



HHS Public Access

Author manuscript

Addiction. Author manuscript; available in PMC 2015 May 22.

Published in final edited form as:

Addiction. 2010 August ; 105(8): 1422–1428. doi:10.1111/j.1360-0443.2010.02987.x.

Requiring suspended drunk drivers to install alcohol interlocks to reinstate their licenses: effective?

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Abstract

Aims—To evaluate a new method being used by some states for motivating interlock installation by requiring it as a prerequisite to reinstatement of the driver's license.

Design—The driving records of Florida DWI offenders convicted between July 2002 and June 2008 were analyzed to determine the proportion of offenders subject to the interlock requirement who installed interlocks.

Setting—Most driving-while-impaired (DWI) offenders succeed in avoiding state laws requiring the installation of a vehicle alcohol interlock.

Participants—A total of 82 318 Florida DWI offenders.

Findings—Due to long periods of complete suspension when no driving was permitted and the failure to complete all the requirements imposed by the court, only 21 377 of the 82 318 offenders studied qualified for reinstatement, but 93% of those who qualified did install interlocks to be reinstated.

Conclusions—Because of the lengthy license suspensions and other barriers that the offenders face in qualifying for reinstatement, it is not clear that requiring a period on the interlock as a prerequisite to reinstating will greatly increase the current installment rate.

Keywords

DWI; impaired driving; license reinstatement; recidivism; vehicle interlocks

INTRODUCTION

Up to 75% of drivers convicted of an impaired-driving offense continue to drive illicitly to some extent [1,2]. Current limitations on the ability of the police to detect and apprehend illicit drivers make the likelihood of being sanctioned for driving-while-suspended (DWS) a

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Declarations of interest

None.

low probability event. This encourages illicit driving and undermines the effectiveness of the license suspension sanction. Aside from jail, a number of vehicle action policies have been tested for controlling the illicit driving of DWI offenders, with varying success [3–5]. These include confiscating or impounding the offender's vehicle, requiring special license plates on the vehicles owned by DWI offenders or seizing the vehicle plates. Recently, alcohol interlocks, which require a breath test to start the car, have attracted a great deal of support, with 47 states now having laws providing for such devices. Research has demonstrated that interlocks reduce recidivism by 65% or more while on the vehicle but returns to the typical rate for DWI offenders after deinstallation [6,7]. A more serious limitation in the use of these devices is that offenders resist their installation by claiming not to have a car or not intending to drive, preferring to risk driving while suspended [8]. As a result, with the recent exception of a highly publicized mandatory program in New Mexico that has achieved a 50% installation rate [9], the criminal justice system has generally been unable to motivate more than 10–20% of first and multiple DWI offenders to install interlocks [10].

An emerging policy to deal with this limited implementation of interlocks is for state motor vehicle departments to require a period on the interlock as a prerequisite to reinstating the driver's license following completion of the suspension period. Arizona, Colorado, Florida, Maryland, Michigan and New Mexico have passed such legislation. The motivating feature of this policy is that offenders who do not install interlocks cannot reinstate their driver's licenses and thus remain suspended and unable to drive legally. A salient difference between the states with such laws is whether offenders can avoid the interlock requirement by waiting out the period following qualification for reinstatement. In Maryland, for instance, the requirement to participate in an interlock program extends for 2 years following qualification for reinstatement. After this 2-year period, offenders can obtain a license without installing an interlock. In contrast, the requirement in Florida is permanent, and offenders can never be relicensed unless they install an interlock. This is a particularly severe sanction, as offenders must have access to a vehicle on which to install an interlock in order to reinstate.

Neither of these applications of the reinstatement requirement has been evaluated. Further, several potential problems arise when requiring interlocks for reinstatement. There is a substantial period following arrest and conviction during which the licenses of DWI offenders are completely suspended and they cannot drive legally at all. Further, most states require that offenders pay all their fines and complete their treatment requirements to become eligible for reinstatement. Up to 84% of suspended DWI offenders delay reinstatement [11], and up to a third never complete the requirements. Finally, forcing installation of the units could increase the probability that offenders would make a greater effort to circumvent the interlock by driving a non-interlock-equipped vehicle, resulting in a higher recidivism rate than that experienced in prior studies [6,7].

This paper presents an initial process evaluation of the Florida program begun in February 2002. The interlock requirement was applied to all multiple offenders and to first offenders convicted of an aggravated DWI offense, defined as drivers with a blood alcohol concentration (BAC) of 0.20 or higher or who were transporting passengers younger than 18 years. Although the length of the interlock suspension varies depending on the specific

sentence of the court, first offenders are generally required to install an interlock for 6 months, second offenders for a year (2 years if it is an aggravated offense) and third offenders for not less than 2 years. Before becoming eligible for reinstatement and therefore subject to the interlock requirement, the offender must complete the suspension period during which all driving is prohibited and pay all fines and fees assessed by the court or required by the interlock and treatment/education providers. This Florida program provided the first opportunity to determine the percentage of offenders who qualified for reinstatement and, of those, the percentage who installed interlocks in order to reinstate. It also provided an opportunity to determine the recidivism rate of offenders who did install interlocks compared to offenders who are still in the process of qualifying for reinstatement.

METHODS

Research plan

The Florida Department of Highway Safety and Motor Vehicles (DHSMV) provided the full driving records for all DWI offenders who, when eligible to reinstate, would be required to install interlocks from the July 2002 implementation of the interlock law to June 2008, when we closed our study file. To determine the percentage of DWI offenders installing interlocks because it was required for reinstatement, we modeled the steps through which the offenders had to pass to become eligible for reinstatement, and if they did install an interlock, the period on the device and the period after deinstallation. The flow diagram in Fig. 1 identifies those steps and describes the six groups into which our analytical procedure divided the offenders included in this study.

The records of 82 318 offenders were entered into our data system between July 2002 and June 2008. During this 6-year study, the offenders moved through the six steps shown in Fig. 1 to complete their mandated time on the interlock and return to normal license status. The diagram shows the number of offenders who reached each of the six steps during the 6-year study. Thus, 45 848 of the offenders completed their full-suspension periods; 21 377 of those offenders became qualified for reinstatement, and 24 471 continued to be barred from reinstating due to unmet administrative requirements. Of those who qualified for reinstatement, 19 914 installed interlocks, and 12 466 completed their period on the interlock and were relicensed. To be included in the study, a driver had to commit a DWI offense between July 2002 (when the interlock requirement was first imposed) and June 2008 and had to be mandated to install the interlock as a condition of reinstatement. Thus, offenders entered the database beginning with the date of their suspension for a DWI offense that required a period on the interlock. At that point, they began the period of full (no driving) suspension required by the offense for which they were convicted. That period varied with the number of prior offenses and the types of offenses and was not necessarily correlated with whether the offender was required to install an interlock to reinstate.

Table 1 provides a distribution of the mandated full-suspension periods as a function of the number of prior offenses for the 82 000 offenders in the study. The number of prior offenses includes all DWI arrests that resulted in a license suspension as indicated by (a) an administrative license suspension (ALS) for having a BAC higher than the 0.08 limit at the time of arrest; (b) an implied-consent refusal (suspension for refusing the breath test when

arrested); or (c) a suspension based on a DWI conviction that, in some cases, came some months later. The suspension began close to the day of arrest if it was based on an ALS or implied-consent citation, but could be delayed if based only on a conviction that might not occur for several months following arrest. For our analysis, we used the full life-time history of each offender as it appeared on the Florida driver files. Thus, a prior offense in this study included a previous DWI conviction, an ALS or an implied-consent citation.

As shown in Table 1, approximately 28% of the drivers in our sample were first offenders, 43% second offenders and 18% third offenders, leaving 11% who were third or more frequent offenders. Two-thirds of the first offenders were assigned 6-month suspensions and another quarter received 1-year suspensions so, overall, 90% of first offenders were suspended for a year or less. Longer sentences were probably associated with crash involvement. In contrast, just over half of the second offenders were suspended for a year or less and a third for 5 years. Most of those with three or more convictions received 10-year suspensions or had no suspension length listed on their driving records, suggesting that their licenses were revoked. From this picture, it is apparent that a substantial segment of the offender population in our analysis sample would not qualify for reinstatement during the 6 years of our study. This is confirmed by Fig. 1 showing, as of the time we closed the data set in 2008, that 36 470 (82 318–45 848) of the offenders in our study were still serving their period of full, no-driving suspension.

Step 2 in the process of qualifying for reinstatement is to complete all court-mandated requirements for reinstatement (pay fines, serve jail terms, complete treatment requirements) and to avoid accumulating new offenses that extend or renew their full-suspension period. Among the factors that barred offenders from qualifying for reinstatement once they had completed their suspension periods were failure to complete mandated treatment programs, failure to pay fines or failure to pay reinstatement fees. Some offenders were barred from reinstating because of failures to respond to issues unrelated to the DWI offense, such as unpaid traffic tickets, or failure to respond to other court orders, such as paying child support.

In step 2, the 24 471 offenders ineligible for reinstatement at the end of the 6-year study had been in that status since completing their required full suspension for an average of 2 years and 7 months. Some, however, had failed to meet all the requirements for reinstatement for more than 5 years after completion of their full-suspension period. This suggests that a large proportion of those offenders who complete their suspension periods with outstanding administrative problems are unlikely to attempt reinstatement. Unfortunately, we have no information on the offenders' reasons for failure to complete the requirements. Although some are known to be still driving because they continue to accumulate traffic citations, others may have left the state without information flowing to the Florida driver files. Further, some may no longer be driving because of poor health or the unavailability of a vehicle.

The offenders in step 3 in Fig. 1 had completed their mandatory full-suspension period and all other requirements for reinstatement as of June 2008 and were therefore fully qualified to reinstate. It would be expected that fully qualified offenders would apply for restoration of

their licenses soon after qualifying for reinstatement. However, as of June 2008 when our 6-year study ended, the 1463 who qualified for reinstatement had still not installed an interlock, and their distribution of time since completing the required suspension period was essentially the same as for the offenders in step 2, who had completed their suspension period but remained unqualified for reinstatement. In other words, these 1463 offenders who despite being qualified to reinstate had not acted on that opportunity for up to 5 years.

Step 4 includes the 19 014 offenders who applied for reinstatement and installed interlocks. At the end of the 6-year study, 5448 offenders were in step 4. Another 2000 offenders had completed their mandatory period on the interlock but still had the interlock installed (step 5). In addition, 12 466 offenders (step 6) had completed the required interlock period and were fully relicensed. The 2000 offenders in step 5 had their time on the interlock extended beyond the original specified period for reasons not known to the authors. Presumably, offenders in that group will eventually complete the extended requirement and move into step 6.

We used the model in Fig. 1 to explore the characteristics of the offenders reaching each step in the model and to determine the recidivism levels of those offenders who reach each step, emphasizing the period when the offenders were in the interlock program (during step 4, including those offenders in steps 5 and 6 while they were on the interlock in step 4, and during the postinterlock period in step 6). Further, we used the Fig. 1 model to determine whether the same recidivism reductions were achieved while the interlock was installed with a rise following deinstallation, as reported in previous studies [6,7].

Measures

Three demographic measures were used as covariates throughout the analysis: age, gender and race/ethnicity (white, Hispanic, African Americans and other/unknown). Driver record measures included priors (DWI convictions, ALSs, and implied-consent suspensions). Other measures in our analysis, which depended upon their status in the program, were the offenders' suspension status, eligibility for reinstatement, interlock installed and license reinstatement with the date of entry to each status.

Analysis plan

Two sets of analyses were conducted to explore the effectiveness of the Florida interlock program: logistic regression to study the percentage of the DWI offenders who installed interlocks and survival analysis to determine whether offenders in the Florida interlock program were demonstrating reductions in recidivism similar to those reported in previous studies of interlocks. Logistic regression was used to explore the characteristics of offenders reaching key steps in the program, and survival analysis was used to compare the recidivism rates of four groups while they were in each of four steps: (a) suspended; (b) completed suspension, qualified for reinstatement but not on the interlock; (c) on the interlock; and (d) postinterlock.

In this study, as in all but one of the previous interlock studies, it was impossible to assign offenders at random to the interlock. It was therefore necessary to contrast the recidivism rate of offenders while on the interlock with offenders in other steps of progress toward

reinstatement. For this analysis, four groups were defined: (a) offenders in step 1, Fig. 1, who were serving their full-suspension periods; (b) offenders who had completed their full-suspension period but were not qualified or had not yet applied for reinstatement (24 471 in step 2 and 1463 in step 3); (c) offenders who were in or had been in the interlock program (steps 4, 5 and 6 while they were on the interlock); and (d) offenders in step 6 who had completed their time on the interlock and were fully licensed. Because the time in each step varied and some offenders were in a step for up to 5 or 6 years, the survival analyses were limited to the first 2 years in a particular step, and cases were censored at the end of 2 years to make the steps more comparable. These analyses of recidivism were performed using Cox regression survival analytical methods.

RESULTS

Percentage meeting eligibility requirements

From Fig. 1, it is clear that only 22 840 (1463 + 21 377) or 28% of the 82 318 DWI offenders in our study qualified for reinstatement during the 6 years from 2002 to 2008. The likelihood of becoming fully eligible to install an interlock increased in older age cohorts and peaked between the ages of 50 and 64 before declining slightly. Subjects younger than 25 were especially unlikely to become fully eligible (Wald = 380.8; $df = 11$; $P < 0.001$). Females were 30% more likely than males to become fully eligible (Wald = 104.3; $P < 0.001$). Hispanics and African Americans were less likely than whites to become fully eligible, whereas Asians were more likely than all other groups to become fully eligible (Wald = 189.2, 236.9, 15.3, respectively, all < 0.01).

Percentage installing interlocks

As shown in Fig. 1, only 19 914 (or 24%) of the 82 318 offenders installed interlocks from July 2002 to June 2008. If only the 45 848 offenders completing their full-suspension periods (step 1) during that time are considered, then 43% of that group installed interlocks. However, if only the offenders who met all their court and administrative requirements and were eligible for reinstatement are considered, then 93% installed interlocks. As might be expected, individuals with fewer DWI offenses were more likely to become eligible and install interlocks. Those with multiple priors were four to six times less likely to install interlocks than those with only a single prior. Hispanics were 34% less likely than whites to install interlocks; African Americans, about 40% less likely; and Asians, about twice as likely. Among those who installed the interlock, older subjects up to about age 60 were generally more likely to complete the period on the interlock (Wald = 31.1; $df = 11$; $P = 0.001$), but gender showed no relationship to the likelihood of completing the interlock period. Those with few or no priors were more than 1.5 times and 3.0 times as likely to complete the interlock period as those with two or more priors (Wald = 291.7; $df = 3$; $P < 0.001$). Hispanics were 30% less likely to complete the interlock period than all other ethnic groups (Wald = 25.4; $P < 0.001$).

Recidivism rates

The highest recidivism rate (6.75% over 2 years) occurred among the DWI offenders who were serving their periods of full, no-driving suspension. Those who completed their period

of full suspension but who had not yet qualified for reinstatement had 50% lower recidivism rates (3.05% over 2 years), apparently because many were either not driving or had left the state. Those who reinstated and installed interlocks had a recidivism rate of 1.15% over 2 years, 80% lower than those still serving their mandatory suspension time. However, as research in prior interlock studies has found, the recidivism rate increased (to 5.20%) following deinstallation of the interlock.

Offenders who completed their full-suspension period and became eligible to reinstate were 38% less likely to recidivate than were offenders who served the full-suspension period but were not qualified to reinstate (Wald = 116.6; $P < 0.001$). Offenders who installed interlocks and completed the interlock program were 40% less likely to recidivate than offenders who installed and should have completed their period on the interlock, but had been extended and had not yet completed the interlock program (Wald = 26.3; $P < 0.001$).

DISCUSSION

In this study, we found that 93% of the offenders who qualified for reinstatement installed interlocks to regain full license status. This is the highest rate of entry into an interlock program on record. Nevertheless, only one in four of the offenders required to install interlocks to reinstate qualified for reinstatement. This was partly a function of the lengthy license suspension periods placed on drivers convicted of first aggravated and multiple DWI offenses in Florida (Table 1), but clearly, sanctions other than suspension also played a significant role in determining the percentage of offenders who became qualified to reinstate and install interlocks. In Florida, 53% of the offenders who completed their full-suspension periods were ineligible to reinstate because they had not satisfied the court's sanction requirements or the Florida DHSMV's administrative requirements. To what extent the failure to meet the reinstatement requirements is related to the offenders' lack of capability due to the severity of the DWI sanctions in Florida or to the offenders' lack of interest in reinstating is unclear.

The individual factors that led to reinstatement and installation of interlocks were predictable. Older offenders were more likely to reinstate than younger offenders. Perhaps because they are more likely to move out of state, drivers younger than 25 were especially unlikely to reinstate. Female offenders were more likely to reinstate than males, and offenders with multiple DWI convictions were less likely to reinstate than first offenders. Hispanics and African Americans were less likely than whites to reinstate, whereas Asian offenders were more likely than whites to reinstate. Although data on income were not available, the lower rates of qualification for reinstatement and installation of the interlock among African Americans, Hispanics and younger drivers suggest that low income was a factor in meeting the costs of reinstatement (fines and treatment fees) and installing the interlock that required a \$70 installation fee and \$2.60 per day rental. These results suggest clearly that Florida's requirements for reinstatement create a screening process that reduces the number of high-risk young male offenders and multiple offenders who qualify for reinstatement and who install interlocks.

When the recidivism of offenders in the interlock program was compared with offenders serving their full license suspension, the interlock group had an 80% lower recidivism rate. Evidence that this reduction was due to the interlock is provided by the rise in recidivism after deinstallation. Nevertheless, there is a possibility that subject selection contributed to the difference, given the evidence of the screening effect of the reinstatement qualifying process. The low recidivism while on the interlock suggests the potential value of shortening the full-suspension period during which illicit driving produces a higher recidivism rate and lengthening the interlock period required for reinstatement during which recidivism is lower. Nevertheless, as in other interlock studies, recidivism increased after deinstallation of the interlock. This suggests that, for longer-term suppression of recidivism, behavioral change is required such as might be provided by effective treatment programs. Although most court systems mandate treatment for DWI offenders, it is limited mainly to brief educational programs.

The recidivism rate for offenders who completed all the reinstatement requirements for reinstatement but did not reinstate was 50% lower than that of the offenders who were still suspended. This provides further evidence of the screening effect of the Florida DWI sanction program. The number of higher-risk offenders eligible to reinstate may have been reduced by repeat offenses that extended the period of suspension. Another possibility is that some of those offenders who completed the requirements for reinstatement but did not install an interlock were no longer driving in Florida due to loss of access to a vehicle (which was needed to install the interlock), or because of medical problems, or because they were no longer a resident in Florida (e.g. offenders leaving the state without informing the Florida DHSMV).

This study is limited in several significant ways. First, we have no information from the offenders themselves on why they did or did not reinstate. In addition, this study evaluates only one state, and laws requiring interlocks for reinstatement vary across states. Other states may have achieved higher overall interlock installation rates; therefore, additional studies of states with interlock requirements for reinstatement are needed. Only a few states currently have the law, and as the 6-year data collection effort in this study demonstrates, evaluations of reinstatement programs require a lengthy data collection period. Meanwhile, policymakers will be under pressure to pass interlock reinstatement laws. Furthermore, we have no direct information on the factors influencing the offenders' decisions to reinstate and install interlocks. The Florida system requires that offenders meet a substantial set of requirements to reinstate. Clearly, those who meet those requirements do reinstate 93% of the time. Unclear is whether those requirements are creating barriers that offenders cannot meet or whether their inaction simply indicates a lack of interest in reinstating. Further, we do not know whether the interlock requirement contributed to the lack of interest. A future study is needed to determine if, with the initiation of the Florida interlock program, the proportion of all DWI offenders applying for reinstatement of their licenses declined.

Acknowledgments

This study was funded by the National Institute on Alcohol Abuse and Alcoholism (grant numbers R21 AA016758, K05 AA014260 and P20 AA017831). The research was made possible through the cooperation of Ms Barbara

Lauer, Chief of the Bureau of Driver Education and DUI Program of the Florida DHSMV. Mr Milton Gross provided assistance in the collection of driver records and advice on record interpretation.

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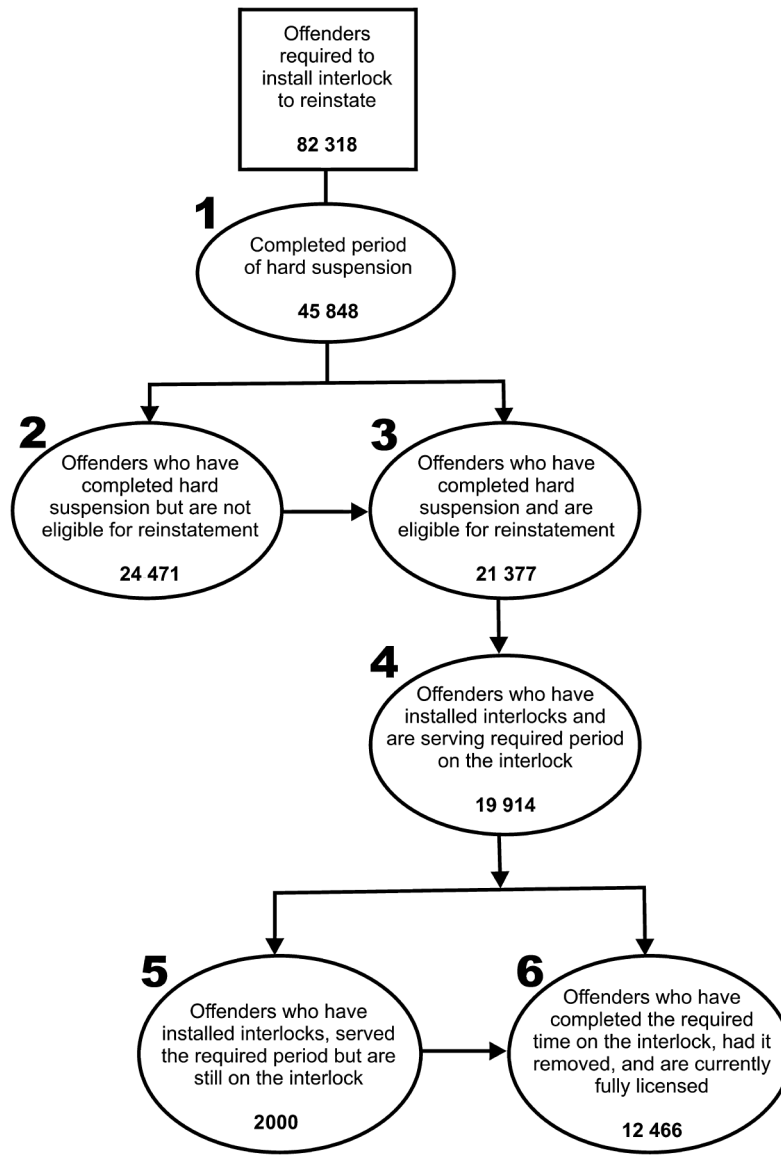


Figure 1. Flow diagram of path to reinstatement for Florida offenders required to install interlocks (July 2002–June 2008). Numbers indicate the offenders reaching each of the six steps as of June 2008. Approximately 4000 records of offenders during the 6-year period of the study had to be excluded because of incomplete data

Table 1

The length of the full-suspension period in relation to the number of prior offenses.

Full-suspension period	Number of prior offenses				Total
	0*	1	2	3+	
6 months	15 698	11 954	3 496	985	32 133
	65.9%	32.5%	22.1%	10.2%	
1 year	5 487	8 115	3 933	1 338	18 873
	23.0%	22.1%	24.8%	13.9%	
5 years	699	12 653	2 454	940	16 746
	2.9%	34.4%	15.5%	9.7%	
10 years	23	423	4 009	1 079	5 534
	0.1%	1.2%	25.3%	11.2%	
Indefinite	1 911	3 608	1 943	5305	12 767
	8.0%	9.8%	12.3%	55.0%	
Total	23 818	36 753	15 835	9647	86 053
	27.7%	42.7%	18.4%	11.2%	

* First offenders—no prior offenses. Figures in bold are percentages of the prior group that falls into each suspension group.