average number of prior DUI convictions in the 2 years prior to index conviction, and track participation.

reconvicted (compared to White participants, $p < 0.05$), and there was a small trend indicating younger participants were also more likely to be reconvicted ($p = 0.65$).

4c. Are there any participant demographics and background characteristics related to having a subsequent crash?

Result: NO. There were no significant differences in participant demographic or background characteristics for those involved in a subsequent crash. At 6 years post index conviction, 14% ($n = 168$) of DUI Monitoring Court participants were involved in at least one crash. Essentially no difference existed between the groups for any participant characteristics: gender, employment status, race, marital status, highest education, age, and prior misdemeanor or felony DUI convictions, or track status. Tables 4a and 4b details demographic and court-related data comparing participants who had a crash of any kind versus no crash in the 6 years after their index conviction.[24]

Table 4a. DUI Monitoring Court Participant Demographics by New Crash Status

Participant Characteristic	No Crash *N* = 1002	New Crash *N* = 168	Significant?
Average Age at Index DUI	36.6 years	36.3 years	No
Gender			
Male	82.5%	85.1%	No
Female	17.5%	14.9%	
Race and Ethnicity			
Asian	7.2%	5.4%	No
Black or African American	14.2%	18.5%	
Hispanic	47.0%	48.8%	
Native American	0.8%	0.0%	
Pacific Islander	1.5%	0.6%	
White	24.4%	22.0%	
Other	1.9%	1.8%	
Unknown	3.1%	3.0%	
Marital Status			
Single	48.2%	53.0%	No
Married	23.1%	19.6%	
Not Married	13.4%	11.9%	
Unknown	15.4%	15.5%	

[24] Comparisons of categorical variables were made using chi-square analyses. Comparisons of continuous variables were made using t-tests.

Table 4b. DUI Monitoring Court Participant Background Characteristics by New Crash Status

Participant Characteristic	No Crash *N* = 1002	New Crash *N* = 168	Significant?
Highest Education			
No HS or did not complete	29.7%	23.8%	No
HS graduate or GED	28.9%	31.5%	
Some college or more	29.0%	28.6%	
Unknown	12.3%	16.1%	
Employment Status			
Employed	40.5%	44.1%	No
Unemployed	40.5%	42.7%	
Unknown	19.0%	13.2%	
Average Number of 2-year Prior DUI			
Misdemeanor Convictions	1.18	1.13	No
Felony Convictions	0.00	0.01	No
Track			
Track 1	88.3%	85.1%	No
Track 2	11.7%	14.9%	

4d. Are there any differences in recidivism by year of program entry?

Result: MAYBE**.** There are some small decreases in in the DUI recidivism rate and rate of new crashes by program participant year of entry, but these differences were not statistically significant. As a reminder, all program participants in this study entered the DUI Monitoring Court between the years of 2008 to 2010. Across the five areas of interest, there does appear to be a 1 to 3 percentage point decrease in the percent of the population reconvicted for a new DUI or involved in another crash, but this decrease was not statistically significant. Table 4c shows the proportion of the program group that, by entry year, was reconvicted for a new DUI or involved in another crash at 6 years post index conviction.

Table 4c. DUI Monitoring Court Recidivism Rates by Program Entry Year

Relevant Research Question	Outcome	2008 *N* = 408	2009 *N* = 442	2010 *N* = 320	Significant?
1a	Any new DUI conviction	24.5%	23.8%	22.8%	No
2a	Any new traffic crash	16.2%	13.6%	13.1%	No
2c	HBD crash	4.2%	4.1%	2.8%	No
2e	Crash associated with DUI conviction	3.2%	2.9%	2.5%	No
2f	Injury crash	6.4%	6.6%	4.7%	No

4e. Are there any differences in recidivism by DUI Monitoring Court track status?

Result: YES. As previously mentioned, the largest factor associated with being convicted of a new DUI offense was track status. Participants in Track 2 (the Treatment Track) were more likely to be reconvicted of a new DUI than participants in Track 1 (the Monitoring Track), 46% compared to 21%, respectively. Additionally Track 2 participants were more likely to be involved in crashes where the officer determined they had been drinking or using drugs (HBD; 9% compared to 3% of Track 1 participants), as well as injury crashes (10% compared to 5% of Track 1 participants). Though not significant, those who came from Track 2 also had a larger percentage of participants involved in any type of crash (18% vs. 14%) and also crashes associated with DUI convictions (5% versus 3%). Table 4d shows the recidivism rate (for DUI convictions and crashes), by track status.

Table 4d. DUI Monitoring Court Recidivism Rates by Track

Relevant Research Question	Outcome	Track 1 *N* = 1,028	Track 2 *N* = 142	Significant?
1a	Any new DUI conviction	20.7%	45.8%	Yes***
2a	Any new traffic crash	13.9%	17.6%	No
2c	HBD crash	3.1%	8.5%	Yes**
2e	Crash associated with DUI conviction	2.6%	4.9%	No
2f	Injury crash	5.4%	9.9%	Yes*

*$p < 0.05$, **$p < .01$, ***$p < .001$

Outcome Evaluation Summary

The focus of this portion of the outcome evaluation of the San Joaquin DUI Monitoring Court (SJDMC) was to measure whether the implementation of the court had an impact on recidivism (as measured by DUI convictions and new crashes) for those who participated. The analysis included 1,170 SJDMC participants and 1,262 comparison individuals who were convicted of their second or greater DUI offense in the last 10 years.

Results showed that in the 6 years following their index DUI and subsequent entry into the SJDMC program, DUI Monitoring Court Participants:

- Had significantly fewer new DUI convictions,
- Had significantly fewer individuals arrested for new DUI convictions,
- Exhibited the greatest reduction in recidivism for the higher risk participants (those with 2 or more DUI conviction in the 2 year prior to program entry,
- Had significantly fewer total crashes, and
- Were significantly less likely to fail to appear before the court than individuals that did not participate in the DUI Monitoring Court.

In addition, although not statistically significant, trends showed that SJDMC participants had fewer crashes associated with drinking or using drugs, DUI convictions, and injuries.

Lastly, SJDMC DUI Monitoring Court Participants in Track 1 (in the "monitoring track") were less likely than participants in Track 2 ("DUI Treatment Court Track") to have another DUI conviction, crash while drinking or using drugs, or crash that involved injury. This is congruent with expectations for the high-risk high-need individuals who comprise Track 2.

See Appendix A for the summary of means and percentages of the outcome questions.

One factor to consider when examining these findings is that individuals in the comparison group (those with an index DUI in 2006) who had a new DUI after 2008 would subsequently enter the SJDMC. Therefore, many of those originally in the comparison group who recidivated eventually became SJDMC participants and therefore their outcomes would be impacted by the services they received as well as the monitoring and other requirements of the SJDMC. Given this, the significant findings, as well as the trends, may be more meaningful in demonstrating the positive impact of the SJDMC.

The San Joaquin DUI Monitoring Court model shows substantial promise for increasing public safety in reducing drunk driving and automobile accidents, the second largest cause of accidental death in the nation.[25]

[25] Poisoning is now the leading cause of death from injuries in the United States and nearly 9 out of 10 poisoning deaths are caused by drugs. Warner, M., Chen, L. H., Makuc, D. M., Anderson, R. N., & Miniño, A. M. (2011). Drug poisoning deaths in the United States, 1980-2008. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22617462

Appendix A. Mean and Percentage Comparisons for Outcome Measures

Table A1 details both the means and percentages of each outcome 6 years after the index conviction.[26] There were significant differences for the percentage reconvicted for a major alcohol/drug offense, 28.7% for the comparison group and 23.8% for the program group. There were trends that showed the program group potentially performing better than the comparison group, but not significantly so, for total crashes (16.8% comparison, 14.4% program) and DUI crashes (4.0% comparison, 2.9% program). These results are summarized in more detail in the outcome results above. There were no significant differences in the percentages for injury crashes nor HBD crashes.

In addition to the percentages above, mean number of reconvictions and four types of crashes were calculated. There were significant differences for the means of DUI recidivism (0.37 comparison, 0.28 program) and total crashes (0.19 comparison, 0.17 program) both of which the program group performed better than the comparison group. There were no significant difference in the means for injury, DUI, nor HBD crashes.

Table A1. Means and Percentages of Each Outcome at 6 Years

Outcome Measure	Units of Measure	Comparison	Program	Significant?
DUI Recidivism	Means	0.37	0.28	Yes***
	Percentages	28.7%	23.8%	Yes**
Total Crashes	Means	0.21	0.17	Yes*
	Percentages	16.8%	14.4%	No†
HBD Crashes	Means	0.05	0.04	No
	Percentages	4.7%	3.8%	No
DUI Crashes	Means	0.04	0.03	No
	Percentages	4.0%	2.9%	No†
Injury Crashes	Means	0.07	0.06	No
	Percentages	6.5%	6.0%	No

$^{\dagger}p \sim 0.10$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$

[26] For the means, significant results are determined by t-tests. For the percentages, significance is determined by a chi-squared analysis.