

Reasons for Driver License Suspension, Recidivism, and Crash Involvement Among Drivers With Suspended/Revoked Licenses

FINAL REPORT

January 2009

DISCLAIMER

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its content or use thereof. If trade or manufacturers' names or products are mentioned, it is because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

1. Report No. DOT HS 811 092	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Reasons for Drivers License Suspension, Recidivism and Crash Involvement among Suspended/Revoked Drivers		5. Report Date Lcpwct{ 2009	
		6. Performing Organization Code	
7. Authors Jon A. Carnegie and Robert J. Eger, III, Ph.D.		8. Performing Organization Report No.	
9. Performing Organization Name and Address American Association of Motor Vehicle Administrators (AAMVA) 4301 Wilson Boulevard, Suite 400 Arlington, VA 22203		10. Work Unit No. (TRAVIS)	
		11. Contract or Grant No. DTNH22-05-D-15043	
12. Sponsoring Agency Name and Address U.S. Department of Transportation / NHTSA Enforcement and Justice Services Division 1200 New Jersey Ave. SE NTI-122 Washington, DC 20590		13. Type of Report and Period Covered Final Report	
		14. Sponsoring Agency Code	
15. Supplementary Notes The Contracting Officer's Technical Representative for this project was Keith D. Williams			
16. Abstract In February 2005, 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.			
17. Key Words Suspended and Revoked Drivers Driver's License Crash involvement Suspended and Revoked Working Group		18. Distribution Statement Document is available through the National Technical Information Service Springfield, VA 22161 and free of charge at www.nhtsa.dot.gov .	
19. Security Classif.(of this report) Unclassified	20. Security Classif.(of this page) Unclassified	21. No. of Pages 40	22. Price

TABLE OF CONTENTS

Executive Summary	v
Section 1: Introduction	1
Background and Problem Statement	1
Research Objectives and Approach	3
Report Outline	3
Section 2: State Agency Survey and Legislative Review	4
Agency Survey	4
General Findings	4
Legislative Review	6
Section 3: Case Study Selection	9
Screening Process	9
Short List and Final Selection of Case Study Jurisdictions	10
Section 4: Overview of Case Study Jurisdictions	14
Section 5: Data Analysis and Findings	17
Data Acquisition, Sample Frame, Methods	17
Aggregate Trends in Suspension Activity	18
Violation Recidivism, Survival Analysis, and Crash Involvement	18
Section 6: Discussion, Conclusions, and Recommendations	22
Selected References	25
Appendix: Reasons for Suspensions in Case Study States	26

LIST OF TABLES

Table 1: State survey responses by AAMVA region	4
Table 2: Size of responding jurisdiction	4
Table 3: Licensed versus suspended drivers in each State (2005)	5
Table 4: Reasons for driver’s license suspension/revocation in the United States	8
Table 5: Short list of potential case study jurisdictions	10
Table 6: Final case study jurisdictions	13
Table 7: Selected highway statistics—case study jurisdictions	14
Table 8: Reasons for driver’s license suspension in the case study jurisdictions	15
Table 9: Driving versus non-driving suspensions (2002–2006)	18
Table 10: Average number of times suspended drivers observed during period of suspension	18
Table 11: Days to event occurrence among drivers suspended for non-driving versus driving reasons	19

Table 12: Drivers subsequently convicted of an event during their suspension period19
Table 13: Hazard function for the analysis period of suspension20
Table 14: Suspended drivers involved in a crash.....21

LIST OF FIGURES

Figure 1: Survival graph for recidivism of all types of violations and crashes20

EXECUTIVE SUMMARY

There is a commonly held belief among motor vehicle administrators, law enforcement, and the courts that suspended drivers pose a significant traffic safety risk when they continue to drive. As such, driving with a suspended or revoked license is considered a serious driving offense in most jurisdictions. There is some research to support this assessment. For example, in 2000, the AAA Foundation conducted a study entitled *Unlicensed to Kill* and a follow-up study, *Unlicensed to Kill, the Sequel*. These studies evaluated data from 1993 through 1999 on fatal crashes involving suspended and/or revoked and unlicensed drivers. Researchers found that “of the 278,078 drivers involved in fatal crashes in the United States...3.7 percent were unlicensed, 7.4 percent were driving on an invalid (e.g., suspended, revoked, denied/cancelled) license, and 2.7 percent were of unknown license status” (Griffin & DeLaZerda, 2000). However, other research has found that crash rates vary widely based on the reason for suspension/revocation and that drivers suspended for non-driving reasons posed the lowest traffic safety risk among the suspended-license groups with a risk comparable to those of the validly licensed drivers (Gebers & DeYoung, 2002).

In February 2005, AAMVA convened a working group comprised of motor vehicle agency representatives, law enforcement professionals, judges, prosecutors, researchers, and highway safety professionals from the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration (FHWA), and the Federal Motor Carrier Safety Administration (FMCSA) to discuss and map-out what needs to be done to address the problem of driving with a suspended license. 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 include the following:

1. Determine the number of drivers with licenses that are suspended/revoked under State laws that allow a driver’s license to be suspended/revoked for non-driving offenses;
2. Determine the number of those drivers who are subsequently cited for driving while suspended;
3. Determine the extent of crash involvement by those drivers; and
4. Explore the relationship between driving behavior and violations of those laws.

To achieve these objectives, the research team developed a phased work program that included a nationwide survey of motor vehicle agencies to document current driver monitoring, license suspension/revocation, and driver history data archive and retrieval practices; a review of State laws governing license suspension; and a detailed analysis of suspended driver history data for six representative case study jurisdictions. It should be noted that the study did not address unlicensed drivers.

Key findings include:

- All 50 States and the District of Columbia have laws that permit the State motor vehicle agency and/or the courts to withdraw driving privileges for at least some non-driving reasons. The most common non-driving reasons for suspension include:
 - ◆ Failure to comply with a child support order (47 jurisdictions or 92%);
 - ◆ Failure to maintain proper insurance (45 jurisdictions or 88%);
 - ◆ Failure to appear in court to satisfy a summons for a moving violation (43 jurisdictions or 84%);

- ◆ Fraudulent application for driver's license or vehicle registration documents (40 jurisdictions or 78%);
- ◆ Altered or unlawful use of a driver's license (39 jurisdictions or 76%);
- ◆ Alcohol and drug-related offenses by minors, other than DUI (38 jurisdictions or 75%);
- ◆ Convictions for drug-related offenses, other than DUI (34 jurisdictions or 67%); and
- ◆ Failure to pay a motor vehicle and/or court fines, fees, and surcharges (31 jurisdictions or 61%).

Other less common non-driving reasons for suspension include:

- ◆ Truancy (15 jurisdictions or 29%);
 - ◆ Fuel theft (14 jurisdictions or 27%);
 - ◆ Delinquent conduct by a minor (13 jurisdictions or 25%);
 - ◆ Use of fictitious license plates, registration, or inspection sticker (13 jurisdictions or 25%);
 - ◆ Failure to appear in court to satisfy a parking ticket (8 jurisdictions or 16%);
 - ◆ Making terrorist threats (NY and PA);
 - ◆ Graffiti (CO);
 - ◆ Failure to register as a sex offender (MA); and
 - ◆ Attempt to purchase tobacco by a minor (OR).
- Our data show an overall decrease of 26 percent in the total number of suspended drivers over the analysis period. Concurrent with this overall reduction in the number of suspended drivers, we find an increase of drivers suspended for non-driving reasons. Drivers suspended for non-driving reasons rises from 27 percent of all suspended drivers in 2002 to 36 percent of all suspended drivers by 2005 in our database.
 - Our analysis separates drivers with suspended licenses into two groups., suspended for driving reasons and suspended for non-driving reasons.
 - ◆ Suspended for driving reasons: our database consists of 53,875 drivers suspended for driving reasons, of which about 42 percent (22,424) are subsequently convicted of a violation while their driving privileges are suspended; and
 - ◆ Suspended for non-driving reasons: Our database consists of 24,248 drivers suspended for non-driving reasons of which about 38 percent (9,288) are subsequently convicted of a violation while their driving privileges are suspended.
 - **Approximately 30 percent of drivers suspended for driving reasons (15,850 of 53,875) commit a moving violation while under suspension compared to approximately 15 percent of drivers suspended for non-driving reasons (3,613 of 24,248).**
 - **Approximately 3.4 percent of drivers suspended for driving reasons (1,832 of 53,875) are convicted of driving while suspended compared to 2.7 percent of drivers suspended for non-driving reasons (656 of 24,288).**
 - **Less than 1 percent (0.09%) of drivers suspended for non-driving reasons (218 of 24,248) are involved in a crash while their driver's license is suspended. This compares to over 3 percent (3.4%) of drivers suspended for driving reasons (1,835 of 53,875) who are involved in a crash while their driver's license is suspended.**

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 con-

sidering driving behavior. Overall, the analysis provides information to administrators and safety experts indicating the two groups of suspended drivers differ on multiple dimensions.

From a policy perspective, the findings appear to support the conclusion that not all suspended drivers behave the same and therefore can and perhaps should be treated differently by motor vehicle agencies, law enforcement, and the courts. This is not to say that suspensions of drivers for non-driving reasons is unfounded; on the contrary, we make no statement about the use of suspensions regardless of the reasons. What we find is that when comparing the two groups, those who are suspended for driving reasons versus those suspended for non-driving reasons, our findings suggest that these two groups are not homogeneous in behavior and therefore may need differing policy actions. This presents a dilemma for policymakers in the context of current driver control and management systems and a multitude of Federal and State laws already in place.

A potential option might be to consider a new licensure status that differentiates between drivers suspended for bad driving and those suspended for financial or compliance reasons. In fact, in many jurisdictions there is already a dual status system in place for withdrawing driving privileges that could be used as the basis of a new licensure status. The existing distinction is between license suspension and revocation. Suspensions most often represent a temporary withdrawal while revocations are a more severe and sometimes permanent sanction.

SECTION 1: INTRODUCTION

Background and Problem Statement

Although originally intended as a sanction to address poor driving behavior in the United States, driver's license suspension is now commonly used as a means to punish individuals engaged in criminal and/or otherwise socially undesirable behavior unrelated to the operation of a motor vehicle. Suspension is also used as a means to compel compliance with administrative requirements such as appearing in court to answer a summons and payment of fines, fees, and surcharges. Laws permitting driver's license suspension for non-driving reasons are now on the books in all 50 States and the District of Columbia. Common non-driving reasons for suspension include, but are not limited to, failure to appear in court, controlled substance convictions, failure to pay fines/fees, failure to maintain proper insurance, and failure to pay child support (Carnegie, 2007). Furthermore, several recent studies have found that suspensions for non-driving reasons outnumber suspensions ordered to punish habitual bad driving in some jurisdictions (Carnegie, 2007; Joerger, 2002; Gebers & DeYoung, 2002).

Studies also indicate that many suspended/revoked drivers continue to drive after their suspension. For example, recent studies conducted in New Jersey and Oregon found that approximately 25 percent of suspended drivers are subsequently convicted of driving while suspended (Carnegie, 2002; Joerger, 2002). Other studies in California and Wisconsin documented similarly significant rates of driving while suspended (Gebers & DeYoung, 2002; McCartt et al., 2002). One study even found that in Michigan 30 to 70 percent of drivers whose licenses have been suspended or revoked for driving under the influence of drugs or alcohol continue to drive during the suspension period (Eby et al., 2002)

There is a commonly held belief among motor vehicle administrators, law enforcement, and the courts that suspended drivers pose a significant traffic safety risk when they continue to drive. As such, driving with a suspended or revoked license is considered a serious driving offense in most jurisdictions. There is some research to support this assessment. For example, in 2000, the AAA Foundation conducted a study entitled *Unlicensed to Kill* and a follow-up study, *Unlicensed to Kill, the Sequel*. These studies, evaluated data from 1993 through 1999 on fatal crashes involving suspended and/or revoked and unlicensed drivers. Researchers found that "of the 278,078 drivers involved in fatal crashes in the United States...3.7 percent were unlicensed, 7.4 percent were driving on an invalid (e.g., suspended, revoked, denied/cancelled) license, and 2.7 percent were of unknown license status" (Griffin & DeLaZerda, 2000).

It is important to note that the AAA Foundation studies did not examine the underlying reason for suspension to differentiate document crash incidence among drivers suspended for driving reasons versus non-driving reasons. This is important because there is also some evidence that crash patterns may be different between these two groups. For example, a 2002 study conducted by Michael A. Gebers and David J. DeYoung for the California Department of Motor Vehicles concluded that suspended/revoked drivers are a heterogeneous group, both demographically and with regard to their driving behavior. The research found all suspended driver groups have higher crash and conviction rates compared to validly licensed drivers, but the rates vary widely based on the reason for suspension/revocation. They further found that drivers suspended for non-driving reasons (failure to pay child support) posed the lowest traffic safety risks among the suspended driver groups with a risk not much higher than validly licensed drivers (31).

The top priority of the Secretary of the U.S. Department of Transportation (DOT) is to improve the safety of the Nation's transportation system. President Bush challenged DOT to develop creative ways to reduce the number of fatalities on the Nation's highways. The DOT Secretary accepted this challenge and established a

goal to reduce the highway fatality rate to not more than 1.0 per 100 million vehicle miles traveled (VMT) by 2008, down from 1.7 per 100 million VMT in 1996. The Secretary reached out to all organizations involved in promoting highway safety to support this goal. Addressing the problem of suspended/revoked drivers more effectively could be an important part of a successful strategy.

More research is needed to define the full scope of the suspended and revoked driver problem nationwide to better understand the comparative highway safety risk of drivers suspended for driving reasons versus non-driving reasons and to better understand the effectiveness of various interventions used to address the problem of driving while suspended. The issue of driving while suspended has been a key area of focus for the American Association of Motor Vehicle Administrators (AAMVA) Law Enforcement Committee for several years.

In February 2005, 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 discuss and map-out what needs to be done to address the problem. Organizations represented on the *Suspended and Revoked Driver Working Group* include:

- AAMVA Driver's License & Control Committee (DL&C)
- AAMVA Financial Responsibility and Insurance Committee (FR&I)
- AAMVA Law Enforcement Committee (LE)
- American Association of State Highway Transportation Officials (AASHTO)
- Federal Highway Administration (FHWA)
- Federal Motor Carrier Safety Administration (FMCSA)
- Governors Highway Safety Association (GHSA)
- International Association of Chiefs of Police (IACP)
- National Center for State Courts (NSCS)
- National Council for State Legislators (NCSL)
- National Cooperative Highway Research Program (NCHRP)
- National Highway Traffic Safety Administration (NHTSA)
- National Sheriffs Association (NSA)
- National Traffic Law Center (NTLC)
- Rutgers University, Alan M. Voorhees Transportation Center
- Transportation Research Board (TRB)

The first meeting of the working group was held February 8–9, 2005, in Albuquerque, New Mexico. As a result of this meeting, AAMVA published a “white paper” framing the driving while suspended problem from various perspectives—law enforcement, courts, prosecutors, etc. and broadly defining next steps to address the problem. A research subcommittee of the group met again July 19-20, 2005, at the National Center for State Courts to define preliminary research steps necessary to investigate the incidence of driving while suspended and crash involvement for suspended/revoked drivers. This research study is the first step toward advancing the research agenda outlined by the working group.

Research Objectives and Approach

The research objectives defined for this study were developed with input from the *Suspended and Revoked Driver Working Group* and included the following:

1. Determine the number of drivers who have suspended/revoked licenses under State laws that allow a driver's license to be suspended/revoked for non-driving offenses;
2. Determine the number of those drivers who are subsequently cited for driving while on a suspended or revoked license;
3. Determine the extent of crash involvement by those drivers; and
4. Explore the relationship between driving behavior and violations of those laws.

To achieve these objectives, the research team developed a phased work program that included a nationwide survey of motor vehicle agencies to document current driver monitoring, license suspension/revocation, and driver history data archive and retrieval practices; a review of State laws governing license suspension; and a detailed analysis of suspended/revoked driver history data for four representative case study jurisdictions. It should be noted that the study did not address unlicensed drivers.

Report Outline

The remainder of this report summarizes the results of the research. Section two describes the results of the motor vehicle agency survey and presents a broad legislative review of license suspension laws in the 50 States and the District of Columbia. Section three summarizes the process used to select the case-study jurisdictions profiled as part of the suspended driver data analysis. Section four describes data acquisition and analysis methods; presents the results of the analysis; and describes suspension patterns, including: the incidence of subsequent conviction for driving while suspended and crash involvement among suspended/revoked drivers in four case study jurisdictions. Finally, section five presents a discussion of the study's key findings and recommendations for future research.

SECTION 2: STATE AGENCY SURVEY AND LEGISLATIVE REVIEW

As described briefly above, phase one research involved conducting a survey of State motor vehicle agencies and a review of State laws governing driver's license suspension in the United States. This section describes survey methods and results and summarizes suspension laws and policies in the 50 States and the District of Columbia.

Agency Survey

In July and August 2006, the research team conducted a survey of U.S. State motor vehicle agencies to document current driver monitoring, license suspension/revocation, and driver history data archive and retrieval practices. The survey was designed with input and assistance of AAMVA research staff and conducted using AAMVA's *Websurveyer* Internet survey instrument. The survey contained 17 multiple-choice and open-ended questions.

Survey respondents were recruited via various AAMVA listserv and e-newsletter publications. In addition, efforts were made to increase survey response rates by contacting AAMVA region managers and with targeted e-mail and phone contacts to ensure appropriate geographic participation within each AAMVA service region. Survey responses were compiled electronically via *Websurveyer* and exported for use in Microsoft Excel. Data analysis was conducted by researchers at the Voorhees Transportation Center.

General Findings

A total of 36 jurisdictions responded to the survey. Complete responses were received from the following jurisdictions, organized by AAMVA service region:

Table 1: State survey responses by AAMVA region

Region I	Region II	Region III	Region IV
Connecticut	Alabama	Indiana	Arizona
Delaware	Arkansas	Kansas	Colorado
District of Columbia	Florida	Michigan	Idaho
Maine	Kentucky	Minnesota	Montana
Maryland	North Carolina	Missouri	Oregon
Massachusetts	South Carolina	Nebraska	Utah
New York	Tennessee	North Dakota	Washington
Pennsylvania	Virginia	Ohio	Wyoming
Rhode Island		South Dakota	
Vermont		Wisconsin	

For comparative purposes, the responding jurisdictions were categorized by size of jurisdiction in terms of number of licensed drivers in each State. Table 2 provides a breakdown of jurisdictions responding to the survey by size of jurisdiction.

Table 2: Size of responding jurisdiction

Size of Jurisdiction (number of licensed drivers)	Number of Respondents	Percent
Large (more than 5 million)	9	25%
Medium (1,000,001 to 5 million)	17	47%
Small (1 million or less)	10	28%
Total	36	100%

Table 3: Licensed versus suspended drivers in each State (2005)

State	Number of Licensed Drivers	Number of Suspended Drivers	Percent Suspended
AK	2,035,490	90,000	4.4%
AL	3,668,028	156,824	4.3%
AR	2,035,490	90,000	4.4%
AZ	4,701,960	194,260	4.1%
CO	4,477,556	400,000	8.9%
CT	2,700,000	100,000	3.7%
DC	340,000	9,000	2.6%
DE	619,878	106,501	17.2%
FL	10,000,000	1,000,000	10.0%
ID	1,000,000	65,000	6.5%
IN	5,500,000	200,000	3.6%
KY	3,000,000	100,000	3.3%
MA	5,000,000	54,000	1.1%
MD	3,846,425	129,976	3.4%
ME	1,000,000	23,000	2.3%
MN	3,000,000	300,000	10.0%
MO	4,100,000	325,000	7.9%
MT	733,679	40,000	5.5%
ND	450,000	25,000	5.6%
NE	1,300,000	60,000	4.6%
NY	10,000,000	400,000	4.0%
OH	8,000,000	75,000	0.9%
OR	2,700,000	300,000	11.1%
RI	750,000	71,955	9.6%
SD	550,000	22,000	4.0%
TN	4,400,000	600,000	13.6%
UT	1,800,000	230,000	12.8%
VA	5,200,000	1,700,000	32.7%
VT	588,194	143,365	24.4%
WA	5,000,000	181,000	3.6%
WI	3,930,000	119,430	3.0%
WY	450,000	16,000	3.6%

As part of the survey, participants were asked to estimate (on average) how many drivers were suspended and/or revoked at any given time in their jurisdiction. Responses were received from 32 jurisdictions. According to the data provided, the average rate of suspension among those jurisdictions participating in the survey was 7.4 percent. Suspension rates ranged from a low of approximately 1 percent in Massachusetts to a high of nearly 33 percent in Virginia. A similar survey conducted by the research team in 2004 found similar rates of suspension (Carnegie, 2007). Table 3 provides a breakdown of the number of suspended drivers as a proportion to the total licensed driver population in each State.

Twenty-two jurisdictions responding to the survey (61%) use a point-based system to monitor driver behavior. Seven jurisdictions (19%) use an occurrence-based system, and another seven jurisdictions (19%) monitor driving behavior using some combination of both point- and occurrence-based monitoring. All 36

jurisdictions responding to the survey reported suspending and/or revoking driving privileges for non-driving reasons.

Driver history data archiving and retrieval practices

Data archival practices vary significantly by jurisdiction. Approximately one third of the survey respondents (11 jurisdictions) reported archiving driver history data and records indefinitely. One third (11 jurisdiction) reported archiving data for more than 10 years but not indefinitely; and 10 jurisdictions (30%) reported saving driver history data between 5 and 10 years. Three jurisdictions (Connecticut, Maryland, & North Dakota) reported purging some data after as little as three years.

Data storage platforms also varied by jurisdiction and ranged from mainframe data management systems such as IBM VSAM, IMS, and CICS to scaleable server databases such as Oracle, to smaller-scale database management programs such as Microsoft SQL and IBM DB2. Sixteen of the jurisdictions responding to the survey (44%) reported maintaining their driver history data using mainframe computer systems. Four (11%) reported using an Oracle system and 11 jurisdictions (31%) reported using smaller-scale systems run on local servers. Respondents from five jurisdictions provided no answer or were unsure of what data platform was used in their jurisdictions. A cross-reference of jurisdiction size with selected database platform revealed no relationship between the size of the jurisdiction and the platform used. Most, but not all, jurisdictions responding to the survey (83%) reported maintaining a data coding index or single-source data dictionary for driver history data entry purposes.

Twenty-three jurisdictions (64%) responding to the survey reported entering **data related to crash involvement** as part of driver histories. The level of crash data detail varied by jurisdiction and ranged from very basic data (e.g., crash date and whether the crash involved a fatality) to very detailed data (e.g., crash date, type of crash, number of vehicles involved, fatality involvement, amount of property damage, and crash location). In 26 jurisdictions, complete crash records are maintained by agencies other than the motor vehicle licensing agency.

Thirty-one of the 36 survey respondents provided a brief summary of how data is retrieved for statistical analysis. All 31 respondents providing an answer to this question reported that **data requests** beyond standard statistical reports must be made in writing and require some level of programming based on the query criteria specified. The typical timeframe for receiving data ranged from 1-14 days (11 jurisdictions), to 15-30 days, (6 jurisdictions) to an unknown period of time (15 jurisdictions). Those reporting an unknown period of time indicated that the timeframe depends largely on the extent and nature of the data request. All 31 jurisdictions that responded to this question also provided contact information for the individuals in their agencies to whom a request for data can be submitted.

Legislative Review

The reasons for driver's license suspension are diverse, complex, and sometimes interrelated. Reasons include those that are driving-related (e.g., DUI, habitual bad driving, reckless driving, and driving while suspended); those that are not driving-related (e.g., failure to pay child support or failure to appear in court for a non-driving offense and suspensions imposed for drug-related offenses not involving the operation of a motor vehicle); and those that are for compliance reasons indirectly related to driving behavior or motor vehicle use (e.g., failing to appear in court to pay/satisfy a parking ticket or moving violation; failing to maintain proper auto insurance; and failing to pay court/agency fines and fees that stem from a driving-related infraction) (Carnegie, 2007).

As part of this study, the research team conducted a review of State laws governing driver's license suspension in the 50 States and the District of Columbia. The primary purpose of the review was to determine the

extent to which various jurisdictions currently withdraw driving privileges for non-driving reasons. The review drew upon information and data from three primary sources: (1) the nationwide survey of motor vehicle agencies described earlier in this section (36 jurisdictions responded to the survey); (2) a 2004 survey of motor vehicle agencies conducted for the New Jersey Motor Vehicle Commission (Carnegie, 2007); and (3) a review of State driver's licensing documents and statutes accessed via the Internet.

Currently, all 50 States and the District of Columbia have laws that permit the State motor vehicle agency and/or the courts to withdraw driving privileges for at least some non-driving reasons. The most common non-driving reasons for suspension include the following:

- Failure to comply with a child support order (47 jurisdictions or 92%);
- Failure to maintain proper insurance (45 jurisdictions or 88%);
- Failure to appear in court to satisfy a summons for a moving violation (43 jurisdictions or 84%);
- Fraudulent application for a driver's license or vehicle registration documents (40 jurisdictions or 78%);
- Altered or unlawful use of a driver's license (39 jurisdictions or 76%);
- Alcohol and drug-related offenses by minors, other than DUI (38 jurisdictions or 75%);
- Convictions for drug-related offenses, other than DUI (34 jurisdictions or 67%); and
- Failure to pay motor vehicle and/or court fines, fees, and surcharges (31 jurisdictions or 61%).

Other less common reasons for suspension include the following:

- Truancy (15 jurisdictions or 29%);
- Fuel theft (14 jurisdictions or 27%);
- Delinquent conduct by a minor (13 jurisdictions or 25%);
- Use of fictitious license plate, registration, or inspection sticker (13 jurisdictions or 25%);
- Failure to appear in court to satisfy a parking ticket (8 jurisdictions or 16%);
- Making terrorist threats (New York and Pennsylvania);
- Graffiti (Colorado);
- Failure to register as a sex offender (Massachusetts); and
- Attempt to purchase tobacco by a minor (Oregon).

Table 4 summarizes the reasons for suspension in each jurisdiction.

Table 4: Reasons for driver's license suspension/revocation in the United States

	AL	AK*	AZ	AR	CA*	CO	CT	DE	DC	FL	GA*	HI*	ID	IL*	IN	IA*	KS	KY	LA*	ME	MD	MA	MI	MN	MS*	MO	
DRIVING-RELATED REASON FOR SUSPENSION																											
Driving while intoxicated or under the influence of drugs	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Driving while suspended or revoked	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Reckless driving	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Careless driving	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Leaving the scene of an accident	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Accumulation of points or "countable" violations/crashes	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
NON-DRIVING REASONS FOR SUSPENSION																											
Failure to appear in court to satisfy a summons for a moving violation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Failure to appear in court to satisfy a parking ticket	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Failure to pay a motor vehicle fine, surcharge or fee	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Failure to pay court fines, fees or surcharges	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Failure to comply with a child support order	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Conviction for a drug-related offense other than DUI	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Failure to maintain proper insurance	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Altered or unlawful use of a driver's license	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fictitious license plates, registration, inspection etc.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fraudulent application for driver's license or vehicle registration documents	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Alcohol and drug related offenses by minors other than DUI	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Truancy	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Delinquent conduct by a minor	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

	MT	NE	NV*	NH*	NJ*	NM*	NY	NC	ND	OH	OK*	OR	PA	RI	SC	SD	TN	TX*	UT	VT	VA	WA	WV*	WI	WY		
DRIVING-RELATED REASON FOR SUSPENSION																											
Driving while intoxicated or under the influence of drugs	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Driving while suspended or revoked	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Reckless driving	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Careless driving	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Leaving the scene of an accident	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Accumulation of points or "countable" violations/crashes	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
NON-DRIVING REASONS FOR SUSPENSION																											
Failure to appear in court to satisfy a summons for a moving violation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Failure to appear in court to satisfy a parking ticket	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Failure to pay a motor vehicle fine, surcharge or fee	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Failure to pay court fines, fees or surcharges	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Failure to comply with a child support order	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Conviction for a drug-related offense other than DUI	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Failure to maintain proper insurance	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Altered or unlawful use of a driver's license	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Fictitious license plates, registration, inspection etc.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Fraudulent application for driver's license or vehicle registration documents	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Alcohol and drug related offenses by minors other than DUI	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Truancy	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Delinquent conduct by a minor	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

Notes: The data presented in this table was primarily derived from a 2005 survey of motor vehicle agencies (31 responses were received). The survey data was supplemented with a review of on-line material. Information for those states marked with an * was compiled from motor vehicle licensing documents and statutes available via the internet.

SECTION 3: CASE STUDY SELECTION

As stated earlier, one of the primary research objectives for this study was to document the incidence of convictions for driving while suspended and crash involvement among suspended/revoked drivers. As noted above, the purpose of the agency survey was to provide baseline information regarding current State practices related to driver monitoring, license suspension, and driver history data archive and retrieval practices. This baseline data, which was summarized in Section two, provided a foundation for selecting case study jurisdictions for detailed driver history data analysis in six representative jurisdictions.

Screening Process

The universe of potential case study locations was limited to the 36 jurisdictions responding to the survey. Each jurisdiction responding to the survey was then ranked based on survey responses according to a set of five primary criteria. This ranking resulted in a short list of 11 jurisdictions for further consideration. Step two involved consultation with representatives from AAMVA and NHTSA and consideration of a variety of secondary factors. The primary screening criteria and secondary factors are described below.

Primary Screening Criteria

The following are the primary screening criteria used to rank potential case study jurisdictions:

1. **Suspend for a variety of driving and non-driving reasons**—Given that one of the study’s research objectives is to examine the incidence of crash involvement among drivers suspended for different reasons (both driving and non-driving), the selected case study jurisdictions should suspend drivers for non-driving reasons. As noted earlier, all of the jurisdictions that responded to the survey reported suspending driving privileges for non-driving reasons (*Suspend for non-driving reasons = 1 point*)
2. **One-stop access to crash data**—The selected case study jurisdictions should record at least basic crash data as part of driver history data archives. Detailed crash data regarding at-fault crashes, type of crash, and severity of crash is preferred. Those jurisdictions that do not record at least basic crash data as part of driver histories should not be considered for this study. (*Basic data = 1 point, limited data = 2 points, detailed data = 3 points*)
3. **Period of time data is archived**—The selected case study jurisdictions should maintain driver history data for a minimum of five years. A period of 10 years is preferred. (*5-10 years = 1 point, More than 10 years = 2 points*)
4. **Reasonable opportunity for successful data retrieval**—The selected case study jurisdictions should provide a reasonable opportunity for success in terms of data access and retrieval. This should include considerations related to data request processes and estimated time for data retrieval. (**High**—reasonable data request procedure and short turnaround time [two weeks or less] to fulfill data request = 3 points; **Medium**—reasonable data request procedure and turnaround time was less than 30 days or unspecified depending on request = 2 points; **Low**—somewhat difficult data request procedure and/or long turnaround time to fulfill data request = 1 point; **Limited or no information provided regarding data request procedures = 0 points**)
5. **Data “index” available**—The selected case study jurisdictions should maintain a comprehensive data coding index that can be made available to the research team. (*1 point*)

Secondary Considerations

The following secondary factors were considered prior to selecting the final list of case study jurisdictions.

- A. **Geographic diversity**—The selected case study jurisdictions should represent a diversity of geographic locations. Toward this end, at least one case study jurisdiction should be selected from each of AAMVA’s four service regions.
- B. **Size diversity**—The selected case study jurisdictions should represent a range of jurisdictions in terms of size of licensed driver population.
- C. **Size of suspended driver population**—The selected case study jurisdictions should have a large enough pool of suspended drivers to support valid sample selection.

Short List and Final Selection of Case Study Jurisdictions

Based on the data and information provided in response to the survey, 11 jurisdictions were selected for short listing (see Table 5). Each jurisdiction met most or all of the selection criteria described above. In addition, the 11 jurisdictions provided a diversity of geographic and size representation.

Table 5: Short list of potential case study jurisdictions

Region I	Region II	Region III	Region IV
New Jersey * (large) New York (large) Pennsylvania (large)	Arkansas (medium) Florida (large) Tennessee (medium)	Kansas (medium) Michigan (large) South Dakota (small)	Colorado (medium) Oregon (medium)

* New Jersey did not formally respond to the survey and was therefore not included in the survey data analysis. However, New Jersey was included in the short list screening process. The information and data used for this purpose was provided by members of the research team familiar with New Jersey driver license policies and driver history data archive and retrieval practices.

Eleven **AAMVA Region I** jurisdictions responded to the agency survey. Of those, three scored eight or more points based on the criteria outlined above.

1. **New York** received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. It is a large jurisdiction with approximately 10 million licensed drivers. Approximately four percent or 400,000 licensed drivers have their driving privileges suspended. In New York, driving behavior is monitored using a combination of both point- and occurrence-based monitoring. Driver history data includes data related to violations and suspensions as well as detailed crash involvement data, including: event date, property damage, personal injury, fatality indicator, and reference number for cross-checking data with other data sets. Driver history data was last purged 14 years ago in 1992. Data is maintained on an Oracle database system. The process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the information that is being requested. New York maintains a comprehensive data coding “index.”
2. **Pennsylvania** also received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. Similar to New York, it is a large jurisdiction with approximately 8.4 million licensed drivers. Pennsylvania did not provide data regarding the number of suspended drivers when responding to this survey. However, previous research conducted by the research team indicates that in 2004, the State had approximately 600,000 suspended drivers. At the time, this represented approximately seven percent of all licensed drivers in the State. In Pennsylvania, driving behavior is monitored using a point-based system. Driver history data includes data related to violations and suspensions as well as limited crash involvement data, including: event date, accident severity, and reference number for cross-checking data with other data sets. Driver history data is maintained indefinitely using a mainframe IBM CICS database system. The process for retrieving data varies but most often involves some level of programming.

Data requests must be made in writing specifying the data elements required and a detailed explanation on how the data will be used. The timeframe for data retrieval and delivery depends on available PennDOT resources and the complexity of the request. Pennsylvania maintains a comprehensive data coding “index.”

3. **New Jersey** is the third region 1 jurisdiction to receive a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. Similar to New York and Pennsylvania, New Jersey is a large jurisdiction. The State has approximately 6 million licensed drivers and approximately 300,000 suspended drivers at any given time. This represents about five percent of the licensed driver population. New Jersey monitors driving behavior using a point-based system. Driver history data includes data related to violations, suspensions, as well as, basic crash involvement data (event date and fatality indicator). Driver history data is maintained indefinitely using a mainframe Legacy database system. The process for retrieving data involves a multi-staged request and varying levels of programming depending on the complexity of the data requested. Data requests must be made in writing specifying the data elements required and a detailed explanation on how the data will be used. The request must first be made to the New Jersey MVC driver control unit which then forwards it to the State Office of Information Technology for programming and data retrieval. The timeframe for data retrieval and delivery depends on available resources, the complexity of the request and competing priorities. New Jersey maintains a comprehensive data coding “index.” **Special Note:** The research team has extensive experience working with New Jersey MVC data and currently has a data request pending which should satisfy the needs of this study. If NJ is selected as a case study location, permission to use the data for this study must be obtained prior to using the data.

Eight **AAMVA Region II** jurisdictions responded to the agency survey. Of those, three scored eight or more points based on the criteria outlined above.

1. **Arkansas** received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. It is a medium-size jurisdiction with approximately 2 million licensed drivers. Approximately four percent or 90,000 licensed drivers have their driving privileges suspended. In Arkansas, driving behavior is monitored using a point-based system. Driver history data includes data related to violations and suspensions as well as limited crash involvement data, including: event date, fatality indicator, and type of vehicle. Only at-fault crashes are recorded. Driver history data is maintained for 15 years on a mainframe IBM IMS database system. The process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the information that is being requested. Arkansas maintains a comprehensive data coding “index.”
2. **Florida** received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. It is a large jurisdiction with approximately 10 million licensed drivers. According to data from previous studies, approximately 10 percent or 1 million licensed drivers have their driving privileges suspended. In Florida, driving behavior is monitored using an occurrence-based system. Driver history data includes data related to violations and suspensions as well as basic crash involvement data (event date, fatality indicator, and at-fault indicator). Driver history data is maintained for 10-75 years depending on the offense; and “warehoused” using IBM DB2 software on a local server network. The process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the information requested and the size of the sample. According to the individual responding to the survey, most requests for data can be fulfilled in “a few days.” Florida maintains a comprehensive data coding “index.”
3. **Tennessee** received a total screening score of 10 out of 10 and did not meet any of the exclusion criteria. It is a medium-size jurisdiction with approximately 4.4 million licensed drivers. Approximately 14 percent or 600,000 licensed drivers have their driving privileges suspended. Tennessee uses a point-based system to monitor driving behavior. Driver history data includes data related to violations and suspensions as well as detailed crash involvement data, including: event date, type of crash, fatality indicator, bodily

injury indicator, property damage amount, at-fault, and type of vehicle. Driver history data is maintained for 10 years for most offenses and indefinitely for DUI and active suspensions and revocations. Data is stored on a mainframe IBM database system. Data must be requested in writing and the process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the information requested, but most requests can be fulfilled within two to three days. Tennessee maintains a comprehensive data coding “index.”

Ten **AAMVA Region III** jurisdictions responded to the agency survey. Of those, three scored eight or more points based on the criteria outlined above.

1. **Kansas** received a total screening score of 9 out of 10 and did not meet any of the exclusion criteria. It is a medium-size jurisdiction with approximately 2 million licensed drivers. Kansas did not provide data regarding the number of suspended drivers when responding to this survey. However, previous research conducted by the research team indicates that in 2004, the State had approximately 100,000 suspended drivers (Carnegie, 2007). At the time, this represented approximately five percent of all licensed drivers in the State. In Kansas, driving behavior is monitored using an occurrence-based system. Driver history data includes data related to violations and suspensions as well as limited crash involvement data, including: event date, crash severity, and type of vehicle. Driver history data is maintained for 10 years for most offenses and indefinitely for some. Data is archived using IBM DB2 software on a local server network. Special requests for data must be made in writing. The process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the complexity of the information requested. Kansas maintains a comprehensive data coding “index.”
2. **Michigan** received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. It is a large jurisdiction with approximately 7.2 million licensed drivers. Michigan did not provide data regarding the number of suspended drivers when responding to this survey. Driver behavior in Michigan is monitored using a combination of both point- and occurrence-based monitoring. Driver history data includes data related to violations and suspensions as well as detailed crash involvement data, including: event date, number of vehicles involved, fatality indicator, bodily injury indicator, negligence code, alcohol/drug use indicator, and reference number for cross-checking data with other data sets. Driver history data is maintained for 7-10 years. Data is stored on a mainframe IBM DB2 database system. Data must be requested in writing, and the process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the information requested, but most requests can be fulfilled within 7-10 days. Michigan maintains a comprehensive data coding “index.”
3. **South Dakota** received a total screening score of 9 out of 10 and did not meet any of the exclusion criteria. It is a small jurisdiction with approximately 550,000 licensed drivers. Approximately 4 percent or 22,000 licensed drivers have their driving privileges suspended. South Dakota uses a point-based system to monitor driving behavior. Driver history data includes data related to violations and suspensions as well as limited crash involvement data, including: event date, vehicle type, crash number, and fatality indicator. Driver history data for standard license holders is maintained for 10 years. Data for CDL drivers is saved indefinitely. Data is maintained on an Oracle database system. The process for retrieving data varies but most often involves some level of programming. The timeframe for data delivery is dependent on the information that is being requested and programmer workload. South Dakota maintains a comprehensive data coding “index.”

Eight **AAMVA Region VI** jurisdictions responded to the agency survey. Of those, two scored eight or more points based on the criteria outlined above. These included:

1. **Colorado** received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. It is a medium-size jurisdiction with approximately 4.5 million licensed drivers. Approximately 9 percent or 400,000 licensed drivers have their driving privileges suspended. Colorado uses a point-based system

to monitor driving behavior. Driver history data includes data related to violations and suspensions as well as limited crash involvement data, including: event date, persons involved, and other unspecified “statistical” information. Driver history data is maintained indefinitely. Requests for data must be made in writing and most often involve some level of programming. The timeframe for data delivery is dependent on the complexity of the information requested and programmer workload. Most requests can be fulfilled within two weeks. Colorado maintains a comprehensive data coding “index.”

2. **Oregon** received a total screening score of 8 out of 10 and did not meet any of the exclusion criteria. It is a medium-size jurisdiction with approximately 2.7 million licensed drivers. Approximately 11 percent or 300,000 licensed drivers have their driving privileges suspended. Oregon uses an occurrence-based system to monitor driving behavior. Driver history data includes data related to violations and suspensions as well as detailed crash involvement data, including: event date, type of accident, fatality involvement, employment indicator, and reference number for cross-checking data with other data sets. The length of time driver history data is maintained depends on the type of event and ranges from five years to indefinitely. Data is stored and access using Microsoft SQL database management software. Requests for data must be made in writing and most often involve some level of query programming. The timeframe for data delivery is dependent on the complexity of the information requested but most often requests can be fulfilled within two to three weeks. Oregon maintains a comprehensive data coding “index.”

The final selection of case-study jurisdictions was made after consulting with representatives from AAMVA and NHTSA regarding the short list and a series of follow-up telephone interviews with the principal points of contact responsible for data retrieval requests within each agency. Based on these interviews, the short list was narrowed to six jurisdictions for subsequent data collection and analysis (see Table 6).

Table 6: Final case study jurisdictions

Region I	Region II	Region III	Region IV
New Jersey (large)	Florida (large) Tennessee (medium)	Kansas (medium) South Dakota (small)	Colorado (medium)

SECTION 4: OVERVIEW OF CASE STUDY JURISDICTIONS

As noted in the previous section, the research team contacted each of the 11 short list jurisdictions via telephone to discuss data acquisition. Six jurisdictions agreed to provide data on both suspended/revoked drivers and currently licensed drivers. These were Colorado, Florida, Kansas, New Jersey, South Dakota, and Tennessee. This section presents a brief descriptive profile of each case study jurisdiction. The descriptions include an overview of selected highway statistics and information from the legislative review of license suspension laws in each State. Table 7 provides a summary of selected highway statistics for the six case study jurisdictions included in the final data analysis. Table 8 provides a quick-reference overview of suspension reasons by jurisdiction.

Table 7: Selected highway statistics—Case study jurisdictions

State	Licensed Drivers (thousands)	Registered Vehicles (thousands)	Vehicle Miles Traveled (millions)	Population (thousands)	Traffic Fatalities	Fatality Rate per 100,000 Population
Colorado	3,341	1,808	47,962	4,665	606	13.0
Florida	13,374	15,691	201,531	17,790	3,543	19.9
Kansas	1,974	2,368	29,621	2,745	428	15.6
New Jersey	5,871	6,262	73,819	8,718	748	8.6
South Dakota	566	854	8,397	776	186	24.0
Tennessee	4,352	4,980	70,814	5,963	1,270	21.3

Sources: U.S. Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Facts 2005 Early Edition, Washington, DC: 2006, available at <http://www-nrd.nhtsa.dot.gov/Pubs/TSF2005EE.PDF> as of December 5, 2006; U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2005, Washington, DC: 2006; U.S. Department of Commerce, U.S. Census Bureau, Statistical Abstract of the United States 2006 Washington, DC: 2006, available at <http://www.census.gov/compendia/statab/> as of December 26, 2006.

Colorado

Colorado has approximately 4.7 million residents and 3.3 million licensed drivers. There are approximately 1.8 million registered vehicles in the State. Colorado drivers log approximately 48 billion vehicle miles per year. In 2005, there were 606 fatal crashes on Colorado roadways. This equates to a per capita fatality rate of 13.0 per 100,000 residents. Colorado uses a point-based system to monitor driver behavior. Licensed drivers may have their driving privileges withdrawn for both driving and non-driving reasons (see Table 8). According to motor vehicle agency representatives, at any given time, approximately nine percent of the State's licensed drivers may have their driving privileges suspended/revoked. In addition, it should be noted that the State of Colorado has a conditional job-related probationary license program that allows eligible drivers to drive for employment, medical, and essential needs purposes during the period of their suspension/revocation (Carnegie, 2007).

Table 8: Reasons for driver's license suspension/revocation in the case study jurisdictions

	CO	FL	KS	NJ*	SD	TN
DRIVING-RELATED REASONS FOR SUSPENSION						
Driving while intoxicated or under the influence of drugs	■	■	■	■	■	■
Driving while suspended or revoked	■	■	■	■	■	■
Reckless driving			■	■		■
Careless driving				■		
Leaving the scene of an accident	■	■	■	■	■	■
Accumulation of points or "countable" violations/crashes	■	■	■	■	■	■
NON-DRIVING REASONS FOR SUSPENSION						
Failure to appear in court to satisfy a moving violation	■	■	■	■	■	■
Failure to appear in court to satisfy a parking ticket		■		■		
Failure to pay a motor vehicle fine, surcharge or fee		■	■	■		■
Failure to pay court fines, fees or surcharges		■	■	■	■	■
Failure to comply with a child support order	■	■	■	■		■
Conviction for a drug-related offense other than DUI	■	■	■	■		■
Failure to maintain proper insurance	■	■	■	■	■	■
Altered or unlawful use of a driver's license	■	■		■	■	■
Fictitious license plates, registration, inspection sticker, etc.		■		■		
Fraudulent application for driver's license or registration	■	■	■	■	■	■
Alcohol- and drug-related offenses (other than DUI) by minors	■	■	■	■	■	■
Truancy		■				■
Delinquent conduct by a minor	■	■	■	■		■

Notes: The data presented in this table was primarily derived from a 2005 survey of motor vehicle agencies (31 responses were received). The survey data was supplemented with a review of online material. Information for those States marked with an * was compiled from motor vehicle licensing documents and statutes available via the Internet. The reasons listed in the table may not be exhaustive.

Florida

Florida has 17.8 million residents, 13.3 million licensed drivers, and approximately 15.7 million registered vehicles. It is the largest jurisdiction investigated for this study. Florida drivers log more than 201 billion vehicle miles per year. In 2005, there were 3,543 fatal crashes on Florida roadways. This equates to a per capita fatality rate of 19.9 per 100,000 residents. Driving behavior in Florida is monitored using an occurrence-based system. Florida drivers may have their driving privileges withdrawn for both driving and non-driving reasons (see Table 8). No data on the number of suspended drivers in Florida was made available for this study; however, according to data from previous studies, approximately 10 percent or 1-1.3 million licensed drivers have their driving privileges suspended at any given time in the State.

Kansas

Kansas has approximately 2.7 million residents and 1.9 million licensed drivers. There are approximately 2.4 million registered vehicles in the State. Kansas drivers log approximately 29.6 billion vehicle miles per year. In 2005, there were 428 fatal crashes on Kansas roadways. This equates to a per capita fatality rate of 15.6 per 100,000 residents. Like Florida, Kansas uses an occurrence-based system to monitor driver behavior. Kansas drivers may have their driving privileges withdrawn for both driving and non-driving reasons (see Table 8). According to State motor vehicle agency representatives, any given time, approximately 5 percent of the State's licensed drivers may have their driving privileges suspended/revoked. Further, it should be noted that the State of Kansas has restricted-use license program that allows eligible drivers to drive for employ-

ment, education, drug treatment and medical purposes during the period of their suspension/revocation (Carnegie, 2007).

New Jersey

New Jersey has 8.7 million residents, 5.9 million licensed drivers, and approximately 6.3 million registered vehicles. New Jersey drivers log more than 73.8 billion vehicle miles per year. With 748 fatal crashes in 2005, New Jersey has the lowest per capita fatality rate (8.6 per 100,000 residents) of the six case-study jurisdictions investigated for this study. Driving behavior in New Jersey is monitored using a point-based system. As is true in all six case study jurisdictions, New Jersey drivers may have their driving privileges withdrawn for both driving and non-driving reasons (see Table 8). At any given time, approximately five percent of the State's licensed drivers may have their driving privileges suspended (Carnegie, 2007).

South Dakota

South Dakota is the smallest jurisdiction investigated for this study. The State has only about 776,000 residents and 566,000 licensed drivers. There are approximately 854,000 registered vehicles in the State. South Dakota drivers log approximately 8.4 billion vehicle miles per year. In 2005, there were only 128 fatal crashes in the State. However, given its population South Dakota has the highest per capita fatality rate (24.0 per 100,000 residents) of the six jurisdictions included in this study. Like Colorado and New Jersey, South Dakota uses a point-based system to monitor driver behavior. In South Dakota, drivers may have their driving privileges withdrawn for both driving and non-driving reasons (see Table 8). According to motor vehicle agency representatives, at any given time, approximately four percent of the State's licensed drivers may have their driving privileges suspended.

Tennessee

Tennessee has approximately 5.9 million residents, 4.4 million licensed drivers, and approximately 4.9 million registered vehicles. Drivers in Tennessee log more than 70.8 billion vehicle miles per year. In 2005, there were 1,270 fatal crashes in the State. This equates to a per capita fatality rate of 21.3 per 100,000 residents. Driving behavior in Tennessee is monitored using a point-based system. The State's drivers may have their driving privileges withdrawn for both driving and non-driving reasons (see Table 8). According to motor vehicle agency representatives, at any given time, rates of license suspension in Tennessee range from 6-14 percent of the State's licensed driver population. It should also be noted that the State of Tennessee has a restricted use license program that allows eligible drivers to drive for employment, education, drug treatment, and medical purposes during the period of their suspension/revocation (Carnegie, 2007).

SECTION 5: DATA ANALYSIS AND FINDINGS

In this section we describe the results of our data analysis which included several areas of inquiry. After describing data acquisition, sample frame, and analysis methods we examine aggregate trends in suspension activity by comparing two groups of suspended drivers, those whose suspension is due to driving reasons and those suspended for non-driving reasons.

Data Acquisition, Sample Frame, Methods

Each of the six States participating in this study provided data covering the five-year time period of 2002-2006. The suspended/revoked driver data provided by each jurisdiction included the following driver history information: unique driver identification number (not driver's license number), reason for suspension, and violation history from time of suspension forward. Violation history data prior to suspension was not provided. Crash data were limited to the period of 2002-2006 for those States whose technology could link driver license data and crash data. It is important to note that many jurisdictions only record data for at-fault crashes. As a result, crash data in this context is difficult to analyze and its uses are limited in terms of statistical inference.

Sampling Frame

After obtaining the data from each participating jurisdiction, the research team created a merged dataset by sampling randomly 20,000 driver records from the universe of suspended/revoked drivers in the data from each State. The random sample was obtained using the driver's license number or other record identifier field provided by the jurisdiction as a unique identifier. No other metric, such as demographic or socioeconomic, was used to select the random sample. Care was taken to assure that driver's identification numbers were randomly assigned. This resulted in a dataset containing 120,000 suspended/revoked driver's records.

Not all of the 120,000 sampled records were useable due to errors in the drivers' license number or unique identifier field. Distribution of the unusable data was consistent across all States except New Jersey which had in excess of one-third of the errors. The final dataset included 85,100 unique suspended/revoked driver's records including drivers from all six States. Of these 85,100 records, 6,977 indicated a suspension or revocation without identification of the reason for the suspension/revocation. As a result, only 78,123 unique suspended/revoked driver's records could be categorized by reason for suspension/revocation. This subset of records was used in the detailed analysis.

Methods

Given that our data universe consists of only suspended/revoked drivers' records for the six States, we recode the records to create two subgroups—drivers suspended for driving reasons and drivers suspended for non-driving reasons. The recoding was based on the research team's review of suspension reasons in each of the six jurisdictions and interpretation of the suspensions recorded for each driver. Although specific non-driving reasons for suspension differ by State, the metric of non-driving reasons for suspension remains consistent across all six jurisdictions. The criterion used to categorize drivers suspended for driving related suspension included all reasons related to negligent operation of a motor vehicle. For the purpose of this study, negligent operation of a motor vehicle includes drivers whose suspension was ordered as a result of failing to appear in court or pay a fine on a traffic violation. It should be noted it is possible that drivers suspended for failing to appear/pay fine (arguably a compliance violation) are not "poor" drivers per se in the same manner as a persistent or habitual violator might be. However, because the suspension stemmed from

an earlier driving violation, it is considered for the purpose of this study to be a driving-related suspension. All driving and non-driving reasons in the database are shown in Appendix A.

Aggregate Trends in Suspension Activity

Table 9 shows the total number of suspended drivers by year in the sample population and the proportion of total suspended drivers by suspension type. As shown in the table, the total number of suspended drivers decreases over the analysis period from approximately 19,000 in 2002 to approximately 14,000 from 2004-2006. This represents a 26-percent decrease over the time period. A concurrent result of the downward trend in suspensions over the analysis period is the increasing proportion of drivers suspended for non-driving reasons in the population of all suspended drivers over the time period. In 2002, drivers suspended for non-driving reasons represented over one quarter (27%) of all suspended drivers. In 2005 and 2006, they represented in excess of one-third (36%) of all suspended drivers.

Table 9: Driving versus non-driving suspensions—2002–2006

Year	Total Suspended Driver Records in Sample	Suspended for Non-Driving Reasons		Suspended for Driving Reasons	
		Number	% of total	Number	% of total
2002	18,984	5,054	27%	13,930	73%
2003	17,272	4,849	28%	12,423	72%
2004	14,021	4,295	31%	9,726	69%
2005	13,709	4,910	36%	8,799	64%
2006	14,137	5,140	36%	8,997	64%
Total	78,123	24,248	31%	53,875	69%

Violation Recidivism, Survival Analysis, and Crash Involvement

In the following analyses, we define a recorded event within the database as a crash, moving violation, conviction for driving while suspended, or non-driving offense such as failure to pay a court-ordered financial obligation, failure to pay child support, and failure to maintain continuous liability insurance. After grouping the events, we examined the driving records of suspended drivers over the period of analysis to document how frequently any of the four types of events occurred on each suspended driver’s record. Our database consists of 53,875 drivers suspended for driving reasons of which about 42 percent (22,424) are subsequently convicted of a violation while their driving privileges are suspended. Of the 24,248 drivers suspended for non-driving reasons, about 38 percent (9,288) are subsequently convicted of a violation while their driving privileges are suspended. As shown in Table 10, the total number of events entered on suspended driver records is relatively consistent when comparing drivers suspended for non-driving versus driving reasons. On average, over the five-year time period, drivers suspended for non-driving reasons logged 2.6 events, while drivers suspended for driving reasons logged 2.7 events.

Table 10: Average number of times suspended drivers observed during the period of suspension (2002–2006)

Type of suspended driver	Average times observed in database
Suspended for non-driving reason (N=24,248)	2.6
Suspended for driving reason (N=53,875)	2.7

Looking at days until an event occurs; Table 11 shows the mean and median number of days until an event is recorded in the database. Drivers suspended for driving reasons receive a moving violation within 8 months (254 days) compared to 11 months (340 days) for drivers suspended for non-driving reasons. Both groups were in a subsequent crash within 10 months (308 days for those suspended for driving reasons versus 9.4 months or 287 days for drivers suspended for non-driving reasons). Drivers who were suspended for

non-driving reasons were subsequently convicted of driving while suspended within 11.7 months (355 days) compared to 14.4 months for drivers suspended for driving reasons. The two groups differ when considering the number of days until they received a moving violation, a subsequent non-driving offense, or a subsequent driving while suspended violation. The two groups did not differ in the time to involvement in a subsequent crash.

Table 11: Days to event occurrence among drivers suspended for non-driving versus driving reasons (2002–2006)

Type of Event	Drivers Suspended for Non-Driving Reasons			Drivers Suspended for Driving Reasons		
	Mean	Median	95% Confidence Interval	Mean	Median	95% Confidence Interval
Crash	287	187	(241, 333)	308	215	(293, 323)
Moving Violation	340	214	(328, 351)	254	128	(249, 259)
Non-Driving Offense	270	160	(262, 279)	404	319	(394, 415)
Driving While Suspended	355	258	(330, 380)	436	348	(420, 452)

Violation Recidivism

This section examines violation recidivism among drivers suspended for non-driving reasons versus those suspended for driving reasons. Table 12 shows both the number of events and the percentage of events occurring after the initial drivers' suspension during the period of study. As shown in the table, moving violations are committed by 29.4 percent of drivers suspended for driving reasons after their initial suspension while 14.9 percent of those suspended for non-driving reasons commit a moving violation after their initial suspension. Looking at non-driving offenses, we see that 20.7 percent of drivers suspended for non-driving reasons commit a subsequent non-driving offense compared to 8.8 percent of those suspended for driving reasons. When considering driving on a suspended license, 3.4 percent of drivers suspended for driving reasons are convicted of this offense while 2.7 percent of drivers suspended for non-driving reasons are convicted of this offense.

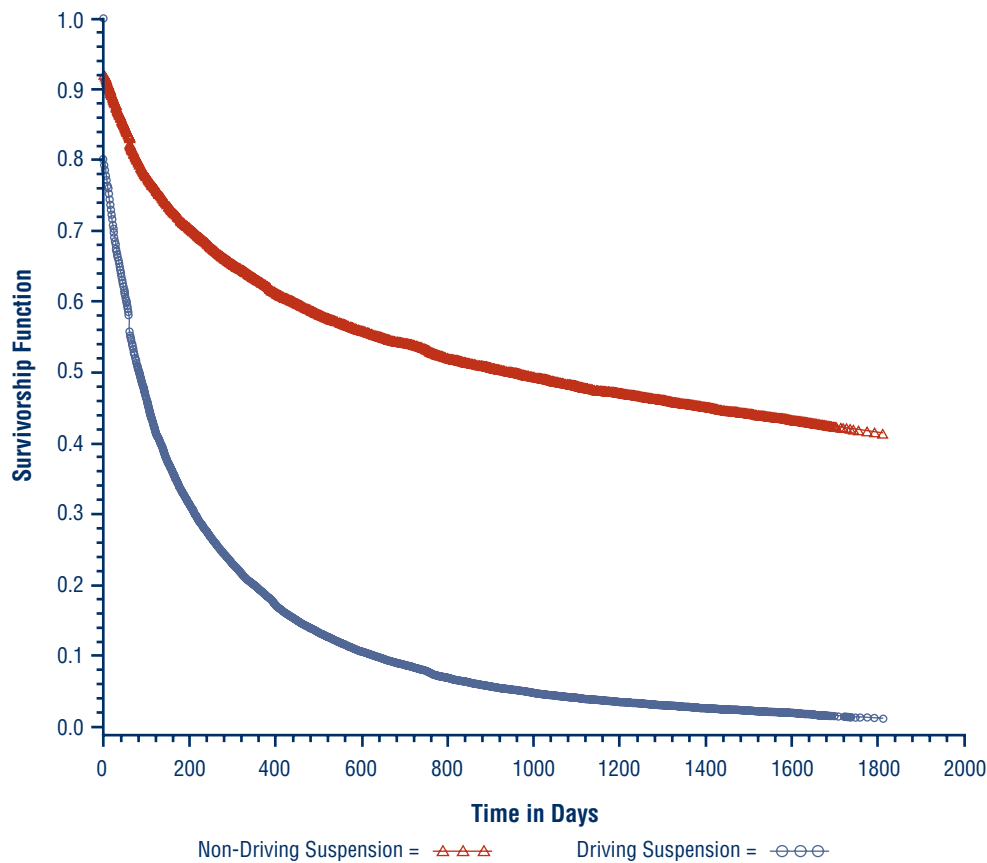
Table 12: Drivers subsequently convicted of an event during their suspension period (2002–2006)

Type of Event	Drivers suspended for non-driving reasons (N=24,288)		Drivers suspended for driving reasons (N=53,875)	
	Number of Events	Percentage	Number of Events	Percentage
Moving Violation	3,613	14.9	15,850	29.4
Non-Driving Offense	5,028	20.7	4,741	8.8
Driving While Suspended	656	2.7	1,832	3.4

Survival Analysis

We further explore the violation recidivism between the two groups, drivers suspended for driving reasons versus drivers suspended for non-driving reasons, through survival analysis. Figure 1 shows the survival analysis function graphically. In the graph, the vertical axis represents the survivorship function. The survivorship function shows that the group suspended for non-driving reasons consistently lies above the group suspended for driving reasons. This indicates that the recidivism rate for drivers suspended for non-driving reasons is lower through the time period than the rate for drivers suspended for driving reasons. This finding remains true when controlling for the number of individuals in each group who never reoffend during the analysis period. Statistically, this controls for the censoring of those who never reoffend in the time period under analysis.

Figure 1: Survival graph for recidivism of all types of violations and crashes



In Table 13, we offer the statistical hazard outcomes for the survival analysis. We test for the proportional hazard assumption finding that the non-statistically significant result $-\chi^2 = .8883$ $Pr\chi^2 = .3459$ – leads to the conclusion that there is no evidence of an increasing or decreasing trend over time in the hazard ratio. The variables used in the analysis are nominal variables. The first variable, driving reason, is coded 1 if the driver’s suspension is for driving reasons. The variable labeled recidivism is coded 1 if the suspended driver commits a moving violation while suspended, and the final variable is the interaction between driving reason and violation recidivism which takes on the value of 1 if the driver is suspended for driving reasons and has committed a moving violation while suspended. The hazard ratio on the interaction is 2.79 meaning that the hazard for recidivism for those drivers who are suspended for driving reasons and commit an additional driving-related offense is 2.79 times greater than for those who are suspended for non-driving reasons or those who are suspended for driving reasons but do not reoffend.

Table 13: Hazard function for the analyzed period of suspension (2002-2006)

Variable	Parameter Estimate	Standard Error	χ^2	$Pr > \chi^2$	Hazard Ratio
Driving Reason	-0.814	0.019	1906.47	<.0001	0.443
Violation Recidivism	1.576	0.021	5806.66	<.0001	4.834
Driving Reason* Recidivism	1.026	0.026	1612.34	<.0001	2.791

Crash Involvement

In addition to violation recidivism and time until the reoffending event, we examined crash involvement among suspended drivers to determine if patterns of crash involvement differed between drivers suspended for driving versus non-driving reasons. Table 14 shows that about 0.09% of drivers suspended for a non-driving reason are involved in a crash while 3.4% of drivers suspended for driving-related reasons are involved in a crash. If we focus on only those who have been involved in any of the events after suspension of their driver's license, we find that about 1.9% of drivers suspended for a non-driving reason are involved in a crash while 6.8% of drivers suspended for driving-related reasons are involved in a crash.

Table 14: Suspended drivers involved in a crash during the period of suspension (2002-2006)

Type of Suspended Driver	Repeat Offenders			All Suspended Drivers		
	N	Number of Events	Percentage	N	Number of Events	Percentage
Suspended for Non-Driving Reason	9,288	176	1.9	24,248	218	0.09
Suspended for Driving Reason	22,424	1,525	6.8	53,875	1,835	3.4

SECTION 6: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

There is a commonly held belief among motor vehicle administrators, law enforcement, and the courts that suspended drivers pose a significant traffic safety risk when they continue to drive. As such, driving while suspended is treated as a very serious offense in most jurisdictions. This belief stems largely from a time when there was a direct relationship between license suspension and driving behavior. The reality today is that license suspension is widely used as a sanction for things other than habitual bad driving. In fact, several studies have found that suspensions for non-driving reasons are far more common than suspensions ordered to punish habitual bad driving (Carnegie, 2007).

According to a survey of State motor vehicle agencies and a review of State statutes conducted for this study, all 50 States and the District of Columbia have laws that permit the State motor vehicle agency and/or the courts to withdraw driving privileges for at least some non-driving reasons. Common non-driving reasons for suspension include: failure to comply with a child support order; failure to maintain proper insurance; failure to appear in court to satisfy a summons; fraudulent application for driver's license or vehicle registration documents; altered or unlawful use of a driver's license; alcohol and drug-related offenses by minors other than DUI; convictions for drug-related offenses other than DUI; and failure to pay a motor vehicle and/or court fines, fees, and surcharges. Other less common non-driving reasons for suspension include: truancy; fuel theft; delinquent conduct by a minor; use of fictitious license plates, registration, or inspection sticker; failure to appear in court to satisfy a parking ticket; making terrorist threats; graffiti; failure to register as a sex offender; and attempting to purchase tobacco by a minor.

Our analysis of suspended driver data from six jurisdictions shows that about 38 percent of drivers suspended for non-driving reasons and about 42 percent of drivers suspended for driving reasons are subsequently convicted of a violation while their driving privileges are suspended. Our data shows an overall decrease of 26 percent in the total number of suspended drivers over the analysis period, with most the decline occurring among drivers who were suspended for a driving reason. While approximately the same number of drivers was suspended for non-driving reasons, they account for a larger proportion, increasing from 27 percent of all suspended drivers in 2002 to 36 percent of all suspended drivers by 2005.

This finding is important because our data analysis shows that the pattern of violation and crash involvement among drivers suspended for driving versus non-driving reasons vary in significant ways:

- **Approximately 30 percent of drivers suspended for driving reasons commit a moving violation while under suspension compared to approximately 15 percent of drivers suspended for non-driving reasons.**
- **Approximately 3.4 percent of drivers suspended for driving reasons are convicted of driving while suspended compared to 2.7 percent of drivers suspended for non-driving reasons.**
- **Less than one percent (0.09%) of drivers suspended for non-driving reasons are involved in a crash while their driver's license is suspended. This compares to over three percent (3.4%) of drivers suspended for driving reasons are involved in a crash while their driver's license is suspended.**

These findings are in many ways intuitive and prove the obvious—drivers suspended for bad driving are indeed bad drivers. However, together, the findings also point to the conclusion that the suspended driver population is heterogeneous in behavior while suspended, leading to the conclusion that safety efforts to

combat the problem of driving while suspended should take into account the differences between the two suspended driving groups.

From a policy perspective, the findings appear to support the conclusion that not all suspended drivers behave the same and therefore can and perhaps should be treated differently by motor vehicle agencies, law enforcement, and the courts. This is not to say that suspensions of drivers for non-driving reasons is unfounded. On the contrary, we make no statement about the use of suspensions regardless of the reasons. What we find is that when comparing the two groups, those who are suspended for driving reasons versus those suspended for non-driving reasons, our findings suggest that these two groups are not homogeneous in behavior and therefore may need differing policy actions. This presents a dilemma for policymakers in the context of current driver control and management systems and a multitude of Federal and State laws already in place.

License suspension was originally intended as a sanction to address poor driving behavior; however, it is now (almost universally) used as a means to punish individuals engaged in criminal and/or otherwise socially undesirable behavior unrelated to driving and as a means to compel compliance with administrative requirements such as appearing in court and paying fines, fees, and surcharges, and insurance requirements. Given the significant administrative burden (both court and law enforcement) associated with processing drivers found to be driving while suspended and the fact that drivers suspended for non-driving reasons appear to pose a comparatively lower safety risk (i.e., fewer violations and crashes while suspended) compared to those who are suspended based on driving reasons, the findings may provide a foundation for reconsidering how motor vehicle agencies, law enforcement and the courts deal with license suspension for non-driving reasons.

An option might be to consider a new licensure status that differentiates between drivers suspended for bad driving and those suspended for financial or compliance reasons. In fact, in many jurisdictions there is already a dual status system in place for withdrawing driving privileges. The existing distinction is between license suspension and revocation. Suspensions most often represent a temporary withdrawal while revocations are a more severe and sometimes permanent sanction.

Additionally, an option might be to stop the practice of suspending licenses for things unrelated to driving. This would certainly reestablish the link between the sanction and driving behavior. Unfortunately, we do not know the relationship in our study between suspended for non-driving reasons and the average driver (not suspended). This is a limitation of the study, however we note that previous studies indicate that those suspended for non-driving reasons may not differ significantly from the average driver (Gebers and DeYoung). We would argue that much more research needs to be done before drawing any major conclusions about the relationship between those suspended for non-driving reasons and the average driver.

As a potential policy, for example, a status of “restricted” could be added to suspended and revoked for drivers whose suspension/revocation is due to non-driving reasons. Under restricted status, a driver could be limited to driving for work, workforce training and medical purposes, similar to the restricted use, occupational or work license programs in place in many States. The withdrawal of some driving privileges would likely retain much of the deterrent or coercive effect that the threat of license suspension currently provides. At the same time it may limit the economic impact of license suspension on those unable to pay fines (e.g., working poor) and indigent individuals by allowing drivers to continue to drive to work. Such a status would eliminate the need for drivers to apply for such a license and relieve motor vehicle agencies of the administrative burden of processing restricted-use license requests in the jurisdictions that have them. Finally, such a status may reduce the financial and administrative burden to law enforcement and the courts of processing drivers found to be driving while suspended for non-driving reasons, allowing law enforcement and the

courts to concentrate limited resources on more dangerous suspended drivers—those drivers found to be driving while suspended for driving reasons.

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 suspended drivers differ on multiple dimensions. A question that remains unanswered is whether or not the two groups differ in risk-taking and driving ability. We have shed some light on the fact that violation recidivism and crash involvement vary between the groups and that driving violations after suspension are more pronounced for those suspended for driving reasons. Drivers whose licenses are suspended for driving reasons are more likely to be convicted of a subsequent driving violation, while those suspended for non-driving reasons are more likely to be convicted of a subsequent non-driving violation. More research is needed before drawing definitive conclusions.

For example, the crash data used in this analysis was limited in most instances to drivers found to be at-fault. What is not known is the influence of suspended drivers contributing to a crash when not found at fault. It could be argued that the suspended driver has some fault in the crash since the driver was not allowed to legally drive. An analysis that differentiates the number of crashes in which the two groups were involved may lead to a better metric for measuring this driving behavior. Also, the analysis was limited to sample data from six jurisdictions. This is an improvement over studies that have focused on data from a single jurisdiction but questions of representativeness remain. Finally these data do not allow a comparison of the violation or crash experiences of suspended drivers for whatever reason to the general population of drivers. What can be said from this analysis is that the findings appear to be robust across the jurisdictions sampled.

SELECTED REFERENCES

- Carnegie, J.A. (2007). *Driver's License Suspensions, Impacts and Fairness Study*. New Jersey: New Jersey Department of Transportation.
- Eby, D.W., et al. (2002). *An Evaluation of Michigan's Repeat Alcohol Offender Laws: Executive Summary*. Michigan: The University of Michigan Transportation Research Institute.
- Gebers, M.A., and DeYoung, D.J. (2002). *An Examination of the Characteristics and Traffic Risk of Drivers Suspended/Revoked for Different Reasons*. California: California Department of Motor Vehicles.
- Griffin, L.I., and DeLaZerda, S. (2000). *Unlicensed to Kill*. Washington, DC: AAA Foundation for Traffic Safety.
- Joerger, M. (2002). *Profile of Driver Problems Follow-up Evaluation: An Examination of Driver Demographic Information and Driving Record*. Oregon: Oregon Department of Transportation.
- McCartt, A.T., Geary, L.L., and Nissen, W.J. (2002). *Observational Study of the Extent of Driving While Suspended for Alcohol-Impaired Driving*. Washington, DC: National Highway Traffic Safety Administration. Accessed online at: http://www.nhtsa.dot.gov/people/injury/research/observation_study/index.htm

APPENDIX: REASONS FOR SUSPENSIONS IN CASE STUDY STATES

Driving Reasons

Accident
Allowing an Intoxicated Person to Drive
Careless Driving In Commercial Vehicle
Chemical Test Failure For Alcohol—Administrative
Circumventing/Tampering With Ignition Interrupter
Consuming Alcohol Beverage in a Motor Vehicle
Contest Racing on Public Trafficway
Contributing to Accident Involving Property Damage
Contributing to Accident Resulting in Bodily Injury
Conviction for Failure to Provide Evidence
Conviction Under Implied Consent Law
Display/Represent Driver's License Not Ones Own
Drive on Wrong Side of Road
Drive w/Unlawful Blood Alcohol Level (.08 g/dL or Above)
Drive w/Unlawful Blood Alcohol Level .02 (Under 21)
Driving After Convicted as Habitual Offender
Driving on Sidewalk
Driving Under Influence of Narcotics
Driving While Revoked
Driving While Suspended
DUI—Manslaughter
DUI—Property Damage/Personal Injury
DUI—Serious Bodily Injury
Eluding Police Officer
Evading Arrest
Exceeding Speed Limitations
Exhibition Driving
Fail to Stop, Rend Aid Injury/Death
Failure to Appear in Court—Out of State
Failure to Pay Fine After Conviction of Moving Violation
Failure to Report Accident
Felony by a Motor Vehicle
Heedless, Willful, Wanton, or Reckless Driving

Non-Driving Reasons

Court Installment Order
Court Ordered—Countermeasure Program
Court Ordered Due to a Judgment
Criminal Mischief
Deface Public/Private Property
Failure to Appear—Non-driving
Failure to Appear—Worthless Check
Failure to Complete Required Alcohol Program
Failure to Maintain Insurance
Failure to Pass Required Driver's Examination
Failure to Pay Court Financial Obligation
Failure to Pay Fine
Failure to Report to Required Driver's License Exam
Failure to Satisfy Non-Moving Violation
Failure to Submit Required Medical/Vision Report
Felony Possession/Trafficking of a Controlled Substance
Immoral Act Involving Motor Vehicle
Improper Use of DL or ID Card
Inadequate Vision
Juvenile Alcohol Offense—Minor
Juvenile Court Action
Juvenile Non-Compliance—School Attendance
Juvenile-Restricted Permit
Juvenile-Truancy
Littering
Medical-Unknown
Non-Felony Drug Possession/Use
Nonpayment of Child Support
Obtaining Driver's License by Fraud
Outstanding Judgment-Unpaid Referee
Parking Offenses
Petty Theft of Gasoline
Possession of Alcohol
Possession of Alcohol-Non-Driver

Driving Reasons

Hit/Run—Leaving Scene of Injury or Fatal
Illegal Transportation of Alcohol or Drugs
Injury Accident—Fault Not Determined
Involved In—Fatal Accident
Involved In—Injury Accident
Involved In—Property Damage Accident
Juvenile Court Suspension—Driving
Leaving the Scene of Accident
Load Dropping/Shifting/Escaping
No Driver's License
Operating Contrary to Conditions Specified
Passing Stopped School Bus
Possession of Weapon—Juvenile Court
Racing on Public Trafficway
Refuse Submit Breath Test (Under 21)
Refuse Submit Breath/Urine/Blood Test
Required Ignition Interlock
Speeding 15 Mph or More Over Limit
Suspension for Driving Off Without Paying
Unlicensed Driver
Unsafe Operation of a Motor Vehicle
Using Hand Held Cell While Driving
Using Motor Vehicle in Connection with Crime
Vandalism in Vehicle
Vehicular Assault—Felony
Vehicular Homicide
Violate Safety Zone
Violation of Restriction
Wrong Way on One-Way Street

Non-Driving Reasons

Sell/Provide Alcohol to Minor
Subject to Seizures
Theft
Theft of Motor Vehicle Parts
VISA Expiration

