LITERATURE SEARCH: Relationship between License Suspension and Recidivism

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October 25, 2024

Summary of Results: Within this preliminary literature search, most studies pertaining to license suspensions relate directly to driving under the influence. These 14 results were pulled from TRID (Transportation Research International Documentation), filtered to within the last 15 years., and arranged by most recent study first.

Similar studies not included here discussed vehicle impoundment and ignition interlocks. For a fuller list of TRB studies related to driver's license suspension and recidivism, see this link.

Links and abstracts are listed with the citations. Links open to full-text documents, pages that allow PDF downloads, or abstract pages. Articles and papers not openly available full text can be obtained through interlibrary loans.

Singichetti, B., Golightly, Y. M., Wang, Y. C., Marshall, S. W., Nauman, R. (2024). Impact of alcohol driving-while-impaired license suspension duration on future alcohol-related license events and motor vehicle crash involvement in North Carolina, 2007 to 2016. *Accident Analysis & Prevention, 197(0).* https://www.sciencedirect.com/science/article/pii/S0001457523004967?via%3Dihub

License suspensions are a strategy to address alcohol-impaired driving behavior and recidivism following an alcohol driving while impaired (alcohol-DWI) conviction. Little is known about the specific impacts of conviction-related suspensions on safety outcomes and given recent fluctuations in alcohol-impaired driving behavior, crashes, and suspension trends, updated and focused assessments of this intervention are necessary. This study aimed to 1) examine the association between type of recent alcohol-DWI suspension and having a secondary alcohol-related license outcome and/or future crash event in North Carolina (NC) between 2007 and 2016; and 2) assess potential modification of these associations by race/ethnicity. The authors used linked NC licensing data, NC crash data, and county-level contextual data from a variety of data sources. The authors compared individuals ages 21 to 64 who sustained initial (1-year) versus repeat (4-year) suspensions for alcohol-related license and crash involvement outcomes. The authors estimated unadjusted and adjusted hazard ratios (aHRs) using Cox proportional hazards models and produced Kaplan-Meier (KM) survival curves using a three-year follow-up period. After observing statistically significant modification by race/ethnicity, the authors calculated stratified aHRs for each outcome (Black and White subgroups only, as other subgroups had low numbers of outcomes).122,002 individuals sustained at least one alcohol-DWI conviction suspension (117,244 initial, 4,758 repeat). Adjusted KM survival curves indicated that within three years of the index suspension, the predicted risks of having a license outcome and crash outcome were about 8 % and 15 %, respectively, among individuals with an initial suspension and 5 % and 10 %, respectively, among individuals with a repeat suspension. After adjusting for potential confounding, the authors found that compared to those with an initial suspension, those with repeat suspensions had a lower incidence of future license (aHR: 0.49; 95 % CI: 0.42, 0.57) and crash outcomes (aHR: 0.67; 95 % CI: 0.60, 0.75). Among Black individuals, license outcome incidence was 162 % lower among repeat versus initial index suspension groups (aHR: 0.38; 95 % CI: 0.26, 0.55), while for White individuals,

the incidence was 87 % lower (aHR: 0.54; 95 % CI: 0.45, 0.64). Similarly, crash incidence for repeat versus initial suspensions among Black individuals was 56 % lower (aHR: 0.64; 95 % CI: 0.50, 0.83), while only 39 % lower among White individuals (aHR: 0.72; 95 % CI: 0.63, 0.81). Decreased incidence of both license and crash outcomes were observed among repeat versus initial index suspensions. The magnitude of these differences varied by race/ethnicity, with larger decreases in incidence among Black compared to White individuals. Future research should examine the underlying mechanisms leading to alcohol-impaired driving behavior, convictions, recidivism, and crashes from a holistic social-ecological perspective so that interventions are designed to both improve road safety and maximize other critical public health outcomes, such as access to essential needs and services (e.g., healthcare and employment).

Rees, H., McCullough, A., Daoud, S. O., Mitchum, A. L., Sacchi, D. (2023) *2022 Annual Report of the California DUI Management Information System.* California Department of Motor Vehicles. https://www.dmv.ca.gov/portal/uploads/2023/09/2022-DUI-MIS-Report.pdf

In this thirty-first annual legislatively mandated report, 2019 and 2020 driving under the influence of alcohol and/or drugs (DUI) data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents cross-tabulated information on DUI arrests, convictions, postconviction sanctions, driver license suspension/revocation actions, and on drivers in alcohol- or drug-involved crashes. In addition, this report provides 1-year proportions of DUI recidivism and crash rates for first and second DUI offenders arrested each year over a period of 30 years. Also, the long-term recidivism curves for the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 2005. The proportions of convicted first and second DUI offenders arrested in 2019 who were referred to, enrolled in, and completed DUI programs are also presented. Additionally, the numbers and percentages of DUI offenders who installed ignition interlock devices are presented by county and DUI offender status.

Daoud, S. O. (2022). *2021 Annual Report of the California DUI Management Information System.* California Department of Motor Vehicles. https://www.dmv.ca.gov/portal/file/2021-annual-report-of-the-california-dui-management-information-system-pdf/

In this thirtieth annual legislatively mandated report, 2018 and 2019 driving under the influence of alcohol and/or drugs (DUI) data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents cross-tabulated information on DUI arrests, convictions, postconviction sanctions, driver license suspension/revocation actions, and on drivers in alcohol- or drug-involved crashes. In addition, this report provides 1-year proportions of DUI recidivism and crash rates for first and second DUI offenders arrested each year over a period of 29 years. Also, the long-term recidivism curves for the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 2005. Two analyses were conducted to evaluate if referrals to alcohol and drug education programs were associated with reductions in 1-year subsequent DUI incidents and crashes among those convicted of the reduced charge of alcohol- or drug-related reckless driving, and if referrals to the 9-month DUI program were associated with reductions in 1-year subsequent DUI incidents and crashes when compared to referrals to the 3-month DUI program among first DUI offenders. The proportions of convicted first and second DUI offenders arrested in 2018, who were referred to, enrolled in, and completed DUI programs are also presented. Additionally, the numbers and percentages of DUI offenders who installed ignition interlock devices are presented by county and DUI offender status.

Daoud, S. O. (2021). *2020 Annual Report of the California DUI Management Information System.* California Department of Motor Vehicles.
https://www.dmv.ca.gov/portal/file/2020_annual_report_of_the_california_dui_management_information_system-pdf/

In this twenty-ninth annual legislatively-mandated report, 2017 and 2018 driving under the influence of alcohol and/or drugs (DUI) data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents cross-tabulated information on DUI arrests, convictions, postconviction sanctions, driver license suspension/revocation actions, and on drivers in alcohol- or drug-involved crashes. In addition, this report provides 1-year proportions of DUI recidivism and crash rates for first and second DUI offenders arrested in each year over a time period of 28 years. Also, the long-term recidivism curves of the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 2005. An analysis was conducted to evaluate if referrals to the 9-month DUI program were associated with reductions in 1-year subsequent DUI incidents and crashes when compared to referrals to the 3-month DUI program among first DUI offenders. The proportions of convicted first and second DUI offenders arrested in 2017, who were referred to, enrolled in, and completed DUI programs are also presented. Additionally, the numbers and percentages of DUI offenders who installed ignition interlock devices are presented by county and DUI offender status.

Daoud, S. O., Tashima, H. N. (2020). *2018 Annual Report of the California DUI Management Information System.* California Department of Motor Vehicles. https://www.dmv.ca.gov/portal/uploads/2020/04/S5-259.pdf

In this twenty-seventh annual legislatively-mandated report, 2015 and 2016 driving under the influence of alcohol and/or drugs (DUI) data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents cross-tabulated information on DUI arrests, convictions, postconviction sanctions, driver license suspension/revocation actions, and on drivers in alcohol- or drug-involved crashes. In addition, this report provides 1-year proportions of DUI recidivism and crash rates for first and second DUI offenders arrested in each year over a time period of 26 years. Also, the long-term recidivism curves of the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 2005. An analysis was conducted to evaluate if referrals to the 9-month DUI program were associated with reductions in 1-year subsequent DUI incidents and crashes when compared to referrals to the 3-month DUI program among first DUI offenders. The proportions of convicted first and second DUI offenders arrested in 2015, who were referred, enrolled, and completed DUI programs are also presented. Additionally, the numbers and percentages of DUI offenders who installed ignition interlock devices are presented by county and DUI offender status.

Choi, Y., Kho, S., Kim, D., Park, B. (2019). Analysis of the duration of compliance between recidivism of drunk driving and reinstatement of license after suspension or revocation. *Accident Analysis & Prevention*, 124(0), 120-126. https://doi.org/10.1016/j.aap.2019.01.001

The objective of this study was to examine the specific deterrence effect of administrative license suspension and revocation regarding the duration of compliance. This study tried to capture the effort of the reinstated offenders to increase the duration of their compliance in spite of their subsequent conviction for DUI. Specifically, the difference between the recidivism rate and the duration of compliance was examined and compared in terms of drivers' characteristics, including gender, the type of license, and age. Data from all drivers who have been newly licensed for five years from 2009 to 2014 in Korea were collected for analysis. The proportional hazard regression and logistic regression models were estimated for the drivers with suspended or

revoked licenses, respectively. The former was for exploring the duration of compliance, and the latter was for analyzing the recidivism rate. The results of the analysis showed that license sanctions significantly increased the duration of compliance. The results indicated that the violation-prone groups included male drivers, those with regular and moped licenses, and those between the ages of 30 and 39. License suspension was more effective than license revocation, but this finding did not hold for regular licensed drivers. Drivers' groups that showed different results between compliance duration and recidivism rate also were identified and appropriate treatments should be implemented to improve their willingness to comply.

Daoud, S. O., Tashima, H. N. (2018) *2017 Annual Report of the California DUI Management Information System.* California Department of Motor Vehicles. https://www.dmv.ca.gov/portal/uploads/2021/03/2017-Annual-Report-of-the-California-DUI-Management-Information-System.pdf

In this twenty-sixth annual legislatively-mandated report, 2014 and 2015 driving under the influence of alcohol and/or drugs (DUI) data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents crosstabulated information on DUI arrests, convictions, postconviction sanctions, driver license suspension/revocation actions, and on drivers in alcohol- or drug-involved crashes. In addition, this report provides 1-year proportions of DUI recidivism and crash rates for first and second DUI offenders arrested in each year over a time period of 25 years. Also, the long-term recidivism curves of the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 2005. An analysis was conducted to evaluate if referrals to the 9-month DUI program were associated with reductions in 1-year subsequent DUI incidents and crashes when compared to referrals to the 3-month DUI program among first DUI offenders. The proportions of convicted first and second DUI offenders arrested in 2014, who were referred, enrolled, and completed DUI programs are also presented. Additionally, the numbers and percentages of DUI offenders who installed ignition interlock devices are presented by county and DUI offender status.

Tashima, H. N., Daoud, S. O. (2018). *2016 Annual Report of the California DUI Management Information System.* California Department of Motor Vehicles. https://www.dmv.ca.gov/portal/uploads/2021/03/2016-Annual-Report-of-the-California-DUI-Management-Information-System.pdf

In this twenty-fifth annual legislatively-mandated report, 2013 and 2014 driving under the influence of alcohol and/or drugs (DUI) data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents cross-tabulated information on DUI arrests, convictions, court sanctions, license suspension/revocation actions, and alcohol- or drug-involved crashes. In addition, this report provides 1-year proportions of DUI recidivism and crash rates for first and second DUI offenders arrested in each year over a time period of 24 years. Also, the long-term recidivism curves of the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 1994. Two analyses were conducted to evaluate if referrals to DUI programs were associated with reductions in 1-year subsequent DUI incidents and crashes among those convicted of the reduced charge of alcohol- or drug-related reckless driving, and if referrals to the 9-month DUI program were associated with reductions in 1-year subsequent DUI incidents and crashes when compared to referrals to the 3-month DUI program among first DUI offenders. The proportions of convicted first and second DUI offenders arrested in 2013, who were referred, enrolled, and completed DUI programs are also presented.

Choi, Y., Kho, S., Kim, D. (2016). *Effects of License Suspension and Revocation on Compliance Duration and Recidivism Rate of Driving Under the Influence.* Transportation Research Board 95th Annual Meeting, Transportation Research Board. https://trid.trb.org/view/1392583

License suspension and revocation are the most extensively-used license actions to prevent driving under the influence (DUI) and its related crashes. The first objective of this study is to evaluate the specific deterrence effects of license actions in terms of compliance duration. The second objective is to examine the relationships between compliance duration or recidivism rate and driver's characteristics, including gender, license type and age. To this end, the proportional hazard regression and logistic regression are estimated for drivers with suspended or revoked licenses, respectively. The data of all drivers who have recently acquired a new license for a five-year period (2009-2014) in Korea are collected for analysis. The analysis results show that license actions significantly increase compliance duration. The results indicate that the violation-prone groups include male drivers, those with regular and moped licenses, and those between the ages of 30 and 39. This study also compares the effects of license suspension and revocation on the compliance duration and recidivism rate, respectively. License suspension generally is more effective than license revocation, but this finding does not hold for regular licensed drivers. License revocation is a more gender-equal sanction than license suspension. These findings provide an enhanced understanding of the effect of various license actions on traffic-violation behaviors.

Lyon, C., Persaud, B., Smiley, A. (2014). *Evaluation of the Effectiveness of Driver Improvement Programs in Reducing Future Crashes.* Transportation Research Board 93rd Annual Meeting, Transportation Research Board. https://trid.trb.org/view/1289032

This paper addresses the statistical analysis of driver record data to evaluate driver improvement programs in Ontario, Canada. Several before-after studies were conducted to assess the effectiveness of various interventions in reducing future crashes. The results of these analyses indicated that drivers who receive warning letters, demerit point related interviews or first or second demerit point license suspensions on average have fewer crashes in the period after the intervention than drivers with similar records who were not subject to the intervention, indicating that these interventions are effective in reducing crashes. Drivers receiving warning letters were estimated to have 7.5% fewer crashes after receiving warning letters compared to drivers with similar records. For demerit point related interviews, the first suspension and second suspensions, the estimated reductions are 11.9%, 27.8%, and 42.7% respectively. All of these results are statistically significant at the 95% confidence level. The results for a program aimed at high risk drivers aged 70 years and older (70+ program) and a collision repeater program also indicated that both programs are effective in that drivers subjected to these interventions have fewer subsequent crashes on average than drivers with similar records who were not subject to the intervention. For the 70+ program, the reduction is estimated to be 33% and for the collision repeater program 10.2%. However, for the collision repeater program the reduction, which was based on a very small sample size (113 drivers), was statistically insignificant at the 95% confidence level.

DeYoung, D. J. (2013). Traffic Safety Impact of Judicial and Administrative Driver License Suspension. *Transportation Research Circular*, *Issue E-C174,* 41-53. https://trid.trb.org/view/1261318

One of the most widely used and extensively studied sanctions to control alcohol- and drug-impaired drivers is the suspension or revocation of their privilege to drive. License suspension was first used as a court sanction, either by judges directly suspending the licenses of driving under the influence (DUI) offenders at the time of conviction, or by ordering the department of motor vehicles to suspend licenses once they were notified of the conviction. In an effort to strengthen and improve the effectiveness of license suspension, states began enacting administrative license suspension programs where peace officers impose the suspension at the time of DUI arrest. These administrative actions do not supplant the post-conviction license control actions, but rather constitute a parallel administrative process to the judicial one, delivering the license suspension action more

quickly and surely. Studies of judicially and administratively implemented license programs indicate that license suspension works to control the overall traffic safety risk of first and repeat DUI offenders, and when used administratively attenuates alcohol-involved incidents as well. It is used within the context of a system of other sanctions and treatments, and researchers and policymakers should consider broader system effects when implementing new laws or programs or changing existing ones. Its main limitation is that it is widely violated, because it is an invisible offense and is difficult to enforce; enforcement activities that increase the probability of apprehension and technology that can unmask the invisible nature of the offense will likely increase compliance. Using license suspension in an integrated system involves consideration of how it exerts its effects, its limitations, strengths, and overall system goals. It is relatively inexpensive to administer and is cost-effective, but it does not break the repetitive nature of problem drinking and so should be combined with measures that do.

Rogers, P. N. (2012) *Identifying Barriers to Driving Privilege Reinstatement among California DUI Offenders*. California Department of Motor Vehicles; California Office of Traffic Safety. https://www.dmv.ca.gov/portal/file/identifying-barriers-to-driving-privilege-reinstatement-among-california-dui-offenders/

Evidence suggests that many suspended DUI offenders delay reinstatement of their driving privileges long after they become eligible to reinstate and that those who delay have higher recidivism rates and remain outside of the driver-control system, making corrective action difficult if their driving continues to be a problem. This study updates prior estimates of the extent to which California DUI offenders delay reinstatement of their driving privileges after suspension and investigates the perceived barriers to reinstatement through surveys of offenders and DUI-system professionals. California driver records show that the majority of otherwise reinstatement-eligible 1st and 2nd DUI offenders in California do not reinstate their driving privileges 3 or more years following their arrests. The surveyed offenders and DUI-system professionals indicated strong agreement that high overall financial costs and offenders' confusion about system requirements are the most significant barriers to meeting the obligations that would enable offenders to reinstate their driving privilege, followed closely by failure to complete DUI Program requirements, most often because of offenders' inability to pay the program costs, and also because they lack available alternate transportation to attend classes. The barriers to reinstatement may effectively deter some offenders from driving, preventing DUI incidents they might otherwise have caused, but appear to deprive others at risk of recidivating who continue to drive impaired from access to needed intervention programs. To address the study's primary identified barriers to driving privilege reinstatement, several recommendations are made addressing cost mitigation, improved centralized communication of system requirements, and the benefits to obtaining early license restriction and, ultimately, reinstatement.

Carnegie, J., Strawderman, W. E., Li, W. (2011). Violation and Crash Recidivism Among New Jersey Drivers and Effectiveness of New Jersey's Driver Monitoring and Control System. Transportation Research Board 90th Annual Meeting, Transportation Research Board. https://trid.trb.org/view/1092188

This paper presents the results of a study that examined motor vehicle violation and crash recidivism rates among New Jersey Drivers and assessed the effectiveness of New Jersey's driver monitoring and control system in terms of correcting negligent driving behavior. As part of the study, the research team obtained and analyzed an extensive longitudinal database of driver history records. These data included more than 6 million unique driver records encompassing more than 95 million individual events. This represented a census of all New Jersey drivers with a violation or crash history at the time the data was exported. This study provides important evidence that New Jersey's program of negligent driver countermeasures is effective at reducing violation and crash recidivism among most negligent driver subgroups in the two-year period after MVC intervention. Of the countermeasures used in New Jersey, the combination of license suspension with one-year probation resulted in

the greatest overall reduction in both mean violation and crash rates. New Jersey's driver re-education classes which are accompanied by a 3-point credit against accumulated demerit points and one-year probation resulted in the lowest mean violation rate reduction. Point advisory notices which are accompanied in New Jersey by a concurrent assessment of negligent driver fees appear to be an effective early intervention, producing substantial reductions in both violation and crash recidivism among all driver subgroups except teen drivers. The paper concludes with a number of policy recommendations for improving driver management and control in New Jersey.

Carnegie, J. A., Eger III, R. J. (2009). *Reasons for Drivers License Suspension, Recidivism and Crash Involvement among Suspended/Revoked Drivers.* American Association of Motor Vehicle Administrators; National Highway Traffic Safety Administration. https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/811092_driver-license.pdf

In February 2005, the American Association of Motor Vehicle Administrators (AAMVA) convened a working group comprised of motor vehicle agency representatives, law enforcement professionals, judges, prosecutors, researchers and highway safety professionals from NHTSA, FHWA and FMCSA to develop a needs assessment to address the problem of driving while suspended. The working group determined that not enough was known about the depth and breadth of the issue and that research was needed to more fully understand the changing relationship between license suspension, reasons for suspension and highway safety outcomes. This study was commissioned in response to the working group's call for additional research. The research objectives defined for this study included, determining the number of drivers that are suspended/revoked under state laws that allow a driver's license to be suspended/revoked for non-driving offenses; determining the number of those drivers that are subsequently cited for driving while suspended, determining the extent of crash involvement by those drivers; and exploring the relationship between driving behavior and violations of those laws. The analysis conducted for this study provides a baseline for further discussion by the AAMVA suspended/revoked driver working group. The research results point to differences between the two groups when considering driving behavior. Overall, the analysis provides information to administrators and safety experts indicating the two groups of suspend drivers differ on multiple dimensions.