

Design of an Evaluation Plan for Senate Bill 1046

Project 2209

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Introduction

Alcohol-impaired driving is a primary collision factor in California. In 2019, about 937 people were killed in alcohol-related crashes. This accounted for 26% of all traffic fatalities in California (decrease of 5.1% with respect to 2018). Common sanctions legislators implement to counteract DUI offenses comprise of probation time, jail time, DUI programs, and the installation of Ignition Interlock Devices (IID). IID are devices installed on vehicles that, by requiring a breath test before the engine can be started, prevent drivers with more than minimal amounts of alcohol in their breath from operating vehicles. In 2017, in an attempt to deter motorists from driving while impaired and thereby enhancing road safety, the use of ignition interlocks devices (IID) became law in California with Senate Bill 1046. This law expands AB 91 and mandates that, from January 1, 2019, to January 1, 2026, all repeat and all injury-involved DUI offenders install an IID for a time period ranging from 12 to 48 months (one to four years), depending on the number of prior DUI convictions. DUI offenders are allowed to drive anytime and anywhere if the vehicle is equipped with an IID.

The objective of this report is to design and develop an evaluation plan for the SB 1046 and its implementation of ignition interlock devices.

Study Methods

To consider all significant approaches for developing a practical and useful program assessment model, this project used systematic literature review through meta-analysis approach. The team used the findings to develop possible evaluation plans for IID law in California. The final evaluation plan specifies practical research questions, required data, and statistical analytical methods. The evaluation plan is finalized after consultation with CalSTA to assure its usefulness and practicality in California.

Findings

Overall, the research in effectiveness of IID program seeks to explore whether the implementations of an IID program can affect the rate of DUI-related accidents and their outcome severity. In addition, the research hypothesizes whether sociodemographic factors are related to committing DUI offense or repeating the offence even after being in the program or convicted.

Reviewing 12 years of literature and research in IID program installation and implementation showed that useful sources of data for IID program evaluation include drivers' records and DUI conviction data; survey data from participants in ignition interlock device program; and DUI-related crash data on the number of injured and fatalities. In addition, analysis of variance, time series analysis, descriptive statistics, chi-square test of independence, linear regression, logistic regression and semi-structured interviews were among the most commonly applied analytical approach.

Policy/Practice Recommendations

Based on the findings of this research, the recommended evaluation plan of SB1046 revolves around three research questions:

1. Are there significant changes in the frequency or severity of DUI-related crashes in CA that could be possibly attributed to the IID program implementation?
2. What is the impact of the IID program in CA on DUI recidivism?
3. What is the impact of SB 1046 on IID installation rates?

SB 1046 specifies that the evaluation of the new policy should focus on data collected between January 1, 2019, and January 1, 2024, and that a period of similar duration prior to the implementation of the program needs to be selected as a comparison/control group. Therefore, we suggest that the 2019-2024 data should be compared to

the prior immediate 5-year period, January 1, 2014, and January 1, 2019, inclusive. In addition, attention must be paid in the analysis of the time period January 1, 2014, and January 1, 2019 since four California counties were part of the pilot program defined by AB 91. It is suggested not to include the data regarding these four counties in the control group.

For the aforementioned period, data should be collected on the number of

- injuries and deaths resulting from alcohol-related motor vehicle accidents
- DUI-related crashes
- IIDs in use compared to the total number of DUI offenders required to install an IID.
- installation rates of IID compared to prior five-year period
- individuals convicted more than one time for driving under the influence of alcohol
- individuals who were required to have a functioning, certified IID installed as a result of the program who killed or injured anyone in an accident while he or she was operating a vehicle under the influence of alcohol
- individuals who were required to have a functioning, certified IID installed as a result of the program who were convicted of an alcohol-related violation
- lockouts while an IID is installed, obtained from the IID providers.

Depending on the data, the research team proposes use of descriptive statistics, time series analysis, analysis of variance, and logistic regression to address the research questions for evaluating the effectiveness of IID law on DUI-related crashes frequency and severity, as well as DUI recidivism.

The proposed evaluation plan will be affected by several limitations including limited follow-up time for DUI offenders due to need for a prompt evaluation at the end of the mandate, reduced post-conviction time for DUI offenders convicted in the last 36 months of the mandate, adjudication time lag, reporting errors in data, inaccurate abstracts of conviction, effects of COVID pandemic on driving behavior and DUI offenses, and inaccuracy of geographic location.

The expected barrier and challenges in successful implementation of the IID program include financial burden associated with IID and DUI offense, relicensing fees, insurance fees, cost of treatment completion, and poor monitoring of DUI offenders in the IID program. Therefore, the analysis of data should be cautiously conducted considering the limitations and barriers that might have an effect on the results and their interpretation.

About the Author

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/2209



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