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Attitudes towards requiring ignition interlocks for all driving while intoxicated offenders: findings from the 2010 HealthStyles Survey

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Abstract

Ignition interlocks are effective in reducing recidivism among driving while intoxicated (DWI) offenders while installed on their vehicles. However, the devices are not widely used in the USA. This survey gauged public support for requiring ignition interlocks for all convicted DWI offenders including first-time offenders. 69% of respondents supported such a policy. Support was lowest (38%) among persons who reported drinking and driving in the past 30 days. Multivariate regression analysis indicated that support varied little by region, community size or most measured individual characteristics. Persons who did not drink and drive were 80% more likely to support the requirement than those who drink and drive. These findings suggest that laws requiring ignition interlocks for all convicted DWI offenders may face the most opposition in communities with high levels of drinking and driving.

INTRODUCTION

One third of all motor vehicle crash deaths in the USA involve an alcohol-impaired driver. In 2010, 10 228 people died in crashes in which at least one driver had a blood alcohol concentration (BAC) greater than or equal to the illegal level of 0.08%.¹ Many persons who drive while impaired by alcohol do so frequently. A study of eight states found that 21% to 47% of drivers convicted of driving while intoxicated (DWI) had at least one previous DWI conviction.² Preventing persons who have been convicted of DWI from continuing to drive while intoxicated can decrease alcohol-impaired driving crashes, injuries and fatalities.

Ignition interlocks are devices installed in vehicles that prevent operation by anyone with a BAC above a specified level, usually between 0.02% and 0.04%. They are typically installed in the vehicles of convicted DWI offenders. A systematic review from the Community Preventive Services Task Force (Task Force) found ignition interlocks reduced recidivism by

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Contributors RAS and GB conceptualised the analysis plan, interpreted the data, and wrote the article. GB analysed the data.

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a median of 67% while installed on the vehicles of offenders.³ However, only about 20% of eligible DWI offenders have the devices installed on their vehicles.⁴ The Task Force recommended making ignition interlocks mandatory for all offenders including first-time offenders.³

As states consider ways to increase use of ignition interlocks, it is important to understand the levels of public support for and opposition against expanding programmes that install and monitor interlocks on the vehicles of DWI offenders. Four recent US surveys reported that general support for requiring interlocks for DWI offenders was at least 80%.⁵⁻⁸ Two of the surveys reported support for requiring interlocks for all convicted DWI offenders including first-time offenders at 69% and 75%, respectively.⁶⁷ This study extends the findings of these surveys by exploring whether levels of support for such a policy varied by region of the country, community size, or selected individual characteristics.

METHODS

We analysed data from the 2010 HealthStyles survey. The survey methods are described in greater detail elsewhere.⁹¹⁰ Briefly, HealthStyles is a nationwide mail, self-administered survey conducted as a supplement to the annual ConsumerStyles survey. Both surveys are administered by Porter Novelli International, Washington, DC. Respondents to the 2010 ConsumerStyles survey were recruited from a consumer mail panel containing approximately 200 000 potential adult respondents. The sample was stratified on region, household income, population density, age, and household size and oversampled for low-income and minority potential recipients to ensure adequate representation of these groups. Respondents were given a small monetary incentive totalling less than US\$10 and were entered in a sweepstakes to win the first-place prize of \$1000 and 20 second-place prizes of \$50. The response rate was 52% with 10 328 respondents.

During September and October of 2010, the HealthStyles survey was sent to 6253 respondents of the 2010 ConsumerStyles survey. The Health-Styles survey contains questions about various health-related beliefs and behaviours. The response rate was 67% with 4198 respondents. Estimates were weighted by age, race, gender, income and household size to match 2009 US Current Population Survey proportions.¹¹ Institutional review board approval was not required for this study because Porter Novelli collected the data, providing Centers for Disease Control and Prevention with only a final, de-identified data set.

In the section of the survey about ignition interlocks, respondents were first asked if alcohol-impaired or drunk driving was a 'big problem' in their community. Then, a description of ignition interlocks was given, and respondents were asked if they had heard of the devices 'being required for the cars of convicted drunk drivers.' Next, respondents were asked if interlocks 'should be required for all convicted drunk drivers even if it is the driver's first conviction for drunk driving.' Five response categories were used for the questions about alcohol-impaired driving being a problem and support for interlocks for all DWI offenders: 'strongly disagree,' 'disagree,' 'neutral,' 'agree,' and 'strongly agree.' We combined the response categories 'agree' and 'strongly agree' into a single 'agree' category and 'strongly

disagree' and 'disagree' into a single 'disagree' category. In a separate section of the survey, drinking and driving behaviour was assessed with the question, "During the past 30 days, have you driven when you've had perhaps too much to drink?"

Outcome variables examined in the descriptive analysis included agreeing that alcohol was a big problem in their community, having heard of ignition interlocks, and agreeing that interlocks should be required for all convicted DWI offenders. Demographic variables examined included gender, age group, drinking and driving, race/ethnicity, employment status, education, marital status, annual household income, census region, and population density. For the multivariate analysis, the outcome of interest was agreeing that interlocks should be required for all convicted DWI offenders. Log-linear regression was used to produce prevalence ratios. Variables were retained in the multivariate analysis if they were statistically associated with the outcome in the bivariate analysis; statistical significance was assessed using 95% CIs. SAS V.9.2 was used for all analyses. Two hundred and ten (5%) respondents who did not answer the question about support for ignition interlocks or one or more of the covariates were excluded from the multivariate analysis, resulting in a sample size of 3988.

RESULTS

Overall, 64% of respondents agreed that alcohol-impaired driving is a big problem in their community, 80% had heard of ignition interlocks being required for the cars of convicted drunk drivers, and 69% supported requiring the devices for all convicted DWI offenders including first-time offenders (table 1). Fifteen per cent of respondents expressed being neutral about the use of interlocks for all offenders, and 16% disagreed with the approach. Support for requiring interlocks for all convicted DWI offenders exceeded 60% for all subgroups examined except for persons who reported drinking and driving in the past 30 days; 38% of drinking drivers supported the requirement, 13% were neutral, and 49% opposed it. Among respondents who did not drink and drive, 70% supported the requirement, 14% were neutral, and 16% opposed it.

Compared to women, men reported somewhat higher rates of having heard of ignition interlocks and lower rates of support for requiring the devices for all offenders. Likewise, persons who reported drinking and driving reported higher rates of having heard of ignition interlocks and lower rates of support for their use for all offenders than their counterparts who did not report the behaviour. The same pattern existed for persons living in the Midwest compared to those living in other census regions. Young persons aged 18–24 years, however, reported higher rates of both having heard of devices and support for their use for all offenders compared to other age groups.

Results of the regression analysis indicated that support for requiring interlocks for all convicted DWI offenders varied little by region, community size or most measured individual characteristics (table 2). Persons who did not drink and drive in the past 30 days were 80% more likely to support the requirement than those who drink and drive, after accounting for slight differences in support by gender, age, employment status, marital status, and census region.

DISCUSSION

Results of this study indicate that most (69%) adults support requiring ignition interlocks for all convicted DWI offenders including first-time offenders. This finding is consistent with results from two other recent surveys that reported public support at 69% and 75%.⁶⁷

This study provides several important insights. First, support for requiring ignition interlocks for all convicted DWI offenders seems to vary little by region of the country or community size. Whether or not a person engages in drinking and driving, however, appears to influence their support. Persons who did not drink and drive were 80% more likely than those who did to support an interlock requirement for all offenders. These findings suggest that laws requiring ignition interlocks for all convicted DWI offenders may face the most opposition in communities with high levels of drinking and driving.

This study has several limitations. First, the HealthStyles survey does not use probability sampling in selecting respondents, so participants may not be representative of the US population. However, responses to HealthStyles questions have been shown to favourably compare to responses to similar questions regarding health behaviours and illnesses from the Behavior Risk Factor Surveillance System survey, which uses a national probability sample.⁹ Second, because alcohol-impaired driving is illegal and carries a social stigma, respondents may under-report drinking and driving behaviour, which could bias the measure of support for interlock programs. Lastly, answering the drinking and driving question requires subjective judgement. Although this measure cannot be equated to a specific BAC, 63% of those reporting drinking and driving in the past 30 days also reported binge drinking. This finding suggests that many of the respondents who reported drinking and driving may have driven while legally intoxicated.

As of April 2012, 16 states had passed ignition interlock laws that require or strongly encourage interlocks for all DWI offenders upon the first conviction,¹² and five (Missouri, South Carolina, Pennsylvania, Massachusetts, and New Jersey) additional states and the District of Columbia were considering all-offender laws (personal communication, Frank Harris of Mothers Against Drunk Driving, 1 May 2012). To be successful, this movement towards establishing an interlock requirement for all offenders must overcome the perception that many first-time offenders are ‘social drinkers’ who may have had a single episode of drinking and driving.¹³ Research disputes this perception. The likelihood of being arrested when driving while intoxicated is estimated to be 1 in 88.¹⁴ Additionally, a recent analysis of DWI violations in Maryland found that the DWI arrest rate among persons with one previous DWI violation was more than 7 times higher than among drivers with no prior violations.¹³

Public policy literature describes three ‘streams’ that converge to create opportunity for policy change: recognition of a problem; existence of an acceptable and feasible policy proposal; and political receptivity.^{15,16} This study helps to address the first two streams by confirming that US residents view alcohol-impaired driving as a serious problem and establishing their support for an ignition interlock requirement for all convicted DWI offenders, including first-time offenders.

References

1. National Highway Traffic Safety Administration. Traffic Safety Facts Research Note 2010 Motor Vehicle Crashes Overview. Publication No. DOT HS 811 552. Washington, DC: USDOT; 2011. <http://www-nrd.nhtsa.dot.gov/Pubs/811552.pdf> [accessed 2 Feb 2012]
2. National Highway Traffic Safety Administration. [accessed 2 Feb 2012] Repeat DWI Offenders in the United States. NHTSA Traffic Tech. No. 85. 1995. <http://www.nhtsa.gov/people/outreach/traftech/1995/TT085.htm>
3. Elder RW, Voas RB, Beirness D, et al. Effectiveness of ignition interlocks for preventing alcohol-impaired driving and alcohol-related crashes. A Community Guide Systematic Review. *Am J Prev Med.* 2011; 40:362–76. [PubMed: 21335270]
4. Marques, PR., Voas, RB. Key Features for Ignition Interlock Programs. Publication No. DOT HS 811 262. Washington, DC: National Highway Traffic Safety Administration; 2010. http://www.nhtsa.gov/staticfiles/nti/impaired_driving/pdf/811262.pdf [accessed 2 Feb 2012]
5. McCart AT, Wells JK, Teoh ER. Attitudes toward in-vehicle advanced alcohol detection technology. *Traffic Inj Prev.* 2010; 11:156–64. [PubMed: 20373235]
6. AAA Foundation for Traffic Safety. [accessed 2 Feb 2012] Traffic Safety Culture Index. 2010. <http://www.aaafoundation.org/pdf/2010TSCIndexFinalReport.pdf>
7. AAA Foundation for Traffic Safety. [accessed 2 Feb 2012] Traffic Safety Culture Index. 2011. <http://www.aaafoundation.org/pdf/2011TSCIndex.pdf>
8. Munnich LW, Loveland JD. Do Americans oppose controversial evidence-based road safety policies? *Transportation Res Rec.* 2011; 2213:9–12.
9. Pollard, WE. Proceedings of the American Statistical Association, Section on Health Policy Statistics. Alexandria, VA: American Statistical Association; 2002. Use of consumer panel survey data for public health communication planning: an evaluation of survey results; p. 2720-4. <http://www.amstat.org/sections/srms/proceedings/y2002/Files/JSM2002-000768.pdf> [accessed 31 May 2012]
10. Davis SP, McClave-Regan AK, Rock VJ, et al. Perceptions of menthol cigarette use among U.S. adults and adult smokers: findings from the 2009 HealthStyles survey. *Nicotine Tob Res.* 2010; 12(Suppl 2):S125–35. [PubMed: 21177369]
11. U. S. Census Bureau. [accessed 23 Apr 2012] Current Population Survey (CPS) Homepage. <http://www.census.gov/cps>
12. Mothers Against Drunk Driving. [accessed 1 May 2012] Status of State Ignition Interlock Laws, First Conviction. 2011. <http://www.madd.org/drunken-driving/campaign/status-of-state-ignition.html>
13. Rauch WJ, Zador PL, Ahlin EM, et al. Risk of alcohol-impaired driving recidivism among first offenders and multiple offenders. *Am J Public Health.* 2010; 100:919–24. [PubMed: 19846687]
14. Zador, P., Krawchuck, M., Moore, B. Drinking and Driving Trips, Stops by the Police, and Arrests: Analyses of the 1995 Survey of Drinking and Driving Attitudes and Behavior. Publication No. DOT HS 809 184. Washington, DC: National Highway Traffic Safety Administration; 2001. http://ntl.bts.gov/lib/26000/26600/26662/809_184.pdf [accessed 2 Feb 2012]
15. Kingdon, JW. Agendas, Alternatives, and Public Policies. 2. New York: Addison-Wesley Educational Publishers, Inc; 1995.
16. Bugeja L, McClure RJ, Ozanne-Smith J, et al. The public policy approach to injury prevention. *Inj Prev.* 2011; 17:63–5. [PubMed: 21278088]

What is already known on the subject

- Ignition interlocks are effective in reducing recidivism among driving while intoxicated (DWI) offenders while installed on their vehicles.
- Only about 20% of eligible DWI offenders have the devices installed on their vehicles.
- Many states are actively trying to increase the use of ignition interlocks.

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What this study adds

- In 2010, 69% of respondents supported requiring ignition interlocks for all convicted DWI offenders including first-time offenders.
- Support was lowest (38%) among persons who reported drinking and driving in the past 30 days.
- Multivariate analysis indicated that persons who did not drink and drive were 80% more likely to support the requirement than those who drink and drive.
- These findings suggest that laws requiring ignition interlocks for all convicted DWI offenders may face the most opposition in communities with high levels of drinking and driving.

Table 1

Demographic characteristics by perception of alcohol-impaired driving as a problem in their community, having heard of ignition interlocks being required for the cars of convicted drunk drivers, and support for requiring interlocks for all convicted driving while intoxicated offenders including first-time offenders, HealthStyles 2010

Characteristic	Agrees that alcohol-impaired driving is a big problem in community, % (95% CI)	Has heard of interlocks being required for the cars of convicted drunk drivers, % (95% CI)	Agrees that interlocks should be required for all convicted drunk drivers, % (95% CI)
Gender			
Women	65 (63 to 66)	80 (79 to 81)	72 (71 to 74)
Men	63 (61 to 64)	84 (83 to 86)	65 (63 to 66)
Age (years)			
18–24	65 (63 to 66)	90 (89 to 90)	75 (74 to 76)
25–34	61 (60 to 63)	82 (81 to 83)	66 (64 to 67)
35–44	60 (59 to 62)	81 (80 to 82)	66 (64 to 67)
45–54	60 (58 to 61)	84 (83 to 85)	66 (64 to 67)
55–64	70 (69 to 71)	81 (80 to 82)	71 (69 to 72)
65+	69 (68 to 71)	77 (75 to 78)	71 (70 to 73)
Driven after drinking *			
Yes	57 (56 to 59)	90 (90 to 91)	38 (36 to 39)
No	64 (63 to 66)	82 (81 to 83)	70 (69 to 71)
Race/ethnicity			
White	66 (65 to 68)	86 (85 to 87)	68 (66 to 69)
Black	50 (49 to 52)	76 (75 to 77)	67 (65 to 68)
Hispanic	62 (61 to 64)	74 (73 to 76)	73 (72 to 75)
Other	66 (64 to 67)	65 (63 to 66)	69 (68 to 71)
Employed			
Yes	62 (61 to 64)	84 (83 to 86)	66 (65 to 68)
No	68 (66 to 69)	77 (76 to 78)	73 (72 to 75)
Education			
High school or less	64 (63 to 66)	79 (77 to 80)	66 (65 to 67)
Some college or graduated	63 (62 to 65)	83 (82 to 84)	69 (67 to 70)
Graduate school	67 (65 to 68)	82 (81 to 83)	72 (71 to 74)
Marital status			
Divorced/separated	65 (63 to 66)	83 (81 to 84)	62 (61 to 64)
Married	64 (62 to 65)	82 (81 to 83)	70 (69 to 71)
Widowed	74 (72 to 75)	72 (71 to 74)	76 (75 to 78)
Never married	62 (61 to 64)	84 (83 to 85)	67 (66 to 68)
Domestic partnership	59 (58 to 61)	84 (83 to 85)	66 (64 to 67)
Household income			
Under \$15 000	67 (66 to 69)	72 (70 to 73)	68 (66 to 69)
\$15 000–\$29 999	62 (61 to 64)	80 (79 to 81)	73 (72 to 75)

Characteristic	Agrees that alcohol-impaired driving is a big problem in community, % (95% CI)	Has heard of interlocks being required for the cars of convicted drunk drivers, % (95% CI)	Agrees that interlocks should be required for all convicted drunk drivers, % (95% CI)
\$30 000–\$49 999	64 (62 to 65)	83 (82 to 84)	69 (68 to 71)
\$50 000–\$99 999	64 (63 to 66)	85 (84 to 86)	68 (66 to 69)
\$100 000–\$199 999	62 (61 to 64)	85 (83 to 86)	65 (63 to 66)
\$200 000+	65 (63 to 66)	87 (86 to 88)	70 (68 to 71)
Census region			
Midwest	62 (60 to 63)	87 (86 to 88)	61 (59 to 62)
Northeast	67 (66 to 69)	85 (84 to 86)	73 (71 to 74)
South	63 (62 to 65)	78 (77 to 79)	71 (69 to 72)
West	65 (63 to 66)	82 (81 to 83)	71 (70 to 73)
Community size			
Non-metro	69 (68 to 70)	80 (79 to 81)	69 (68 to 70)
100 000–249 999	61 (60 to 63)	82 (80 to 83)	70 (68 to 71)
250 000–999 999	65 (63 to 66)	82 (81 to 83)	69 (67 to 70)
1 million +	62 (61 to 63)	83 (82 to 84)	68 (67 to 69)
Total	64 (63 to 66)	80 (79 to 81)	69 (68 to 70)

* Driven after drinking was assessed with the question, “During the past 30 days, have you driven when you’ve had perhaps too much to drink?”

Table 2

Prevalence ratios for agreeing that ignition interlocks should be required for all driving while intoxicated offenders including first-time offenders, HealthStyles 2010

Characteristic	Crude prevalence ratio (95% CI)	Adjusted prevalence ratio (95% CI)
Gender		
Women	1.1 (1.1 to 1.2)	1.1 (1.0 to 1.1)
Men	1.0	1.0
Age (years)		
18–24	1.1 (1.1 to 1.2)	1.2 (1.1 to 1.3)
25–34	1.0 (0.9 to 1.1)	1.0 (1.0 to 1.1)
35–44	1.0 (0.9 to 1.1)	1.0 (0.9 to 1.1)
45–54	1.0	1.0
55–64	1.1 (1.0 to 1.2)	1.1 (1.0 to 1.1)
65+	1.1 (1.0 to 1.2)	1.0 (1.0 to 1.1)
Driven after drinking [*]		
Yes	1.0	1.0
No	1.8 (1.5 to 2.3)	1.8 (1.4 to 2.2)
Race/ethnicity		
White	1.0	–
Black	1.0 (0.9 to 1.1)	–
Hispanic	1.1 (1.0 to 1.1)	–
Other	1.0 (0.9 to 1.1)	–
Employed		
Yes	1.0	1.0
No	1.1 (1.1 to 1.2)	1.1 (1.0 to 1.1)
Education		
High school or less	1.0	–
Some college or graduated	1.0 (1.0 to 1.1)	–
Graduate school	1.1 (1.0 to 1.2)	–
Marital status		
Divorced/separated	1.0	1.0
Married	1.1 (1.0 to 1.2)	1.1 (1.1 to 1.2)
Widowed	1.2 (1.1 to 1.4)	1.2 (1.1 to 1.3)
Never married	1.1 (1.0 to 1.2)	1.1 (1.0 to 1.2)
Domestic partnership	1.1 (0.9 to 1.2)	1.0 (0.9 to 1.2)
Household income		
Under \$15 000	1.0 (0.8 to 1.1)	–
\$15 000–\$29 999	1.1 (0.9 to 1.2)	–
\$30 000–\$49 999	1.0 (0.9 to 1.2)	–
\$50 000–\$99 999	1.0 (0.9 to 1.1)	–
\$100 000–\$199 999	0.9 (0.8 to 1.1)	–
\$200 000+	1.0	–

Characteristic	Crude prevalence ratio (95% CI)	Adjusted prevalence ratio (95% CI)
Census region		
Midwest	1.0	1.0
Northeast	1.2 (1.1 to 1.3)	1.2 (1.1 to 1.3)
South	1.2 (1.1 to 1.2)	1.1 (1.1 to 1.2)
West	1.2 (1.1 to 1.3)	1.1 (1.1 to 1.2)
Community size		
Non-metro	1.0	–
<100 000–249 999	1.0 (0.9 to 1.1)	–
250 000–999 999	1.0 (0.9 to 1.1)	–
1 million+	1.0 (0.9 to 1.0)	–

Prevalence ratios in bold print are statically significant.

* Driven after drinking was assessed with the question, “During the past 30 days, have you driven when you’ve had perhaps too much to drink?”

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