## Unlicensed T0 Kill stim <br> 

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## Executive Summary

In 2000, the AAA Foundation for Traffic Safety published the report Unlicensed to Kill, which was based on a study that examined the license status of drivers involved in fatal crashes during the period 1993-97. The results showed that $20 \%$ of all fatal crashes in the United States involved at least one driver who did not have a valid license at the time of the crash.

This report gives the results of a new study of state practices regarding drivers involved in fatal crashes that also has updated and extended the findings of the original Unlicensed to Kill report. The new study's reanalysis of the data in the first report (using data on fatal crashes from 1993 to 1999) confirmed its results: Approximately $20 \%$ of fatal crashes involve at least one driver who did not have a valid license at the time of the crash. These data also show a wide variation across states in the proportion of drivers involved in fatal crashes who lacked a valid license-from a low of $6.1 \%$ in Maine to a high of $23.1 \%$ in New Mexico.

Furthermore, trend analyses show that the proportion of drivers involved in fatal crashes who lack a valid license showed small but steady declines during the 7-year study period. The proportion of suspended drivers (those whose licenses were suspended at the time of the crash) involved in fatal crashes increased slightly, from $4.5 \%$ in 1993 to $5 \%$ in 1999. But the proportion of drivers who were unlicensed; whose licenses had been revoked, expired, or canceled; or who had an unknown license status all declined by a small amount during the 7 years.

## The Issues

The original Unlicensed to Kill report raised serious issues about states' ability to control the unlicensed driving situation. First, to find out if unlicensed drivers are overrepresented in the fatal crash statistics, it would be good to have a reliable estimate of the population of drivers who are unlicensed or driving under an invalid license. Second, to help states better understand and address the problem of drivers who operate a motor vehicle without a valid license, it is important to explain the reasons why states differ so much in their overall experience on this issue, and why they differ in particular types of license status violations among drivers involved in fatal crashes. The questions to be answered include:

- Why are some states' proportion of drivers involved in fatal crashes who have an aberrant license status so much lower than the national average?
- Why do even states with very good records appear to have problems with particular classes of license violations?
- For offenders driving under the influence of alcohol, how do the state's laws affect a motorist's willingness to drive without a valid license?
- What effect is there, if any, of recent laws suspending the licenses of people who fail to pay child support or commit other offenses not related to driving?
- How do state procedures for notification of changes in license status affect the way courts and drivers behave?
- How do the enforcement of penalties for serious traffic violations and the prosecution of repeat offenders affect the state's proportion of drivers without a valid license?
- Are there other factors to consider, such as residency or citizenship status and insurance costs?

This report seeks to answer each of these questions by presenting the results of research in the context of the available literature, data, and expertise of practitioners at the state and national levels. Chapter 1 introduces the issues and reviews the literature. Chapter 2 presents the methods followed in conducting the research. Chapter 3 presents information on the laws, driver-control practices, and procedures of six states that seek to reduce a person's ability to drive without a valid license. Chapter 4 presents recommendations gleaned from successful state practices that could be emulated by other states and promoted by AAA clubs.

To introduce the research problem, chapter 1 defines terms, reviews the literature, highlights findings of various researchers, and explains limitations on data and methods. For instance, by setting the involvement rate of validly licensed drivers as the norm, one group of researchers calculated that drivers whose license has been suspended or revoked are 3.7 times more likely to be involved in a fatal crash than are validly licensed drivers and that unlicensed drivers are 4.9 times more likely to be involved in a fatal crash. Their methodology has limitations, however, most notably the need to establish the identity of the driver at fault in a fatal crash. Another problem is that it is hard to arrive at reliable findings for unlicensed drivers simply because so little is known about them.

Another aspect of the problem examined is the "paradox of reinstatement": Drivers who have lost their license and have not had it reinstated may behave in a safer fashion than those who have had it reinstated or those who are granted a hardship license. Still another aspect is the evidence that suspensions and other sanctions can help bring drivers back into compliance. For instance, researchers found that Florida drivers who were convicted of operating their vehicles while under the influence of alcohol and fail to "resolve" their behavioral issues before license reinstatement had $75 \%$ higher violation rates and $97 \%$ higher crash rates than drivers who were reinstated after resolving their behavioral issues.

Overall, studies thus far of drivers whose licenses have been suspended or revoked or who are unlicensed have been linked to recidivism of drivers suspended for driving under the influence of alcohol. More recent work has begun to look more closely at drivers who were suspended for other reasons, but data on these drivers are lacking.

It is clear that well-crafted, aggressively enforced laws can have an effect on the behavior of drivers suspended for driving under the influence of alcohol. It also seems probable that suspension of driving privileges is generally interpreted (by the drivers) to mean something short of a total ban. The majority of them still drive at least some of the time.

It is important to note that there are sizable gaps in the data available on drivers' behavior in general and that these gaps cause a corresponding lack of completeness in the literature on traffic safety. Moreover, though it makes good logical sense that license sanctions do work, the lack of complete data makes it impossible to be certain just how much of a deterrent is possible with license sanctioning programs. Because people continue to drive while their license is suspended or revoked (and while they are completely unlicensed), the general deterrent effect of license sanctions is not as strong as it could be. This report therefore seeks to answer the question of how best to develop programs to keep these drivers from behind the wheel-because if they do not drive, they do not contribute to traffic safety problems.

## Research Methods

In developing a list of sample states for the research, an attempt was made to identify states that have enacted and studied the effects of laws such as administrative license suspension and vehicle actions such as impoundment. In particular, those states that were lower than the national average in the proportion of crashes involving drivers with any type of aberrant license status were considered candidates. The selection process was biased toward states with a large population so that any changes in the measures reported in the earlier Unlicensed to Kill report and updated in this report could be viewed as real and not as an artifact of relatively small shifts in the population. There was no attempt to select states perceived as representative. Instead, a deliberate decision was made to focus on the states that appeared to have had some success at reducing the fatal crash involvement of drivers with an aberrant license status.

Once candidate states were identified, officials of each state were informed of the level of effort required to participate and were asked to provide written documentation of their problem of drivers operating vehicles with suspended or revoked licenses or while unlicensed and of their laws and procedures for dealing with problem drivers. Each state also identified key personnel that could be interviewed as the project progressed. Six states ultimately agreed to participate: California, Florida, Iowa, Michigan, Minnesota, and Oregon.

The laws of the six participating states were thoroughly reviewed. Then members of the project research team visited the states to gain a thorough understanding of the state's laws and practices regarding licensure, loss of license, reinstatement, and penalties for violating the licensure provisions of the law. Standard practices in the enforcement and adjudication arenas were also explored through interviews with key personnel in each state's driver-control and -licensing branch of the department of motor vehicles.

## Practices in Six States

The interviews with experts in the six states yielded useful information on their varying practices. These states represent medium-sized to large populations, and they have better than national average performance in the proportion of drivers in fatal crashes who lacked a valid license. In addition, several of these states are recognized leaders in laws, procedures, data systems, and analyses related to drivers with an aberrant license status; the report highlights each state's activities in these areas.

The six states all have open container and ignition interlock laws. Three have special repeat offender laws on the books. Four allow vehicle impoundment. Two have special plates or markings for repeat offenders. Four allow vehicle confiscation. And two can also block vehicle registrations by offenders who were driving under the influence of alcohol.

The most notable comparison between all other states and the six participating states involves vehicle impoundment. The majority of other nonparticipating states (78\%) do not have laws regarding vehicle impoundment; however, five of the six participating states do have such laws.

For each of the six states, the report offers brief descriptions of the range of both approaches that work and also barriers to addressing the problem. In California, for instance, the vehicle impoundment program results in eventual forfeiture in approximately half the cases. One principal barrier is that few of the drivers who are eligible for a restricted license ever apply for one.

In Florida, a citation-tracking system that supports analysis of the sequence of events related to each traffic citation has been put to good use analytically, especially in evaluating the program for motorists under the influence of alcohol. One barrier, however, is that law enforcement officers do not always run a driver history check at traffic stops.

In Iowa, an information center assists those drivers seeking help in getting their licenses reinstated and to avoid getting a suspension for unpaid fines. One main barrier is that county attorneys are reluctant to prosecute for driving under suspension or revocation if the driver is also charged with operating while impaired.

In Michigan, the immobilization program effectively blocks registration of vehicles by drivers with suspended or revoked licenses. One main barrier is that checkpoints have been ruled illegal, making it harder for law enforcement officers to catch violators.

In Minnesota, an early intervention program identifies drivers who are in danger of having their license canceled and enables the state to influence those drivers' behavior before they cross the line. A main barrier is that conviction records are not always
coded properly, and thus drivers may legitimately claim that they did not know that their license had been canceled.

In Oregon, local lists of scofflaws are useful in targeting recidivist or problem drivers. One main barrier is that local agencies are reluctant to implement a vehicle seizure program, partly because the law now requires a conviction before a vehicle can be seized.

## Recommendations

The report's recommendations, which are based on the interviews with experts in the six participating states, fall into three broad categories. The first includes laws that are effective in combating driving without a valid license:

- Implement and enforce administrative license revocation and suspension laws
- Establish vehicle impoundment, seizure, and immobilization programs
- Implement plate removal at the scene
- Implement special plates or stickers as an automatic probable cause for a traffic stop
- Establish mandatory jail time for multiple offenders
- Establish strictly circumscribed ignition interlock programs
- Establish a separate law enabling license status checkpoints
- Block registration of vehicles by drivers lacking a valid license

The second category of recommendations pertains to procedures that encourage compliance with the laws:

- Establish strong administrative control of license actions
- Establish driver assistance programs and informational campaigns
- Reduce the possibility and use of plea bargaining through additional information and education
- Create links between driver and vehicle registration files

The third category of recommendations concerns systems and procedures that help law enforcement officers, prosecutors, and courts effectively sanction violators:

- Create citation-tracking systems
- Convert to easy-to-use driver history records for police, prosecutors, and courts
- Provide timely and accurate information in driver history records
- Simplify the laws regarding license suspension


## 1. Introduction to the Issues

A reanalysis of the data in the original Unlicensed to Kill report (which used data on fatal crashes from 1993 to 1999) confirmed the results of that study: Approximately $20 \%$ of fatal crashes involve at least one driver who did not have a valid license at the time of the crash (see appendix A). These data also show a wide variation among the 50 states plus Washington, D.C., in the proportion of drivers involved in fatal crashes who lacked a valid license-from a low of 6.1 \% in Maine to a high of $23.1 \%$ in New Mexico.

Trend analyses (discussed in appendix A) show that the proportion of drivers involved in fatal crashes who lack a valid license (which will be referred to as having an "aberrant license status") showed small but steady declines during the 7 -year study period. The proportion of suspended drivers (those whose licenses were suspended at the time of the crash) involved in fatal crashes increased slightly from $4.5 \%$ in 1993 to 5\% in 1999. But the proportion of drivers who were unlicensed and those whose licenses were revoked, expired, canceled, or who had unknown license status all declined by a small amount during the 7 years (see figure A. 12). (The terms used in this paragraph and other terms used throughout the report are further defined in the next section.)

The original Unlicensed to Kill report raised some serious issues about states' ability to control the unlicensed driving situation. First, to find out if unlicensed drivers are overrepresented in the fatal crash statistics, it would be good to have a reliable estimate of the population of drivers who are unlicensed or driving under an invalid license. Second, to help states better understand and address the problem of drivers who operate a motor vehicle without a valid license, it is important to explain the reasons why states differ so much in their overall experience on this issue, and why they differ in particular types of license status violations among drivers involved in fatal crashes. The questions to be answered include:

- Why are some states' proportion of drivers with an aberrant license status who are involved in fatal crashes so much lower than the national average? Do they have effective programs in place that might work well in other states?
- Why do even states with very good records appear to have problems with particular classes of license violations?
- For offenders driving under the influence of alcohol, how do the state's alcohol laws and administrative procedures affect a person's behavior with respect to the willingness to drive without a valid license?
- What effect is there, if any, of recent laws suspending the licenses of people who fail to pay child support, library fines, or commit other offenses that are not related to driving?
- How do state procedures for notification of changes in license status affect the way courts and drivers behave?
- How do the enforcement and adjudication of penalties for serious traffic viola-
tions and the prosecution of repeat offenders affect the state's proportion of drivers without a valid license?
- Are there other factors to consider, such as societal norms, residency or citizenship status, and insurance costs? If so, how can these best be addressed, and by which government entities?

This report seeks to answer each of these questions by presenting the results of our research in the context of the available literature, data, and expertise at the state and national levels. This chapter introduces the issues in the context of a survey of the relevant literature spanning the past three decades. Chapter 2 presents the methods followed in conducting the research. Chapter 3 presents information on the laws, drivercontrol practices, and procedures of six states that seek to reduce drivers' ability to drive without a valid license. Chapter 4 presents recommendations gleaned from successful state practices that could be emulated by other states and promoted by AAA clubs and the AAA Foundation for Traffic Safety.

There is a growing body of literature related to state driver-control practices, in particular the behavior of drivers with an aberrant license. All states face similar problems in identifying these drivers, stopping them from operating a motor vehicle without a valid license, and ultimately bringing them back into compliance with state laws regarding obtaining or reinstating a license. As will become clear from the following literature review, many of these issues center on controlling repeat offenders, especially with respect to state laws for driving under the influence (DUI) of alcohol. A second and inextricably related set of issues centers not on DUI but on multiple offenders against state laws regarding the payment of fines, attendance at mandatory court appearances, and repeatedly driving without a valid license. Thus, a habitual drunk driver may also be a scofflaw with respect to driving while suspended (DWS), and a habitual DWS driver may be one who earned that suspension not by drunk driving but by failing to appear in court or pay a fine (related terms include driving while revoked, or DWR, and driving while unlicensed, or DWU). These issues are dealt with in detail in chapter 3.

## Definitions

Throughout this report, the term "aberrant license status" is used to refer to drivers who lack a valid license. This term includes the following types of license status:

- Suspended: These are drivers who have temporarily lost their driving privileges for a period defined by law. Typically, they must also meet state- or court-imposed prerequisites for reinstatement, but they are eligible for reinstatement as soon as the suspension period has elapsed.
- Revoked: These are drivers who have completely lost their driving privileges for an indefinite period. Like suspended drivers, before they can ever obtain a new license, they must satisfy all court- and state-imposed requirements. Typically, a driver whose
license is revoked is not eligible for a new license until a minimum period of time has elapsed. Typically, revoked drivers also cannot regain their driving privilege unless they go through the full license application process.
- Unlicensed:These are drivers who, to the best of the state's knowledge, have never held a valid driver's license.
- Expired: These are drivers who, when their license was due for renewal, failed to complete the renewal process.
- Canceled: These are drivers whose driving privileges have been removed but typically not because of a pattern of violations in the state. Cancellations may be imposed for medical reasons (i.e., on a doctor's advice or because of a failed eye exam at the department of motor vehicles) or because, after issuance, the state identified problems in the driver's history when that driver transferred his or her license from another state.
- Denied: These are drivers who were denied driving privileges by the state for whatever reason. Many states keep track of license denials using "dummy records" tied to the individual so that individuals cannot easily attempt to obtain a valid license by going to a different licensing location in the same state.
- Unknown: This category is only meaningful as a notation in a data file (such as crashes) and was included in the analyses presented in appendix A. It is not relevant for discussions of license sanctions with state experts as discussed in the main body of the report.

Several terms having to do with state laws, licensing practices, and driver-control programs are used in the report. These are defined as follows:

- Administrative per se: This term describes the laws establishing an administrative process for dealing with violations of the maximum allowable blood alcohol content (BAC) for drivers in a state. States with administrative per se laws also have a set of procedures in place for suspending the driving privileges of a person who violates the BAC limit without the need for a court trial-that is, the responsible state agency can suspend a driver for a BAC violation even if the court does not convict him or her on the corresponding DUI offense.
- Administrative license sanctions:This term refers to any sanctions legally imposed by state agencies without first requiring court orders. The exact scope, procedures, and limitations of administrative license sanction programs vary among states. In general, they are used to provide rapid, consistent treatment of offenders against the state's DUI laws or its DWS, DWR, and DWU laws. Typical administrative sanctions include license suspension, mandatory evaluation or treatment, fees, and education.
- Court-ordered license sanctions:This term describes any license action ordered by
a judge. In some states, for example, only a judge can revoke a license, but the state's department of motor vehicles (DMV) can administratively suspend. In some states, judges also order suspensions.
- DUIor DWI: These acronyms refer to "driving under the influence (of alcohol or other drugs)" and "driving while intoxicated." State laws define DUI or DWI differently but always with reference to the state's maximum allowable BAC. This is typically considered a serious moving violation and will often result in a mandatory court appearance. In states with an administrative per se law, the fact that a driver was cited for DUI or DWI will also initiate the administrative penalties independent of the court case.
- DWS, DWR, or DWU:These acronyms refer to "driving while suspended," "driving while revoked," and "driving while unlicensed." The term is used to denote the DWS, DWR, or DWU citation (a moving violation) and/or the license status of the driver at the time of a crash or other event.
- Ignition interlock: This is a device that renders a car inoperative unless one or more preconditions are met. In DUI driver-control programs, the typical ignition interlock device requires the driver to give a breath sample which is then analyzed for the presence of alcohol. If there is alcohol present (above some minimum threshold value), the car will not start. Other variations are used to ensure that an individual does not operate the vehicle, or is the only operator of a vehicle.
- Implied consent: States' implied consent laws typically define the rights and responsibilities of drivers holding a state-issued drivers license. In particular, there is an implied consent to a blood, breath, or urine test for BAC. Violations of implied consent laws typically lead to automatic (administrative or court-ordered) suspension of driving privileges.


## Characterizing the Problem

Drivers who operate a motor vehicle without a valid license are believed to be among the worst drivers on the road. This makes good logical sense from the point of view that to drive under suspension or revocation, one must first have done something to earn that suspension or revocation. The case is harder to make, paradoxically, for unlicensed drivers, simply because so little is known about them (how many there are, what proportion of them are cited or convicted, and what proportion are involved in crashes).

DeYoung, Peck, and Helander (1997) attempted to estimate the exposure and fatal crash rates of suspended, revoked, and unlicensed drivers in California. Using a quasi-induced exposure method with data from two-vehicle fatal crashes, they were able to estimate the relative overinvolvement in fatal crashes of drivers without a valid license. The method developed a ratio (the involvement rate) of the proportion of driv-
ers at fault divided by the proportion of drivers not at fault for each of three licensestatus groups: valid, driving while suspended or revoked (DWS/DWR), and unlicensed. By setting the involvement rate of validly licensed drivers as the norm, they calculated that $D W S / D W R$ drivers are 3.7 times more likely to be involved in a fatal crash than are validly licensed drivers. Unlicensed drivers are 4.9 times more likely to be involved in a fatal crash. This methodology has its limitations, most notably the need to establish the identity of the driver who is at fault in fatal crashes. However, it is perhaps the best method we have now for estimating overinvolvement that corrects for exposure, especially for unlicensed drivers.

Other researchers have attempted to learn about the driving behavior of suspended and revoked drivers using the interview approach. For example, Ross and Gonzales (1988) interviewed 71 drivers whose licenses had been suspended or revoked because of a DUI offense in Tucson, Arizona, and Albuquerque, New Mexico. Of the 68 drivers from whom complete information was collected, 45 ( $66 \%$ ) reported that they continued to drive while under suspension. Age, gender, and repeat offender status make a difference in this proportion, with $77 \%$ of young men driving while suspended relative to $70 \%$ for all women, and $52 \%$ for older men. It is surprising that first offenders were more likely to drive ( $94 \%$ ) under suspension than were repeat offenders ( $52 \%$ ), but this result is likely due to the supervised probation program for repeat offenders in both communities included in the sample.

California has recently received a grant to develop a more precise profile of the characteristics of drivers whose licenses have been suspended and revoked in general (not just DUI-related suspensions or revocations). This research will be useful in further defining the relative risk of crash involvement by these drivers. The results were expected to be published by October 2002.

## The Paradox of Reinstatement

Several studies have shown that drivers with suspended and revoked licenses frequently never reinstate their license (or fail to apply for a new one). Given the higher risk of fatal crash involvement associated with drivers who operate a motor vehicle without a valid license, the fact that as many as $50 \%$ of suspended and revoked licensees never reinstate their license gives cause for concern. Voas (2001) reported a study following the driving records of 19,203 DWI first offenders and 6,927 DWI second offenders convicted in 1987 in Oregon. Three years later (in 1991), $50 \%$ of the first offenders and $71 \%$ of the second offenders had not reinstated their license, despite the fact that for both groups the original suspension period had expired in 1988 or 1989. Because only $28 \%$ of DUI suspended drivers are cited for a moving violation or DWS during their suspension, it is unlikely that the reason drivers fail to reinstate is that their suspensions have been extended for DWS or other violations. The failure to reinstate appears to be primarily a personal choice of the drivers, at least for DUI suspensions.

Paradoxically, there is evidence to suggest that these drivers, though they lack a valid license, may behave in a safer fashion than those who do reinstate or those who are granted a hardship license. Voas (2001) also presented data showing that for Ohio DUI offenders, those who reinstated had consistently higher rates of DUI arrests, moving violations, and crash involvement than those who failed to reinstate.

The key to explaining these results seems to be in an alteration of the driving behavior of drivers whose licenses have been suspended or revoked. They do still drive but probably drive less and take much more care when they do drive. Ross and Gonzales (1988) found that almost half (46\%) of DUI-suspended drivers relied on another driver for transportation during their suspension period. Those who did drive frequently reported driving more carefully to avoid being pulled over.

## Evidence that Suspension and Other Sanctions Work

The reinstatement paradox reviewed by Voas (2001) raises the question of whether it is safer to bring a driver back into compliance with state licensing laws or to let that driver continue to drive without a valid license. The obvious policy problem with adopting a laissez-faire attitude toward reinstatement is that DWS drivers are generally not insured and, though they may behave more safely than they would if they reinstated, they are still not very good drivers to begin with and are still more likely than the average driver to cause a crash. They are "safer" only in comparison with their own earlier behavior.

Song and Jones (1991) described a similar problem when hardship permits are granted to suspended drivers. They compared 3,425 offenders who were granted hardship permits with a sample of 32,603 offenders who were eligible for a hardship permit but did not request one, and they found that those granted a hardship permit had a higher crash rate than the drivers who remained under suspension. The obvious explanation for this effect was the higher exposure assumed for drivers who were granted a hardship permit (and thus could drive legally) versus those who were still suspended. Both groups were probably still driving, but the still-suspended drivers were probably driving less, and perhaps, in addition, more cautiously.

Hagen (1978) provided evidence that suspensions have a positive effect on driver behavior, even after eligibility for license reinstatement. He followed the 6 -year driving record of 1,501 matched pairs of multiple DUI offenders in California. One member of each pair was given the mandatory license suspension or revocation appropriate for their number of earlier convictions. The other member of each pair managed to avoid the mandatory suspension through successful defense against the earlier convictions in court. A survival analysis shows that the suspended drivers had lower recidivism of the DUI offense and a lower crash involvement rate than those who "beat" the suspension. These effects lasted longer than the suspension period.

Hagen did not report whether the suspended drivers actually did reinstate; however, the duration of the effectiveness of the suspension action seems to coincide with the end of mandatory proof of financial responsibility imposed on suspended drivers at the time in California. Hagen supposed that the drivers had reinstated and that this requirement for 3 -year mandatory proof of insurance served as a reminder to drive safely.

Jones (1989) found a general deterrent effect for the state's implied consent law in that the proportion of alcohol-related fatalities and night-time crash-related serious injuries both dropped in close temporal proximity to the passage of the law in 1983. California (Rogers 1995, 1997) found both a general and specific deterrent effect of the state's administrative per se law (which became effective January 1, 1990). The general effect was shown through overall reductions in the accident rate timed to the implementation of the per se law. The specific effect was found through a similarly timed reduction in recidivism among DUI offenders.

Grosz, Zeller, and Klein (2001) reported compelling evidence of a specific deterrent effect of "alcohol problem resolution" (defined by the researchers as completion of mandatory courses and payment of fines). Florida law allows DUI offenders to reinstate by showing proofof enrollment in an approved advanced driver improvement or DUI course. Some drivers reinstate at this point, whereas others reinstate once they have actually completed the course(s) and paid any fines. Florida DUI offenders who fail to "resolve" their behavioral issues before reinstatement had $75 \%$ higher violation rates and $97 \%$ higher crash rates than drivers who reinstated after resolving their behavioral issues.

Wells-Parker and others (1995) performed a meta-analysis on the effectiveness of remedial interventions with DUI offenders. They concluded-on the basis of the results of 215 published research reports-that a combined approach of education, counseling, and "contact" probation was $7-9 \%$ effective in reducing later DUI recidivism and later crash involvement. They also concluded that a combination of license actions and remediation provided the most effective program for improving the traffic safety of drivers with prior DUI offenses. They did not look at the effects of more recent types of driver-control practices such as vehicle impoundment or ignition interlock.

Rodgers (1994) indicated that administrative plate impoundment reduced recidivism of multiple DUI offenders in Minnesota. Moreover, drivers whose plates were impounded at the time of arrest were less likely to be cited for another DUI offense than those whose plates were impounded at a later date, through a mailed notice from the Department of Public Safety, thus giving some credence to the notion that immediacy of the punishment may play a role in later behavior.

California studied the effectiveness of vehicle impoundment programs for firsttime and multiple DWS, DWR, and DWU offenders (DeYoung 1997, 1998). The specific deterrent effect of vehicle impoundment was a $20-35 \%$ reduction in DWS
convictions, other traffic convictions, and crashes for drivers whose vehicles were impounded. This effect was strongest among recidivist offenders, who typically are considered the most difficult group to affect with traffic safety programs. There was no strong evidence of a statewide general deterrent effect of the impoundment sanction in California.

Voas, Tippetts, and Taylor (1998) found a specific deterrent effect of vehicle impoundment for multiple DUI offenders in Ohio, both during the vehicle impoundment period and after the vehicle was returned to the driver or owner. During the impoundment period, DWS offenses were reduced by as much as $84 \%$ and DUI offenses were reduced by as much as $100 \%$. Following the return of the vehicle, subsequent DWS offenses were reduced by as much as $53 \%$ and subsequent DUI offenses were reduced by as much as $58 \%$.

Voas and Tippetts (1995) evaluated the deterrent effect of "zebra sticker" laws in Oregon and Washington. These laws created an administrative procedure under which an officer making an arrest for DWS, DWR, or DWU could seize the registration of the vehicle being driven. The DMV would then issue a zebra tag, which is a distinctive, striped sticker that must be placed over the "year" portion of the vehicle's license plate. The presence of a zebra sticker was ruled to provide probable cause for law enforcement officers to stop that vehicle any time it was seen moving on a public roadway. In practice, the zebra stickers were given to DUI offenders who were later caught driving without a valid license. In Oregon, where the law was implemented much more aggressively, there was evidence for both general and specific deterrent effects.

## Summary

The studies performed to date on DWS, DWR, and DWU are obviously closely linked to studies of DUI recidivism. More recent work has begun to look more closely at drivers who were suspended for reasons other than DUI violations, but details describing these "other" subpopulations and statistically valid evaluations of programs designed to address their specific needs are lacking at this time. The National Highway Traffic Safety Administration (NHTSA) has funded a study in California that may shed light on some of these issues.

It is clear that well-crafted, aggressively enforced laws can have an effect on the behavior of suspended DUI offenders. It also seems probable that suspension of driving privileges is generally interpreted (by the drivers) to mean something short of a total ban. The majority of them still drive at least some of the time. They may drive less and drive with greater care while under suspension, but they still drive.

The reinstatement paradox remains unresolved. The NHTS A has funded a fol-low-up study to the work by Voas and his colleagues, and it is hoped that they will be able to offer some concrete suggestions to help states implement effective changes in their suspension and revocation practices.

It is important to note that there are sizable gaps in the data available on drivers' behavior in general and that these gaps cause a corresponding lack of completeness in the literature on traffic safety. The reinstatement paradox makes it clear that suspended and revoked drivers who choose not to reinstate often drive more cautiously than the same individuals would have had they not reinstated.

It is logical to assume, however, that the same drivers were probably less safe in the months leading up to the point when the state took action. The Fatality Analysis Reporting System data on fatal crashes indicate that drivers with past suspensions and who currently drive under suspension are more likely to be involved in fatal crashes than are drivers who are not suspended. But this is not to say that there may not be a large number of unsafe drivers who have yet to be caught. The use of only data on fatal crashes may also mean missing important clues to driver behavior that might become evident if data for crashes of all levels of severity were routinely available for analysis.

In addition, while it makes good logical sense that license sanctions do work, the lack of complete data makes it impossible to be certain just how much of a deterrent is possible with license sanctioning programs. The fact that people continue to drive while their license is suspended or revoked (and while they are completely unlicensed) means that the general deterrent effect of license sanctions is not as strong as it could (or should) be. The question addressed in the remainder of this report is how best to implement and manage programs aimed at keeping these drivers from behind the wheel because if they do not drive, they are not contributing to traffic safety problems.

It is also possible to look at this issue by assuming that the sanctioned drivers will continue to operate a motor vehicle and then seek programs to make these scofflaws as safe as possible. The goal of the research reported here is not to improve sanctioned motorists' driving behavior but to identify the most effective ways to keep them from driving at all. The following chapters fill in some of the gaps in the current literature by examining successful practices, including the experiences of safety practitioners in several states.

## 2. Research Methods

Choosing states for review in developing a list of sample states, an attempt was made to identify states that have enacted and studied the effects of laws such as administrative license suspension and vehicle actions such as impoundment, plate seizure, or special markings. Primarily, however, the choice of states was based on the data analysis presented in appendix A. In particular, those states that were lower than the national average in the proportion of crashes involving drivers with any aberrant license status were considered candidates. In addition, the selection process was consciously biased toward states with a large population so that any changes in the measures used in the earlier Unlicensed to Kill report and updated in appendix A could be viewed as real and not as an artifact of relatively small shifts in the population. There was no attempt to select states perceived as representative at either the national or regional levels. Instead, a deliberate decision was made to focus on the states that appeared, from the data, to have had some success at reducing the involvement of drivers with an aberrant license status in fatal crashes.

Five out of the six states chosen for this study were lower than the national average in their percentage of motorists driving with an aberrant license status:

| National average | 13.5 |
| :--- | ---: |
| California | 21.1 |
| Florida | 12.0 |
| Indiana | 10.7 |
| Michigan | 12.2 |
| Minnesota | 7.2 |
| Oregon | 13.0 |

Although California has a higher percentage of motorists who are driving with an aberrant license status, table 2.1 reveals that California is lower than the national average for drivers in fatal crashes who have a revoked license and have also had earlier license suspensions or revocations. Due to California's large population, this steadily decreasing trend in drivers with an aberrant license status involved in fatal crashes from 1993 to 1999 can be viewed as a real change and not due to a shift in population.

Once a set of candidate states were identified, participation was solicited through telephone contact followed by a formal letter describing the project, the reasons they were selected, and again asking them to participate in the review. Each state was informed of the level of effort required to participate. They were asked to provide any written documentation (data tables, analytic reports) of their driving while suspended (DWS), driving while revoked (DWR), or driving while unlicensed (DWU) problem, along with any available descriptions of their laws and procedures for dealing with DWS, DWR, and DWU drivers. Each state also identified key personnel that could be interviewed as the project progressed.

Table 2.1 Earlier License Suspensions or Revocations for Drivers from Participating States with Revoked Licenses Who Were Involved in Fatal Crashes, 1993-99

| State <br> (first row is number of drivers; <br> second row is percent) | Previous Suspensions or Revocations |  |  |  |
| :--- | ---: | ---: | ---: | ---: |

Source: Fatality Analysis Reporting System data

Seven states were invited to participate, and six states ultimately agreed to do so: California, Florida, Iowa, Michigan, Minnesota, and Oregon. New York elected not to participate. Chapter 3 provides the data used in making these selections. Appendix A gives additional details for these and every other state.

## Review of State Laws

As part of the process of selecting states, each state's laws and regulations related to driver licensing and control were categorized and reviewed. Once the final six participating states were selected, their laws were more thoroughly reviewed. The source for most of this material was via state web sites, supplemented by documents provided by the key contact personnel in each state. The review included the laws on obtaining a driver's license, offenses for which license suspension or revocation are common, procedures for suspending or revoking licenses, and procedures for drivers to regain their license.

## State Site Visits and Interviews

Members of the project team visited the participating states. The site visits were used to gain a thorough understanding of the state's laws and practices regarding licensure, loss of license, reinstatement, and penalties for violating the licensure provisions
of the law. Standard practices in the enforcement and adjudication arenas were also explored through interviews with representatives from those fields in each state.

The team interviewed key personnel in each state's driver-control and -licensing branch of the department of motor vehicles (or the equivalent agency). A sampling of individuals from other agencies (enforcement, adjudication, and highway and traffic safety) was also interviewed, as needed. To set up interviews, the initial key contact personnel provided a list of the other people to be interviewed. In all six states, the interview schedule was set up by one of the state's own employees.

A second goal of the interviews was to obtain state experts' opinions on what measures should be implemented to improve their own state's ability to identify licensure scofflaws and remove them from the roadways. This discussion was intended to go beyond the laws and practices of the state to explore issues such as:

- Notification process for suspension or revocation
- Appeals processes
- Tracking systems in place
- Ideas for reducing the incentive to drive without a valid license
- A profile of "typical" DWS, DWR, and DWU drivers

Because of travel cancellations in September 2001, two of the site visits were changed to conference calls. Participants in California and Oregon agreed to stick to the original interview schedule, but the interviews were conducted via speakerphone rather than face to face. The only potential drawback to this procedure was that the interview team did not have access to any handouts the participants might have brought with them during the interview. In both cases, however, the materials were delivered to the interview team soon after the interviews, and all participants agreed to be available for fol-low-up questions should the need arise. The other four states were visited for on-site interviews as planned.

## State Comparisons

Each state was asked to provide data on the rate of suspension, suspension durations, proportion of the driving population under revocation, reasons for suspension or revocation, and recidivism (i.e., rates of resuspension). The original reason for obtaining this information was to develop comparisons based on such measures as:

- Number of suspensions and revocations in the most recent complete calendar year (i.e., in 2000)
- A year-end "snapshot" of the proportion of drivers under suspension or revocation, and the reasons for those actions
- Duration of all suspensions that ended in the most recent complete calendar year
- Number of persons receiving a second (or greater) suspension beginning during
the most recent complete calendar year (i.e., a count of those suspensions which were not the driver's first ever)

As it turned out, not all states can answer all of these questions on the basis of the data available to them through the driver history file. This, of course, led to an obvious set of recommendations for system upgrades and corresponding analyses.

## Standard Questionnaires

Before the interview sessions, states were provided with a set of standardized questionnaires (see appendix E) that addressed the following issues:

- Suspension and revocation tracking
- Punishment of recidivists
- Vehicle and plate impoundment
- Programs and strategies for removing these drivers from the road
- Court and judicial outreach
- Notification procedures
- Appeal procedures
- Hardship exemptions and restrictions
- Enforcement powers


## 3. Practices in Six States

Tables 3.1 and 3.2 summarize state laws on driving under the influence (DUI) of alcohol and laws on driving without a valid license. The laws of the six participating states are presented in table 3.1. The columns give the illegal per se alcohol limit, whether the state has an open container law and a repeat or habitual offender law, whether the state's laws allow various vehicle-based sanctions (ignition interlock, impoundment, special plates or stickers, vehicle forfeiture, and blocking of registrations), and the duration of administrative license suspension or revocation for the first DUI offense. Table 3.2 gives the averages for all other states (besides the six participating states) with regard to their DUI laws and laws on driving without a valid license.

As can be seen in table 3.1, the six participating states have a mix of 0.08 and 0.10 blood alcohol content (BAC) per se laws. They all have open container and ignition interlock laws. Three of the six have special repeat offender laws on the books. Five allow vehicle impoundment. Two have special plates or markings for repeat offenders. Four allow vehicle confiscation. Two also block vehicle registrations by DUI offenders.

The most notable comparison between all other states and the six participating states involves vehicle impoundment. The majority of other states ( $78 \%$ ) do not have laws regarding vehicle impoundment; however, five of the six participating states do have such laws.

The sources for the information are listed in the notes at the bottoms of tables 3.1 and 3.2. Readers interested in the particulars of any state's laws are encouraged to contact that state directly or visit the official state web site. State laws covering the same topic differ markedly in the exact language used, in the possible penalties that can be imposed, and in the limits of both judicial and administrative processes regarding licensure and license sanctions. The rest of this chapter presents the highlights from each of the six state interviews.

## California Highlights

## CHARACTERIZING THE DWS AND DWR EXPERIENCE

For 1993-99, $21 \%$ of drivers in fatal crashes in California had an aberrant license status at the time of the crash (see appendix A). However, across the 7 years, California showed a dramatic downward trend in the involvement of drivers with an aberrant license status in fatal crashes, from a high of $25 \%$ in 1993 to a low of just above $18 \%$ in 1999. Most of that decrease came from reductions in the percentage of drivers who were unlicensed or suspended at the time of the fatal crash. California was chosen for inclusion in this study because of this downward trend and because a large portion of the research on suspended and revoked drivers has come out of the state's Department of Motor Vehicles (DMV).

Table 3.1 Impaired Driving Laws of the Six Participating States

| State | Illegal PerSe ( $\mathrm{BAC}^{2}$ ) | Open Container | Repeat Offender | Vehicle Interlock | Vehicle Impoundment | Vehicle Immobilization | Special Plate or Markings | Allow Vehicle Confiscation | Suspend <br> Vehicle <br> Registration | Average Days of ALR/ALS for First Offense ${ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California | 0.08 | Yes | No | Yes | Yes | No | No | Yes | No | 120 |
| Florida | 0.08 | Yes | Yes | Yes | Yes | No | No | No | No | 180 |
| lowa | 0.10 | Yes | Yes | Yes | Yes | No | Yes | No | No | 180 |
| Michigan | 0.10 | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |  |
| Minnesota | 0.10 | Yes | No | Yes | No | No | Yes | Yes | Yes | 90 |
| Oregon | 0.08 | Yes | No | Yes | Yes | No | No | Yes | Yes | 90 |

a"BAC" is blood alcohol content
${ }^{\text {b }}$ "ALR/ALS" is administrative license suspension or revocation. The cell is empty for Michigan because the state does not use this legal category.
Sources: National Highway Traffic Safety Administration, State Legislative Fact Sheets, current as of January 2001; National Highway Traffic Safety Administration, Digest of State Alcoho-Highway Safety Related Legislation, 19th edition, current through January 2001; Insurance Institute for Highway Safety data, current as of March 2001

Table 3.2 Impaired Driving Laws of Other States

| Illegal PerSe ( $\mathrm{BAC}^{2}$ ) | Open Container | Repeat Offender | Vehicle Interlock | Vehicle Impoundment | Vehicle Immobilization | Special Plate or Markings | Allow Vehicle Confiscation | Suspend <br> Vehicle <br> Registration | Average Days of ALR/ALS for First Offense ${ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.08 42\% | Yes 56\% | Yes 44\% | Yes 78\% | Yes 22\% | Yes 2\% | Yes 4\% | Yes 51\% | Yes 36\% |  |
| 0.10 53\% | No 44\% | No 56\% | No 22\% | No 78\% | No 98\% | No 96\% | No 49\% | No 64\% |  |

a"BAC" is blood alcohol content.
b"ALR/ALS" is administrative license suspension or revocation.
Sources: National Highway Traffic Safety Administration, State Legislative Fact Sheets, current as of January 2001; National Highway Traffic Safety Administration, Digest of State Alcohol-Highway Safety Related Legislation, 19th edition, current through January 2001; Insurance Institute for Highway Safety data, current as of March 2001.

Suspension and revocation. California's motor vehicle code allows for three sources of license suspension:

1. Court suspension, in which the judge actually takes the driver's license and holds it.
2. Court ordered suspension, in which the judge orders the DMV to suspend the license.
3. Administrative suspension, in which the DMV automatically suspends the license on the basis of the driver history (i.e., the driver qualifies as a "negligent operator"), or because of an administrative per se law violation, a financial responsibility law violation, or a mental or physical disability.

California uses certified mail to notify drivers of a suspension. The state has found that this process works well to provide proof of notification required if the case goes to court. Proof of notification is a major issue in California. Gebers, DeYoung, and Peck (1997) studied the "proof rate" of four suspension notification methods (certified mail, personal contact, prepaid reply envelope, and masking the DMV's return address). They found that the best proof rate $(60-70 \%)$ was achieved using certified mail with a return receipt. This also increased the percentage of convictions for later citations for driving while suspended (DWS) or driving while revoked (DWR), while reducing the number of convictions and crashes.

Drivers whose licenses are suspended administratively have 10 days after notification to apply for an administrative hearing. The hearings are generally held within 30 days, and before the hearing the person is allowed to drive under a stay-of-suspension notice. The hearing officers are DMV employees. They are charged with confirming that there was probable cause for the original traffic stop, that the person was lawfully arrested, and that the person was actually in violation of the law. Approximately $87 \%$ of hearings result in the suspension being sustained.

Restricted licenses. Restricted licenses are generally granted to first- or second-time suspendees, as long as they meet the requirements of having paid their fines, completing any mandatory treatment programs and complying with the state's insurance requirements. Restricted licenses generally allow the person to drive to, from, and during work. For first-time DUI offenders, only those drivers who agreed to a BAC test are eligible for a restricted license.

Vehicle impoundment and seizure. California law provides for both vehicle impoundment (for first and subsequent offenses) and seizure (for multiple offenders). In practice, the vehicle impoundment law is much more frequently applied and results, ultimately, in a forfeiture because most of the impounded cars are worth less money than the cost of their redemption from the impoundment yard. California's impoundment law allows local governments to set the fees to meet the costs of running the program.

The vehicle impoundment law applies regardless of whether the offender is the owner of the vehicle. If the vehicle's owner knowingly allows a suspended or revoked driver to use his or her car, that vehicle is eligible for impoundment or seizure. In the case of habitual offenders, only one in three was the owner of the vehicle impounded at the time of their DWS arrest. Approximately half of the impounded vehicles are sold under lien, so in effect the impoundment results in seizure and forfeiture about half the time.

Ignition interlock. California law requires mandatory imposition of an ignition interlock for DWS cases where the initial suspension was for a DUI offense. Courts are required to impose the installation of an interlock device upon conviction. The DMV administrative procedures also allow multiple DUI offenders (second or greater conviction) to apply for a restricted license with an ignition interlock once they have served the first half of their suspension.

## STATE EXPERTS' REVIEW: WHAT WORKS AND BARRIERS

What works. California's vehicle impoundment program works (DeYoung 1997, 1998). It has been described as a method to get older, less safe, more polluting vehicles off of the roadway. In California's experience, the law results in eventual forfeiture in approximately half the cases. In the vast majority of cases involving a DWS or DWR with a DUI arrest, the driver was not the owner of the vehicle. The administrative per se law has also been found to have a deterrent effect on drinking and driving in the state (Rogers 1995, 1997).

Barriers. Few of the drivers who are eligible for a restricted license ever apply for one. Among per se law violators, only 18,000 of 85,200 eligible drivers ever applied for the restricted license. The main reasons cited for this low application rate are a lack of knowledge on the part of drivers and the costs associated with meeting the preconditions.

Reinstatement of licenses is another big concern in California. The state's studies show that fewer than $50 \%$ of those eligible for license reinstatement do so (within a 3year window used for the analysis). A likely cause of this reluctance to reinstate is the costs involved, especially with respect to insurance. For 3 years following the end of a suspension, drivers must show proof of insurance to be reinstated. After the 3 years, the same driver can obtain a license without proof of insurance.

A problem in the field is that officers are presented with a confusing array of information when they call up a driver history. There are delays inherent in the system for calling up a driver history record, as well. These two factors combine to make it less likely that officers will check the driver history when making a traffic stop. The result is that many cases that would be eligible for a DWS or DWR arrest are not made until after the fact (if at all) and that many vehicles that could be impounded are not. Failure to check the license status means that the DMV would have to put resources toward a
comparison of charges with the license status after a person is charged (as was done in a pilot program in Ventura County; DeYoung 1990). If a person is eligible for enhanced charges, the DMV has the option of notifying the district attorney's office to flag specific cases. This practice is apparently not routine.

Prosecutors use DWS and DWR charges as a source of plea bargaining, especially when more serious charges (e.g., DUI) are under consideration. This leads to a higher rate of conviction in DUI cases but degrades the seriousness of DWS and DWR charges. Of the DWS and DWR cases that are not pled down, only about a fourth result in a sentence that meets the minimum standards in the law. This is especially true with respect to mandatory sentences requiring ignition interlocks. In many cases, judges are reluctant to impose such penalties.

California's courts require proof of service for notifications of suspension. The state uses certified mail in most cases in an attempt to raise the "good service" rate. The exact proportion of "good service" notifications is not known.

The courts are allowed to suspend drivers' licenses for a variety of nondriving offenses. The result is that many suspensions have little or nothing to do with driving safety. This adds to the confusion for officers in the field and for prosecutors and courts.

California's experts on DWS and DWR and unlicensed drivers believe that the system, as it exists now, has too many incentives for not obtaining a license or reinstating one after a suspension. Unlicensed drivers are often doing so because they are undocumented aliens and/or because they cannot afford to meet the insurance requirements. Insurance costs are the reason most often cited for a driver's failure to reinstate his or her license after a suspension.

## Florida Highlights

## CHARACTERIZING THE DWS AND DWR EXPERIENCE

For 1993-99, 12\% of drivers in fatal crashes in Florida had an aberrant license status at the time of the crash. In 1999, Florida experienced its best performance in the 7 -year study period, with just under $10 \%$ of drivers in fatal crashes having an aberrant license status, down from a high of $14 \%$ in 1994. Florida was selected for the study because these proportions compare favorably against the national average of $14 \%$ during the 7 -year period.

Florida has approximately 14 million registered drivers (2000 data). In 2000, more than 1.1 million license sanctions were imposed, including 1.06 million suspensions, 85,000 revocations, and 15,000 cancellations.

Suspension and revocation. Administrative suspensions are based on the number and type of convictions via a point system. Accumulating 12 points in 12 months results in an automatic 30 -day suspension. Accumulating 18 points in 18 months results in a 90 -day suspension. Accumulating 24 points in 36 months results in a 1 -year suspension. In addition, the state has an administrative license revocation (ALR) law, under which the arresting officer takes the driver's license and issues a citation that also serves as a 10-day temporary permit. ALR suspension durations are indicated on the citation as 6 months for a first DUI offense and 1 year for a subsequent DUI offense. Test refusals result in a 1 -year (first offense) or 18-month (subsequent offense) suspension. Florida also administratively suspends licenses when provided notice of a lapse in insurance coverage.

Florida's DWS law allows the officer to charge a driver with DWS "with knowledge" or "without knowledge," depending on whether they believe the person knew about the suspension. Florida's notification of suspension program is such that it is possible for drivers to be unaware that their license has been suspended. A DWS-with-out-knowledge charge is treated as a civil infraction. A DWS-with-knowledge charge is treated as a criminal infraction and is also recorded on the driver history, even if the charges are ultimately dismissed. Many drivers cited for DWS claim that they did not know they had to pay a reinstatement fee; so even though their suspension period is over, they are still suspended because they have failed to follow directions. Enforcement officers in Florida indicated that drivers commonly report never having received the notice of suspension and that it is common for those cited for failure to produce a license to claim identity theft when they appear in court.

In the field, officers are allowed by law to seize the license of a driver who has failed to pay child support. In practice, they seize the license of anyone subject to an administrative suspension because department policy requires that the license be attached to the citation.

Courts can order a license suspension for failure to pay, failure to appear, "check fraud," failure to pay child support, and failure to pay for gasoline at a filling station. All conviction-related suspensions are separate from administrative actions. The courts report that most people cited for DWS or DWR in Florida were originally suspended for failure to pay fines. Once the charges are elevated to criminal DWS, people are more likely to pay because the alternative is jail time.

For ALR suspensions, drivers have 10 days after being cited to request an administrative hearing. The hearings are held within 30 days of the original citation date. Drivers have two options: formal or informal review. If a driver requests a formal review, he or she will receive a temporary license while waiting for the administrative hearing. Temporary licenses are not extended beyond the initial 10 days in the case of informal reviews. In a formal review, the driver is allowed to subpoena witnesses (usually the
arresting officer is subpoenaed). The informal review is only a review of the paperwork and is held with only the hearing officer and the driver present. Administrative rulings may be appealed to the circuit court or higher. While a case is under appeal, the driver is not granted a temporary driving permit.

Restricted licenses. To obtain a hardship license, drivers must apply to the Department of Highway Safety and Motor Vehicles (DHSMV) for a hearing. Only the hearing officers are allowed to grant a hardship license.

Vehicle impoundment and seizure. Florida law allows vehicle impoundment and seizure. In DWS and multiple DUI cases, the law allows vehicle forfeiture even if the driver does not own the vehicle. Rental vehicles and borrowed vehicles are not exempted. Data on the number of vehicle impoundments each year were not available.

Florida's driver and vehicle files are linked. This allows the state to block vehicle registrations when the owner's license is revoked. Drivers with revoked licenses must leave the vehicle unregistered, transfer the vehicle title to a spouse, or sell the vehicle.

Ignition interlock. Only judges can order the installation of an ignition interlock device.

## STATE EXPERTS' REVIEW: WHAT WORKS AND BARRIERS

What works. Florida has a citation-tracking system that supports analysis of the sequence of events related to each traffic citation in the state. This system allows comparison of initial charges with final dispositions, including pleas to reduce charges, dismissals, and convictions. This capability is not easily accessed at present, but it has been put to good use analytically, especially in evaluating the state's DUI program (see Grosz, Zeller, and Klein 2001).

Florida has begun using thumbprints as identification of drivers who are unlicensed or fail to carry their license. This has virtually eliminated false claims of identity theft as an excuse in these cases by providing positive identification of the driver charged.

Florida has a well-established, court-tested procedure for DUI and driver license checkpoints, and these are considered a very effective tool for law enforcement. Few agencies run checkpoints specifically for license status because it requires just as much preparation as it does to run a DUI checkpoint.

Barriers. In practice, law enforcement officers do not always run a driver history check at traffic stops. There are no data showing the proportion of times that a history check is performed and what proportion of those checks show an aberrant license status.

Attempts to reduce DWS and DWR pleas and dismissal rates vary widely from county to county. In some locales, the judges do not allow DWS to be pled down,
whereas in other counties the practice is quite common, resulting in inconsistencies in application of the laws.

A resistance to change in the court clerks' offices stymies the use of automated citations and electronic transmission of citations from law enforcement to the courts. The dimensions of the current five-part universal traffic citation form make it difficult to replicate from a field computer. Some clerks have invested heavily in paper filing systems that are customized to fit the smaller size of the existing form.

Florida's law requiring notification to DHSMV of changes in address was described as "not effective." The result is that many suspended drivers never receive their notice of suspension. This has fostered the general use of the "failed notification" excuse to avoid penalties for DWS and DWR.

## Iowa Highlights

## CHARACTERIZATION OF THE DWS AND DWR EXPERIENCE

For 1993-99, just over 9\% of drivers in fatal crashes in Iowa had an aberrant license status at the time of the crash. In 1999, Iowa had a low of $6.7 \%$ drivers with an aberrant license status in fatal crashes, down from a high of $12 \%$ in 1996. Iowa was selected for inclusion in the study because of this much-better-than-average performance, as presented in appendix A.

Iowa has a driver license population of 2.1 million. Some 76,367 drivers' licenses were suspended or revoked for traffic law violations in 1999.

## LAWS AND PROCEDURES

Suspension and revocation. Upon receiving three moving violations in a 12 -month period, drivers are subject to suspension of their license for 90 days. The alternative is to attend the Driver Improvement Program (DIP). Most offenders opt for the DIP to avoid the suspension that requires expensive high-risk driver insurance. By attending the DIP, the driver avoids a record of suspension and keeps the license while on a 1-year probation. Any violation during that year results in the 90 -day suspension. The implementation of the DIP was based on a study that showed this to be more effective than issuing a warning letter or a suspension notice.

The state believes that this type of early intervention may explain a lower than average percentage of drivers continuing to drive with suspended or revoked licenses, especially because younger drivers are overrepresented in the program.

Driver's licenses are administratively revoked under the state's Operating While Impaired (OWI) statute. The license of anyone arrested for failure of a BAC test for

OWI ( 0.10 for adults, 0.02 for youth), or for refusal of a test, is administratively revoked.

The state's Habitual Offender Law provides that a driver with three convictions for specified offenses be considered a habitual offender and be barred from driving for 2 to 6 years, depending on the point total. Only the Office of Driver Services can order barments. A court conviction of an offense while under barment results in prison time, as opposed to jail time.

Restricted licenses. The law allows the issuance of a Temporary Restricted License (TRL) under certain conditions. It is believed that the availability of a TRL removes some of the sense of hopelessness. To apply for a TRL after administrative revocation for OWI, a driver must meet several conditions:

1. First offense for test failure: No TRL until 30 days have passed.
2. Second and subsequent offense for test failure: No TRL.
3. First offense for refusal: No TRL until 90 days have passed.
4. Second offense for refusal: No TRL until 1 year has passed (requires the installation of an ignition interlock device).

Vehicle impoundment and seizure or immobilization. For driving while revoked for an OWI-based conviction, several vehicle-related sanctions may be ordered:

1. The vehicle may be impounded upon arrest.
2. The owner of a vehicle driven by a person who is revoked may be subject to criminal and civil penalty.
3. Plates and registration of the first offender may be seized.
4. The vehicle of a second or subsequent offender may be seized and forfeited.

Ignition interlock. An ignition interlock device may be ordered for anyone whose license was revoked for an OWI conviction who wants a TRL (after 30 days for a first offense) or who is reinstating after a second OWI conviction but has not previously had an ignition interlock device installed. The law also allows an habitual offender to apply for a TRL but under strict guidelines, including installation of an ignition interlock device. Note the waiting periods stated above under the discussion of TRLs.

Checkpoints and other enforcement events. The state conducts periodic enforcement campaigns around the state, such as vehicle safety inspection stops (checkpoints), corridor enforcement, and saturation patrols. These result in many arrests, including a number for driving while under suspension or revocation. The publicity about these campaigns, not only their announcement but also the release of the results, may contribute to fewer drivers with aberrant licenses.

What works. Iowa operates an information center that provides assistance to those seeking help in getting their licenses reinstated and to avoid getting a suspension for unpaid fines. The state believed that the process for getting relicensed was too complex and discouraged drivers from going through it to get relicensed. The information center was established to remove these obstacles.

The center is staffed with experienced Office of Driver Services personnel who are very knowledgeable about licensing procedures and requirements. The information center staff explain to callers what tests may be required to restore the license, what classes may be required, what fees need to be paid, where to pay the fees, how to request a payment schedule, and so on. Similar assistance is available at licensing stations throughout the state. The state believes that this "public face" of the licensing office, and the mindset that these drivers are "customers" and not "lawbreakers," may keep many drivers from feeling hopeless and, therefore, giving up and simply continuing to drive without their license.

The "rocket docket" concept evolved from the recognition that driving while under suspension or revocation was a major problem. The concept is that bringing all parties (the judge, the local licensing office representative, the county attorney, the arresting officer, and the public defender) into court at the same time allows the case to be processed more quickly and may enable the driver to get relicensed more quickly. For example, the licensing representative may have the full record available to not only assist the court but also to advise the driver on what to expect, what is required, what the consequences are if they do not meet the requirements, and what can be done to get relicensed. The state has received national recognition for this unique concept.

Removal of licenses is strictly under the jurisdiction of the licensing agency, and the Iowa Administrative Procedures Act streamlines and depoliticizes the license removal process.

Law enforcement officers in small rural areas generally know who has been suspended and, when they observe them driving, can make an immediate traffic stop. The state's rural character helps officers personally know those drivers who are under suspension or revocation.

Officers who almost always cite for driving under suspension or revocation may also order vehicle removal. Some departments issue a "hot list" of drivers in their jurisdiction under suspension or revocation, especially if emphasizing drivers under suspension or revocation in a given week.

The state has a unified court system—judges are part of a single system. This has positive benefits, such as:

1. Scheduled fines-fines are uniformly imposed across the state, and the fines go into the state's general fund.
2. Aggressive prosecution of anyone charged with driving while "barred" (a sanction under the state's habitual offender statute, described above). There is no judicial discretion for driving while barred. It is an administratively imposed sanction once the driver is certified as an habitual offender.
3. No judicial power over licensing. The state's traffic code has removed licensing revocation and suspension issues from judges. Licensing officials administratively handle all licensing actions; thus, licensing penalties are not part of the plea-bargaining process.
4. The clerks of court are state employees under the Judicial Department and are not subject to local political influence, which they are in states where they are elected.

The state staff offered opinions that the state's demographics and values may explain a low incidence of driving with an aberrant license-for example, a larger older population living in rural areas and small towns.

Barriers. Comments were received regarding the belief that prosecution is the weakest link. County attorneys are reluctant to prosecute for driving under suspension or revocation (the DWS/DWR equivalent in Iowa) if the driver is also charged with OWI. The penalty is $\$ 1,000$ and jail time, but there is pressure from the community because jails are full and usually the offender cannot pay the fines. The result is that about a third of DWS and DWR cases are not convicted and others are reduced or dismissed. The $50 \%$ that get to trial probably do not get convicted of the initial charge. Many times they are pled down to driving on an expired license, which results in a $\$ 10$ fine.

The problem with doubling revocation time for each incident of driving while under revocation for OWI is that the accumulation reaches a "hopelessness" stage and causes the driver to give up. The profile of DWS or DWR and unlicensed drivers, as suggested by anecdotal evidence furnished by state personnel, generally describes operators who are unable to pay all the fees and fines associated with license reinstatement.

## Michigan Highlights

## CHARACTERIZATION OF THE DWS AND DWR EXPERIENCE

For 1993-99, $12 \%$ of drivers in fatal crashes in Michigan had an aberrant license status at the time of the crash. The state experienced more than a twofold increase in the proportion of drivers involved in fatal crashes who had a suspended license, from a low of $2.3 \%$ in 1994 to a high of almost $7 \%$ in 1998. Beside the fact that Michigan was better than the national average (see appendix A), the state was chosen for inclusion in the study because its driver-control program historically has been very well run, with strong administrative components and strong judicial outreach.

Suspension and revocation. All driver license actions are handled administratively by the Michigan Department of State (DOS) because there are no longer any courtordered suspensions or revocations in the state. Michigan is not an ALR state with respect to alcohol offenses (operating under the influence, or OUI). They administratively suspend only after conviction. In the field, officers destroy the driver's license upon arrest for OUI (with a BAC above 0.10 ) and issue the driver a paper license. The paper license is valid until the final disposition is received by the DOS from the court. For a second OUI offense or third DWS or DWR offense, the law requires the officer to confiscate the vehicle's plates as well.

Michigan law sets the period of suspensions for a first OUI offense and for revocations, in the case of multiple offenses, under the repeat-offender statutes. The law also sets mandatory additional periods of suspension or revocation for repeat offenders.

Appeals of revocations and suspensions to the court system are allowed but only on the record (i.e., does the suspension or revocation duration match what the law says should be done on the basis of the number and type of prior convictions?). The restrictions placed on the driver cannot be appealed to the court because they are set as mandatory by state law.

Police in the field are provided with a simple-to-read license status report in the driver's record. It tells them exactly what to do (e.g., destroy the license or seize the plates), depending on the violation for which they intend to cite the driver.

Restricted licenses. Multiple OUI offenders can be granted a restricted license. This process involves two hearings, the first to determine if they qualify for a restricted license and the second a year later to evaluate their performance under the restrictions. Approximately $50 \%$ of drivers who request a restricted license are granted one. Those who are not granted a restricted license must wait 1 year before making a new application. To be eligible for a restricted license, drivers must first serve the "hard time" component of their suspension or revocation. They must also meet all the requirements for a restricted license set in the law.

Vehicle impoundment and seizure. Courts order vehicle immobilization (impoundment; lockout technology; or a reverse-tether interlock device, which blocks the use of the vehicle if the revoked driver's ankle comes within a set distance from the vehicle's gas pedal). These penalties are imposed by the judge and take effect after release from incarceration.

In addition, the DOS blocks the registration of any vehicles by suspended or revoked drives. This block is automatic, and notification of the block is made available to car dealerships around the state so that they know the vehicle cannot be registered before it is sold to a driver with a suspended or revoked license.

The basic charge for a DWS or DWR is a misdemeanor; however, lending a vehicle to a known DWS or DWR driver can result in felony charges if there is a crash involving injury or death. Vehicle seizure is not allowed until conviction, but a vehicle can be impounded upon the arrest of the driver.

Ignition interlock. Interlock devices are mandatory for 1 year as part of the condition for a limited license following a suspension for multiple OUI convictions. Michigan has approved use of the reverse-tether interlock device.

STATE EXPERTS' REVIEW: WHAT WORKS AND BARRIERS

What works. The secretary of state's staff and the law enforcement representatives that were interviewed praised the immobilization program. Likewise, the program allowing the state to block registration of vehicles by drivers with suspended or revoked licenses has been judged to be effective. Because the change in the law is so recent, there are not yet any analyses of effectiveness. The anecdotal evidence was positive.

Most courts in the state provide dispositions electronically to the DOS. This gives the DOS rapid access to information leading to administrative suspension or revocation actions.

The enhanced penalties for multiple OUI and DWS offenses are viewed as successful deterrents. In cases of injury or death caused by a multiple offender, the charges are enhanced to felony status and can result in jail terms and lengthy suspensions or revocations. The notion that owners of vehicles used by drivers convicted of DWS or OUI could themselves face felony charges is viewed as a real deterrent against lending vehicles. The enhanced penalty and immobilization programs are currently under review to quantify their impact on safety and driver behavior.

Barriers. Checkpoints have been ruled illegal in Michigan. This was considered a blow to law enforcement officers' ability to catch drivers who are operating DWS, DWR, or DWU. Even though the checkpoints were originally intended to catch DUI offenders, the law enforcement personnel interviewed stated that checkpoints were an effective means of catching drivers who lacked a valid license.

The DOS does not have a good link with insurers to provide notification of a lapse in coverage. This means that drivers with suspended or revoked licenses can sometimes get away with showing proof of insurance on the basis of a binder alone, then fail to pay for the actual policy, but still be allowed to reinstate their license.

Perhaps as a reaction against the loss of judicial flexibility in sentencing, some judges have made too-frequent use of deferred adjudication-dismissal with court costs in traffic cases. The end result is an inability to precisely calculate multiple offenders' recidivism rates.

There are some indications that vehicle forfeiture may not be effective because most of the seized vehicles are worth less than it costs to process them. This evidence is anecdotal, as is the evidence suggesting that the impoundment program is effective. It is clear that there is low public awareness of the penalties for allowing a vehicle to be used by a driver who has been convicted of DWS or DWR.

## Minnesota Highlights

## CHARACTERIZATION OF THE DWS AND DWR EXPERIENCE

Analysis of fatal crashes in Minnesota between 1993 and 1999 indicates that only $7.2 \%$ of drivers had an aberrant license status at the time of the crash. Across the 7 years analyzed, Minnesota experienced a general decrease in the proportion of drivers with an aberrant license status in fatal crashes, from a high of $8.9 \%$ in 1996 to a low of $4.4 \%$ in 1999. Minnesota was selected for inclusion in the study on the basis of these data (see appendix A). The state has approximately 3.65 million licensed drivers; about 186,000 (5\%) of licenses were suspended, revoked, or canceled in 2000.

## LAWS AND PROCEDURES

Suspension and revocation. Minnesota does not administratively suspend drivers on the basis of the number of "points" accrued in the driver history. The state has an "Inimical to Public Safety" (IPS) statute that provides for a license to be canceled after a minimum of three alcohol-related incidents, and mandatory cancellation for the fourth incident. About $75-80 \%$ are canceled upon the third incident. For example, if the first two are in a 5 -year period, the person is put under special review and given a warning that a third within 10 years will result in cancellation. The cancellations have an openended time frame. Licenses are reinstated only after a special review. There is no judicial process for reinstatement; however, canceled drivers do have the option of a court hearing. The law specifically addresses claims of failed notification of the cancellationignorance of the cancellation is not an excuse and does not result in dismissal of charges for driving while canceled.

Minnesota runs an "early intervention" program designed to identify drivers who are in danger of license cancellation. The driver history application is programmed to produce a "kick out" file of drivers with multiple traffic convictions and/or multiple crashes but who currently fall short of the criteria of IPS. Law enforcement officers have a special field on the crash report form and a form-the Request for Examination of Driver-that they can use to force a driver to be "kicked out." Drivers identified in this file are notified that they are approaching cancellation and are automatically scheduled for an interview with Department of Public Safety (DPS) evaluators. If they fail to show up for the interview, the license is automatically canceled until the driver comes in for the interview.

The state administratively revokes licenses for alcohol violations (arrested for a BAC of 0.10 or above or for test refusal) under the Implied Consent Law. This is comparable to what is generally referred to as administrative license revocation. The state does not grant a "stay" pending any request for an administrative review; thus the revocation is effective 7 days from the arrest. If a review is requested, the individual is notified within 15 days of the review results. Minnesota treats all alcohol offenses from other states as "like and similar" and posts them to the driver history as if they were instate violations of the 0.10 BAC limit.

Judges in Minnesota have the latitude to suspend or revoke driving privileges but do not do so very often. The Minnesota Motor Vehicle Code includes sentencing guidelines but only for criminal offenses. Judges can order a lifetime suspension (essentially a judicial cancellation), usually for failure to comply with court orders. The state also suspends drivers' licenses for failure to pay child support. In these cases, only a notification from the Human Services Department can lift the suspension.

Restricted licenses. The state grants work permits for offenders with alcohol violations but only after specified waiting periods have expired. For a first offense test failure (a BAC of 0.10 to 0.19 ) or refusal, the waiting period is 15 days. For a first-offense failure of 0.20 and higher, it is 30 days. For a second-offense test failure of 0.10 to 0.19 , the waiting period is 90 days. For a second-offense test failure of 0.20 or higher or for second offense test refusal, it is 180 days. For third offenses, the waiting periods vary from 180 days to no limit, depending on the length of time between violations and the BAC level.

Vehicle impoundment and seizure or immobilization. In the 1980s, legislation was passed permitting plate impoundment to be administratively ordered. Approximately 500 plates are impounded every year. Plate confiscation is required if the driver meets any of these conditions:

1. Has a prior DWI within past 10 years
2. Tests for a BAC of 0.20 or higher
3. Is driving while under cancellation
4. A passenger in the vehicle is younger than 16 years old and is also younger than the driver by at least 18 months

If any one of these conditions is met, the license plates of allvehicles owned by the driver are impounded. In $95 \%$ of cases, the enforcement officer impounds the plates in the field. In the remaining cases, the DPS impounds the plates after the fact. All impoundments are for a minimum of 1 year. Multiple offender DUI drivers, upon their third arrest, face an additional year of impoundment.

If a vehicle plate has been impounded and the family or a business associate of the offender needs access to the vehicle, a specially numbered plate (a so-called W plate) is issued with the letters "WX" or "WY" in the first two positions of the plate number.

This allows an officer to easily spot the vehicle and gives the officer probable cause to stop the vehicle without further cause to determine that the offender is not driving. A recent court ruling has upheld the "probable cause" provision of the distinctive plate law.

A recent change to the W -plate law makes it illegal for anyone who is under an impoundment order to operate any vehicle that does not have the special plates. This holds true even for drivers whose licenses have been reinstated but who are still serving out the full 1-year impoundment order.

Vehicle forfeiture is required on the third DUI violation if the offense occurs in the violator's vehicle. The special plate requirement is also in force (i.e., even if granted a restricted license, the driver can only legally drive vehicles with a W plate). This requirement is in force for an additional year for drivers with a third DUI arrest. The law states that any violation of this provision results in a permanent ban on putting any plates on the vehicle used by the offending driver, even if the driver is not the owner of the vehicle. This provision is intended to block owners from knowingly allowing a suspended or revoked driver from using their car.

## STATE EXPERTS' REVIEW: WHAT WORKS AND BARRIERS

What works. A Minnesota study (Rodgers 1994) indicated that administrative plate impoundment reduced recidivism of multiple DUI offenders. Moreover, drivers whose plates were impounded at the time of arrest were less likely to recidivate than those whose plates were impounded at a later date, through a mailed notice from the DPS.

The DPS reports that their early intervention program works. In the sense that it identifies drivers who are in danger of cancellation under the IPS law, the program gives DPS a way to influence those drivers' behavior before they cross the line. There were no data on how effective the interventions were in terms of keeping a higher proportion of these drivers from ultimately being canceled. The state makes good use of the driver history system's kick-out file as a means of identifying drivers who need intervention. Allowing law enforcement officers to force a kick out through an annotation on the crash report form or by filling out the re-test form also appears to be a valuable method of identifying potential problem drivers.

The newer W-plate program is currently under evaluation. The experience of other states, most notably Oregon, is that distinctive plates or stickers have a specific deterrent effect with multiple DUI offenders.

Barriers. Conviction records transmitted for entry into the driver history file are not always coded properly and may get entered incorrectly. Approximately $4 \%$ of all notifications of cancellation are not coded into the driver history record for a variety of reasons. The result is that drivers may legitimately claim that they did not know that they had been canceled.

Judges' orders may occasionally be vague. Also judges may "continue for dismissal" if the driver meets certain conditions. These actions do not get entered into the driver history record, so there is no method for tracking them.

Courts and prosecutors do not have full access to the driver history file. Law enforcement access is similarly limited. Furthermore, some users expressed a need for training in how to read a driver history record. All of these problems can result in failure to enhance charges.

## Oregon Highlights

## CHARACTERIZING THE DWS AND DWR EXPERIENCE

For 1993-99, $13 \%$ of drivers involved in fatal crashes in Oregon had an aberrant license status at the time of the crash. However, the state experienced a strong downward trend in the percentage of drivers in fatal crashes who lacked a valid license, from a high of more than $15 \%$ in 1993 to less than $11 \%$ in 1998 and 1999. On the basis of this downward trend (see appendix A), Oregon was selected for inclusion in the study. Oregon has just fewer than 2.5 million licensed drivers, with 74,103 under suspension in 2000.

LAWS AND PROCEDURES

Suspension and revocation. Suspensions in Oregon can be administrative under the state's ALR law. Courts can also suspend or revoke upon a conviction or for failure to appear or pay fines. Revocation is mandatory for felony DWS convictions. Under the habitual offender program, a driver's license can be revoked administratively for 3 major traffic convictions or for 20 minor ones in a 5 -year period.

Drivers charged with DUI who either fail or refuse the BAC test must surrender their license (usually to the arresting officer) and are provided with a 30 -day permit to allow time to conduct a hearing. Hearings must be requested within 10 days of the arrest and suspension. Approximately $17 \%$ of administratively suspended drivers request a hearing. Under the ALR law, first-offense failure of the BAC test results in a 90day suspension with 30 days of "hard time" (i.e., no hardship license can be granted). Second or subsequent test failures result in a 1-year suspension with no possibility of a hardship license for the entire year. Test refusals result in a 1- or 3-year (for, respectively, first and multiple offenses) suspension with 90 days or a 1-year hard-time component (for first or subsequent offenses).

A court conviction on the DUI charges can result in a 1-year (first DUI offense) or 3 -year (subsequent DUI offense) suspension ordered by the court. In practice, the courts usually refer first offenders to a diversion program that lasts 1 year and runs concurrent with the suspension.

Administratively suspended drivers can request a hearing that would then be held in front of an administrative law judge in the Oregon Department of Employment. The notice of suspension or revocation provides drivers with information on what to do and who to call. The DMV operates a customer assistance unit that deals with drivers' questions, including those related to a suspension or revocation. Failure to turn in a suspended or revoked license results in a misdemeanor charge.

The Department of State Police has a system set up to track citations and arrests. The general feeling among officers is that a majority of suspensions are for failure to pay or failure to appear and that the same people are cited repeatedly for DWS until they are finally jailed.

Restricted licenses. Probationary permits are granted that allow people to drive for employment and treatment program attendance. The application requires the driver to obtain a letter from their employer and to supply the name and address of their alcohol treatment program (if any). Failure to abide by the restricted license provisions can result in a misdemeanor DWS charge that, upon conviction, can result in a 1-year hard suspension.

Vehicle impoundment and seizure. When a driver is stopped and found to be DWS, DUI, or failing to comply with restrictions or insurance requirements, the officer has the option of impounding the vehicle and having it towed. Only Portland has an active impoundment program. Furthermore, judges in Oregon have the latitude to force sale of a vehicle owned by a recidivist driver.

In the 1980s, Oregon ran a pilot study of placing a distinctive striped sticker (the "zebra sticker") on the license plate of cars driven by people without a valid license. The presence of the sticker was enough to give the officer probable cause to stop the vehicle.

Oregon's law allows vehicle owners to be fined if they knowingly let a DWS, DWR, or unlicensed person drive the car. The state's impoundment laws do not apply to vehicles not owned by the driver.

## STATE EXPERTS' REVIEW: WHAT WORKS AND BARRIERS

What works. Local lists of scofflaws (giving name, address, and vehicle identification information) are useful in targeting recidivist or problem drivers. These are only put together at the initiative of local law enforcement officers and agencies. There is no statewide coordination. On the basis of the 1980s pilot study, the zebra sticker program appears to have been very effective.

The DMV's customer service staff is well trained to help drivers to understand the reinstatement process. They can advise them on the items that must be cleared up before reinstatement, which court they need to work with in order to pay fines, or how to prove completion of mandatory programs.

Barriers. Check points are not allowed in Oregon. This makes it more difficult for law enforcement to catch drivers who are DWS, DWR, or unlicensed.

Local agencies are reluctant to implement a vehicle seizure program, even as a pilot test, even though these programs have proven beneficial in other states. Part of the reason for this reluctance is that the law now requires a conviction before a vehicle can be seized. Another reason for reluctance is that the cost of administering a seizure program is viewed as prohibitive.

## 4. Recommendations

The following recommendations are based on the interviews with state experts. In particular, the practitioners in the six participating states were asked to tell us what was working in their state, what the barriers are, and what laws and procedures they would like to have in their state in order to combat driving without a valid license. In chapter 3 , a summary is provided of the laws and procedures that are working in each state, as well as what barriers there are to better control the problem of driving while suspended, driving while revoked, and driving while unlicensed (DWS, DWR, and DWU). This chapter gives recommendations for implementing the most effective versions of the various laws and practices, and for avoiding the important barriers.

## Laws to Combat Driving without a Valid License

## IMPLEMENT AND ENFORCE ADMINISTRATIVE LICENSE REVOCATION AND SUSPENSION LAWS

Administrative license revocation and suspension (per se) laws are effective primarily because justice is swift and certain. Even without a conviction, the arresting officer can immediately sanction drivers who are caught with illegal blood alcohol content (BAC) or who refuse a test. Well-crafted administrative license revocation (ALR) laws will limit the scope of hearings following suspension to a review of the facts (driver record, BAC level, and the charge). Some state laws allow a much broader scope to the hearings (e.g., to establish probable cause), and it is likely that such provisions could contribute to a reduction in the percentage of suspensions upheld upon review simply because the state is open to more avenues of attack by the suspended driver or the driver's attorney.

California's studies of the effectiveness of their 0.08 BAC and ALR laws showed both specific and generalized deterrent effects for the ALR law. That is, not only did drivers who experienced the sanctions alter their behavior, but overall safety improved as well. An important side note from California's experience is that it may be necessary to establish confirmation procedures so that the Department of Motor Vehicles (DMV) can prove in court that a suspension notice was not only sent to, but also received by, the offender. If courts require proof of service, California's experience suggests that the most cost-effective alternative is certified mail with return receipts.

On the basis of the content of the National Highway Traffic Safety Administration's alcohol program assessments, one important factor is the potential for delaying a suspension when a hearing is pending. The preferred situation is to have the law enforcement officer "serve" the driver with a suspension notice as part of the citation or arrest process (i.e., the citation is the notice of suspension), and the suspension takes effect at the end of the time period allowed for the driver to request a hearing. The suspension
should not be delayed until the hearing takes place, and, of course, the hearings should take place in a timely manner.

ESTABLISH VEHICLE IMPOUNDMENT, SEIZURE, AND IMMOBILIZATION PROGRAMS

Of these three options (i.e., impound, seize, or immobilize), it is clear that vehicle seizure laws set up a much more stringent-and therefore costly and hard to manageprocess than vehicle impoundment laws. Because the goal is to get drivers with an aberrant license status out from behind the wheel, it appears that impoundment programs can be very effective and have the advantage of simplicity and lower cost to manage the resulting programs. A good impoundment law would allow impounding any vehicle used by a DWS, DWR, or DWU driver, regardless of ownership. The cost of redeeming the vehicle should be high enough to allow the administrative agency to recoup all costs of managing the program. In this way, older and less valuable cars would be removed from the roadway (they would not be redeemed because the cost of redemption exceeds the value of the vehicle) and, at the same time, those who loaned their vehicles to DWS, DWR, and DWU drivers would be punished for doing so.

As much as possible, the vehicle-based sanction programs should be operated through administrative processes rather than the courts. This is because the effectiveness of these sanctions is likely to be directly proportional to their swift and certain nature. Even if courts are consistent in the application of vehicle sanctions (and experience shows that they are not), the delays inherent in court proceedings are likely to dilute the value of vehicle-based sanctions. Given the fact that DWS, DWR, and DWU drivers are overinvolved in fatal crashes, it is also recommended that vehicle sanctions apply to them in general, regardless of whether the initial suspension or revocation was related to an offense of driving while under the influence (DUI) of alcohol.

## IMPLEMENT PLATE REMOVAL AT THE SCENE

One obvious method of reducing the cost of vehicle impoundment programs is to impound only the vehicle's license plates. This approach has been used successfully in Minnesota. The value of this countermeasure relies on its immediacy-it is most effective when the law enforcement officer removes the plates at the time of arrest.

For plate impoundment to be effective, the state must have a method for blocking re-registration of that vehicle by the offending driver or immediate family members. Minnesota goes one step further by permanently blocking the registration of any vehicle driven by a three-time DUI offender, regardless of who owns the vehicle. This provision is one way of curtailing the practice of friends lending their vehicle to a driver who is barred from owning or registering a vehicle in his own name.

The replacement of standard plates with a distinctive plate or sticker for selected offenders is another variation of vehicle impoundment. It has been shown to have a deterrent effect on DWS and multiple DUI drivers. The zebra sticker program in Oregon was shown to be effective. Minnesota uses a W plate-that is, a plate with a distinctive letter W on it. The key to the effectiveness of distinctive plates and stickers is the presumption of probable cause written into the law. This gives the officer justification to stop the vehicle simply because it is displaying the special plates.

Requiring the use of special plates or stickers for a probationary period following license reinstatement can enhance the use of this countermeasure for driver control. At a minimum, the plate should be required for the duration of any restricted or hardship license grant. The onset of the special plate requirement should be delayed until immediately after any period of incarceration.

ESTABLISH MANDATORY JAIL TIME FOR MULTIPLE OFFENDERS

There is clearly a cadre of drivers who are scofflaws and for whom no sanctions appear to be effective. In these cases, jail time may be the only way to keep these people off the road. The way to accomplish this goal is to raise the level of repeat DWS, DWR, and DWU offenses to that of a criminal offense and then to educate judges as to the danger to the community posed by these offenders. They must be treated as if they were violent offenders capable of injuring or killing others through their driving behavior or judges will be less willing to penalize them with jail time.

In some states, imposing mandatory jail sentences for habitual offenders may be preferable to allowing judicial discretion. This is because, with judicial discretion, these potentially dangerous offenders may be given their freedom because of external factors such as jail overcrowding. The point of a mandatory jail sentence is to ensure that the most recalcitrant offenders are actually punished for their behavior. If overcrowding is a serious concern for some communities, consideration should be given to house arrest enforced through the use of tracking anklets or other positive means of ensuring that the convicted person does not gain access to a motor vehicle.

Even with mandatory sentences, training of judges and prosecutors is key. Without their involvement and compliance, the use of plea bargains to lesser charges (those not requiring a mandatory jail sentence) is probable. It should be stressed in the training that the sentences are warranted and that the law is written to target the most serious offenders-those who continue to drive as long as they have access to a vehicle, regardless of license status, fines, or forfeiture of personal property. For those whom nothing short of physical restraint will keep from operating a motor vehicle, the law would allow for (and insist upon) their incarceration or house arrest.

Ignition interlocks have been found to be effective as a temporary means of driver control for multiple offender DUI drivers. The main problems most often cited with these types of devices are the cost (often more than the value of the vehicle) and the fact that, because the restrictions are tied to a vehicle, a determined driver could simply use a vehicle that is not equipped with the interlock and never change his or her behavior. Because these drivers are among the most dangerous on the road, it is clear that requiring an interlock alone may not be enough to deter them from driving outside the times or places allowed under their restricted licenses.

The only way to better ensure compliance with interlock laws for all DUI-restricted recidivist drivers is through a system of meaningful rewards and punishments. For example, successful completion of a probationary period under an interlock device could be used, as in Michigan, as a precondition for reinstatement of a full, unrestricted license. In addition, making it certain that any use of an unequipped vehicle by the restricted driver will result in revocation and jail time would provide a deterrent against this behavior. Seizure and forfeiture of unequipped vehicles used by the offender would provide a deterrent against friends and family lending their vehicles.

## ESTABLISH A SEPARATE LAW ENABLING LICENSE STATUS CHECKPOINTS

Some states are in the position that their DUI checkpoints have been ruled unconstitutional. This situation may not hold true for driver license checkpoints, which can be viewed differently from a judicial point of view. Because it is extremely difficult to identify DWS, DWR, and DWU drivers and because of their higher crash risk, the argument that license checkpoints are valid may be worthwhile in states where DUI checkpoints have been ruled invalid.

## BLOCK REGISTRATION OF VEHICLES BY DRIVERS LACKING A VALID LICENSE

As a supplemental component that strengthens other vehicle-based sanctions, vehicle registrations should be blocked for these operators. By blocking registrations, the state can be sure that drivers whose licenses have been suspended or revoked cannot avoid the punishment of plate removal, vehicle impoundment, or other countermeasures simply by obtaining another vehicle.

## Procedures to Encourage Compliance with the Laws

## ESTABLISH STRONG ADMINISTRATIVE CONTROL OF LICENSE ACTIONS

Centralized control of license action administration in the DMV (or equivalent) is a valuable approach to driver control. In particular, the laws enabling this sort of administrative control reduce judicial latitude with respect to the application and dura-
tion of suspensions, thereby standardizing treatment of offenders on the basis of the actual offense alone. This has an effect on both the swiftness and the certainty of penalties for serious offenses such as DUI or DWS and DWR. It can also have the effect of reducing the variety of reasons for suspension to those that have a clear relationship to traffic safety. Even when the sanctions can only be applied after conviction (as is the case in Michigan), the state still benefits from standardizing the penalties meted out to different drivers who commit the same or similar offenses.

One caveat on this approach is that it may foster a judicial backlash against the reduction in flexibility of sentencing. In Michigan, for example, it appears that judges may opt for deferred adjudication more readily as a means of retaining control over the treatment of offenders. To reduce the likelihood of deferred adjudication, plea bargains to reduce sentences, or other actions of the court that tend to water down the effectiveness of state's laws regarding DWS and DWR, it is important that states have the ability to track citations from the point of issuance to final disposition, and that they have the ability to analyze data at the court level.

ESTABLISH DRIVER ASSISTANCE PROGRAMS AND INFORMATIONAL CAMPAIGNS

There is strong evidence that a large proportion of drivers whose licenses have been suspended or revoked fail to take the steps necessary to obtain a hardship license or, ultimately, to reinstate their license. Anecdotal evidence suggests that confusion over the proper procedures is one of the chief reasons for drivers' failure to reinstate their license, even though they meet all the requirements to do so. Some of the reasons given for this by state experts are that people do not understand what steps they are supposed to take, do not understand what options are open to them, and do not even realize that their suspension is in effect until they apply for reinstatement.

The reinstatement fees and additional insurance costs were also cited as plausible reasons for failure to obtain a valid license once the suspension period has expired. At a minimum, giving drivers who are suspended a simple, easy-to-follow set of instructions on how to get their license back (or to receive a hardship license) is worthwhile. Going further (as in Iowa and Minnesota) to provide personalized assistance over the telephone or in person is a better way to help ensure that drivers get back into the system as soon as they are eligible. The alternative, it appears, is that suspended drivers will not pursue reinstatement and will simply drive without a valid license.

REDUCE THE POSSIBILITY AND USE OF PLEA BARGAINING THROUGH ADDITIONAL INFORMATION AND EDUCATION

Education of prosecutors and judges is probably the most effective way to reduce the possibility that DWS and DWR charges will be reduced or dismissed. This is a procedural solution that the DMV and the administrative office of the courts should work on together to ensure that the message gets out in the most effective manner possible. Tracking systems that show the proportion of DWS and DWR cases reduced
or dismissed, at a court-by-court level, are good tools for fostering awareness of this issue. Of course, giving judges and prosecutors solid information about the safety threat posed by DWS, DWR, and DWU drivers should be a key goal of any education program.

## CREATE LINKS BETWEEN DRIVER AND VEHICLE REGISTRATION FILES

The benefit of linking driver records and vehicle registration files is that it makes it possible for a state to block vehicle registrations and renewals for vehicles owned by suspended or revoked drivers (or for any driver who lacks a valid license). This also helps states to confirm compliance with financial responsibility laws.

## Systems and Procedures for Effectively Sanctioning Violators

## CREATE CITATION-TRACKING SYSTEMS

The best system to ensure that drivers do not escape the administrative and judicial punishments due to them is one that tracks the efficiency of the enforcement and adjudication processes. In particular, very few states can easily generate an analysis of the proportion of DWS, DWR, and DWU charges that result in a conviction. Florida, as an example, is able to do this at the level of individual counties (and presumably courts within counties). The system in Florida is not, at present, easy to use, but future upgrades will allow the state to analyze the outcomes of any citation for any type of violation from the point when the ticket was issued to the point where a disposition is received from the court. This information is valuable in developing targeted education programs for law enforcement officers, prosecutors, and judges.

## CONVERT TO EASY-TO-USE DRIVER HISTORY RECORDS FOR POLICE, PROSECUTORS, AND COURTS

The system for presenting a driver history record to an officer in the field or a prosecutor preparing a court case must be user friendly. In particular, the system should provide information not just on previous convictions but also on the changes in the license status. A good example is the system in Iowa that immediately tells the officer that, if a charge of a specific type (e.g., DWS or DUI) is made against the driver, the vehicle is eligible for impoundment, the plates can be taken, or whatever the appropriate action is. For use by prosecutors and judges in traffic cases, it is important that the driver history record is easy to understand and that they have training in how to interpret the record with respect to the state's point system or multiple offender laws.

## PROVIDE TIMELY AND ACCURATE INFORMATION IN DRIVER HISTORY RECORDS

Driver history records must be as up-to-date as possible in order to be used reliably by law enforcement, prosecutors, and judges. The state should encourage the automatic
electronic transfer of citation information from the field to the courts and disposition information from the courts to the DMV.

## SIMPLIFY THE LAWS REGARDING LICENSE SUSPENSION

Confusion about the law is a serious problem in many of the states we visited. The vehicle code in most states is comprised of a series of layers that have been altered and expanded over several legislative sessions. The task of reformatting the laws into more meaningful categories or combining sections to deal with topics such as suspension in one section of the law, instead of across multiple sections, is daunting. But confusing laws make it far more likely that offenders do not experience the punishments prescribed by the law because either they are mischarged in the first place or their defense finds a way to have the charges reduced. Perhaps more important, if the laws are confusing, the task of explaining to a suspended or revoked driver what they need to do to reinstate their license becomes very complex. If drivers do not understand what is required of them, they are less likely to complete the reinstatement process.

## Appendix A. Fatal Traffic Crashes in the United States, 1993-99

The AAA Foundation for Traffic Safety's June 2000 report Unlicensed to Kill (Griffin and DeLaZerda 2000) showed that between 1993 and 1997 nationwide as many as 20 percent of fatal crashes involved at least one driver who was operating a motor vehicle without a valid license. This appendix replicates and extends the 2000 report with data for additional years and trend analyses.

## Analysis of the Data

To update Unlicensed to Kill, the most recent 7 years of Fatality Analysis Reporting System (FARS) data were analyzed. Table A. 1 shows that between 1993 and 1999, 390,278 drivers were involved in fatal crashes in the United States. An additional 186 driver records were identified in the FARS data files but were coded as "missing" the driver's license status information (bringing the total number of driver records to

Table A. 1 License Status of Drivers Involved in Fatal Crashes in the United States, 1993-99, and Comparison with Data Reported in Unlicensed to Kill (June 2000) for 1993-97

| License Status | 1993-99 |  | 1993-97 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Frequency | Percent | Frequency | Percent |
| Valid |  |  |  |  |
| Valid | 336,091 | 86.1 | 238,547 | 85.8 |
| Learner's permit | 1,353 | 0.3 | 951 | 0.3 |
| Temporary | 163 | 0.0 | 124 | 0.0 |
| Valid, all ${ }^{3}$ | 337,607 | 86.5 | 239,622 | 86.2 |
| Aberrant |  |  |  |  |
| Not licensed | 14,196 | 3.6 | 10,228 | 3.7 |
| Suspended | 18,657 | 4.8 | 13,094 | 4.7 |
| Revoked | 4,037 | 1.3 | 3,718 | 1.3 |
| Expired | 4,385 | 1.1 | 3,348 | 1.2 |
| Canceled or denied | 572 | 0.1 | 435 | 0.2 |
| Unknown | 9,824 | 2.5 | 7,632 | 2.7 |
| Aberrant, all | 51,671 | 13.5 | 38,455 | 13.8 |
| Total | 390,278 | 100 | 278,078 | 100 |

Source: Fatality Analysis Reporting System data

[^0]$390,464)$. These were dropped from all analyses in this report. The table gives the driver's license status ${ }^{1}$ at the time of the crash. There are few differences to point out between the update and the original analysis. The proportion of drivers with a valid license (valid + learner's permit + temporary) has increased slightly in the update, indicating that 1998 and 1999 saw an upswing in comparison with the earlier 5 years.

Note that as an update to the Unlicensed to Kill report, this appendix includes updated tables and figures, plus a section on the changes in the license status of drivers involved in fatal crashes during the 7 years. To simplify the discussion throughout the remainder of the appendix, the following terms are defined:

- Valid licenses are those coded in FARS as "valid," "learner's permit" or "temporary." The term "valid license" will be used to indicate the group of all three classes, unless the table includes the three classes separately (as in table A. 1). The meaning should be clear from the context.
- Aberrant license status refers to the grouping of all license status categories other than valid, learner's permit, or temporary.

As may be seen in table A.1, though the vast majority of drivers involved in fatal crashes possessed a valid license at the time of the crash, a large proportion of drivers had some form of aberrant license status. The most frequent aberrant status was driving with a suspended license.

Figure A. 1 shows the proportion of drivers in fatal crashes lacking a valid license at the time of the crash. All aberrant license status categories were combined to give the percentages shown for each state. As in the previous report, the average over all states was just under $14 \%$ ( $13.8 \%$ for 1993-97 data, $13.5 \%$ for 1993-99 data). This represents a slight overall drop.

Changes in the rank ordering of states did take place when the more recent data were added to the figure. However, Maine still had the lowest percentage of drivers with an aberrant license status ( $6.1 \%$ ) and New Mexico still had the highest ( $23.1 \%$ ). Several states improved their ranking (moving toward the top end of figure A. 1, indicating a lower crash involvement by drivers with an aberrant license status). Most notable of these states were Rhode Island (which moved up 8 places in the ranking), Pennsylvania and Nevada (each moved 6), Oregon (5), and West Virginia and Delaware (each 4). Several other states showed negative changes in their ranking (moving toward the bottom of figure A. 1, indicating a higher crashing involvement by drivers with an aberrant license status). Most notable of these were Vermont (which moved down 11 places); Washington (8); Illinois (6); and Kansas, Louisiana, Ohio, and Oklahoma (each 4).

For small states, the broad movements are most easily explained by the fact that small numbers of crashes can change the percentage in any category within an analysis of FARS data. For example, Rhode Island's entire contribution to the analysis consisted

Figure A. 1 Percentage of Drivers Involved in Fatal Crashes Who Were Driving with an Aberrant License Status, Ranked by the State Where the Accident Occurred, 1993-99


Source: Fatality Analysis Reporting System data
of 455 drivers in the 1993-97 period, and 666 in the 1993-99 period. A $1 \%$ change in aberrant license status required only a difference of 7 drivers in the more recent period.

The overall change for Rhode Island was 1.6 percentage points, representing a difference of 11 drivers in fatal crashes during the final 2 years of the analysis period (1998 and 1999).

For other, larger states, the changes are less easily explained. One possible reason is that many states are "bunched" in the distribution. The middle of the distribution, for example, is crowded with states that are near the average of $13.5 \%$ aberrant license status. Under those conditions, individual states could change a great deal in ranking just by moving a small percentage.

The largest positive changes in the percentage of drivers with an aberrant license status were posted by the District of Columbia ( 2.1 percentage points), Arizona (2), Hawaii and Rhode Island (1.6 each), and Delaware (1.4) and Nevada (1.3). Of these, only Arizona (at 8,739 ) had a moderate to large number of drivers in the data set, and that state did not change in ranking against other states in figure A. 1. The other states had such a small number of crashes (and drivers) in the analysis that such swings are considered just an artifact of small changes in their crash experience. At the other end of the spectrum, the largest negative changes in the percentage of drivers with an aberrant license status were posted by Louisiana (a change of 2 percentage points), Vermont (1.6), and Washington (1.4). Vermont is a small state. Louisiana and Washington are both medium-sized to large in terms of the number of drivers included in the analysis (7,931 and 6,129 , respectively).

In summary, there is reason to suspect that most of the changes seen in figure A. 1 between the current analysis and the original are products of either the small numbers of drivers involved in individual states or the close groupings of states-making it easy for some states to move several places up or down in the rankings.

Table A. 2 shows the distribution of license status across vehicle types as coded in FARS. As in the previous report, the license status of drivers involved in fatal crashes varies among the various vehicle types. Motorcyclists are almost twice as likely as passenger car drivers to be driving with a suspended license. Drivers of commercial motor

Table A. 2 Driver's License Status by Vehicle Type (as a percentage within vehicle type) for Drivers Involved in Fatal Crashes, 1993-99

| License Status | Vehicle Type |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Car | Utility | Pickup | Van | Other Light Truck | MediumWeight Truck | Heavy Truck | Motorcycle | Bus | Other | Total |
| Valid, all | 85.8 | 90.0 | 88.5 | 89.2 | 88.5 | 94.4 | 98 | 80.1 | 98.1 | 33.8 | 86.4 |
| Aberrant, all | 14.2 | 10.0 | 11.5 | 10.8 | 11.5 | 5.6 | 4.2 | 19.9 | 1.9 | 66.2 | 13.6 |
| Valid | 85.3 | 89.6 | 98.13 | 878.9 | 88.4 | 94.3 | 95.8 | 78.9 | 98.1 | 33.3 | 86.1 |
| Learner's permit | 0.4 | 0.4 | 0.2 | 0.3 | 0.1 | 0.1 | 0.0 | 1.1 | 0.0 | 0.4 | 0.3 |
| Temporary | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| Not licensed | 4.4 | 2.8 | 2.7 | 3.1 | 2.6 | 1.1 | 0.2 | 4.9 | 0.0 | 10.0 | 3.6 |
| Suspended | 5.3 | 4.0 | 4.8 | 3.8 | 4.4 | 2.1 | 1.1 | 9.5 | 0.4 | 2.2 | 4.8 |
| Revoked | 1.4 | 0.9 | 1.5 | 0.9 | 0.6 | 0.5 | 0.2 | 2.4 | 0.0 | 1.1 | 1.3 |
| Expired | 1.2 | 0.9 | 1.3 | 120 | 0.8 | 0.5 | 0.3 | 1.9 | 0.0 | 0.9 | 1.1 |
| Canceled | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 |
| Unknown | 1.8 | 1.2 | 1.0 | 1.9 | 3.1 | 1.4 | 2.4 | 1.0 | 1.3 | 52.0 | 2.5 |
| Total percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of drivers | 207,638 | 26,196 | 73,125 | 23,964 | 1,077 | 3,509 | 389,608 | 16,226 | 2,002 | 6,893 | 3,50928 |

[^1]vehicles (especially heavy trucks and buses) are much less likely to have any aberrant license status than are operators of the other types of motor vehicles. There were 856 missing cases excluded from the analysis reported in table A.2. The total number of cases (including missing ones) was 390,464 .

Table A. 3 displays the mix of driver license status among all drivers involved in each fatal crash recorded in the FARS data for 1993-99. The table shows that almost $20 \%$ of crashes involve at least one driver with an aberrant license status. This represents a slight change from the previous report in that, for the 1993-97 period covered in that report, $80.0 \%$ of all crashes involved only drivers with a valid license. After 1998 and 1999 data are added, the results for all 7 years show a small improvement, in that $80.4 \%$ of fatal crashes involved only drivers with a valid license. Note also that the data in table A. 3 represent numbers of crashes and of fatalities. Most other tables in this appendix represent numbers of drivers.

Table A. 4 presents the gender and median age of drivers involved in fatal crashes, distributed among the license status recorded in FARS (1993-99). Additional details can be found in appendixes B through D. As in the previous report, there are, in general, large gender differences for drivers involved in fatal crashes- $73 \%$ of all drivers involved in fatal crashes are male, $26 \%$ are female, and the sex of $1 \%$ is unknown. By scanning the columns in table A.4, one can easily see that for certain aberrant license

Table A. 3 Fatal Crashes and Fatalities by Driver's License Status of Drivers Involved in Fatal Crashes, 1993-99


[^2]categories, males are even more likely to be overrepresented in the data. Males show this further overrepresentation in the categories for driving without a license; driving with a suspended, revoked, or expired license; and driving with a canceled license.

Table A. 4 also shows that the median age of drivers involved in fatal crashes varies as a function of their license status. Drivers with a valid license had the highest median age ( 37 years). Among the aberrant license classes, the median age for those without a license was the lowest, at 23 years. This is not surprising because the FARS records include a fair number of underage drivers who would all fall in this category. The median age for drivers with suspended licenses is a full 8 years younger than that for drivers with valid licenses ( 29 versus 37 years). There were 187 missing records excluded from the analysis reported in table A.2, bringing the total number of records to 390,464.

Figures A. 2 through A. 5 compare the age distribution of drivers with an aberrant license status with that of drivers with a valid license. Figures A. 6 through A. 10 compare the times of day of fatal crashes involving drivers with aberrant license classifications with those of drivers with valid licenses.

Table A. 4 Driver's License Status by Gender and Median Age, 1993-99

|  | $\begin{array}{lll} & \text { Gender } & \\ \text { Male } & \text { Female } & \text { Unknown }\end{array}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| License Status | Number | Percent | Number | Percent | Number | Percent | Median Age (years) | Total Drivers |
| Valid, all | 244,950 | 72.6 | 92,607 | 27.4 | 49 | . 0 | 36 | 337,606 |
| Aberrant, all | 39,542 | 75.1 | 7,720 | 14.7 | 5,409 | 10.3 | 31 | 52,671 |
| Valid | 243,930 | 72.6 | 92,111 | 27.4 | 49 | 0.0 | 37 | 336,0 |
| Learner's permit | 901 | 66.6 | 452 | 33.4 | 0 | 0.0 | 17 | 1,353 |
| Temporary | 119 | 73.0 | 44 | 27.0 | 0 | 0.0 | 23 | 163 |
| Not licensed | 11,335 | 79.8 | 2,850 | 20.1 | 11 | 0.1 | 23 | 14,196 |
| Suspended | 16,013 | 85.8 | 2,631 | 14.1 | 13 | 0.1 | 29 | 18,657 |
| Revoked | 4,542 | 90.2 | 493 | 9.8 | 2 | 0.0 | 32 | 5,037 |
| Expired | 3,438 | 78.4 | 947 | 21.6 | 0 | 0.0 | 34 | 4,385 |
| Canceled | 487 | 85.1 | 84 | 14.7 | 1 | 0.2 | 33 | 572 |
| Unknown ${ }^{\text {a }}$ | 3727 | 37.9 | 715 | 7.3 | 5,382 | 54.8 |  | 9,824 |
| Total | 284,492 | 72.9 | 100,327 | 25.7 | 5,458 | 1.4 |  | 390,277 |

${ }^{\text {a }}$ The empty cell in this row and the one below indicate that data are unknown.
Source: Fatality Analysis Reporting System data

Figures A. 2 through A. 5 and figures A. 6 through A. 10 are similar to those presented in the earlier report. For drivers involved in fatal crashes, the distribution of driver age and hour of the day differs between drivers with valid licenses and those with an aberrant license status. The differences in age distribution make some logical sense, in that those with suspended, revoked, or expired licenses show a peak of the age distri-

Figure A. 2 Percentage of Fatal Crashes that Involved Drivers with Suspended or Valid Licenses by Age, 1993-99

Valid
Suspended


Source: Fatality Analysis Reporting System data

Figure A. 3 Percentage of Fatal Crashes that Involved Drivers with Revoked or Valid Licenses by Age, 1993-99


Source: Fatality Analysis Reporting System data
bution that is higher (older age) than for drivers with valid licenses. This no doubt, in part, reflects the fact that one must first have a valid license before that license can be suspended, revoked, or expire. In addition, there is little doubt that the legal drinking age affects these distributions. That is, though the peak of the valid driver age distribution in fatal crashes is earlier, the valid driver distribution is flatter and the median age for drivers with valid licenses is higher than for any of the aberrant license status classifications.

Figure A. 4 Percentage of Fatal Crashes that Involved Drivers with Expired or Valid Licenses, 1993-99


Source: Fatality Analysis Reporting System data

Figure A. 5 Percentage of Fatal Crashes that Involved Drivers without Licenses or with Valid Licenses, 1993-99


Source: Fatality Analysis Reporting System data

One could hypothesize that the earlier peak for those with valid licenses reflects the fact that young drivers are more likely to be involved in fatal crashes regardless of whether or not they engage in behaviors that can lead to suspensions and revocations. The flatter distribution for those with valid licenses is reflective of the nature of rare

Figure A. 6 Percentage of Fatal Crashes that Involved Drivers with Suspended or Valid Licenses by Hour when Crash Occurred, 1993-99


Source: Fatality Analysis Reporting System data

Figure A. 7 Percentage of Fatal Crashes that Involved Drivers with Revoked or Valid Licenses by Hour when Crash Occurred, 1993-99


Source: Fatality Analysis Reporting System data
events (fatal crashes) and the fact that all drivers face some risk of being involved in a fatal crash regardless of their license status. The lower median and higher peak of the distributions for those with an aberrant license status indicates clearly that these drivers are a more homogeneous class of drivers than all drivers in general, or all drivers with a valid license.

The time-of-day (hour) distributions given in figures A. 6 through A. 10 clearly indicate that drivers with an aberrant license status are more likely to be involved in

Figure A. 8 Percentage of Fatal Crashes that Involved Drivers with Expired or Valid Licenses by Hour when Crash Occurred, 1993-99


Source: Fatality Analysis Reporting System data

Figure A. 9 Percentage of Fatal Crashes that Involved Drivers without Licenses or with Valid Licenses by Hour when Crash Occurred, 1993-99


Source: Fatality Analysis Reporting System data
fatal crashes in the late night and early morning hours than are those with a valid license (whose distribution peaks during the afternoon to early evening hours). What is not known, of course, is whether these differences reflect a difference in the times at which people with an aberrant license status drive (e.g., do they avoid driving during the day?), or whether it reflects those times during which those with an aberrant license status are most likely to engage in dangerous behavior (e.g., drinking and driving).

Figure A. 10 Percentage of Fatal Crashes that Involved Drivers with Unknown License Status or Valid Licenses by Hour when Crash Occurred, 1993-99


Source: Fatality Analysis Reporting System data

Table A. 5 displays the police officers' judgment of alcohol involvement for drivers involved in fatal crashes during the period 1993-99. The table gives the percentage distribution among the possible codes for alcohol involvement for each type of license status classification. Only drivers operating with a temporary license show higher "no alcohol" involvement than drivers with valid licenses, but these drivers also showed a higher "alcohol involved" indicator than those with simply valid licenses. All the aberrant license status classifications have a much higher percentage of alcohol involvement

Table A. 5 Driver's License Status by Presence of Alcohol (in the Opinion of the Investigating Officer), 1993-99

| License Status | Alcohol Involvement Indicator (percent) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | No Alcohol | Alcohol Involved | Not Reported | Unknown | Total Drivers |
| Valid, all | 56.2 | 13.4 | 18.6 | 11.9 | 337,580 |
| Aberrant, all | 28.7 | 30.7 | 18.8 | 21.8 | 52,666 |
| Valid | 56.2 | 13.4 | 18.6 | 11.9 | 336,064 |
| Learner's permit | 54.7 | 13.2 | 16.4 | 15.7 | 1,353 |
| Temporary | 69.9 | 19.6 | 6.7 | 3.7 | 163 |
| Not licensed | 33.1 | 29.5 | 21.0 | 16.4 | 14,194 |
| Suspended | 30.1 | 38.5 | 13.2 | 18.3 | 18,655 |
| Revoked | 18.6 | 52.4 | 11.7 | 17.3 | 5,037 |
| Expired | 32.3 | 32.5 | 21.3 | 13.9 | 4,384 |
| Canceled or denied | 36.0 | 40.0 | 11.4 | 12.6 | 572 |
| Unknown | 22.7 | 5.1 | 29.6 | 42.7 | 9,824 |
| Total drivers | 204,836 | 61,250 | 72,628 | 51,532 | 390,246 |

[^3]Table A. 6 Previous Driving While Intoxicated (DWI) Convictions for Drivers Involved in Fatal Crashes by License Status, 1993-99

|  |  | DWI Convictions in 3 Years Prior to Crash (percent) |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |

Source: Fatality Analysis Reporting System data

Table A. 7 Previous Suspensions and Revocations for Drivers Involved in Fatal Crashes by License Status, 1993-99

\left.|  | Suspension or Revocation Convictions in 3 Years |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Prior to Crash (percent) |  |  |  |  |  |  |$\right)$

Source: Fatality Analysis Reporting System data
noted by the investigating officer than for any of the valid license classifications (valid, learner's permit, or temporary). There were 218 missing cases excluded from the analysis reported in table A.5, bringing the total number of cases to 390,464 .

Tables A. 6 and A. 7 display driver history information for drivers involved in fatal crashes during the period 1993-99. Table A. 6 shows previous convictions for driving while intoxicated (DWI) in the 3 years before the fatal crash for drivers in each license status classification. Table A. 7 shows previous suspensions and revocations in the 3
years before the fatal crash for drivers in each license status classification. Percentages in the table are within license status classification across the possible values of the driver history variable (DWI convictions or suspensions or revocations, respectively, for tables A. 6 and A.7). There were 192 and 193 missing cases excluded from the analyses reported in tables A. 6 and A.7, respectively, bringing the total number of cases to 390,464.

It is not surprising that the aberrant license status categories show a high percentage of drivers with previous DWI convictions and previous suspensions or revocations. Drivers with valid licenses at the time of the fatal crash show much lower percentages of previous DWI convictions or suspensions or revocations. Among the aberrant license classifications, those with suspended or revoked licenses at the time of the fatal crash are much more likely than other license status classifications to have had previous DWI convictions or suspensions or revocations.

Figure A. 11 shows the percentage of drivers involved in fatal crashes who were operating under a suspended or revoked license and whose driver history showed three or more suspensions or revocations in the 3 years before the crash. The data in figure A. 11 are sorted by the ranking of the state that issued the license under which the driver was operating when the crash occurred.

Figure A. 11 is, of course, open to some interpretation. One possibility is that drivers from states toward the bottom of the figure (e.g., New Jersey) are more willing than drivers from other states to operate a motor vehicle without a valid license. Another interpretation is that drivers with suspended or revoked licenses are equally likely to drive without a valid license, but that the states at the bottom of the distribution issue suspensions and revocations to only the most seriously dangerous drivers. Either scenario would explain the shape of the figure and the rankings of the states.

Table A. 8 displays a classification of drivers with unknown license status by whether they were hit-and-run drivers or not. For those who were hit-and-run drivers, the table shows whether they struck a nonmotorist, a motor vehicle in transport, or a parked motor vehicle (or stationary object). For those who were not hit-and-run drivers, the table displays the source of their driver's license (same state, other state, military, other country, etc.). The data are for only those drivers involved in fatal crashes whose license status was coded "unknown" in FARS (1993-99).

Table A. 9 displays the vehicle types driven by young (age 4-19 years) unlicensed drivers involved in fatal crashes. Table A. 10 displays the driver's outcome (fatality versus nonfatality) for drivers involved in fatal crashes for each license status classification. Percentages are within license status. The table shows drivers from single- and multivehicle crashes separately so that percentages add to $100 \%$ within each license status for both single- and multi-vehicle crashes. There were 186 missing cases excluded from the analysis reported in table A. 10, bringing the total number of cases to 390,464 .

The data presented in tables A.8, A.9, and A. 10 are similar to those presented in

Figure A. 11 Percentage of Drivers with Suspended or Revoked Licenses Involved in Fatal Crashes Who Had Three or More Suspensions or Revocations in the Three Years before the Crash, Ranked by Licensing State, 1993-99


Source: Fatality Analysis Reporting System data
the previous report (which covered 1993-97 fatal crashes). Table A. 8 shows that drivers with an unknown license status in fatal crashes are more likely to be hit-and-run drivers than non-hit-and-run ones, and that if they are not hit-and-run drivers, they are most likely from somewhere other than the state in which the crash occurred. This table thus provides some plausible reasons for why the driver's license status was unknown-either

Table A. 8 Drivers with Unknown License Status by Hit-and-Run Status and Jurisdiction of License Origin, 1993-99

| Drivers of Unknown License Status | Number | Percent |
| :--- | ---: | ---: |
| Hit-and-run drivers (subtotal) | 5,464 | 55.6 |
| Hit pedestrian or nonmotorist | 4,385 | 44.6 |
| Hit parked vehicle or stationary object | 65 | 0.7 |
| Hit motor vehicle in transport | 1,014 | 10.3 |
| Non-hit-and--run drivers (subtotal) | 4,360 | 44.4 |
| Drivers from other states or U.S. territories | 1,266 | 12.9 |
| Drivers from state in which crash occurred | 673 | 6.9 |
| Drivers from military | 4 | 0.0 |
| Drivers from Canada | 4 | 0.0 |
| Drivers from Mexico | 199 | 2.0 |
| Drivers from other countries | 426 | 4.3 |
| $\quad$ Drivers from unknown state or country | 1,788 | 18.2 |
| Total drivers | 9,824 | 100 |

Source: Fatality Analysis Reporting System data

Table A. 9 Vehicle Type Driven by Young Unlicensed Drivers (4-19 years old) Involved in Fatal Crashes, 1993-99 (number of drivers)

| Vehicle <br> Type | 4 | 5 | 6 | 7 | 8 | 9 | Unlicensed Driver Age (years) |  |  |  |  | 15 | 16 | 17 | 18 | 19 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 10 | 101 | 12 | 13 | 14 |  |  |  |  |  |  |
| Passenger car |  |  |  |  |  | 1 | 2 | 6 | 24 | 79 | 231 | 467 | 529 | 600 | 623 | 543 | 3,105 |
| Utility |  |  |  |  |  | 1 | 1 | 1 | 4 | 18 | 23 | 50 | 65 | 47 | 41 | 33 | 284 |
| Pickup |  |  |  |  | 1 | 1 | 3 | 6 | 7 | 26 | 58 | 103 | 84 | 114 | 92 | 79 | 574 |
| Van |  |  |  |  |  |  |  | 1 | 2 | 2 | 27 | 30 | 33 | 32 | 31 | 33 | 191 |
| Light truck |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  | 2 | 3 |
| Mediumweight truck |  |  |  |  |  |  |  |  | 1 | 1 |  |  |  | 1 |  |  | 3 |
| Heavy truck |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  | 2 |
| Motorcycle |  |  |  | 3 | 2 | 1 | 6 | 12 | 19 | 35 | 50 | 54 | 31 | 24 | 53 | 39 | 329 |
| Other | 2 | 2 | 4 | 5 | 8 | 19 | 26 | 24 | 47 | 49 | 93 | 88 | 35 | 26 | 17 | 12 | 457 |
| Total | 2 | 2 | 4 | 8 | 11 | 23 | 38 | 50 | 104 | 210 | 482 | 792 | 777 | 847 | 857 | 741 | 4,948 |

Source: Fatality Analysis Reporting System data
the driver left the scene; or the state, territory, or country that issued their driver's license could not provide the FARS analyst with license status data in time for the closeout of the annual FARS file.

Table A. 9 shows that young unlicensed drivers involved in fatal crashes are most likely to have been behind the wheel of a typical passenger vehicle. A relatively large number of these young unlicensed drivers were operating vehicles classified as "other" in FARS.

Table A. 10 Driver Outcome (Fatality or Nonfataiity) by Driver's License Status and Crash Mode (Single- versus Multi-Vehicle Crashes), 1993-99

| License Status | Single-Vehicle Crashes |  |  |  | Multi-Vehicle Crashes |  |  |  | Number |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fatality |  | Nonfataiity |  | Fatality |  | Nonfataiity |  |  |
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent |  |
| Valid, all | 51,058 | 43.6 | 66,163 | 56.4 | 141,679 | 64.3 | 78,707 | 35.7 | 337,607 |
| Aberrant all | 12,901 | 46.3 | 14,972 | 53.7 | 14,420 | 58.1 | 10,378 | 41.9 | 52,671 |
| Valid | 50,694 | 43.5 | 65,801 | 56.5 | 141,208 | 64.3 | 78,388 | 35.7 | 336,091 |
| Learner's permit | 333 | 51.5 | 313 | 48.5 | 424 | 60.0 | 283 | 40.0 | 1,353 |
| Temporary | 31 | 38.8 | 49 | 61.3 | 47 | 56.6 | 36 | 43.4 | 163 |
| Not licensed | 3,166 | 42.0 | 4,370 | 58.0 | 3,670 | 55.1 | 2,990 | 44.9 | 14,196 |
| Suspended | 3,464 | 36.0 | 6,167 | 64.0 | 4,845 | 53.7 | 4,181 | 46.3 | 18,657 |
| Revoked | 809 | 28.6 | 2,022 | 71.4 | 1,150 | 52.1 | 1,056 | 47.9 | 4,037 |
| Expired | 690 | 33.3 | 1,381 | 66.7 | 1,104 | 47.7 | 1,210 | 52.3 | 4,385 |
| Canceled or denied | 80 | 29.4 | 191 | 70.5 | 159 | 52.8 | 142 | 47.2 | 572 |
| Unknown | 4,692 | 84.8 | 841 | 15.2 | 3,492 | 81.4 | 799 | 18.6 | 9,824 |
| Total drivers | 63,959 | 44.1 | 81,135 | 55.9 | 156,099 | 63.7 | 89,085 | 36.3 | 390,278 |

Source: Fatality Analysis Reporting System data

Table A. 11 Annual Driver's License Status Percentages for Each State, 1993-99

| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama |  |  |  |  |  |  |  |  |
| Valid | 81.29 | 80.12 | 83.19 | 83.9 | 83.49 | 84.43 | 84.08 | 82.99 |
| Aberrant, all | 18.71 | 19.88 | 16.81 | 16.511 | 15.921 | 15.57 | 15.92 | 17.01 |
| Not licensed | 4.42 | 4.4 | 4.46 | 5.18 | 5.05 | 4.94 | 5.17 | 4.85 |
| Suspended | 5.89 | 4.64 | 4.73 | 3.89 | 5.42 | 5.42 | 4.84 | 4.96 |
| Revoked | 4.93 | 4.36 | 5.19 | 3.69 | 4.44 | 3.50 | 3.90 | 4.28 |
| Expired | 1.03 | 0.62 | 0.66 | 0.71 | 0.80 | 0.55 | 0.60 | 0.71 |
| Canceled or denied | 0.29 | 0.14 | 0.13 | 0.13 | 0.18 | 0.14 | 0.47 | 0.21 |
| Unknown | 2.14 | 5.47 | 1.64 | 2.00 | 0.62 | 1.03 | 0.94 | 2.00 |
| Alaska |  |  |  |  |  |  |  |  |
| Valid | 86.07 | 79.57 | 84.11 | 81.19 | 82.80 | 80.00 | 85.15 | 82.91 |
| Aberrant, all | 13.93 | 20.43 | 15.89 | 18.81 | 17.20 | 20.00 | 14.85 | 17.09 |
| Not licensed | 7.38 | 7.53 | 2.80 | 6.93 | 9.68 | 4.71 | 1.98 | 5.84 |
| Suspended | 0.82 | 2.15 | 3.74 | 2.97 | 3.23 | 1.18 | 2.97 | 2.42 |
| Revoked | 4.92 | 5.38 | 7.48 | 5.94 |  | 5.88 | 5.94 | 5.13 |
| Expired |  | 2.15 |  | 0.99 | 2.15 | 2.35 | 2.97 | 1.42 |
| Canceled or denied |  |  |  | 1.98 |  |  |  | 0.28 |
| Unknown | 0.82 | 3.23 | 1.87 |  | 2.15 | 5.88 | 0.99 | 1.99 |
| Arizona |  |  |  |  |  |  |  |  |
| Valid | 80.20 | 77.60 | 78.317 | 77.46 | 77.56 | 82.79 | 78.31 | 78.86 |
| Aberrant, all | 19.80 | 22.40 | 21.63 | 22.54 | 22.44 | 17.21 | 21.69 | 21.14 |
| Not licensed | 6.37 | 6.26 | 7.40 | 7.51 | 6.02 | 6.08 | 8.53 | 6.93 |
| Suspended | 5.20 | 6.85 | 5.44 | 5.79 | 6.10 | 4.89 | 6.51 | 5.84 |
| Revoked | 0.69 | 1.27 | 0.94 | 0.55 | 0.89 | 0.79 | 0.94 | 0.87 |
| Expired | 2.16 | 2.1 | 1.16 | 1.49 | 1.63 | 0.87 | 0.72 | 1.41 |
| Canceled or denied |  | 0.34 | 0.58 | 0.31 | 0.16 | 0.32 | 0.14 | 0.27 |
| Unknown | 5.39 | 5.58 | 6.10 | 6.89 | 7.64 | 4.26 | 4.84 | 5.81 |
| Arkansas |  |  |  |  |  |  |  |  |
| Valid | 87.18 | 87.10 | 88.35 | 86.57 | 87.10 | 87.26 | 85.84 | 87.06 |
| Aberrant, all | 12.82 | 12.90 | 11.65 | 13.43 | 12.90 | 12.74 | 14.16 | 12.94 |
| Not licensed | 4.87 | 3.07 | 4.51 | 2.41 | 3.05 | 2.40 | 2.42 | 3.24 |
| Suspended | 4.74 | 6.14 | 4.76 | 7.98 | 7.97 | 8.89 | 8.55 | 7.03 |
| Revoked | 0.26 | 0.12 |  | 0.25 | 0.12 | 0.12 | 0.89 | 0.25 |
| Expired | 1.92 | 1.60 | 1.50 | 2.28 | 0.94 | 0.84 | 1.15 | 1.45 |
| Canceled or denied |  | 0.25 | 0.13 | 0.13 | 0.23 | 0.12 | 0.26 | 0.16 |
| Unknown | 1.15 | 1.97 | 1.00 | 0.38 | 0.70 | 0.36 | 0.89 | 0.92 |
| California |  |  |  |  |  |  |  |  |
| Valid | 74.69 | 76.20 | 78.26 | 80.39 | 81.57 | 81.44 | 81.72 | 79.02 |
| Aberrant, all | 25.31 | 23.80 | 21.74 | 19.61 | 18.43 | 18.56 | 18.28 | 20.98 |
| Not licensed | 6.27 | 6.69 | 5.18 | 4.86 | 4.68 | 4.23 | 4.53 | 5.26 |
| Suspended | 9.17 | 8.56 | 8.42 | 7.90 | 6.82 | 7.01 | 6.58 | 7.84 |
| Revoked | 0.94 | 0.92 | 0.84 | 0.64 | 0.58 | 0.68 | 0.57 | 0.75 |
| Expired | 3.26 | 2.82 | 2.78 | 1.98 | 22 | 1.982 | 2.22 | 2.44 |
| Canceled or denied | 0.06 |  | 0.05 |  | 0.02 | 0.02 | 0.07 | 0.03 |
| Unknown | 5.64 | 4.88 | 4.58 | 4.37 | 4.37 | 4.87 | 4.40 | 4.74 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Colorado |  |  |  |  |  |  |  |  |
| Valid | 87.21 | 85.68 | 85.53 | 84.61 | 85.22 | 87.69 | 86.28 | 86.03 |
| Aberrant, all | 12.79 | 14.32 | 14.47 | 15.39 | 14.78 | 12.31 | 13.72 | 13.97 |
| Not licensed | 2.45 | 4.56 | 4.15 | 4.38 | 3.57 | 2.72 | 3.46 | 3.62 |
| Suspended | 5.03 | 4.82 | 3.44 | 4.26 | 2.83 | 2.96 | 2.27 | 3.62 |
| Revoked | 2.72 | 2.15 | 4.27 | 3.50 | 4.19 | 4.02 | 4.06 | 3.59 |
| Expired | 1.22 | 0.76 | 1.19 | 1.75 | 2.09 | 1.18 | 1.31 | 1.36 |
| Canceled or denied | 0.95 | 1.01 | 0.24 | 0.25 | 0.37 | 0.36 | 1.07 | 0.60 |
| Unknown | 0.68 | 2.03 | 1.54 | 1.88 | 1.85 | 1.66 | 1.79 | 1.64 |
| Connecticut |  |  |  |  |  |  |  |  |
| Valid | 89.85 | 89.63 | 89.41 | 90.31 | 89.56 | 90.95 | 88.92 | 89.82 |
| Aberrant, all | 10.15 | 10.37 | 10.59 | 9.69 | 10.44 | 9.05 | 11.08 | 10.18 |
| Not licensed | 3.02 | 3.70 | 2.46 | 3.55 | 4.67 | 2.43 | 4.03 | 3.40 |
| Suspended | 5.62 | 4.44 | 4.43 | 4.26 | 4.44 | 4.86 | 3.78 | 4.57 |
| Revoked | 0.43 | 0.49 |  |  |  |  | 0.25 | 0.17 |
| Expired | 0.22 | 0.25 | 0.99 |  | 0.44 | 1.10 | 1.26 | 0.60 |
| Canceled or denied |  |  | 0.25 | 0.24 | 0.22 |  |  | 0.10 |
| Unknown | 0.86 | 1.48 | 2.46 | 1.65 | 0.67 | 0.66 | 1.76 | 1.33 |
| Delaware |  |  |  |  |  |  |  |  |
| Valid | 84.80 | 85.45 | 85.38 | 86.63 | 85.56 | 89.41 | 90.79 | 86.78 |
| Aberrant, all | 15.20 | 14.55 | 14.62 | 13.37 | 14.44 | 10.59 | 9.21 | 13.22 |
| Not licensed | 3.51 | 3.03 | 2.34 | 1.60 | 4.28 | 2.35 | 2.63 | 2.83 |
| Suspended | 3.51 | 3.03 | 3.51 | 3.21 | 1.07 | 2.94 | 2.63 | 2.83 |
| Revoked | 2.34 | 3.03 | 2.34 | 1.07 | 4.81 | 1.76 | 1.97 | 2.49 |
| Expired | 0.58 |  | 0.58 | 0.53 | 0.53 | 1.18 |  | 0.50 |
| Canceled or denied | 0.58 | 0.661 | 1.17 | 0.53 | 1.60 | 1.76 | 0.66 | 1.00 |
| Unknown | 4.68 | 4.85 | 4.68 | 6.42 | 2.14 | 0.59 | 1.32 | 3.57 |
| District of Columbia |  |  |  |  |  |  |  |  |
| Valid | 76.54 | 79.52 | 81.58 | 73.49 | 74.70 | 85.71 | 83.64 | 79.00 |
| Aberrant, all | 23.46 | 20.48 | 18.42 | 26.51 | 25.30 | 14.29 | 16.36 | 21.00 |
| Not licensed | 1.23 | 6.02 | 5.26 | 10.84 | 6.02 | 7.79 |  | 5.58 |
| Suspended | 2.47 | 6.02 | 3.95 | 2.41 | 4.82 | 1.30 | 3.64 | 3.53 |
| Revoked | 1.23 |  |  | 1.20 | 1.20 |  |  | 0.56 |
| Expired | 1.23 |  | 1.32 |  |  |  |  | 0.37 |
| Canceled or denied | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |
| Unknown | 17.28 | 8.43 | 7.89 | 12.05 | 13.25 | 5.19 | 12.73 | 10.97 |
| Florida |  |  |  |  |  |  |  |  |
| Valid | 86.93 | 85.89 | 87.41 | 87.89 | 88.60 | 88.90 | 90.24 | 88.03 |
| Aberrant, all | 13.07 | 14.11 | 12.59 | 12.1 | 11.40 | 11.10 | 9.76 | 11.97 |
| Not licensed | 2.03 | 2.032 | 2.29 | 2.86 | 2.88 | 3.07 | 2.45 | 2.57 |
| Suspended | 5.86 | 6.39 | 5.88 | 5.40 | 4.40 | 4.63 | 4.09 | 5.21 |
| Revoked | 0.35 | 0.37 | 0.25 | 0.18 | 0.18 | 0.12 | 0.02 | 0.21 |
| Expired | 0.16 | 0.19 | 0.18 | 0.13 | 0.05 | 0.15 | 0.05 | 0.13 |
| Canceled or denied | 0.05 | 0.19 | 0.08 | 0.15 | 0.08 | 0.02 | 0.02 | 0.08 |
| Unknown | 4.61 | 4.66 | 3.92 | 3.39 | 3.82 | 3.10 | 3.12 | 3.78 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Georgia |  |  |  |  |  |  |  |  |
| Valid | 86.25 | 90.00 | 88.19 | 88.41 | 88.75 | 88.02 | 89.22 | 88.42 |
| Aberrant, all | 13.75 | 10.00 | 11.81 | 11.59 | 11.25 | 11.98 | 10.78 | 11.58 |
| Not licensed | 3.12 | 2.44 | 2.58 | 2.81 | 2.49 | 3.49 | 3.76 | 2.95 |
| Suspended | 5.61 | 4.57 | 5.98 | 5.61 | 4.98 | 5.19 | 4.72 | 5.23 |
| Revoked | 0.85 | 0.40 | 0.72 | 0.94 | 0.69 | 0.92 | 0.77 | 0.76 |
| Expired | 0.95 | 0.55 | 0.81 | 0.79 | 0.55 | 0.32 | 0.53 | 0.64 |
| Canceled or denied | 0.11 | 0.110 | 0.14 | 0.09 | 0.05 |  |  | 0.07 |
| Unknown | 3.12 | 1.94 | 1.58 | 1.36 | 2.49 | 2.07 | 1.01 | 1.92 |
| Hawaii |  |  |  |  |  |  |  |  |
| Valid | 77.22 | 76.19 | 71.70 | 80.20 | 83.33 | 89.83 | 76.60 | 79.60 |
| Aberrant, all | 22.78 | 23.81 | 28.30 | 19.80 | 16.67 | 10.17 | 23.40 | 20.40 |
| Not licensed | 6.67 | 4.76 | 5.03 | 6.44 | 5.00 | 5.65 | 4.96 | 5.56 |
| Suspended | 5.56 | 6.12 | 10.06 | 4.95 | 3.89 | 2.26 | 5.67 | 5.40 |
| Revoked | 3.33 |  | 1.89 | 2.97 | 2.22 |  | 2.13 | 1.85 |
| Expired | 5.56 | 8.84 | 6.29 | 3.47 | 2.78 | 1.13 | 7.80 | 4.89 |
| Canceled or denied |  |  |  | 0.50 |  | 0.56 | 0.71 | 0.25 |
| Unknown | 1.67 | 4.08 | 5.03 | 1.49 | 2.78 | 0.56 | 2.13 | 2.45 |
| Idaho |  |  |  |  |  |  |  |  |
| Valid | 77.09 | 85.53 | 84.00 | 87.50 | 86.18 | 82.72 | 88.76 | 84.74 |
| Aberrant, all | 22.91 | 14.47 | 16.00 | 12.50 | 13.82 | 17.28 | 11.24 | 15.26 |
| Not licensed | 3.64 | 2.89 | 3.69 | 4.46 | 4.93 | 3.70 | 3.75 | 3.87 |
| Suspended | 3.64 | 5.14 | 7.08 | 5.06 | 5.59 | 7.41 | 4.03 | 5.45 |
| Revoked | 0.36 | 0.64 | 1.23 | 0.360 | 0.66 | 1.54 | 0.58 | 0.77 |
| Expired | 0.73 | 2.89 | 2.15 | 1.49 | 1.32 | 1.85 | 1.73 | 1.76 |
| Canceled or denied |  |  |  |  |  |  | 0.29 | 0.05 |
| Unknown | 14.55 | 2.89 | 1.85 | 1.19 | 1.32 | 2.78 | 0.86 | 3.38 |
| Illinois |  |  |  |  |  |  |  |  |
| Valid | 88.62 | 89.91 | 87.39 | 88.298 | 88.29 | 85.75 | 86.40 | 87.73 |
| Aberrant, all | 11.38 | 10.09 | 12.61 | 12.32 | 11.71 | 14.25 | 13.60 | 12.27 |
| Not licensed | 3.27 | 2.41 | 3.79 | 3.50 | 3.40 | 5.42 | 4.68 | 3.77 |
| Suspended | 4.06 | 3.35 | 4.90 | 4.93 | 3.66 | 3.72 | 3.89 | 4.08 |
| Revoked | 0.68 | 0.66 | 0.74 | 0.39 | 0.73 | 0.36 | 0.49 | 0.58 |
| Expired | 0.63 | 0.61 | 0.630 | 0.79 | 1.10 | 0.98 | 1.48 | 0.88 |
| Canceled or denied | 0.05 | 0.14 | 0.05 | 0.05 | 0.05 | 0.10 |  | 0.06 |
| Unknown | 2.69 | 2.692 | 2.54 | 2.66 | 2.77 | 3.67 | 3.05 | 2.90 |
| Indiana |  |  |  |  |  |  |  |  |
| Valid | 91.90 | 90.34 | 89.16 | 87.64 | 88.07 | 88.72 | 89.53 | 89.31 |
| Aberrant, all | 8.10 | 9.66 | 10.84 | 12.36 | 11.93 | 11.28 | 10.47 | 10.69 |
| Not licensed | 0.94 | 1.35 | 1.82 | 1.93 | 1.04 | 2.18 | 1.22 | 1.51 |
| Suspended | 4.64 | 4.57 | 5.82 | 6.79 | 6.30 | 6.62 | 6.24 | 5.87 |
| Revoked |  | 0.15 | 0.07 |  |  | 0.22 |  | 0.06 |
| Expired | 1.02 | 1.57 | 1.53 | 1.021 | 1.41 | 1.02 | 1.22 | 1.28 |
| Canceled or denied | 0.08 | 0.07 | 0.07 | 0.21 | 0.07 |  |  | 0.07 |
| Unknown | 1.42 | 1.95 | 1.53 | 3.111 | 3.11 | 1.24 | 1.79 | 1.89 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| lowa |  |  |  |  |  |  |  |  |
| Valid | 89.34 | 91.77 | 89.36 | 88.00 | 90.91 | 92.85 | 93.29 | 90.79 |
| Aberrant, all | 10.66 | 8.23 | 10.64 | 12.00 | 9.09 | 7.15 | 6.71 | 9.21 |
| Not licensed | 1.72 | 2.54 | 3.40 | 2.96 | 2.16 | 2.49 | 2.29 | 2.52 |
| Suspended | 3.45 | 2.40 | 2.70 | 2.81 | 2.47 | 2.64 | 2.14 | 2.65 |
| Revoked | 2.98 | 1.65 | 1.84 | 2.07 | 2.16 | 0.62 | 0.86 | 1.73 |
| Expired | 1.25 | 1.05 | 1.42 | 1.04 | 0.92 | 0.62 | 0.71 | 1.00 |
| Canceled or denied | 0.31 | 0.15 | 0.14 | 0.15 | 0.15 |  |  | 0.13 |
| Unknown | 0.94 | 0.45 | 1.13 | 2.96 | 1.23 | 0.78 | 0.71 | 1.18 |
| Kansas |  |  |  |  |  |  |  |  |
| Valid | 92.06 | 91.22 | 87.63 | 87.69 | 90.14 | 88.05 | 88.13 | 89.19 |
| Aberrant, all | 7.94 | 8.78 | 12.37 | 12.371 | 9.86 | 11.95 | 11.87 | 10.81 |
| Not licensed | 2.25 | 2.51 | 2.44 | 3.56 | 1.85 | 1.82 | 3.15 | 2.53 |
| Suspended | 2.76 | 4.30 | 7.32 | 5.49 | 4.47 | 6.20 | 5.72 | 5.21 |
| Revoked | 0.69 | 0.54 | 0.87 | 1.63 | 0.92 | 0.91 | 0.57 | 0.89 |
| Expired | 1.55 | 1.08 | 1.05 | 0.89 | 1.69 | 1.36 | 1.29 | 1.27 |
| Canceled or denied |  |  |  | 0.30 | 0.15 |  |  | 0.07 |
| Unknown | 0.69 | 0.36 | 0.70 | 0.45 | 0.77 | 1.66 | 1.14 | 0.84 |
| Kentucky |  |  |  |  |  |  |  |  |
| Valid | 91.06 | 90.35 | 9.1291 | 91.07 | 91.87 | 92.17 | 89.12 | 91.01 |
| Aberrant, all | 8.94 | 9.65 | 8.79 | 8.93 | 7.13 | 6.83 | 10.88 | 8.99 |
| Not licensed | 2.13 | 2.46 | 2.42 | 1.96 | 2.60 | 2.69 | 2.65 | 2.42 |
| Suspended | 4.34 | 4.4 | 3.86 | 4.4 | 4.41 | 4.21 | 7.10 | 4.72 |
| Revoked | 0.09 | 0.19 | 0.18 | 0.36 | 0.17 | 0.17 | 0.09 | 0.18 |
| Expired | 1.19 | 1.04 | 0.99 | 0.63 | 0.43 | 0.08 | 0.47 | 0.69 |
| Canceled or denied |  |  |  | 0.09 |  |  |  | 0.01 |
| Unknown | 1.19 | 1.32 | 1.35 | 1.25 | 0.52 | 0.67 | 0.57 | 0.98 |
| Louisiana |  |  |  |  |  |  |  |  |
| Valid | 87.73 | 87.29 | 85.83 | 81.50 | 78.02 | 78.45 | 79.47 | 82.44 |
| Aberrant, all | 12.27 | 12.271 | 14.17 | 18.50 | 21.98 | 21.55 | 20.53 | 17.56 |
| Not licensed | 3.78 | 3.04 | 3.91 | 3.25 | 0.43 | 3.72 | 3.39 | 3.06 |
| Suspended | 4.61 | 5.34 | 5.72 | 6.59 | 12.44 | 14.10 | 13.25 | 9.10 |
| Revoked |  | 0.18 |  | 0.180 | 3.07 | 0.63 | 0.66 | 0.69 |
| Expired | 2.03 | 2.49 | 3.00 | 1.38 | 1.02 | 1.27 | 0.66 | 1.66 |
| Canceled or denied |  |  | 0.09 | 0.20 | 0.09 |  | 0.08 | 0.06 |
| Unknown | 1.85 | 1.66 | 1.45 | 6.99 | 4.94 | 1.82 | 2.48 | 2.98 |
| Maine |  |  |  |  |  |  |  |  |
| Valid | 94.67 | 91.87 | 93.44 | 94.50 | 93.61 | 94.47 | 94.53 | 93.85 |
| Aberrant, all | 14.33 | 8.13 | 6.56 | 5.50 | 6.39 | 5.53 | 5.47 | 6.15 |
| Not licensed |  | 3.25 | 0.39 | 0.46 | 0.38 | 0.40 |  | 0.70 |
| Suspended | 4.89 | 3.25 | 3.09 | 5.05 | 6.02 | 3.56 | 3.91 | 4.24 |
| Revoked |  | 0.41 |  |  |  | 0.40 | 0.78 | 0.23 |
| Expired | 0.44 | 0.41 |  |  |  | 0.40 |  | 0.17 |
| Canceled or denied | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unknown |  | 0.81 | 3.09 |  |  | 0.79 | 0.78 | 0.81 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maryland |  |  |  |  |  |  |  |  |
| Valid | 94.98 | 92.22 | 81.91 | 91.35 | 91.81 | 92.59 | 91.58 | 90.82 |
| Aberrant, all | 5.02 | 7.78 | 18.09 | 8.65 | 8.19 | 7.41 | 8.42 | 9.18 |
| Not licensed | 0.47 | 2.49 | 1.28 | 1.52 | 1.66 | 2.66 | 1.66 | 1.68 |
| Suspended | 0.23 | 0.76 |  | 0.82 | 2.88 | 3.01 | 3.56 | 1.58 |
| Revoked | 1.52 | 0.65 | 3.62 | 3.86 | 0.93 | 0.93 | 0.83 | 1.83 |
| Expired |  |  |  |  |  |  | 0.47 | 0.06 |
| Canceled or denied |  | 0.11 |  |  |  |  |  | 0.02 |
| Unknown | 2.80 | 3.78 | 13.19 | 2.46 | 2.32 | 0.81 | 1.90 | 4.01 |
| Massachusetts |  |  |  |  |  |  |  |  |
| Valid | 89.97 | 90.51 | 92.73 | 89.54 | 90.82 | 90.50 | 88.77 | 90.43 |
| Aberrant, all | 10.03 | 9.49 | 7.27 | 10.46 | 9.18 | 9.50 | 11.23 | 9.57 |
| Not licensed | 1.25 | 0.68 | 1.65 | 1.65 | 0.51 | 2.33 | 1.40 | 1.34 |
| Suspended | 3.61 | 3.56 | 2.81 | 3.30 | 4.08 | 2.33 | 4.74 | 3.49 |
| Revoked | 2.51 | 1.69 | 1.49 | 1.28 | 2.04 | 1.25 | 2.81 | 1.88 |
| Expired | 1.10 | 1.19 | 0.66 | 0.92 | 0.68 | 1.25 | 0.88 | 0.95 |
| Canceled or denied | 0.16 |  |  | 0.37 | 0.17 |  |  | 0.10 |
| Unknown | 1.41 | 2.37 | 0.66 | 2.94 | 1.70 | 2.33 | 1.40 | 1.81 |
| Michigan |  |  |  |  |  |  |  |  |
| Valid | 86.81 | 89.41 | 88.52 | 87.20 | 87.95 | 86.01 | 87.20 | 87.80 |
| Aberrant, all | 13.19 | 10.59 | 11.48 | 11.50 | 12.05 | 13.99 | 12.80 | 12.20 |
| Not licensed | 2.74 | 2.22 | 2.54 | 1.62 | 2.58 | 1.49 | 2.90 | 2.29 |
| Suspended | 2.99 | 2.31 | 3.65 | 4.71 | 5.20 | 6.92 | 6.10 | 4.54 |
| Revoked | 0.25 | 0.44 | 0.31 | 0.67 | 0.83 | 1.64 | 1.00 | 0.73 |
| Expired | 4.21 | 3.25 | 2.80 | 1.66 | 1.55 | 1.05 | 0.80 | 2.19 |
| Canceled or denied | 0.10 |  |  |  |  |  |  | 0.01 |
| Unknown | 2.89 | 2.36 | 2.18 | 2.83 | 1.90 | 2.89 | 2.00 | 2.43 |
| Minnesota |  |  |  |  |  |  |  |  |
| Valid | 91.49 | 91.23 | 92.75 | 91.13 | 93.1 | 93.15 | 95.61 | 92.78 |
| Aberrant, all | 8.51 | 8.77 | 7.25 | 8.87 | 6.29 | 6.85 | 4.39 | 7.22 |
| Not licensed | 1.60 | 1.75 | 1.84 | 2.79 | 1.07 | 2.13 | 1.21 | 1.77 |
| Suspended | 0.80 | 1.75 | 0.86 | 1.46 | 1.90 | 1.57 | 0.77 | 1.31 |
| Revoked | 3.06 | 2.57 | 1.72 | 1.70 | 1.07 | 2.13 | 1.32 | 1.92 |
| Expired |  |  | 0.25 | 0.12 |  | 0.22 | 0.22 | 0.12 |
| Canceled or denied | 1.73 | 1.29 | 1.2 | 1.34 | 0.47 | 0.22 | 0.55 | 1.02 |
| Unknown | 1.33 | 1.40 | 0.86 | 1.46 | 1.78 | 0.56 | 0.33 | 1.09 |
| Mississippi |  |  |  |  |  |  |  |  |
| Valid | 87.75 | 88.79 | 87.97 | 88.81 | 89.46 | 90.73 | 88.30 | 88.86 |
| Aberrant (all) | 12.25 | 11.21 | 12.03 | 11.19 | 10.54 | 9.27 | 11.70 | 11.14 |
| Not licensed | 7.65 | 5.99 | 6.32 | 6.79 | 6.22 | 6.79 | 6.51 | 6.60 |
| Suspended | 2.84 | 2.80 | 3.29 | 2.39 | 1.53 | 0.80 | 3.05 | 2.36 |
| Revoked | 0.20 | 0.39 | 0.52 | 0.40 | 0.63 | 0.40 | 0.49 | 0.40 |
| Expired | 0.59 | 1.55 | 1.56 | 1.34 | 1.35 | 0.80 | 1.24 | 1.20 |
| Canceled or denied |  | 0.10 |  |  | 0.09 | 0.08 |  | 0.04 |
| Unknown | 0.98 | 0.39 | 0.35 | 0.57 | 0.72 | 0.40 | 0.41 | 0.54 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Missouri |  |  |  |  |  |  |  |  |
| Valid | 90.88 | 88.31 | 87.64 | 87.04 | 88.51 | 88.55 | 88.78 | 88.48 |
| Aberrant, all | 9.12 | 11.69 | 12.36 | 12.96 | 11.49 | 11.45 | 11.22 | 11.52 |
| Not licensed | 2.14 | 2.92 | 3.37 | 2.63 | 2.19 | 2.43 | 2.28 | 2.56 |
| Suspended | 2.38 | 2.51 | 3.09 | 2.89 | 3.44 | 3.52 | 2.35 | 2.90 |
| Revoked | 2.85 | 3.41 | 3.09 | 4.21 | 3.12 | 2.94 | 3.90 | 3.37 |
| Expired | 0.87 | 1.81 | 1.19 | 1.58 | 1.25 | 1.02 | 1.68 | 1.35 |
| Canceled or denied |  | 0.07 | 0.21 | 0.33 | 0.25 | 0.19 | 0.07 | 0.17 |
| Unknown | 0.87 | 0.97 | 1.40 | 1.32 | 1.25 | 1.34 | 0.94 | 1.17 |
| Montana |  |  |  |  |  |  |  |  |
| Valid | 85.58 | 84.62 | 84.19 | 86.59 | 88.698 | 88.69 | 83.86 | 85.54 |
| Aberrant, all | 14.42 | 15.38 | 15.381 | 13.41 | 14.92 | 11.31 | 16.14 | 14.46 |
| Not licensed | 5.12 | 7.29 | 7.91 | 5.28 | 6.10 | 5.11 | 5.51 | 6.05 |
| Suspended | 0.93 | 2.02 | 1.98 | 4.07 | 3.73 | 1.82 | 4.72 | 2.80 |
| Revoked | 2.33 | 2.83 | 0.79 | 2.85 | 2.37 | 2.19 | 3.15 | 2.35 |
| Expired | 5.12 | 2.83 | 2.77 | 0.81 | 1.69 | 2.19 | 2.36 | 2.47 |
| Canceled or denied |  |  | 0.79 |  |  |  |  | 0.11 |
| Unknown | 0.93 | 0.40 | 1.58 | 0.41 | 1.02 |  | 0.39 | 0.67 |
| Nebraska |  |  |  |  |  |  |  |  |
| Valid | 90.24 | 89.46 | 90.96 | 91.94 | 91.52 | 91.48 | 91.46 | 91.04 |
| Aberrant, all | 9.76 | 10.54 | 9.04 | 8.06 | 8.48 | 8.52 | 8.54 | 8.96 |
| Not licensed | 2.66 | 3.42 | 1.75 | 2.78 | 2.49 | 3.01 | 3.52 | 2.82 |
| Suspended | 2.37 | 2.85 | 3.21 | 23.492 | 3.49 | 2.51 | 2.01 | 2.66 |
| Revoked | 2.37 | 2.28 | 1.75 | 2.22 | 0.50 | 1.50 | 1.01 | 1.62 |
| Expired | 1.18 | 0.85 | 2.04 | 0.56 | 2.00 | 1.00 | 1.26 | 1.27 |
| Canceled or denied | 0.89 |  |  |  |  |  |  | 0.12 |
| Unknown | 0.30 | 1.14 | 0.29 | 0.28 |  | 0.50 | 0.75 | 0.46 |
| Nevada |  |  |  |  |  |  |  |  |
| Valid | 86.74 | 83.78 | 81.27 | 85.55 | 87.22 | 90.38 | 86.90 | 86.16 |
| Aberrant, all | 13.26 | 16.22 | 18.73 | 14.45 | 12.78 | 9.62 | 13.10 | 13.84 |
| Not licensed | 3.46 | 4.59 | 5.82 | 3.61 | 4.54 | 2.09 | 3.93 | 3.97 |
| Suspended | 4.61 | 4.32 | 5.06 | 5.64 | 3.92 | 2.93 | 3.28 | 4.20 |
| Revoked | 1.73 | 3.24 | 2.03 | 1.81 | 0.82 | 0.84 | 1.75 | 1.68 |
| Expired | 0.58 | 1.35 | 1.52 | 1.13 | 1.03 | 0.84 | 0.22 | 0.94 |
| Canceled or denied | 0.58 |  | 0.51 | 0.68 | 0.21 | 0.42 | 0.22 | 0.37 |
| Unknown | 2.31 | 2.70 | 3.80 | 1.58 | 2.27 | 2.51 | 3.71 | 2.69 |
| New Hampshire |  |  |  |  |  |  |  |  |
| Valid | 91.95 | 92.52 | 91.18 | 95.81 | 94.22 | 94.12 | 88.65 | 92.66 |
| Aberrant, all | 8.05 | 7.48 | 8.82 | 4.19 | 5.78 | 5.88 | 11.35 | 7.34 |
| Not licensed | 3.36 | 1.36 | 2.35 | 0.52 |  | 1.18 | 3.24 | 1.69 |
| Suspended | 2.01 | 3.40 | 3.53 | 1.57 | 4.05 | 2.94 | 5.41 | 3.29 |
| Revoked | 0.67 | 0.68 |  |  | 0.58 |  | 0.54 | 0.34 |
| Expired | 2.01 | 1.36 | 1.18 | 0.52 | 0.58 | 0.59 |  | 0.84 |
| Canceled or denied |  |  |  |  |  | 0.59 |  | 0.08 |
| Unknown |  | 0.68 | 1.76 | 1.57 | 0.58 | 0.59 | 2.16 | 1.10 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| New Jersey |  |  |  |  |  |  |  |  |
| Valid | 88.17 | 87.49 | 88.32 | 85.55 | 88.178 | 89.85 | 88.17 | 87.87 |
| Aberrant, all | 11.83 | 12.51 | 11.68 | 14.45 | 12.22 | 10.15 | 11.83 | 12.13 |
| Not licensed | 2.86 | 1.79 | 1.84 | 3.05 | 1.52 | 1.56 | 1.52 | 2.23 |
| Suspended | 6.30 | 8.44 | 7.27 | 6.35 | 6.58 | 4.98 | 4.35 | 6.34 |
| Revoked | 0.19 | 0.40 | 0.09 | 0.09 |  | 0.20 | 0.10 | 0.15 |
| Expired | 0.10 | 0.290 | 0.28 | 0.09 | 0.28 | 0.29 | 0.30 | 0.22 |
| Canceled or denied | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unknown | 2.39 | 1.69 | 2.21 | 4.87 | 2.54 | 3.12 | 5.56 | 3.20 |
| New Mexico |  |  |  |  |  |  |  |  |
| Valid | 78.67 | 72.83 | 75.39 | 76.6476 | 76.64 | 76.18 | 80.50 | 76.87 |
| Aberrant, all | 21.33 | 27.17 | 24.61 | 22.24 | 23.36 | 23.82 | 19.50 | 23.13 |
| Not licensed | 8.22 | 7.92 | 8.84 | 6.19 | 8.67 | 9.25 | 5.55 | 7.77 |
| Suspended | 6.46 | 7.92 | 6.59 | 7.36 | 6.37 | 7.48 | 6.26 | 6.91 |
| Revoked | 1.57 | 3.77 | 2.43 | 2.51 | 1.95 | 2.17 | 1.61 | 2.29 |
| Expired | 1.37 | 0.94 | 1.04 | 1.240 | 1.24 | 0.98 | 0.72 | 1.04 |
| Canceled or denied | 0.39 | 0.19 |  | 0.17 | 0.18 | 0.20 | 0.18 | 0.18 |
| Unknown | 3.33 | 6.42 | 5.72 | 5.02 | 4.96 | 3.74 | 5.19 | 4.94 |
| New York |  |  |  |  |  |  |  |  |
| Valid | 84.82 | 86.50 | 87.06 | 86.31 | 88.45 | 88.48 | 89.09 | 87.19 |
| Aberrant, all | 15.18 | 13.50 | 12.94 | 13.69 | 11.55 | 11.52 | 10.91 | 12.81 |
| Not licensed | 5.30 | 3.59 | 3.55 | 2.67 | 3.26 | 3.21 | 2.53 | 3.48 |
| Suspended | 4.28 | 4.60 | 4.43 | 4.06 | 3.17 | 3.65 | 3.80 | 4.01 |
| Revoked | 0.89 | 1.45 | 1.1 | 1.81 | 1.54 | 1.65 | 1.75 | 1.44 |
| Expired | 0.51 | 0.66 | 0.31 | 0.29 | 0.18 | 0.05 | 0.05 | 0.30 |
| Canceled or denied |  |  | 0.09 | 0.05 | 0.09 | 0.05 | 0.05 | 0.05 |
| Unknown | 4.20 | 3.20 | 3.46 | 4.82 | 3.31 | 2.92 | 2.73 | 3.53 |
| North Carolina |  |  |  |  |  |  |  |  |
| Valid | 87.89 | 87.47 | 85.32 | 84.03 | 86.78 | 85.24 | 85.62 | 86.00 |
| Aberrant, all | 12.11 | 12.53 | 14.68 | 15.97 | 13.22 | 14.76 | 14.38 | 14.00 |
| Not licensed | 3.44 | 3.26 | 3.14 | 3.263 | 34.123 | 4.12 | 3.22 | 3.43 |
| Suspended | 1.08 | 0.89 | 3.85 | 3.39 | 5.52 | 4.12 | 7.28 | 3.81 |
| Revoked | 6.40 | 6.79 | 4.86 | 6.00 | 2.44 | 3.89 | 1.56 | 4.50 |
| Expired | 0.27 | 0.16 | 1.62 | 1.84 | 0.89 | 1.13 | 1.09 | 1.02 |
| Canceled or denied |  | 0.05 | 0.150 | 0.19 | 0.15 | 0.27 | 0.33 | 0.16 |
| Unknown | 0.91 | 1.37 | 1.1 | 0.92 | 1.09 | 1.22 | 0.90 | 1.08 |
| North Dakota |  |  |  |  |  |  |  |  |
| Valid | 88.71 | 80.56 | 85.57 | 79.66 | 87.02 | 88.07 | 84.62 | 84.94 |
| Aberrant, all | 11.29 | 19.44 | 14.43 | 20.34 | 12.98 | 11.93 | 15.38 | 15.06 |
| Not licensed | 6.45 | 6.48 |  | 8.47 | 6.11 | 4.59 | 3.50 | 5.18 |
| Suspended | 0.81 | 6.48 | 7.22 | 7.63 | 3.05 | 3.67 | 7.69 | 5.18 |
| Revoked | 1.61 | 1.85 | 1.03 |  | 2.29 | 1.83 | 4.20 | 1.93 |
| Expired |  | 0.93 | 1.03 | 1.69 | 0.76 |  |  | 0.60 |
| Canceled or denied |  |  |  |  |  | 0.92 |  | 0.12 |
| Unknown | 2.42 | 3.70 | 5.15 | 2.54 | 0.76 | 0.92 |  | 2.05 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ohio |  |  |  |  |  |  |  |  |
| Valid | 89.90 | 91.11 | 90.0 | 90.02 | 91.30 | 88.18 | 89.07 | 89.96 |
| Aberrant, all | 10.10 | 8.89 | 9.80 | 9.98 | 8.70 | 11.82 | 10.93 | 10.04 |
| Not licensed | 0.75 | 1.10 | 1.22 | 0.76 | 1.06 | 1.32 | 0.60 | 0.97 |
| Suspended | 2.85 | 4.26 | 4.18 | 4.76 | 4.42 | 7.20 | 6.65 | 4.91 |
| Revoked |  | 0.11 | 0.05 |  | 0.110 | 0.110 | 0.05 | 0.06 |
| Expired | 3.15 | 2.31 | 2.75 | 2.84 | 1.56 | 1.32 | 1.71 | 2.23 |
| Canceled or denied | 2.10 | 0.37 | 0.85 | 0.81 | 0.45 | 0.30 | 0.30 | 0.74 |
| Unknown | 1.25 | 0.74 | 0.74 | 0.81 | 1.611 | 1.57 | 1.61 | 1.12 |
| Oklahoma |  |  |  |  |  |  |  |  |
| Valid | 87.60 | 87.73 | 89.10 | 85.93 | 86.13 | 88.13 | 84.81 | 87.01 |
| Aberrant, all | 12.40 | 12.27 | 10.90 | 14.07 | 13.87 | 11.87 | 15.19 | 12.99 |
| Not licensed | 2.35 | 3.72 | 2.34 | 2.79 | 3.74 | 3.14 | 3.43 | 3.09 |
| Suspended | 3.91 | 3.72 | 3.89 | 6.09 | 4.47 | 4.06 | 5.93 | 4.61 |
| Revoked | 3.02 | 2.82 | 2.34 | 2.30 | 2.74 | 1.42 | 1.14 | 2.24 |
| Expired | 1.34 | 0.56 | 0.44 | 0.560 | 0.560 | 0.81 | 0.83 | 0.80 |
| Canceled or denied | 0.11 |  |  | 0.10 | 0.18 | 0.20 | 0.10 | 0.10 |
| Unknown | 1.68 | 1.46 | 1.89 | 2.20 | 1.73 | 2.23 | 3.75 | 2.14 |
| Oregon |  |  |  |  |  |  |  |  |
| Valid | 84.60 | 85.97 | 85.68 | 87.32 | 87.20 | 89.23 | 89.08 | 86.98 |
| Aberrant, all | 15.40 | 14.03 | 14.32 | 12.68 | 12.80 | 10.77 | 10.92 | 13.02 |
| Not licensed | 5.57 | 3.71 | 3.96 | 4.42 | 4.02 | 3.78 | 2.46 | 4.03 |
| Suspended | 6.89 | 6.45 | 6.55 | 5.75 | 6.10 | 4.90 | 5.99 | 6.08 |
| Revoked | 0.73 | 1.29 | 1.64 | 1.03 | 0.89 | 1.40 | 1.23 | 1.18 |
| Expired | 1.47 | 0.97 | 0.95 | 1.18 | 0.60 | 0.28 | 0.18 | 0.81 |
| Canceled or denied |  | 0.48 | 0.14 |  | 0.30 | 0.14 |  | 0.15 |
| Unknown | 0.73 | 1.13 | 1.09 | 0.29 | 0.89 | 0.28 | 1.06 | 0.77 |
| Pennsylvania |  |  |  |  |  |  |  |  |
| Valid | 88.92 | 89.83 | 88.08 | 90.31 | 75.14 | 89.16 | 90.09 | 87.26 |
| Aberrant, all | 11.08 | 10.17 | 11.92 | 9.69 | 24.86 | 10.84 | 9.91 | 12.74 |
| Not licensed | 2.03 | 3.24 | 3.69 | 2.75 | 3.10 | 1.92 | 1.76 | 2.64 |
| Suspended | 6.56 | 4.32 | 6.21 | 4.14 | 4.64 | 6.95 | 6.05 | 5.55 |
| Revoked | 0.09 | 0.230 | 0.230 | 0.230 | 0.23 | 0.59 | 0.38 | 0.24 |
| Expired | 0.32 | 0.54 | 0.39 | 0.48 | 0.27 | 0.15 | 0.33 | 0.36 |
| Canceled or denied | 0.09 | 0.10 |  | 0.10 | 0.14 | 0.20 |  | 0.09 |
| Unknown | 1.99 | 1.77 | 1.53 | 2.12 | 16.48 | 1.03 | 1.38 | 3.87 |
| Rhode Island |  |  |  |  |  |  |  |  |
| Valid | 87.10 | 85.23 | 87.64 | 87.06 | 89.80 | 87.50 | 94.02 | 88.59 |
| Aberrant, all | 12.90 | 14.77 | 12.36 | 12.94 | 10.20 | 12.50 | 5.98 | 11.41 |
| Not licensed | 3.23 | 6.82 |  | 3.53 | 3.06 | 4.17 | 1.71 | 3.15 |
| Suspended | 4.30 | 4.55 | 6.74 | 5.88 | 5.10 | 5.21 | 4.27 | 5.11 |
| Revoked |  | 2.27 | 1.12 |  |  |  |  | 0.45 |
| Expired | 2.15 | 1.14 |  | 2.35 |  | 2.08 |  | 1.05 |
| Canceled or denied | 1.08 |  | 1.12 |  |  |  |  | 0.30 |
| Unknown | 2.15 |  | 3.37 | 1.18 | 2.04 | 1.04 |  | 1.35 |


| State and License Status | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | All Years |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| South Carolina |  |  |  |  |  |  |  |  |
| Valid | 87.21 | 89.62 | 88.96 | 90.79 | 90.04 | 88.16 | 89.01 | 89.12 |
| Aberrant, all | 12.79 | 10.38 | 11.04 | 9.21 | 9.96 | 11.84 | 10.99 | 10.88 |
| Not licensed | 4.05 | 3.13 | 3.25 | 2.55 | 2.87 | 3.18 | 2.98 | 3.13 |
| Suspended | 5.43 | 3.85 | 5.22 | 4.69 | 5.40 | 6.00 | 5.46 | 5.18 |
| Revoked | 0.55 | 0.45 | 0.43 | 0.33 | 0.08 | 0.67 | 0.14 | 0.37 |
| Expired |  | 0.36 | 0.09 | 0.08 |  |  | 0.07 | 0.08 |
| Canceled or denied | 0.09 |  |  |  | 0.08 | 0.67 | 0.21 | 0.16 |
| Unknown | 2.67 | 2.60 | 2.05 | 1.56 | 1.52 | 1.33 | 2.13 | 1.96 |
| South Dakota |  |  |  |  |  |  |  |  |
| Valid | 86.14 | 87.03 | 83.85 | 90.10 | 88.20 | 86.32 | 84.46 | 86.60 |
| Aberrant, all | 13.86 | 12.97 | 16.15 | 9.90 | 11.80 | 13.68 | 15.54 | 13.40 |
| Not licensed | 6.63 | 4.32 | 5.21 | 4.46 | 5.62 | 7.55 | 5.70 | 5.65 |
| Suspended | 3.01 | 5.41 | 5.73 | 1.98 | 2.81 | 3.77 | 6.22 | 4.14 |
| Revoked |  | 1.08 | 3.13 | 0.50 |  |  | 1.55 | 0.90 |
| Expired | 1.81 | 2.16 | 2.08 | 2.48 | 1.69 | 1.89 | 0.52 | 1.81 |
| Canceled or denied | 0.60 |  |  |  | 0.56 |  | 1.04 | 0.30 |
| Unknown | 1.81 |  |  | 0.50 | 1.12 | 0.47 | 0.52 | 0.60 |
| Tennessee |  |  |  |  |  |  |  |  |
| Valid | 84.37 | 84.91 | 85.05 | 86.8 | 85.95 | 86.82 | 87.36 | 85.69 |
| Aberrant, all | 15.63 | 15.09 | 14.95 | 14.82 | 14.05 | 13.18 | 12.64 | 14.31 |
| Not licensed | 3.59 | 2.69 | 3.37 | 3.42 | 3.62 | 2.47 | 2.86 | 3.14 |
| Suspended | 4.10 | 4.09 | 4.43 | 5.14 | 3.98 | 3.88 | 4.18 | 4.26 |
| Revoked | 6.11 | 6.11 | 5.26 | 4.55 | 5.01 | 5.06 | 4.12 | 5.16 |
| Expired | 0.50 | 0.55 | 0.71 | 0.53 | 0.42 | 0.71 | 0.63 | 0.58 |
| Canceled or denied | 0.63 | 0.24 | 0.53 | 0.18 | 0.12 | 0.18 | 0.06 | 0.27 |
| Unknown | 0.69 | 1.41 | 0.65 | 1.0 | 0.90 | 0.88 | 0.80 | 0.90 |
| Texas |  |  |  |  |  |  |  |  |
| Valid | 84.16 | 85.56 | 84.79 | 85.49 | 85.61 | 85.69 | 85.28 | 85.25 |
| Aberrant, all | 15.84 | 14.44 | 15.21 | 15.21 | 14.39 | 14.391 | 14.72 | 14.75 |
| Not licensed | 8.16 | 6.93 | 7.30 | 7.11 | 6.70 | 6.93 | 6.63 | 7.08 |
| Suspended | 2.60 | 2.44 | 3.23 | 2.81 | 3.41 | 2.75 | 2.91 | 2.89 |
| Revoked | 0.10 | 0.02 | 0.14 | 0.1 | 0.28 | 0.19 | 0.17 | 0.16 |
| Expired | 2.08 | 2.46 | 1.87 | 2.11 | 1.81 | 1.83 | 2.38 | 2.07 |
| Canceled or denied | 0.07 | 0.07 | 0.02 | 0.12 | 0.06 |  | 0.04 | 0.06 |
| Unknown | 2.83 | 2.51 | 2.64 | 2.15 | 2.13 | 2.61 | 2.59 | 2.49 |
| Utah |  |  |  |  |  |  |  |  |
| Valid | 85.75 | 90.00 | 83.03 | 88.14 | 87.83 | 89.39 | 85.94 | 87.18 |
| Aberrant, all | 14.25 | 10.00 | 16.97 | 11.86 | 12.17 | 10.61 | 14.06 | 12.82 |
| Not licensed | 5.54 | 5.81 | 6.42 | 5.33 | 6.74 | 4.06 | 5.07 | 5.58 |
| Suspended | 2.90 | 1.40 | 2.98 | 1.45 | 0.87 | 3.16 | 3.69 | 2.34 |
| Revoked | 1.06 | 0.70 | 0.69 | 0.24 | 0.22 | 0.45 |  | 0.47 |
| Expired | 0.26 |  | 0.23 | 0.24 |  |  |  | 0.10 |
| Canceled or denied | 0.79 | 1.16 | 0.69 | 0.73 | 0.43 | 0.90 | 1.15 | 0.83 |
| Unknown | 3.69 | 0.93 | 5.96 | 3.87 | 3.91 | 2.03 | 4.15 | 3.51 |


| Vermont |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valid | 87.32 | 89.52 | 89.47 | 82.24 | 88.49 | 82.11 | 83.93 | 86.30 |
| Aberrant, all | 12.68 | 10.48 | 10.53 | 17.76 | 116891 | 16.89 | 16.07 | 13.70 |
| Not licensed | 4.93 |  | 1.50 |  |  | 2.44 | 1.79 | 1.63 |
| Suspended | 5.63 | 5.71 | 6.02 | 10.28 | 7.91 | 9.76 | 8.93 | 7.67 |
| Revoked |  | 2.86 | 1.50 | 0.93 |  | 1.63 | 0.89 | 1.05 |
| Expired | 0.70 | 0.95 |  |  |  |  | 2.68 | 0.58 |
| Canceled or denied |  |  | 0.75 |  |  |  |  | 0.12 |
| Unknown | 1.41 | 0.95 | 0.75 | 6.54 | 3.60 | 4.07 | 1.79 | 2.67 |
| Virginia |  |  |  |  |  |  |  |  |
| Valid | 91.41 | 91.46 | 87.79 | 89.72 | 90.89 | 90.67 | 89.36 | 90.20 |
| Aberrant, all | 8.59 | 8.54 | 12.21 | 10.28 | 9.11 | 9.33 | 10.64 | 9.80 |
| Not licensed | 1.03 | 2.28 | 1.25 | 2.82 | 1.57 | 1.88 | 1.34 | 1.74 |
| Suspended | 3.69 | 3.30 | 6.02 | 3.81 | 3.44 | 4.75 | 6.98 | 4.53 |
| Revoked | 1.12 | 0.34 | 0.90 | 1.33 | 1.49 | 0.90 | 1.25 | 1.07 |
| Expired | 0.17 | 0.08 | 0.33 | 0.17 | 0.07 | 0.16 | 0.18 | 0.17 |
| Canceled or denied |  | 0.08 |  |  |  |  |  | 0.01 |
| Unknown | 2.58 | 2.45 | 3.60 | 2.16 | 2.54 | 1.64 | 0.89 | 2.28 |
| Washington |  |  |  |  |  |  |  |  |
| Valid | 83.43 | 80.0 | 80.05 | 84.908 | 85.84 | 84.90 | 86.80 | 84.19 |
| Aberrant, all | 16.57 | 16.10 | 19.95 | 15.72 | 14.16 | 15.10 | 13.20 | 15.81 |
| Not licensed | 4.92 | 5.13 | 4.51 | 3.29 | 3.42 | 3.64 | 3.69 | 4.06 |
| Suspended | 5.16 | 4.55 | 7.48 | 6.47 | 6.39 | 6.73 | 5.83 | 6.10 |
| Revoked | 2.40 | 3.15 | 2.97 | 2.67 | 1.71 | 3.09 | 1.43 | 2.50 |
| Expired | 1.80 | 1.63 | 2.02 | 1.23 | 0.23 | 0.66 | 0.95 | 1.21 |
| Canceled or denied | 0.12 | 0.12 | 0.12 | 0.120 | 0.11 |  |  | 0.08 |
| Unknown | 1.92 | 1.28 | 1.90 | 1.64 | 1.94 | 0.99 | 1.07 | 1.53 |
| West Virginia |  |  |  |  |  |  |  |  |
| Valid | 89.76 | 90.06 | 87.98 | 89.01 | 91.25 | 92.27 | 92.01 | 90.34 |
| Aberrant, all | 10.24 | 9.94 | 12.02 | 10.249 .9 | 8.75 | 7.73 | 7.99 | 9.66 |
| Not licensed | 3.54 | 1.83 | 2.44 | 1.72 | 1.14 | 0.86 | 1.95 | 1.95 |
| Suspended | 3.91 | 4.26 | 4.68 | 4.09 | 2.85 | 3.86 | 3.51 | 3.87 |
| Revoked | 1.30 | 1.62 | 2.65 | 3.23 | 2.09 | 2.36 | 1.75 | 2.12 |
| Expired | 0.93 | 1.42 | 1.22 | 1.51 | 1.33 | 0.21 | 0.39 | 1.00 |
| Canceled or denied | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unknown | 0.56 | 0.81 | 1.02 | 0.43 | 1.33 | 0.43 | 0.39 | 0.72 |
| Wisconsin |  |  |  |  |  |  |  |  |
| Valid | 89.51 | 89.63 | 88.98 | 90.47 | 89.0 | 89.04 | 90.22 | 89.58 |
| Aberrant, all | 10.49 | 10.37 | 11.02 | 9.53 | 10.90 | 10.96 | 9.78 | 10.42 |
| Not licensed | 1.87 | 1.83 | 2.76 | 2.99 | 2.80 | 3.03 | 2.57 | 2.56 |
| Suspended | 3.53 | 2.54 | 3.05 | 1.87 | 2.39 | 1.67 | 2.17 | 2.45 |
| Revoked | 3.84 | 4.27 | 3.44 | 3.18 | 3.84 | 3.86 | 4.05 | 3.78 |
| Expired | 0.42 | 0.71 | 0.59 | 0.75 | 0.42 | 0.63 | 0.30 | 0.55 |
| Canceled or denied |  |  | 0.30 |  | 0.10 | 0.21 | 0.30 | 0.13 |
| Unknown | 0.83 | 1.02 | 0.89 | 0.75 | 1.35 | 1.57 | 0.40 | 0.96 |
| Wyoming |  |  |  |  |  |  |  |  |
| Valid | 94.29 | 83.95 | 88.95 | 91.08 | 86.93 | 90.70 | 87.14 | 88.85 |
| Aberrant, all | 5.71 | 16.05 | 11.05 | 8.92 | 13.07 | 9.30 | 12.86 | 11.15 |
| Not licensed | 0.71 | 0.62 | 2.91 | 1.91 | 5.88 | 1.16 | 2.38 | 2.23 |
| Suspended | 2.86 | 11.11 | 3.49 | 4.46 | 3.27 | 3.49 | 4.76 | 4.80 |
| Revoked | 0.71 | 1.23 | 1.16 | 1.27 |  | 3.49 | 1.43 | 1.37 |
| Expired | 0.71 | 1.23 |  |  |  |  |  | 0.26 |
| Canceled or denied |  |  | 0.58 |  | 0.65 | 0.58 | 0.95 | 0.43 |
| Unknown | 0.71 | 1.85 | 2.91 | 1.27 | 3.27 | 0.58 | 3.33 | 2.06 |

[^4]Table A. 10 shows that drivers with an aberrant license classification are more likely to survive fatal crashes than their validly licensed peers. It is not clear what mechanisms could be at work to account for this result.

## Trend Analysis

This section is a new addition since the original Unlicensed to Kill report. It gives information about the changes across years at the state level for drivers involved in fatal crashes from 1993 to 1999 . Table A. 11 shows the state in which the crash occurred and the license status of all drivers involved in crashes.

Table A. 11 demonstrates that it is difficult to identify a large number of states with a trend in either aberrant or valid license status classifications during the period under study. California is the sole example of a large state that experienced a relative diminution of the aberrant license classifications across the 7 years. Figure A. 12 shows the U.S. average for the percentage of drivers involved in fatal crashes for each aberrant license status classification during the period.

As may be seen in figure A. 12, there is a slight trend toward lower percentages across the years for most of the aberrant license status classifications. The increase for suspended licenses may be due to an increase in suspensions. But without further study, it is difficult to put forward any explanations.

Figure A. 12 Trend over the Years in Aberrant License Status Percentages for Drivers Involved in Fatal Crashes, 1993-99


[^5]B. 1 License Status of Drivers in Fatal Crashes by the State in Which the Crash Occurred

| State (first row is number; second row is percent) | License Status |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not licensed | Suspended | Revoked | Expired | Canceled or Denied | Valid | Learner's Permit | Temporary | Unknown | Total |
| Alabama | 506 | 518 | 447 | 74 | 22 | 8,609 | 52 |  | 209 | 10,437 |
|  | 4.8 | 5.0 | 4.3 | 0.7 | 0.2 | 82.5 | 0.5 |  | 2.0 | 100.0 |
| Alaska | 41 | 17 | 36 | 10 | 2 | 573 | 9 |  | 14 | 702 |
|  | 5.8 | 2.4 | 5.1 | 1.4 | 0.3 | 81.6 | 1.3 |  | 2.0 | 100.0 |
| Arizona | 606 | 510 | 76 | 123 | 24 | 6,870 | 22 |  | 508 | 8,739 |
|  | 6.9 | 5.8 | 0.9 | 1.4 | 0.3 | 78.6 | 0.3 |  | 5.8 | 100.0 |
| Arkansas | 183 | 397 | 14 | 82 | 9 | 4,907 | 5 | 1 | 52 | 5,650 |
|  | 3.2 | 7.0 | 0.2 | 1.5 | 0.2 | 86.8 | 0.1 | 0.0 | 0.9 | 100.0 |
| California | 1,897 | 2,829 | 269 | 880 | 11 | 28,438 | 22 | 8 | 1,710 | 36,064 |
|  | 5.3 | 7.8 | 0.7 | 2.4 | 0.0 | 78.9 | 0.1 | 0.0 | 4.7 | 100.0 |
| Colorado | 205 | 205 | 203 | 77 | 34 | 4,818 | 23 | 3 | 93 | 5,661 |
|  | 3.6 | 3.6 | 3.6 | 1.4 | 0.6 | 85.1 | 0.4 | 0.1 | 1.6 | 100.0 |
| Connecticut | 102 | 137 | 5 | 18 | 3 | 2,683 | 9 |  | 40 | 2,997 |
|  | 3.4 | 4.6 | 0.2 | 0.6 | 0.1 | 89.5 | 0.3 |  | 1.3 | 100.0 |
| Delaware | 34 | 34 | 30 | 6 | 12 | 1,039 | 3 | 2 | 43 | 1,203 |
|  | 2.8 | 2.8 | 2.5 | 0.5 | 1.0 | 86.4 | 0.2 | 0.2 | 3.6 | 100.0 |
| District of Columbia | 30 | 19 | 3 | 2 |  | 423 | 2 |  | 59 | 538 |
|  | 5.6 | 3.5 | 0.6 | 0.4 |  | 78.6 | 0.4 |  | 11.0 | 100.0 |
| Florida | 710 | 1,442 | 57 | 35 | 23 | 24,242 | 117 | 2 | 1046 | 27,674 |
|  | 2.6 | 5.2 | 0.2 | 0.1 | 0.1 | 87.6 | 0.4 | 0.0 | 3.8 | 100.0 |
| Georgia | 430 | 762 | 110 | 93 | 10 | 12,779 | 92 | 1 | 280 | 14,557 |
|  | 3.0 | 5.2 | 0.8 | 0.6 | 0.1 | 87.8 | 0.6 | 0.0 | 1.9 | 100.0 |
| Hawaii | 66 | 64 | 22 | 58 | 3 | 934 | 10 |  | 29 | 1,186 |
|  | 5.6 | 5.4 | 1.9 | 4.9 | 0.3 | 78.8 | 0.8 |  | 2.4 | 100.0 |
| Idaho | 86 | 121 | 17 | 39 | 1 | 1,880 | 3 |  | 75 | 2,222 |
|  | 3.9 | 5.4 | 0.8 | 1.8 | 0.0 | 84.6 | 0.1 |  | 3.4 | 100.0 |


| State (first row is number; second row is percent) | License Status |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not licensed | Suspended | Revoked | Expired | Canceled or Denied | Valid | Learner's Permit | Temporary | Unknown | Total |
| Illinois | 531 | 575 | 82 | 124 | 9 | 12,337 | 23 | 4 | 408 | 14,093 |
|  | 3.8 | 4.1 | 0.6 | 0.9 | 0.1 | 87.5 | 0.2 | 0.0 | 2.9 | 100.0 |
| Indiana | 143 | 558 | 6 | 122 | 7 | 8,435 | 50 |  | 180 | 9,501 |
|  | 1.5 | 5.9 | 0.1 | 1.3 | 0.1 | 88.8 | 0.5 |  | 1.9 | 100.0 |
| Iowa | 118 | 124 | 81 | 47 | 6 | 4,243 | 4 |  | 55 | 4,678 |
|  | 2.5 | 2.7 | 1.7 | 1.0 | 0.1 | 90.7 | 0.1 |  | 1.2 | 100.0 |
| Kansas | 111 | 229 | 39 | 56 | 3 | 3,908 | 9 | 2 | 37 | 4,394 |
|  | 2.5 | 5.2 | 0.9 | 1.3 | 0.1 | 88.9 | 0.2 | 0.0 | 0.8 | 100.0 |
| Kentucky | 190 | 371 | 14 | 54 | 1 | 7,138 | 21 | 1 | 77 | 7,867 |
|  | 2.4 | 4.7 | 0.2 | 0.7 | 0.0 | 90.7 | 0.3 | 0.0 | 1.0 | 100.0 |
| Louisiana | 243 | 722 | 55 | 132 | 5 | 6,537 |  | 1 | 236 | 7,931 |
|  | 3.1 | 9.1 | 0.7 | 1.7 | 0.1 | 82.4 |  | 0.0 | 3.0 | 100.0 |
| Maine | 12 | 73 | 4 | 3 |  | 1,601 | 14 | 2 | 14 | 1,723 |
|  | 0.7 | 4.2 | 0.2 | 0.2 |  | 92.9 | 0.8 | 0.1 | 0.8 | 100.0 |
| Maryland | 104 | 98 | 113 | 4 | 1 | 5,605 | 15 |  | 248 | 6,188 |
|  | 1.7 | 1.6 | 1.8 | 0.1 | 0.0 | 90.6 | 0.2 |  | 4.0 | 100.0 |
| Massachusetts | 55 | 143 | 77 | 39 | 4 | 3,670 | 31 | 1 | 74 | 4,094 |
|  | 1.3 | 3.5 | 1.9 | 1.0 | 0.1 | 89.6 | 0.8 | 0.0 | 1.8 | 100.0 |
| Michigan | 333 | 661 | 106 | 318 | 2 | 12,743 | 25 | 2 | 354 | 14,544 |
|  | 2.3 | 4.5 | 0.7 | 2.2 | 0.0 | 87.6 | 0.2 | 0.0 | 2.4 | 100.0 |
| Minnesota | 104 | 77 | 113 | 7 | 60 | 5,439 | 25 |  | 64 | 5,889 |
|  | 1.8 | 1.3 | 1.9 | 0.1 | 1.0 | 92.4 | 0.4 |  | 1.1 | 100.0 |
| Mississippi | 517 | 185 | 31 | 94 | 3 | 6,954 | 4 | 1 | 42 | 7,831 |
|  | 6.6 | 2.4 | 0.4 | 1.2 | 0.0 | 88.8 | 0.1 | 0.0 | 0.5 | 100.0 |
| Missouri | 264 | 299 | 347 | 139 | 17 | 9,078 | 30 | 1 | 120 | 10,295 |
|  | 2.6 | 2.9 | 3.4 | 1.4 | 0.2 | 88.2 | 0.3 | 0.0 | 1.2 | 100.0 |
| Montana | 108 | 50 | 42 | 44 | 2 | 1,523 | 3 |  | 12 | 1,784 |
|  | 6.1 | 2.8 | 2.4 | 2.5 | 0.1 | 85.4 | 0.2 |  | 0.7 | 100.0 |


| State (first row is number; second row is percent) | License Status |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not licensed | Suspended | Revoked | Expired | Canceled or Denied | Valid | Learner's Permit | Temporary | Unknown | Total |
| Nebraska | 73 | 69 | 42 | 33 | 3 | 2,316 | 42 |  | 12 | 2,590 |
|  | 2.8 | 2.7 | 1.6 | 1.3 | 0.1 | 89.4 | 1.6 |  | 0.5 | 100.0 |
| Nevada | 118 | 125 | 50 | 28 | 11 | 2,547 | 15 | 2 | 80 | 2,976 |
|  | 4.0 | 4.2 | 1.7 | 0.9 | 0.4 | 85.6 | 0.5 | 0.1 | 2.7 | 100.0 |
| New Hampshire | 20 | 39 | 4 | 10 | 1 | 1,084 | 1 | 13 | 13 | 1,185 |
|  | 1.7 | 3.3 | 0.3 | 0.8 | 0.1 | 91.5 | 0.1 | 1.1 | 1.1 | 100.0 |
| New Jersey | 164 | 467 | 11 | 16 |  | 6,464 | 11 |  | 236 | 7,369 |
|  | 2.2 | 6.3 | 0.1 | 0.2 |  | 87.7 | 0.1 |  | 3.2 | 100.0 |
| New Mexico | 299 | 266 | 88 | 40 | 7 | 2,949 | 9 |  | 190 | 3,848 |
|  | 7.8 | 6.9 | 2.3 | 1.0 | 0.2 | 76.6 | 0.2 |  | 4.9 | 100.0 |
| New York | 533 | 614 | 221 | 46 | 7 | 13,152 | 192 | 5 | 540 | 15,310 |
|  | 3.5 | 4.0 | 1.4 | 0.3 | 0.0 | 85.9 | 1.3 | 0.0 | 3.5 | 100.0 |
| North Carolina | 485 | 539 | 636 | 144 | 23 | 12,091 | 65 |  | 152 | 14,135 |
|  | 3.4 | 3.8 | 4.5 | 1.0 | 0.2 | 85.5 | 0.5 |  | 1.1 | 100.0 |
| North Dakota | 43 | 43 | 16 | 5 | 1 | 695 | 5 | 5 | 17 | 830 |
|  | 5.2 | 5.2 | 1.9 | 0.6 | 0.1 | 83.7 | 0.6 | 0.6 | 2.0 | 100.0 |
| Ohio | 133 | 673 | 8 | 306 | 102 | 12,207 | 32 | 94 | 154 | 13,709 |
|  | 1.0 | 4.9 | 0.1 | 2.2 | 0.7 | 89.0 | 0.2 | 0.7 | 1.1 | 100.0 |
| Oklahoma | 208 | 310 | 151 | 54 | 7 | 5,816 | 36 | 1 | 144 | 6,727 |
|  | 3.1 | 4.6 | 2.2 | 0.8 | 0.1 | 86.5 | 0.5 | 0.0 | 2.1 | 100.0 |
| Oregon | 188 | 284 | 55 | 38 | 7 | 4,039 | 21 |  | 36 | 4,668 |
|  | 4.0 | 6.1 | 1.2 | 0.8 | 0.1 | 86.5 | 0.4 |  | 0.8 | 100.0 |
| Pennsylvania | 386 | 812 | 35 | 52 | 13 | 12,682 | 81 | 2 | 566 | 14,629 |
|  | 2.6 | 5.6 | 0.2 | 0.4 | 0.1 | 86.7 | 0.6 | 0.0 | 3.9 | 100.0 |
| Rhode Island | 21 | 34 | 3 | 7 | 2 | 590 |  |  | 9 | 666 |
|  | 3.2 | 5.1 | 0.5 | 1.1 | 0.3 | 88.6 |  |  | 1.4 | 100.0 |
| South Carolina | 267 | 442 | $32$ | 7 | 14 | 7,598 |  |  | 167 | 8,535 |
|  | 3.1 | 5.2 | 0.4 | 0.1 | 0.2 | 89.0 | 0.1 | 0.0 | 2.0 | 100.0 |

B. 1 / 4

License Status of Drivers in Fatal Crashes by the State in Which the Crash Occurred

| State (first row is number; second row is percent) | License Status |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not licensed | Suspended | Revoked | Expired | Canceled or Denied | Valid | Learner's Permit | Temporary | Unknown | Total |
| South Dakota | 75 | 55 | 12 | 24 | 4 | 1,133 | 14 | 3 | 8 | 1,328 |
|  | 5.6 | 4.1 | 0.9 | 1.8 | 0.3 | 85.3 | 1.1 | 0.2 | 0.6 | 100.0 |
| Tennessee | 368 | 499 | 604 | 68 | 32 | 10,016 | 22 |  | 106 | 11,715 |
|  | 3.1 | 4.3 | 5.2 | 0.6 | 0.3 | 85.5 | 0.2 |  | 0.9 | 100.0 |
| Texas | 2237 | 912 | 51 | 655 | 18 | 26,832 | 90 | 1 | 785 | 31,581 |
|  | 7.1 | 2.9 | 0.2 | 2.1 | 0.1 | 85.0 | 0.3 | 0.0 | 2.5 | 100.0 |
| Utah | 167 | 70 | 14 | 3 | 25 | 2,604 | 6 | 1 | 105 | 2,995 |
|  | 5.6 | 2.3 | 0.5 | 0.1 | 0.8 | 86.9 | 0.2 | 0.0 | 3.5 | 100.0 |
| Vermont | 14 | 66 | 9 | 5 | 1 | 737 | 6 |  | 23 | 861 |
|  | 1.6 | 7.7 | 1.0 | 0.6 | 0.1 | 85.6 | 0.7 |  | 2.7 | 100.0 |
| Virginia | 147 | 382 | 90 | 14 | 1 | 7,568 | 34 |  | 192 | 8,428 |
|  | 1.7 | 4.5 | 1.1 | 0.2 | 0.0 | 89.8 | 0.4 |  | 2.3 | 100.0 |
| Washington | 249 | 374 | 153 | 74 | 5 | 5,160 | 20 |  | 94 | 6,129 |
|  | 4.1 | 6.1 | 2.5 | 1.2 | 0.1 | 84.2 | 0.3 |  | 1.5 | 100.0 |
| West Virginia | 68 | 135 | 74 | 35 |  | 3,146 | 5 | 2 | 25 | 3,490 |
|  | 1.9 | 3.9 | 2.1 | 1.0 |  | 90.1 | 0.1 | 0.1 | 0.7 | 100.0 |
| Wisconsin | 178 | 171 | 263 | 38 | 9 | 6,232 | 8 |  | 67 | 6,966 |
|  | 2.6 | 2.5 | 3.8 | 0.5 | 0.1 | 89.5 | 0.1 |  | 1.0 | 100.0 |
| Wyoming | 26 | 56 | 16 | 3 | 5 | 1,027 | 8 | 1 | 24 | 1,166 |
|  | 2.2 | 4.8 | 1.4 | 0.3 | 0.4 | 88.1 | 0.7 | 0.1 | 2.1 | 100.0 |
| Total | 14,196 | 18,657 | 5,037 | 4,385 | 572 | 336,091 | 1,353 | 163 | 9,824 | 390,278 |
|  | 3.6 | 4.8 | 1.3 | 1.1 | 0.1 | 86.1 | 0.3 | 0.0 | 2.5 | 100.0 |

Source: Fatality Analysis Reporting System data
C. 1 Age, Gender, and License Status of Drivers Involved in Fatal Crashes

| Gender | Age Group |  |  |  |  | License Status |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | is number second row is percent) | Not licensed | Suspended | Revoked | Expired | Canceled oi• Denied | Valid | Learner's Permit | Temporary | Unknown | Total |
| Male |  |  |  |  |  |  |  |  |  |  |  |
|  | <20 | 3,891 | 1,215 | 209 | 186 | 36 | 25,814 | 550 | 36 | 260 | 32,197 |
|  |  | 12.1 | 3.8 | 0.6 | 0.6 | 0.1 | 80.2 | 1.7 | 0.1 | 0.8 | 100.0 |
|  | 20-29 | 4,182 | 7,059 | 1,614 | 1,111 | 155 | 59,741 | 244 | 37 | 907 | 75,050 |
|  |  | 5.6 | 9.4 | 2.2 | 1.5 | 0.2 | 79.6 | 0.3 | 0.0 | 1.2 | 100.0 |
|  | 30-39 | 1,771 | 4,491 | 1,551 | 991 | 146 | 52,190 | 59 | 22 | 647 | 61,868 |
|  |  | 2.9 | 7.3 | 2.5 | 1.6 | 0.2 | 84.4 | 0.1 | 0.0 | 1.0 | 100.0 |
|  | 40-49 | 701 | 2,089 | 709 | 523 | 70 | 41,311 | 26 | 15 | 465 | 45,909 |
|  |  | 1.5 | 4.6 | 1.5 | 1.1 | 0.2 | 90.0 | 0.1 | 0.0 | 1.0 | 100.0 |
|  | 50-59 | 362 | 688 | 308 | 244 | 27 | 26,597 | 10 |  | 265 | 28,501 |
|  |  | 1.3 | 2.4 | 1.1 | 0.9 | 0.1 | 93.3 | 0.0 |  | 0.9 | 100.0 |
|  | 60-69 | 203 | 271 | 94 | 146 | 16 | 16,771 | 4 | 3 | 168 | 17,676 |
|  |  | 1.1 | 1.5 | 0.5 | 0.8 | 0.1 | 94.9 | 0.0 | 0.0 | 1.0 | 100.0 |
|  | 70+ | 162 | 188 | 56 | 234 | 37 | 21,411 | 8 | 6 | 142 | 22,244 |
|  |  | 0.7 | 0.8 | 0.3 | 1.1 | 0.2 | 96.3 | 0.0 | 0.0 | 0.6 | 100.0 |
|  | Unknown | 63 | 12 | 1 | 3 |  | 95 |  |  | 873 | 1,047 |
|  |  | 6.0 | 1.1 | 0.1 | 0.3 |  | 9.1 |  |  | 83.4 | 100.0 |
|  | Total | 11,335 | 16,013 | 4,542 | 3,438 | 487 | 243,930 | 901 | 119 | 3,727 | 284,492 |
|  |  | 4.0 | 5.6 | 1.6 | 1.2 | 0.2 | 85.7 | 0.3 | 0.0 | 1.3 | 100.0 |

C. 1 / 2

Age, Gender, and License Status of Drivers Involved in Fatal Crashes

| Gender | Age Group (years; first row is number second row is percent) | License Status |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Not licensed | Suspended | Revoked | Expired | Canceled oiDenied | Valid | Learner's Permit | Temporary | Unknown | Total |
| Female |  |  |  |  |  |  |  |  |  |  |  |
|  | <20 | 1,056 | 183 | 25 | 65 | 8 | 11,480 | 324 | 24 | 52 | 13,217 |
|  |  | 8.0 | 1.4 | 0.2 | 0.5 | 0.1 | 86.9 | 2.5 | 0.2 | 0.4 | 100.0 |
|  | 20-29 | 901 | 1,049 | 157 | 268 | 29 | 20,355 | 76 | 6 | 212 | 23,053 |
|  |  | 3.9 | 4.6 | 0.7 | 1.2 | 0.1 | 88.3 | 0.3 | 0.0 | 0.9 | 100.0 |
|  | 30-39 | 503 | 889 | 190 | 278 | 23 | 19,218 | 37 | 10 | 148 | 21,296 |
|  |  | 2.4 | 4.2 | 0.9 | 1.3 | 0.1 | 90.2 | 0.2 | 0.0 | 0.7 | 100.0 |
|  | 40-49 | 215 | 357 | 78 | 144 | 14 | 14,694 | 12 | 1 | 106 | 15,621 |
|  |  | 1.4 | 2.3 | 0.5 | 0.9 | 0.1 | 94.1 | 0.1 | 0.0 | 0.7 | 100.0 |
|  | 50-59 | 81 | 94 | 26 | 73 | 3 | 9,324 | 1 | 3 | 50 | 9,655 |
|  |  | 0.8 | 1.0 | 0.3 | 0.8 | 0.0 | 96.6 | 0.0 | 0.0 | 0.5 | 100.0 |
|  | 60-69 | 44 | 27 | 4 | 24 | 3 | 6,738 | 2 |  | 31 | 6,873 |
|  |  | 0.6 | 0.4 | 0.1 | 0.3 | 0.0 | 98.0 | 0.0 |  | 0.5 | 100.0 |
|  | 70+ | 39 | 31 | 13 | 95 | 3 | 10,288 |  |  | 32 | 10,501 |
|  |  | 0.4 | 0.3 | 0.1 | 0.9 | 0.0 | 98.0 |  |  | 0.3 | 100.0 |
|  | Unknown | 11 | 1 |  |  | 1 | 14 |  |  | 84 | 111 |
|  |  | 9.9 | 0.9 |  |  | 0.9 | 12.6 |  |  | 75.7 | 100.0 |
|  | Total | 2,850 | 2,631 | 493 | 947 | 84 | 92,111 | 452 | 44 | 715 | 100,327 |
|  |  | 2.8 | 2.6 | 0.5 | 0.9 | 0.1 | 91.8 | 0.5 | 0.0 | 0.7 | 100.0 |


| Gender | Age Group (years; first row |  | License Status |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | seconcfrow percent) | is | Not license | Suspended <br> d | Revoked | Expired | Canceled or Denied | Valid | Learner's Permit | Temporary | Unknown | Total |
| Unknown |  |  |  |  |  |  |  |  |  |  |  |  |
|  | <20 |  | 1 | 1 |  |  |  |  |  |  | 1 | 3 |
|  |  |  | 33.3 | 33.3 |  |  |  |  |  |  | 33.3 | 100.0 |
|  | 20-29 |  |  |  |  |  | 1 | 3 |  |  | 2 | 6 |
|  |  |  |  |  |  | 16.7 | 50.0 |  |  | 33.3 | 100.0 |  |
|  | 30-39 |  | 1 |  |  |  |  | 4 |  |  |  | 5 |
|  |  |  | 20.0 |  |  |  |  | 80.0 |  |  |  | 100.0 |
|  | 40-49 |  |  |  |  |  |  | 1 |  |  | 3 | 4 |
|  |  |  |  |  |  |  | 25.0 |  |  | 75.0 | 100.0 |  |
|  | 50-59 |  |  |  |  |  |  | 3 |  |  |  | 3 |
|  |  |  |  |  |  |  | 100.0 |  |  |  | 100.0 |  |
|  | 70+ |  |  |  |  |  |  | 2 |  |  |  | 2 |
|  |  |  |  |  |  |  | 100.0 |  |  |  | 100.0 |  |
|  | Unknown |  | 9 | 12 | 2 |  |  | 36 |  |  | 5,376 | 5,435 |
|  |  |  | 0.2 | 0.2 | 0.0 |  |  | 0.7 |  |  | 98.9 | 100.0 |
|  | Total |  | 11 | 13 | 2 |  | 1 | 49 |  |  | 5,382 | 5,458 |
|  |  |  | 0.2 | 0.2 | 0.0 |  | 0.0 | 0.9 |  |  | 98.6 | 100.0 |

Note: In the original report, appendix B displayed a cross-tabulation of vehicle type/body type versus VIN-decoded vehicle type. That appendix is not repeated here.
Source: Fatality Analysis Reporting System data.

## An p 1 ix $D$ Suspensions and Revocations Recorded for Drivers Involved in Fatal Crashes in the Three Years Preceding Their Fatal Crash, 1993-99

This appendix consists of four tables. Each table gives the number of suspensions or revocations for drivers with a different category of license for the 3 years preceding their fatal crash, by licensing state: table D.1, for drivers with valid licenses; table D.2, for drivers with suspended licenses; table D.3, for drivers with revoked licenses; and table D.4, for drivers with expired licenses.
Table D. 1 Previous Suspensions or Revocations for Drivers with Valid Licenses by State or Jurisdiction

| State (first row is number; <br> second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
|  |  |  |  |  |  |  |
| Alabama | 7,818 | 510 | 143 | 105 | 4 | 8,580 |
|  | 91.1 | 5.9 | 1.7 | 1.2 | 0.0 | 100.0 |
| Alaska | 558 | 30 | 2 | 2 |  | 592 |
|  | 94.3 | 5.1 | 0.3 | 0.3 | 100.0 |  |
| Arizona | 5,926 | 294 | 142 | 123 | 6 | 6,491 |
|  | 91.3 | 4.5 | 2.2 | 1.9 | 0.1 | 100.0 |
| Arkansas | 4,489 | 144 | 77 | 127 | 1 | 4,838 |
|  | 92.8 | 3.0 | 1.6 | 2.6 | 0.0 | 100.0 |
| California | 27,437 | 980 | 294 | 121 | 9 | 28,841 |
|  | 95.1 | 3.4 | 1.0 | 0.4 | 0.0 | 100.0 |
| Colorado | 4,616 | 191 | 48 | 27 | 6 | 4,888 |
|  | 94.4 | 3.9 | 1.0 | 0.6 | 0.1 | 100.0 |
| Connecticut | 2,492 | 125 | 41 | 32 | 32 | 2,722 |
|  | 91.6 | 4.6 | 1.5 | 1.2 | 1.2 | 100.0 |
| Delaware | 946 | 51 | 14 | 4 | 4 | 1,019 |
|  | 92.8 | 5.0 | 1.4 | 0.4 | 0.4 | 100.0 |
|  | 312 | 6 |  |  | 69 | 387 |
|  | 80.6 | 1.6 |  |  | 17.8 | 100.0 |
| District of Columbia | 21,814 | 1,693 | 628 | 544 | 8 | 24,687 |
|  | 88.4 | 6.9 | 2.5 | 2.2 | 0.0 | 100.0 |
| Florida | 11,652 | 801 | 158 | 73 | 3 | 12,687 |
|  | 91.8 | 6.3 | 1.2 | 0.6 | 0.0 | 100.0 |


| State (first row is number; <br> second row is percent) | Previous Suspensions or Revocations |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | Total


| Table D. 1 / 3 <br> State (first row is number; second row is percent) | Previous Suspensions or Revocations for Drivers with Valid Licenses by State or Juriscliction |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Michigan | 11,465 | 955 | 332 | 329 | 2 | 13,083 |
|  | 87.6 | 7.3 | 2.5 | 2.5 | 0.0 | 100.0 |
| Minnesota | 5,048 | 317 | 111 | 103 | 11 | 5,590 |
|  | 90.3 | 5.7 | 2.0 | 1.8 | 0.2 | 100.0 |
| Mississippi | 6,311 | 189 | 30 | 3 | 4 | 6,537 |
|  | 96.5 | 2.9 | 0.5 | 0.0 | 0.1 | 100.0 |
| Missouri | 8,251 | 269 | 84 | 28 | 1 | 8,633 |
|  | 95.6 | 3.1 | 1.0 | 0.3 | 0.0 | 100.0 |
| Montana | 1,333 | 26 | 1 | 1 | 2 | 1,363 |
|  | 97.8 | 1.9 | 0.1 | 0.1 | 0.1 | 100.0 |
| Nebraska | 2,251 | 67 | 14 | 9 | 1 | 2,342 |
|  | 96.1 | 2.9 | 0.6 | 0.4 | 0.0 | 100.0 |
| Nevada | 1,996 | 114 | 67 | 75 | 3 | 2,255 |
|  | 88.5 | 5.1 | 3.0 | 3.3 | 0.1 | 100.0 |
| New Hampshire | 1,041 | 46 | 22 | 5 | 4 | 1,118 |
|  | 93.1 | 4.1 | 2.0 | 0.4 | 0.4 | 100.0 |
| New Jersey | 5,661 | 316 | 198 | 273 | 10 | 6,458 |
|  | 87.7 | 4.9 | 3.1 | 4.2 | 0.2 | 100.0 |
| New Mexico | 2,292 | 276 | 60 | 41 | 1 | 2,670 |
|  | 85.8 | 10.3 | 2.2 | 1.5 | 0.0 | 100.0 |
| New York | 12,094 | 832 | 355 | 436 | 39 | 13,756 |
|  | 87.9 | 6.0 | 2.6 | 3.2 | 0.3 | 100.0 |


| Table D. 1 / 4 <br> State (first row is number; second row is percent) | Previous Suspensions or Revocations for Drivers with Valid Licenses by State or Jurisdiction |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
| North Carolina | 10,941 | 531 | 211 | 135 | 3 | 11,821 |
|  | 92.6 | 4.5 | 1.8 | 1.1 | 0.0 | 100.0 |
| North Dakota | 645 | 33 | 27 | 19 | 4 | 728 |
|  | 88.6 | 4.5 | 3.7 | 2.6 | 0.5 | 100.0 |
| Ohio | 11,720 | 675 | 190 | 57 | 7 | 12,649 |
|  | 92.7 | 5.3 | 1.5 | 0.5 | 0.1 | 100.0 |
| Oklahoma | 5,289 | 265 | 125 | 75 | 16 | 5,770 |
|  | 91.7 | 4.6 | 2.2 | 1.3 | 0.3 | 100.0 |
| Oregon | 3,631 | 223 | 83 | 71 | 3 | 4,011 |
|  | 90.5 | 5.6 | 2.1 | 1.8 | 0.1 | 100.0 |
| Pennsylvania | 12,209 | 571 | 130 | 57 | 44 | 13,011 |
|  | 93.8 | 4.4 | 1.0 | 0.4 | 0.3 | 100.0 |
| Puerto Rico | 9 |  |  |  |  | 9 |
|  | 100.0 |  |  |  |  | 100.0 |
| Rhode Island | 635 | 26 | 3 |  | 1 | 665 |
|  | 95.5 | 3.9 | 0.5 |  | 0.2 | 100.0 |
| South Carolina | 6,844 | 248 | 48 | 6 | 3 | 7,149 |
|  | 95.7 | 3.5 | 0.7 | 0.1 | 0.0 | 100.0 |
| South Dakota | 1,069 | 72 | 12 | 1 | 3 | 1,157 |
|  | 92.4 | 6.2 | 1.0 | 0.1 | 0.3 | 100.0 |
| Tennessee | 9,783 | 267 | 64 | 32 | 2 | 10,148 |
|  | 96.4 | 2.6 | 0.6 | 0.3 | 0.0 | 100.0 |


| Table D. 1 / 5 <br> State (first row is number; second row is percent) | Previous Suspensions or Revocations for Drivers with Valid Licenses by State or Jurisdiction |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Texas | 26,160 | 781 | 275 | 200 | 12 | 27,428 |
|  | 95.4 | 2.8 | 1.0 | 0.7 | 0.0 | 100.0 |
| Utah | 2,383 | 93 | 24 | 20 | 15 | 2,535 |
|  | 94.0 | 3.7 | 0.9 | 0.8 | 0.6 | 100.0 |
| Vermont | 603 | 33 | 15 | 8 | 13 | 672 |
|  | 89.7 | 4.9 | 2.2 | 1.2 | 1.9 | 100.0 |
| Virginia | 6,903 | 450 | 176 | 164 | 11 | 7,704 |
|  | 89.6 | 5.8 | 2.3 | 2.1 | 0.1 | 100.0 |
| Washington | 4,980 | 274 | 90 | 95 | 3 | 5,442 |
|  | 91.5 | 5.0 | 1.7 | 1.7 | 0.1 | 100.0 |
| West Virginia | 2,750 | 139 | 23 | 8 | 2 | 2,922 |
|  | 94.1 | 4.8 | 0.8 | 0.3 | 0.1 | 100.0 |
| Wisconsin | 5,779 | 262 | 177 | 79 | 5 | 6,302 |
|  | 91.7 | 4.2 | 2.8 | 1.3 | 0.1 | 100.0 |
| Wyoming | 765 | 46 | 27 | 12 | 1 | 851 |
|  | 89.9 | 5.4 | 3.2 | 1.4 | 0.1 | 100.0 |
| Military | 23 |  |  |  | 4 | 27 |
|  | 85.2 |  |  |  | 14.8 | 100.0 |
| Canada | 151 | 2 | 2 |  | 91 | 246 |
|  | 61.4 | 0.8 | 0.8 |  | 37.0 | 100.0 |
| Mexico | 1 |  |  |  | 5 | 6 |
|  | 16.7 |  |  |  | 83.3 | 100.0 |
| Other foreign | 9 |  |  |  | 45 | 54 |
|  | 16.7 |  |  |  | 83.3 | 100.0 |
| Total | 312,204 | 15,545 | 5,225 | 3,934 | 694 | 337,602 |
|  | 92.5 | 4.6 | 1.5 | 1.2 | 0.2 | 100.0 |

Source: Fatality Analysis Reporting System data

Table D. 2 Prior Suspensions or Revocations for Drivers with Suspended Licenses by State or Jurisdiction

| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Alabama | 66 | 222 | 87 | 129 |  | 504 |
|  | 13.1 | 44.0 | 17.3 | 25.6 |  | 100.0 |
| Alaska | 2 | 8 | 1 | 1 |  | 12 |
|  | 16.7 | 66.7 | 8.3 | 8.3 |  | 100.0 |
| Arizona | 62 | 126 | 100 | 168 | 1 | 457 |
|  | 13.6 | 27.6 | 21.9 | 36.8 | 0.2 | 100.0 |
| Arkansas | 121 | 81 | 60 | 131 |  | 393 |
|  | 30.8 | 20.6 | 15.3 | 33.3 |  | 100.0 |
| California | 517 | 1,420 | 593 | 436 |  | 2,966 |
|  | 17.4 | 47.9 | 20.0 | 14.7 |  | 100.0 |
| Colorado | 20 | 102 | 38 | 32 |  | 192 |
|  | 10.4 | 53.1 | 19.8 | 16.7 |  | 100.0 |
| Connecticut | 15 | 52 | 29 | 38 |  | 134 |
|  | 11.2 | 38.8 | 21.6 | 28.4 |  | 100.0 |
| Delaware | 11 | 14 | 10 | 7 |  | 42 |
|  | 26.2 | 33.3 | 23.8 | 16.7 |  | 100.0 |
| District of Columbia | 1 | 6 | 1 | 2 |  | 10 |
|  | 10.0 | 60.0 | 10.0 | 20.0 |  | 100.0 |
| Florida | 218 | 479 | 294 | 477 | 4 | 1,472 |
|  | 14.8 | 32.5 | 20.0 | 32.4 | 0.3 | 100.0 |
| Georgia | 108 | 346 | 144 | 145 |  | 743 |
|  | 14.5 | 46.6 | 19.4 | 19.5 |  | 100.0 |


| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Hawaii | 26 | 16 | 8 | 5 |  | 55 |
|  | 47.3 | 29.1 | 14.5 | 9.1 |  | 100.0 |
| Idaho | 23 | 43 | 24 | 30 | 1 | 121 |
|  | 19.0 | 35.5 | 19.8 | 24.8 | 0.8 | 100.0 |
| Illinois | 190 | 259 | 91 | 60 | 1 | 601 |
|  | 31.6 | 43.1 | 15.1 | 10.0 | 0.2 | 100.0 |
| Indiana | 95 | 168 | 116 | 208 | 2 | 589 |
|  | 16.1 | 28.5 | 19.7 | 35.3 | 0.3 | 100.0 |
| lowa | 18 | 46 | 22 | 29 |  | 115 |
|  | 15.7 | 40.0 | 19.1 | 25.2 |  | 100.0 |
| Kansas | 197 | 11 | 25 | 10 |  | 243 |
|  | 81.1 | 4.5 | 10.3 | 4.1 |  | 100.0 |
| Kentucky | 44 | 127 | 74 | 101 | 5 | 351 |
|  | 12.5 | 36.2 | 21.1 | 28.8 | 1.4 | 100.0 |
| Louisiana | 381 | 234 | 85 | 49 | 1 | 750 |
|  | 50.8 | 31.2 | 11.3 | 6.5 | 0.1 | 100.0 |
| Maine | 12 | 19 | 12 | 28 |  | 71 |
|  | 16.9 | 26.8 | 16.9 | 39.4 |  | 100.0 |
| Maryland | 24 | 39 | 24 | 26 | 2 | 115 |
|  | 20.9 | 33.9 | 20.9 | 22.6 | 1.7 | 100.0 |
| Massachusetts | 24 | 34 | 29 | 62 | 1 | 150 |
|  | 16.0 | 22.7 | 19.3 | 41.3 | 0.7 | 100.0 |


| State (first row is number; <br> second row is percent) | Previous Suspensions or Revocations |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | Total


| State (first row is number; <br> second row is percent) | Previous Suspensions or Revocations |  |  |  | Total |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
|  |  |  |  |  |  |  |
| North Carolina | 78 | 138 | 101 | 219 | 536 |  |
|  | 14.6 | 25.7 | 18.8 | 40.9 | 100.0 |  |
| North Dakota | 6 | 8 | 6 | 23 | 43 |  |
|  | 14.0 | 18.6 | 14.0 | 53.5 | 100.0 |  |
| Ohio | 51 | 282 | 208 | 158 | 2 | 701 |
|  | 7.3 | 40.2 | 29.7 | 22.5 | 0.3 | 100.0 |
|  | 74 | 105 | 59 | 67 | 305 |  |
| Oklahoma | 24.3 | 34.4 | 19.3 | 22.0 | 100.0 |  |
|  | 23 | 61 | 48 | 145 | 277 |  |
| Oregon | 8.3 | 22.0 | 17.3 | 52.3 | 100.0 |  |
|  | 185 | 241 | 133 | 242 | 3 | 804 |
| Pennsylvania | 23.0 | 30.0 | 16.5 | 30.1 | 0.4 | 100.0 |
|  | 23 | 14 | 3 | 3 | 43 |  |
| Rhode Island | 53.5 | 32.6 | 7.0 | 7.0 | 100.0 |  |
|  | 104 | 235 | 80 | 23 | 442 |  |
| South Carolina | 23.5 | 53.2 | 18.1 | 5.2 | 100.0 |  |
|  | 4 | 34 | 13 | 9 | 60 |  |
| South Dakota | 6.7 | 56.7 | 21.7 | 15.0 | 100.0 |  |
|  | 230 | 148 | 51 | 46 | 475 |  |
| Tennessee | 48.4 | 31.2 | 10.7 | 9.7 |  | 100.0 |
|  | 85 | 380 | 162 | 223 | 1 | 851 |
| Texas | 10.0 | 44.7 | 19.0 | 26.2 | 0.1 | 100.0 |


| State (first row is number; second row is percent) |  | Suspe | ions or | vocatio |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Utah | 23 | 36 | 20 | 10 | 2 | 91 |
|  | 25.3 | 39.6 | 22.0 | 11.0 | 2.2 | 100.0 |
| Vermont | 7 | 19 | 12 | 30 |  | 68 |
|  | 10.3 | 27.9 | 17.6 | 44.1 |  | 100.0 |
| Virginia | 65 | 108 | 67 | 162 |  | 402 |
|  | 16.2 | 26.9 | 16.7 | 40.3 |  | 100.0 |
| Washington | 25 | 136 | 75 | 134 |  | 370 |
|  | 6.8 | 36.8 | 20.3 | 36.2 |  | 100.0 |
| West Virginia | 30 | 48 | 16 | 11 |  | 105 |
|  | 28.6 | 45.7 | 15.2 | 10.5 |  | 100.0 |
| Wisconsin | 30 | 62 | 35 | 45 |  | 172 |
|  | 17.4 | 36.0 | 20.3 | 26.2 |  | 100.0 |
| Wyoming |  | 7 | 9 | 24 |  | 40 |
|  |  | 17.5 | 22.5 | 60.0 |  | 100.0 |
| Military |  |  |  | 1 |  | 1 |
|  |  |  |  | 100.0 |  | 100.0 |
| Canada |  |  |  | 1 | 2 | 3 |
| Mexico |  |  |  | 33.3 | 66.7 | 100.0 |
|  |  | 2 |  |  |  | 2 |
| Other foreign |  | 100.0 |  |  |  | 100.0 |
|  |  | 2 | 1 |  | 1 | 4 |
|  |  | 50.0 | 25.0 |  | 25.0 | 100.0 |
| Total | 3,536 | 6,760 | 3,446 | 4,872 | 41 | 18,655 |
|  | 19.0 | 36.2 | 18.5 | 26.1 | 0.2 | 100.0 |

Table D. 3 Prior Suspensions or Revocations for Drivers in Fatal Crashes with a Revoked License by State

| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Alabama | 49 | 72 | 72 | 267 |  | 460 |
|  | 10.7 | 15.7 | 15.7 | 58.0 |  | 100.0 |
| Alaska | 12 | 14 | 3 | 8 |  | 37 |
|  | 32.4 | 37.8 | 8.1 | 21.6 |  | 100.0 |
| Arizona | 18 | 8 | 17 | 28 |  | 71 |
|  | 25.4 | 11.3 | 23.9 | 39.4 |  | 100.0 |
| Arkansas | 2 |  |  | 7 |  | 9 |
|  | 22.2 |  |  | 77.8 |  | 100.0 |
| California | 97 | 51 | 57 | 59 |  | 264 |
|  | 36.7 | 19.3 | 21.6 | 22.3 |  | 100.0 |
| Colorado | 46 | 59 | 44 | 73 |  | 222 |
|  | 20.7 | 26.6 | 19.8 | 32.9 |  | 100.0 |
| Connecticut |  | 2 |  | 1 | 1 | 4 |
|  |  | 50.0 |  | 25.0 | 25.0 | 100.0 |
| Delaware | 7 | 5 | 9 | 12 |  | 33 |
|  | 21.2 | 15.2 | 27.3 | 36.4 |  | 100.0 |
| District of Columbia | 2 | 2 |  | 1 |  | 5 |
|  | 40.0 | 40.0 |  | 20.0 |  | 100.0 |
| Florida | 11 | 17 | 6 | 5 |  | 39 |
|  | 28.2 | 43.6 | 15.4 | 12.8 |  | 100.0 |
| Georgia | 38 | 22 | 18 | 36 | 1 | 115 |
|  | 33.0 | 19.1 | 15.7 | 31.3 | 0.9 | 100.0 |


| Table D. 3 / 2 <br> State (first row is number; second row is percent) | Prior Suspensions or Revocations for Drivers in Fatal Crashes with a Revoked License by State |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
| Hawaii | 4 | 9 | 4 | 4 |  | 21 |
|  | 19.0 | 42.9 | 19.0 | 19.0 |  | 100.0 |
| Idaho | 2 | 3 | 1 | 2 |  | 8 |
|  | 25.0 | 37.5 | 12.5 | 25.0 |  | 100.0 |
| Illinois | 49 | 28 | 10 | 4 |  | 91 |
|  | 53.8 | 30.8 | 11.0 | 4.4 |  | 100.0 |
| Indiana | 2 |  |  | 1 |  | 3 |
|  | 66.7 |  |  | 33.3 |  | 100.0 |
| Iowa | 6 | 33 | 15 | 29 |  | 83 |
|  | 7.2 | 39.8 | 18.1 | 34.9 |  | 100.0 |
| Kansas | 10 | 13 | 2 | 1 |  | 26 |
|  | 38.5 | 50.0 | 7.7 | 3.8 |  | 100.0 |
| Kentucky | 1 |  | 1 |  |  | 2 |
|  | 50.0 |  | 50.0 |  |  | 100.0 |
| Louisiana | 41 | 15 | 2 |  | 1 | 59 |
|  | 69.5 | 25.4 | 3.4 |  | 1.7 | 100.0 |
| Maine | 1 |  |  | 2 |  | 3 |
|  | 33.3 |  |  | 66.7 |  | 100.0 |
| Maryland | 37 | 37 | 27 | 19 | 1 | 121 |
|  | 30.6 | 30.6 | 22.3 | 15.7 | 0.8 | 100.0 |
| Massachusetts | 10 | 12 | 10 | 58 |  | 90 |
|  | 11.1 | 13.3 | 11.1 | 64.4 |  | 100.0 |


| Table D. 3 / 3 <br> State (first row is number; second row is percent) | Prior Suspensions or Revocations for Drivers in Fatal Crashes with a Revoked License by State |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
| Michigan | 20 | 22 | 20 | 44 |  | 106 |
|  | 18.9 | 20.8 | 18.9 | 41.5 |  | 100.0 |
| Minnesota | 22 | 38 | 18 | 40 |  | 118 |
|  | 18.6 | 32.2 | 15.3 | 33.9 |  | 100.0 |
| Mississippi | 2 | 1 | 1 |  | 2 | 6 |
|  | 33.3 | 16.7 | 16.7 |  | 33.3 | 100.0 |
| Missouri | 40 | 64 | 77 | 176 |  | 357 |
|  | 11.2 | 17.9 | 21.6 | 49.3 |  | 100.0 |
| Montana | 31 | 1 | 6 | 3 |  | 41 |
|  | 75.6 | 2.4 | 14.6 | 7.3 |  | 100.0 |
| Nebraska | 10 | 19 | 8 | 7 |  | 44 |
|  | 22.7 | 43.2 | 18.2 | 15.9 |  | 100.0 |
| Nevada | 12 | 14 | 13 | 17 |  | 56 |
|  | 21.4 | 25.0 | 23.2 | 30.4 |  | 100.0 |
| New Hampshire | 1 |  |  |  |  | 1 |
|  | 100.0 |  |  |  |  | 100.0 |
| New Jersey | 2 |  |  | 8 |  | 10 |
|  | 20.0 |  |  | 80.0 |  | 100.0 |
| New Mexico | 25 | 27 | 18 | 17 |  | 87 |
|  | 28.7 | 31.0 | 20.7 | 19.5 |  | 100.0 |
| New York | 38 | 34 | 41 | 125 |  | 238 |
|  | 16.0 | 14.3 | 17.2 | 52.5 |  | 100.0 |


| Table D. 3 / 4 <br> State (first row is number; second row is percent) | Prior Suspensions or Revocations for Drivers in Fatal Crashes with a Revoked License by State |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| North Carolina | 95 | 149 | 140 | 259 |  | 643 |
|  | 14.8 | 23.2 | 21.8 | 40.3 |  | 100.0 |
| North Dakota | 4 |  | 2 | 6 |  | 12 |
|  | 33.3 |  | 16.7 | 50.0 |  | 100.0 |
| Ohio | 1 | 1 | 1 | 1 |  | 4 |
|  | 25.0 | 25.0 | 25.0 | 25.0 |  | 100.0 |
| Oklahoma | 43 | 50 | 29 | 33 |  | 155 |
|  | 27.7 | 32.3 | 18.7 | 21.3 |  | 100.0 |
| Oregon | 6 | 4 | 4 | 40 |  | 54 |
|  | 11.1 | 7.4 | 7.4 | 74.1 |  | 100.0 |
| Pennsylvania | 8 | 8 | 2 | 10 |  | 28 |
|  | 28.6 | 28.6 | 7.1 | 35.7 |  | 100.0 |
| South Carolina | 11 | 7 | 3 |  |  | 21 |
|  | 52.4 | 33.3 | 14.3 |  |  | 100.0 |
| South Dakota | 2 | 6 | 4 | 1 |  | 13 |
|  | 15.4 | 46.2 | 30.8 | 7.7 |  | 100.0 |
| Tennessee | 272 | 218 | 71 | 47 |  | 608 |
|  | 44.7 | 35.9 | 11.7 | 7.7 |  | 100.0 |


| Table D. 3 / 5 <br> State (first row is number; second row is percent) | Prior Suspensions or Revocations for Drivers in Fatal Crashes with a Revoked License by State |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Suspensions or Revocations |  |  |  |  | Total |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Texas | 7 | 14 | 11 | 11 |  | 43 |
|  | 16.3 | 32.6 | 25.6 | 25.6 |  | 100.0 |
| Utah | 3 | 4 | 5 | 3 |  | 15 |
|  | 20.0 | 26.7 | 33.3 | 20.0 |  | 100.0 |
| Vermont | 1 | 2 | 2 | 4 |  | 9 |
|  | 11.1 | 22.2 | 22.2 | 44.4 |  | 100.0 |
| Virginia | 18 | 14 | 12 | 52 |  | 96 |
|  | 18.8 | 14.6 | 12.5 | 54.2 |  | 100.0 |
| Washington | 12 | 27 | 35 | 83 |  | 157 |
|  | 7.6 | 17.2 | 22.3 | 52.9 |  | 100.0 |
| West Virginia | 13 | 37 | 15 | 6 |  | 71 |
|  | 18.3 | 52.1 | 21.1 | 8.5 |  | 100.0 |
| Wisconsin | 27 | 48 | 54 | 141 |  | 270 |
|  | 10.0 | 17.8 | 20.0 | 52.2 |  | 100.0 |
| Wyoming | 1 | 3 |  | 3 |  | 7 |
|  | 14.3 | 42.9 |  | 42.9 |  | 100.0 |
| Total | 1,172 | 1,214 | 891 | 1,754 | 6 | 5,037 |
|  | 23.3 | 24.1 | 17.7 | 34.8 | 0.1 | 100.0 |

Source: Fatality Analysis Reporting System data

Table D. 4 Prior Suspensions or Revocations for Drivers with Expired Licenses by State or Jurisdiction

| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
| Alabama | 43 | 1 | 1 | 2 |  | 47 |
|  | 91.5 | 2.1 | 2.1 | 4.3 |  | 100.0 |
| Alaska | 11 |  |  |  |  | 11 |
|  | 100.0 |  |  |  |  | 100.0 |
| Arizona | 100 | 5 | 4 | 8 |  | 117 |
|  | 85.5 | 4.3 | 3.4 | 6.8 |  | 100.0 |
| Arkansas | 77 | 5 | 3 | 2 |  | 87 |
|  | 88.5 | 5.7 | 3.4 | 2.3 |  | 100.0 |
| California | 857 | 53 | 12 | 5 |  | 927 |
|  | 92.4 | 5.7 | 1.3 | 0.5 |  | 100.0 |
| Colorado | 68 | 3 |  | 2 |  | 73 |
|  | 93.2 | 4.1 |  | 2.7 |  | 100.0 |
| Connecticut | 14 | 3 | 1 |  |  | 18 |
|  | 77.8 | 16.7 | 5.6 |  |  | 100.0 |
| Delaware | 4 |  | 1 |  |  | 5 |
|  | 80.0 |  | 20.0 |  |  | 100.0 |
| District of Columbia | 2 |  |  |  |  | 2 |
|  | 100.0 |  |  |  |  | 100.0 |
| Florida | 15 | 1 |  |  | 2 | 18 |
|  | 83.3 | 5.6 |  |  | 11.1 | 100.0 |
| Georgia | 87 | 7 | 2 | 2 |  | 98 |
|  | 88.8 | 7.1 | 2.0 | 2.0 |  | 100.0 |

Prior Suspensions or Revocations for Drivers with Expired Licenses by State or Jurisdiction

| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| Hawaii | 50 | 2 | 1 |  |  | 53 |
|  | 94.3 | 3.8 | 1.9 |  |  | 100.0 |
| Idaho | 34 | 1 | 3 | 4 | 2 | 44 |
|  | 77.3 | 2.3 | 6.8 | 9.1 | 4.5 | 100.0 |
| Illinois | 112 | 15 | 3 | 1 | 1 | 132 |
|  | 84.8 | 11.4 | 2.3 | 0.8 | 0.8 | 100.0 |
| Indiana | 96 | 4 | 9 | 6 |  | 115 |
|  | 83.5 | 3.5 | 7.8 | 5.2 |  | 100.0 |
| lowa | 41 | 11 | 1 |  |  | 53 |
|  | 77.4 | 20.8 | 1.9 |  |  | 100.0 |
| Kansas | 63 |  |  |  |  | 63 |
|  | 100.0 |  |  |  |  | 100.0 |
| Kentucky | 55 |  |  |  | 2 | 57 |
|  | 96.5 |  |  |  | 3.5 | 100.0 |
| Louisiana | 114 | 12 |  |  |  | 126 |
|  | 90.5 | 9.5 |  |  |  | 100.0 |
| Maine | 1 |  |  |  |  | 1 |
|  | 100.0 |  |  |  |  | 100.0 |
| Maryland | 6 |  | 1 |  | 1 | 8 |
|  | 75.0 |  | 12.5 |  | 12.5 | 100.0 |
| Massachusetts | 32 | 5 | 4 | 4 |  | 45 |
|  | 71.1 | 11.1 | 8.9 | 8.9 |  | 100.0 |


| State (first row is number; <br> second row is percent) | Previous Suspensions or Revocations |  |  |  | Total |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
| Michigan |  |  |  |  |  |  |
|  | 150 | 68 | 32 | 90 | 340 |  |
| Minnesota | 44.1 | 20.0 | 9.4 | 26.5 | 100.0 |  |
|  | 2 |  |  | 2 | 4 |  |
| Mississippi | 50.0 |  |  | 50.0 | 100.0 |  |
|  | 52 | 5 | 2 |  | 38 | 87 |
| Missouri | 59.8 | 5.7 | 2.3 |  | 32.2 | 100.0 |
|  | 111 | 14 | 3 | 2 | 130 |  |
| Montana | 85.4 | 10.8 | 2.3 | 1.5 | 100.0 |  |
|  | 40 | 1 | 1 | 1 | 43 |  |
| Nebraska | 93.0 | 2.3 | 2.3 | 2.3 | 100.0 |  |
|  | 27 | 2 | 1 |  | 30 |  |
| Nevada | 90.0 | 6.7 | 3.3 |  | 100.0 |  |
|  | 20 |  |  |  | 20 |  |
| New | 100.0 |  |  |  | 100.0 |  |
|  | 8 | 1 | 1 | 1 | 11 |  |
| Hampshire | 72.7 | 9.1 | 9.1 | 9.1 | 100.0 |  |
|  | 15 |  | 1 | 2 | 18 |  |
| New Jersey | 83.3 |  | 5.6 | 11.1 | 100.0 |  |
|  | 23 | 3 | 1 | 2 | 29 |  |
| New Mexico | 79.3 | 10.3 | 3.4 | 6.9 | 7 | 100.0 |
|  | 42 | 4 | 3 | 7 | 56 |  |
| New York | 75.0 | 7.1 | 5.4 | 12.5 | 100.0 |  |


| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3+ | Unknown |  |
| North Carolina | 115 | 18 | 7 | 6 | 1 | 147 |
|  | 78.2 | 12.2 | 4.8 | 4.1 | 0.7 | 100.0 |
| North Dakota | 4 |  |  | 1 |  | 5 |
|  | 80.0 |  |  | 20.0 |  | 100.0 |
| Ohio | 214 | 56 | 21 | 28 | 3 | 322 |
|  | 66.5 | 17.4 | 6.5 | 8.7 | 0.9 | 100.0 |
| Oklahoma | 28 | 2 | 2 | 1 |  | 33 |
|  | 84.8 | 6.1 | 6.1 | 3.0 |  | 100.0 |
| Oregon | 24 | 2 | 3 | 4 |  | 33 |
|  | 72.7 | 6.1 | 9.1 | 12.1 |  | 100.0 |
| Pennsylvania | 46 | 1 | 1 |  |  | 48 |
|  | 95.8 | 2.1 | 2.1 |  |  | 100.0 |
| Rhode Island | 4 |  |  |  |  | 4 |
|  | 100.0 |  |  |  |  | 100.0 |
| South Carolina | 4 | 1 |  |  |  | 5 |
|  | 80.0 | 20.0 |  |  |  | 100.0 |
| South Dakota | 27 | 1 |  |  |  | 28 |
|  | 96.4 | 3.6 |  |  |  | 100.0 |
| Tennessee | 56 | 1 |  |  |  | 57 |
|  | 98.2 | 1.8 |  |  |  | 100.0 |
| Texas | 603 | 44 | 11 | 25 |  | 683 |
|  | 88.3 | 6.4 | 1.6 | 3.7 |  | 100.0 |


| State (first row is number; second row is percent) | Previous Suspensions or Revocations |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | $3+$ | Unknown |  |
| Utah | 2 |  |  |  | 1 | 3 |
|  | 66.7 |  |  |  | 33.3 | 100.0 |
| Vermont | 4 |  |  |  |  | 4 |
|  | 100.0 |  |  |  |  | 100.0 |
| Virginia | 7 | 1 |  |  |  | 8 |
|  | 87.5 | 12.5 |  |  |  | 100.0 |
| Washington | 49 | 5 | 3 | 4 |  | 61 |
|  | 80.3 | 8.2 | 4.9 | 6.6 |  | 100.0 |
| West Virginia | 26 | 1 | 1 |  |  | 28 |
|  | 92.9 | 3.6 | 3.6 |  |  | 100.0 |
| Wisconsin | 36 | 3 | 1 |  |  | 40 |
|  | 90.0 | 7.5 | 2.5 |  |  | 100.0 |
| Wyoming | 4 |  |  |  |  | 4 |
|  | 100.0 |  |  |  |  | 100.0 |
| Military | 1 |  |  |  |  | 1 |
|  | 100.0 |  |  |  |  | 100.0 |
| Canada | 1 |  |  |  |  | 1 |
|  | 100.0 |  |  |  |  | 100.0 |
| Mexico | 1 |  |  |  | 1 | 2 |
|  | 50.0 |  |  |  | 50.0 | 100.0 |
| Total | 3,628 | 362 | 141 | 212 | 42 | 4,385 |
|  | 82.7 | 8.3 | 3.2 | 4.8 | 1.0 | 100.0 |

# Appendix E。 Standardized Site Visit Questionnaires 

## Site Visit Questionnaire

PURPOSE

The purpose of this questionnaire is to support the site visit team when interviewing staff from states participating in the Unlicensed to Kill study. The site visits will be used to gain a thorough understanding of the states' laws regarding licensure, loss of license, reinstatement, and penalties for violating the licensure provisions of the law. A second goal of the interviews is to obtain state experts' opinions on what measures should be implemented to improve their state's ability to identify licensure scofflaws and remove them from the roadways. This discussion will go beyond the laws and enforcement practices of the state to explore issues such as:

- Notification process for suspension/revocation.
- Appeals processes.
- Tracking systems in place.
- Ideas for reducing the incentive to drive without a valid license.


## SECTION A: STATE LAWS

For most of the following questions, a copy of the relevant state statutes will provide a sufficiently detailed answer. If a copy of the statutes is not available, a reference to the appropriate section and paragraph of the law will help us make needed copies later.

1. What are the state's laws regarding requirements to obtain a license.
2. What are the laws regarding suspension and revocation? Conditions under which a license may be suspended or revoked? Judicial versus Administrative suspension and revocation.
3. What are the requirements for reinstatement of a suspended license?
4. Reinstatement of a revoked license?
5. What are the penalties associated with driving while suspended? Driving while revoked? Driving without a license?

## SECTION B: DRIVER-CONTROL PRACTICES

These questions refer to the state's provisions for identifying drivers who meet the conditions for suspension, revocation, or denial of their license, as well as licensure scofflaws and tracking their progress through the system.

1. What data are used to determine if a driver's license should be suspended or revoked?
2. What is the source of the information (courts? administrative hearing officers? driver history file convictions?)
3. How are unlicensed drivers identified in the driver-control system?
4. What is the process for appeal of a driver-control action? Does it differ for suspensions, revocations, or other actions? What range of outcomes is available on successful appeal?
5. For denials of licensure, how are the individuals tracked in the system? What driver-control actions do they face if they violate the law?
6. Once a person is under a driver-control penalty or action, how is their status tracked over the months/years of their penalty?
7. Do driver-control practices differ for judicial versus administrative actions (suspensions/revocations)? If yes, how do they differ?
8. What sorts of exceptions/exemptions are granted and under what conditions (e.g., work-to-home driving privileges for hardship cases)?
9. Does your department set particular goals with respect to the frequency of license-status violations? If so, what are these goals and are there performance measures that can be shared with us?
10. How does the system track all the various status drivers, exemptions, conditions, etc.?
11. How is this information shared with law enforcement?

## SECTION C: ENFORCEMENT AND ADJUDICATION PRACTICES

These questions refer to the actions taken by law enforcement officers and the information available to them when making traffic stops. The questions also cover the role of prosecutors and judges faced with drivers who violate the state's licensing laws.

1. How are people with aberrant license status identified to law enforcement officers during routine traffic stops? What information is available over the Law Enforcement Network (or other source)?
2. Does the information differ for different license status individuals? (Obviously, unlicensed drivers stopped for the first time would have no record, but what information is available on those who have been stopped previously, and how might that differ from information available on those with suspended or revoked licenses?)
3. How timely and accurate is that information?
4. What are the options available to law enforcement in the field when dealing with a driver with a suspended or revoked license? Or unlicensed?
5. What role does the officer play in the adjudication or administrative process of dealing with license statute violations?
6. What is the role of prosecutors? Judges? Court administrators? Others? In the process of dealing with license statute violations? And what information is available to help them be effective in these roles?

In this section, we are soliciting opinions from the driver-control / driver-licensing professionals in the states. The hope is to identify the current practices that are working, and to describe practices that they would like to see implemented.

1. What do you perceive as the key reasons that people are willing to drive without a valid license (i.e., drive while suspended, revoked, or without any license whatsoever)? What are the incentives (societal? monetary? other?)?
2. Do you have any information on the proportion of suspended or revoked drivers who continue to drive anyway?
3. Are there particular aspects of your state's programs that you believe to be particularly effective? If so, which classes of licensure violations are they most effective in dealing with?
4. Are there additional programs you would like to see tested or expanded that would help decrease the prevalence of driving under an aberrant license status? If yes, please describe the methods used in the program, what types of license violation the program would target, and how it would be measured.
5. To the extent that you see external incentives playing a role in drivers' willingness to violate the state's licensing laws, are there things you think can be done to reduce or eliminate particular incentives?

## Analytic Questions

PURPOSE

The purpose of this questionnaire is to collect information from participating states on the rate of suspension, suspension durations, proportion of the driving population under revocation, reasons for suspension/revocation, and recidivism (i.e., rates of resuspension). In order to support some level of comparison, the states are being asked to provide data in a standard format and covering a standard time period. The intent is for these questions to be answered from available data in existing systems. If this proves difficult for a given state, the hope is that they will be willing to perform some analytic research and get us the answers when they are able. If year 2000 data are not available, states are asked to provide the most recently available year's data.

## STANDARD QUESTIONS

1. What are the characteristics of your driver population? Can you provide the following information:
a. Number of registered drivers
b. Age and gender tables of all drivers
c. Ethnicity (if available)
2. How many drivers were suspended in calendar year 2000 ? What were the age,
gender and other characteristics of suspended drivers?
3. How many drivers had licenses revoked in calendar year 2000? What were their characteristics (age, etc.)
4. How many people were subjected to driver-control actions for driving without a license? What were the characteristics of this population?
5. For suspended and revoked drivers currently in your system, can you provide a summary of the reasons for their license status? [E.g., DUI conviction(s), points violation, etc.].
6. For suspensions ending in calendar year 2000 , can you provide data on the average duration of the suspension?
7. What proportion of drivers receiving a suspension in calendar 2000 had a previous suspension? Two prior suspensions? Three or more?
8. What proportion of drivers receiving a revocation in calendar 2000 had been suspended in the past? One prior? Two priors? Three or more?
9. For those drivers with hardship or other exceptions/conditional licenses, what proportion of them was found in violation of the terms and conditions?

## NONSTANDARD QUESTIONS

1. Do you have any analytic reports covering any aberrant license status issues that you can share with us? (Note, this question was asked during the initial telephone confirmation calls with each state.)
2. Are there particular analyses that you would like to see performed in an attempt to better characterize the license violation situation in your state? If yes, please describe in detail.
3. Are there analyses you are aware of from other states, research groups, of the federal government? If yes, please give us a citation or other information identifying the source and document.

## AAAFTS Unlicensed Driver Study Program: Graduated Driver Licensing

## STAGE I PROVISIONS

## Minimum holding period?

(e.g., 6 months minimum?)

## Adult supervision required?

Seat belts required for all passengers?
Zero tolerance for youth?
Cancellation for alcohol violations?
Crash/conviction free during holding period?
Nighttime restrictions?
Other restrictions?

## Holding period?

Seat belt requirement?
License revocation for alcohol offense?
Crash/conviction free? How long?
Nighttime restrictions?
Minimum age for full license?
Distinctive license for youth?

GENERAL QUESTIONS

When in effect?
Any evaluation conducted of program?
Other evidence of its effectiveness, opinions, statistics?

## AAAFTS Unlicensed Driver Study Program: Ignition Interlock

1. What are criteria for participating or being assigned to the program?
2. What are the provisions or features of the program?
3. How is it administered? Describe process.
4. How many assigned per year?
5. What are the requirements for removal of the interlock?
6. Has the state conducted an evaluation of the program's effectiveness?
7. Does the state have any opinions or other evidence of its effectiveness?

## AAAFTS Unlicensed Driver Study Program: Administrative License Revocation

1. When in effect?
2. Include 0.02 for youthful offenders?
3. Include revocation for test refusal?
4. How many days after arrest is effective date of suspension/revocation?
5. How notify-certified or first class mail?
6. What is average delay if hearing requested?
7. How many ALR suspensions per year?
8. How many hearings requested? What percentage upheld?
9. What is delay if revocation appealed?
10. How many revocations appealed? What percentage upheld?
11. Periods of administrative suspension/revocation:
a. 1 st offense $\qquad$
b. 2d offense $\qquad$
c. 3 or more offenses
d. Test refusal
12. What is rate of conviction for DUIs, statistics on percentage of DUI arrests resulting in no conviction or conviction for lesser charge?
13. Does state have a system for tracking arrests thru the entire judicial process?
14. Has the state conducted any evaluation of the effectiveness of ALR? What are the state's opinions about the program, the process, the problems, its strengths/ weaknesses?

Ap p e n d i x F. List of Study Participants

## California

Sergeant Camm, California Highway Patrol<br>Dave DeYoung, California Department of Motor Vehicles<br>Cliff Helander, California Department of Motor Vehicles<br>Larry Hidalgo, California Department of Motor Vehicles<br>Sue Lamar, California Department of Motor Vehicles<br>Tamara Mata, California Department of Motor Vehicles<br>Anthony Mongalo, California Department of Motor Vehicles Julie Montoya, California Department of Motor Vehicles Patricia Rogers, California Department of Motor Vehicles Joan Zant, California Department of Motor Vehicles

## Florida

Beth Allman, Florida Association of Court Clerks \& Comptroller Justin Branch, Circuit and County Courts of Jackson County Captain Gordon Brown, Florida Highway Patrol
Jill Burford, Florida Department of Highway Safety and Motor Vehicles Diana Groom, Florida Department of Highway Safety and Motor Vehicles
Dale Guthrie, Clerk of Circuit and County Courts, Jackson County
T.N. Prakash, Florida Department of Highway Safety and Motor Vehicles Harry Scott, Florida Department of Highway Safety and Motor Vehicles

## lowa

Dave Dudley, Iowa Law Enforcement Academy Scott Falb, Iowa Department of Transportation Sherry Forrest, Iowa Department of Transportation Pete Grady, Attorney General's Office
Jane Holtorf, Iowa Department of Transportation
Kim Snook, Iowa Department of Transportation
Bob Thompson, Iowa Department of Public Safety
Dave Titcomb, Iowa Department of Transportation

## Michigan

Fred Bueter, Michigan Department of State
Paul Charette, Michigan Department of State

Elaine Charney, Michigan Department of State
Sergeant Perry Curtis, Michigan State Police
Sandra Hartnell, State Court Administrator's Office
Thomas Robertson, Prosecuting Attorneys Coordinating Council
Jennette Sawyer, Michigan Department of State
Charles Thelen, Michigan Department of State
David Wallace, Prosecuting Attorneys Coordinating Council

## Minnesota

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## Abbreviations

## Term Description

AAA American Automobile Association
AAAFTS American Automobile Association Foundation for Traffic Safety
ALR Administrative License Revocation

ALS Administrative License Suspension

BAC Blood Alcohol Content

DHSMV Department of Highway Safety and Motor Vehicles
DIP Driver Improvement Program
DMV Department of Motor Vehicles
DOS Department of State

DPS Department of Public Safety
DUI Driving Under the Influence (of alcohol or other drugs)
DWI Driving While Intoxicated
DWR Driving While Revoked
DWS Driving While Suspended
DWU Driving While Unlicensed
FARS Fatality Analysis Reporting System
IPS Inimical to Public Safety
NHTSA National Highway Traffic Safety Administration
OUI Operating Under the Influence (of alcohol or other drugs)
OWI Operating While Impaired
TRL Temporary Restricted License

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[^0]:    ${ }^{1}$ All data used in this report were drawn from the National Highway Trafic Safety Administration's Fataily Analysis Reporting System for 1993 to 1999. As in the prior report, Unlicensed to Kill, the FARS variable (L_STATUS) was used exclusively to determine the license status of drivers involved in fatal crashes. This variable records the status of all licenses except any commercial driver's license that the involved individuals may hold at the time of the crash.

[^1]:    Source: Fatality Analysis Reporting System data

[^2]:    ${ }^{\text {a }}$ The rows list all the possible combinations of license status involved in a single crash-all drivers who possessed valid licenses, and all who possessed invalid licenses-through the combination in which each license status class is represented by at least one driver. The rows do not indicate the number of vehicles in the crash, except of course that single-vehicle crashes cannot have two different license status records, two vehicle crashes cannot have three different status records, and so on.

[^3]:    Source: Fatality Analysis Reporting System data

[^4]:    Note: The blank cells indicate a count or percentage of zero. Source: Fatality Analysis Reporting System data

[^5]:    Source: Fatality Analysis Reporting System data

