# A Review of Legislation Restricting the Intersection of Firearms and Alcohol in the U.S.

Brendan G. Carr, MD, MS<sup>a,b,c</sup> Gali Porat, JD, MS<sup>d</sup> Douglas J. Wiebe, PhD<sup>a,b,c</sup> Charles C. Branas, PhD<sup>a,b,c</sup>

# **SYNOPSIS**

**Objectives.** In the United States, injury is a leading cause of alcohol-related death, and alcohol use is the leading risk factor for injury. We reviewed state and federal legislation regulating the intersection of alcohol and firearms.

**Methods.** We examined the current criminal codes of all 50 states and the District of Columbia using the databases Westlaw and LexisNexis to review restrictions on firearm use while intoxicated.

**Results.** We found three types of laws in 26 states that restrict firearm use by intoxicated people: sales or transfers are restricted in six states, carrying of concealed weapons is restricted in four states, and possession or discharge of a firearm while intoxicated is restricted in 20 states.

**Conclusions.** Regulation of the carrying and use of firearms by acutely intoxicated individuals may represent a public health opportunity to reduce firearm-related injury.

Address correspondence to: Brendan G. Carr, MD, MS, University of Pennsylvania School of Medicine, 929 Blockley Hall, 423 Guardian Dr., Philadelphia, PA 19104; tel. 215-573-3976; fax 215-573-2265; e-mail <carrb@upenn.edu>.

©2010 Association of Schools of Public Health

<sup>&</sup>lt;sup>a</sup>Department of Emergency Medicine, University of Pennsylvania School of Medicine, Philadelphia, PA

<sup>&</sup>lt;sup>b</sup>Department of Biostatistics and Epidemiology, University of Pennsylvania School of Medicine, Philadelphia, PA

<sup>&</sup>lt;sup>c</sup>The Leonard Davis Institute of Health Economics, University of Pennsylvania, Philadelphia, PA

<sup>&</sup>lt;sup>d</sup>University of Pennsylvania School of Law, Philadelphia, PA

Injury is the leading cause of alcohol-related death in the United States, and alcohol is the leading risk factor for injury.<sup>1,2</sup> Owing to the considerable presence of alcohol in injury events of all types, alcohol's relationship to injury has been the subject of modern scientific investigation for an entire century.3-7 Roughly one-quarter of the alcohol-related injury deaths in the U.S. each year are due to motor vehicle crashes.8 As a result, the great majority of the research dedicated to understanding alcohol's relationship to injury has focused on drunk driving. This work has effectively decreased the number of traffic fatalities involving alcohol,9 and the prevention of drinking and driving has been hailed as one of the top 10 U.S. public health achievements of the 20th century by the Centers for Disease Control and Prevention (CDC). 10,11 A nearly equal one-fifth of alcohol-related injury deaths are the result of firearm injuries;8 however, little research has focused on alcohol use and shootings.

The disparity in attention that has been paid to these two types of alcohol-involved fatalities—those from motor vehicle crashes and those from firearms—is even more surprising when considering more closely their similarities in terms of magnitude. There are about 250 million motor vehicles in the U.S.,12 and each year more than 40,000 Americans die in traffic crashes, making motor vehicle crash the leading cause of injury death in the U.S. (http://www.cdc.gov/injury/wisqars/index .html).13 Similarly, there are about 250 million guns in the U.S., 14 and each year more than 30,000 Americans die in shootings, making firearms the second leading cause of injury death in the U.S. About one-third of U.S. households contain firearms, 15 and opportunities to obtain a firearm exist for adolescents16 and adults alike.<sup>17</sup> Whereas drunk driving restrictions have reduced the magnitude of alcohol-related motor vehicle crash death considerably, it is unclear to what degree such legal restrictions have been undertaken to reduce the problem of alcohol-related firearm death.

Proscribed blood alcohol concentration levels and legal penalties for driving while intoxicated are the result of decades of scientific study establishing a driver's crash risk relative to the amount of alcohol the driver has consumed. All 50 U.S. states and the District of Columbia (DC) have laws making it a crime to drive with a blood alcohol concentration at or above a proscribed level: 0.08 milligrams per deciliter. Violations of these laws carry clear legal penalties for drivers who have consumed alcohol past the proscribed level, to "intoxication." Similar reductions in firearm-related fatalities could result from alcohol research efforts comparable to those already

devoted to motor vehicle crashes. Such efforts might also prevent other violence-related outcomes. Each year, almost two million criminal offenses occur by an offender who is under the influence of alcohol at the time of the offense (about 36% of all offenders),<sup>23</sup> and a policy effort that effectively restricts the use of firearms while intoxicated may result in the prevention of a range of violent crimes.

There is a federal restriction on selling or otherwise disposing of firearms to an individual who is an unlawful user of or [is] addicted to any controlled substance, as defined in section 102 of the Controlled Substances Act.<sup>24</sup> This definition of controlled substances explicitly excludes alcohol, wines, and other distilled spirits.<sup>25</sup> Given the success of regulating the use of motor vehicles while intoxicated, we sought to determine the prevalence and distribution of state and federal legislation regulating the intersection of alcohol and firearms by performing a 50-state survey. This research is especially timely given recent state legislation allowing the carrying of concealed weapons in establishments that serve alcohol.

### **METHODS**

We used Westlaw and LexisNexis to conduct on online search of the criminal codes in existence in all 50 U.S. states and DC as of January 1, 2008. We performed searches using various combinations of the key words alcohol, intoxication, firearm, gun, liquor(s), alcoholic, and bar using methods previously described.<sup>23</sup> We also reviewed legal criminal codes of states pertaining to firearms to capture any codes not resulting from the key word search. The search was performed by one of the authors (GP), who has training in advanced legal research and extensive knowledge and experience using these databases. We then compared results with simultaneously performed searches performed by trained legal librarians and Westlaw representatives to ensure that the search strategy was appropriate and that all relevant databases were cross-checked. Any discrepancies were resolved through discussion to obtain consensus.

What resulted was a database of laws identified in the U.S., arrayed as one law per row. Each law was classified according to the primary intent of the legislation. The assigned categories were (1) prohibition of possession of a loaded firearm in a place where intoxicating liquor is sold for consumption on premises; (2) restriction of sale, transfer, possession, or discharge of a firearm to/by an intoxicated person; and (3) restriction of firearm ownership based on habitual alcohol use.

### **RESULTS**

Our search identified a total of 46 laws in 31 states that restrict the intersection of alcohol and firearms. 24-75 "Intoxication" was defined in various ways for different states. These definitions of intoxication related to firearms ranged from being undefined (i.e., only the word "intoxicated" appeared with no accompanying numerical definition) to having specific numerical definitions of intoxication (e.g., 0.08 or 0.10 milligrams/deciliter blood alcohol concentration) to referencing the state drunk driving law cutoff for blood alcohol concentration. The foci of these laws are detailed according to location, acute intoxication, and habitual alcohol use or treatment restrictions.

### Restriction by location

Of the 50 U.S. states and DC, a total of 12 states (Alaska, Arkansas, Illinois, Kentucky, Louisiana, Michigan, New Mexico, Oklahoma, South Carolina, Tennessee, Texas, and Wisconsin) have alcohol-specific firearm restrictions in terms of an individual's location (i.e., as opposed to whether or not the individual has a history of habitual alcohol use or is intoxicated). Specifically, these states restricted possession of a loaded firearm in a place where intoxicating liquor is sold for consumption on premises. Only one of these states (Illinois) does not regulate firearm and alcohol use in any other manner that is detailed in the following sections.

# Restriction by acute intoxication

A total of 26 states have laws restricting firearms for people who are intoxicated (Figures 1 and 2). Six states (Alaska, Delaware, Indiana, Maryland, Tennessee, and Texas) restrict the sale or transfer of firearms to an intoxicated person, and four states (Idaho, Maine,

Figure 1. U.S. states with laws restricting the possession or usage of firearms on the grounds of acute intoxication

Scope of firearm-related laws	States
Restrict sale or transfer to an intoxicated person	Alaska, Delaware, Indiana, Maryland, Tennessee, Texas
Restrict possession and/or discharge of a firearm by an intoxicated person	Alaska, Colorado, Connecticut, Florida, Georgia, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New Mexico, Ohio, Oklahoma, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah
Restrict carrying concealed weapons while intoxicated	ldaho, Maine, Montana, North Carolina

Montana, and North Carolina) restrict the carrying of a concealed weapon while intoxicated. A total of 20 states have laws that specifically restrict possession and/or discharge of a firearm by an intoxicated person.

# Restriction by habitual alcohol use or treatment

An additional group of laws categorically restricts firearm ownership or firearm use by individuals rather than temporarily restricting the carrying and use of a firearm as a result of temporary impairment by alcohol. Laws that categorically restrict ownership largely do so on the grounds of "habitual alcohol use." A total of 18 states restrict firearms based on this criterion, some states in more than one manner. Of states restricting ownership or use of firearms by habitual alcohol users, four states restrict the sale or transfer of firearms (Alabama, Indiana, Maryland, and Tennessee), three restrict firearm possession (Alabama, Florida, and Ohio), seven restrict licensure of firearms (Georgia, Iowa, Maryland, Nevada, New Jersey, Pennsylvania, and West Virginia), and eight restrict concealed carrying of firearms (Colorado, Florida, Kentucky, Louisiana, Mississippi, Missouri, New Mexico, and Wyoming) (Figure 3). An additional three states restrict firearm ownership by people who are currently or have previously been under treatment for alcohol addiction, abuse, or dependence (Hawaii, Massachusetts, and Rhode Island).

Two states restrict possession of firearms by people convicted of alcohol-related crimes. One of these states (Pennsylvania) was previously mentioned as restricting licensure to habitual users, and the other (Arkansas) revokes firearm licenses upon conviction of an alcohol-related crime.

## DISCUSSION

We reviewed laws restricting the interaction of firearms and alcohol, and offer the successful public health intervention of restricting motor vehicle use while intoxicated as a model by which to decrease the mortality associated with firearms. A salient finding of our review was that many states do little to restrict the intersection of alcohol and firearms. In a considerable number of states, firearm ownership and use is precluded for people with a history of habitual alcohol use or who have received or are receiving treatment for alcohol abuse and dependence. However, almost half of all states have no restrictions on ownership, possession, or use of a firearm while intoxicated. Complicating matters further, the terms "intoxication" and "habitual" are not explicitly defined by the legal code in many states.

Researchers have demonstrated that using alcohol

Restrict possession/discharge & sale/transfer Restrict possession or discharge by intoxicated persons

Figure 2. U.S. states restricting the intersection of alcohol intoxication and firearms, by type of restriction

detracts from driving performance. Restrictions on operating a vehicle while intoxicated are the result of decades of scientific study to establish a driver's risk of crash relative to the amount of alcohol consumed. Randomized, blinded, placebo-controlled trials using human drivers in driving simulators provided the foundation for establishing these specific risks. This line of scientific study has led to universal restriction of driving while intoxicated in the U.S.<sup>22</sup>—a policy that has potentially saved tens of thousands of lives. An improved understanding of the effects of alcohol on the ability to appropriately use a firearm—perhaps even using randomized controlled trials-could contribute substantively to the understanding of how the U.S. public could live more safely with firearms. Just as with motor vehicles, approaches to safety may not involve outright bans of guns but, rather, strong and clear restrictions of their unsafe use, such as alcohol intoxication.

Despite the described similarities in the relation-

ship of alcohol to both motor vehicles and firearms, there is a fundamental difference in how the two are regulated. A common regulatory hurdle pertaining to motor vehicles is through usage, whereas the primary

Restrict concealed carrying by intoxicated persons Restrict sale or transfer to intoxicated persons

Figure 3. U.S. states with laws restricting firearms on the grounds of habitual alcohol use

Firearms-related laws	States
Restriction on sale/transfer of firearms	Alabama, Indiana, Maryland, Tennessee
Restriction on possession of firearms	Alabama, Florida, Ohio
Restriction on licensure of firearms	Georgia, Iowa, Maryland, Nevada, New Jersey, Pennsylvania, West Virginia
Prohibition of concealed carrying of firearms	Colorado, Florida, Kentucky, Louisiana, Mississippi, Missouri, New Mexico, Wyoming

regulatory hurdle for firearms is through ownership. Examples include limits placed on the times of day that junior drivers may operate vehicles, consequences associated with violation of restrictions including license suspension and revocation, and restriction of driving while intoxicated. In contrast, firearms are more commonly restricted within the domain of ownership. This is true in the case of people convicted of a felony, minors, fugitives, undocumented immigrants, people adjudicated as mentally incompetent, people with an alcohol addiction, and people convicted of perpetrating intimate partner violence.

Regulations on usage, rather than ownership, offer an opportunity to the public health community to decrease the injury burden of firearms. Given the significant number of criminal offenders who drink alcohol when they commit their offense, <sup>23</sup> there may be implications for stiffer sentences for criminal behavior. There are also, however, policy implications that have the potential to impact the discovery and punishment of gun carriers (legal and illegal) who are intoxicated before they discharge their weapons, and the discovery and punishment of gun carriers (legal and illegal) who are intoxicated after they discharge their weapons.

The regulation of firearms in the U.S. is controversial, and after decades of debate about the intent of the Second Amendment, the U.S. Supreme Court recently agreed that the law implies an individual rather than a collective right to ownership. However, the majority opinion in this landmark case made clear that restricting firearm use is well within the rights of the government in stating that "... nothing in our opinion should be taken to cast doubt on longstanding prohibitions on the possession of firearms by felons and the mentally ill, or laws forbidding the carrying of firearms in sensitive places such as schools and government buildings, or laws imposing conditions and qualifications on the commercial sale of arms."76 The regulation of firearm use by intoxicated individuals is likely to be allowable given this interpretation.

# Limitations

This study had several limitations. It is possible that we missed laws related to the intersection of firearms and alcohol in our review of legal code. It is also important to recognize that simply the presence of a legal code does not assure the enforcement of the law, nor does it ensure that a deterrent effect will be realized. These factors are sure to impact the magnitude of the effectiveness of the intervention, and future work should seek to examine the rates of prosecution for laws restricting firearm use while intoxicated. Finally, although we present a conceptual framework and legal review, we

have not attempted to demonstrate the effectiveness of this legislation and cannot comment on whether restricting the intersection of alcohol and guns would actually decrease firearm injuries and deaths.

# **CONCLUSIONS**

Motor vehicle crash-associated deaths were markedly reduced by regulating driving while intoxicated. Given that operating a car likely encompasses similar demands, in terms of mental and physical ability, as operating a firearm, it can be hypothesized that alcohol might decrease the ability of an individual to appropriately use a firearm.<sup>77</sup> Efforts to reduce firearm-related injuries in the U.S. have mirrored efforts for motor vehicle safety in many ways.<sup>78–81</sup> Given the successful implementation of laws regulating the use of motor vehicles while intoxicated, we conclude that restricting the possession or discharge of firearms while intoxicated may hold promise as a public health intervention.

### **REFERENCES**

- Harwood HF, Fountain D, Livermore G. The economic costs of alcohol and drug abuse in the United States—1992. Rockville (MD): Department of Health and Human Services (US); 1998. NIH Publication No. 98-4327.
- Gordis E. Alcohol and trauma. Washington: National Institutes of Health (US), National Institute on Alcohol Abuse and Alcoholism; 1989.
- Parker RN, Rebhun L-A. Alcohol and homicide: a deadly combination of two American traditions. New York: State University of New York; 1995.
- Dinerman B. Regionalization of obstetric services: problems and opportunities. Am J Obstet Gynecol 1974;120:309-18.
- Musto DF. Alcohol control in historical perspective. In: Plant MA, Single E, Stockwell T, editors. Alcohol: minimising the harm. New York: Free Association Books; 1997. p. 10-25.
- Roizen J. Alcohol and trauma. In: Giesbrecht N, Gonzalez R, Grant M, Osterberg E, Room R, Rootman I, et al., editors. Drinking and casualties: accidents, poisonings, and violence in an international perspective. London: Routledge; 1989. p. 19-61.
- Cherpitel CJ. The epidemiology of alcohol-related trauma. Alcohol, Health Res World 1992;16:191-6.
- Branas CC, Elliott MR, Richmond TS, Culhane D, Ten Have TR, Wiebe DJ. Alcohol consumption, alcohol outlets, and the risk of being assaulted with a gun. Alcohol Clin Exp Res 2009;33:906-15.
- Achievements in public health, 1900–1999. Motor-vehicle safety: a 20th century public health achievement. MMWR Morb Mortal Wkly Rep 1999;48(18):369-74.
- Centers for Disease Control and Prevention (US). Ten great public health achievements—United States, 1900–1999. JAMA 1999;281:1481.
- Ten great public health achievements—United States, 1900–1999. MMWR Morb Mortal Wkly Rep 1999;48(12):241-3.
- 12. Department of Transportation (US), Federal Highway Administration. Highway statistics 2006 [cited 2010 Apr 26]. Available from: URL: http://www.fhwa.dot.gov/policy/ohim/hs06/index.htm
- Smith GS, Branas CC, Miller TR. Fatal nontraffic injuries involving alcohol: a metaanalysis. Ann Emerg Med 1999;33:659-68.
- Vizzard WJ. Shots in the dark. The policy, politics, and symbolism of gun control. New York: Rowman & Littlefield Publishers, Inc.; 2000.

- 15. Hemenway D. Private guns, public health. Ann Arbor (MI): University of Michigan Press; 2004.
- Vaughan RD, McCarthy JF, Armstrong B, Walter HJ, Waterman PD, Tiezzi L. Carrying and using weapons: a survey of minority junior high school students in New York City. Am J Public Health
- 17. Sorenson SB, Vittes KA. Buying a handgun for someone else: firearm dealer willingness to sell. Inj Prev 2003;9:147-50.
- 18. University of Iowa. NADS awarded \$2.9 million for alcohol and driver performance research [press release]; 2002 Dec 31 [cited 2010 Apr 26]. Available from: URL: http://www.news-releases.uiowa .edu/2002/december/1231nads.html
- Jackson JSH, Blackman R. A driving-simulator test of Wilde's risk homeostasis theory. J Appl Psychol 1994;79:950-8.
- 20. Centers for Disease Control and Prevention (US). AR-13: prohibition on use of CDC funds for certain gun control activities [cited 2010 Apr 26]. Available from: URL: http://www.cdc.gov/od/pgo/ funding/grants/additional\_req.shtm
- 21. Alcohol Policy Information System. Distribution of recreational watercraft operator BAC limit laws from January 1, 1998, through January 1, 2008. NIAAA, 2008 [cited 2010 Apr 26]. Available from: URL: http://www.alcoholpolicy.niaaa.nih.gov/Blood\_Alcohol\_ Concentration\_Limits\_Operators\_of\_Recreational\_Watercraft.
- Insurance Institute for Highway Safety. DUI/DWI laws. April 2010 [cited 2010 Apr 26]. Available from: URL: http://www.iihs.org/ laws/dui.aspx
- Greenfield LA. Alcohol and crime: an analysis of national data on the prevalence of alcohol involvement in crime. Washington: Bureau of Justice Statistics, Department of Criminal Justice (US);
- 18 U.S.C. § 922(d)(3); (g)(3).
- 25.
- 21 U.S.C. § 802(6). See generally Ala Code § 13A-11-50 (2004). 26.
- See generally Alaska Stat § 11.61.190 et seq (2009); 18.65.700 et seq
- See generally Ariz Stat. § 13-905 et seq (2009); § 13-3101 (2010). 28.
- See generally Ark Stat Ann  $\S$  5-73-101 et seq (2010); 5-73-201 et seq 29. (2010)
- 30. See generally California Penal Code § 12000 et seq (2010); Cal Welf & Inst Code § 8100 et seq (2009).
- See generally Col Revised Stat § 12-26.1-101 (2002); 18-12-101 et seq 31. (2010); 24-33.5-424 (2008).
- 32. See generally Conn Gen Stat § 29-27 (2010) et seq; 53-202 et seq (2010); 53a-211 et seq (2010).
- See generally Del Code § 11-1441 (2007) et seq; 24-901 et seq 33. (2010).
- See generally Fla Stat § 790.001 et seq (2010).
- See generally Ga Code Ann § 16-11-101.1 et seq (2009); 16-11-171 (2009); 16-11-172 (2005); 35-3-34 (2006).
- See generally Haw Rev Stat § 134-1 et seq (2009).
- See generally Idaho Code § 18-310 (2010); 18-3302 et seq (2006).
- See generally Ill Rev Stat 430:65/0.01 et seq (2006); 720:5/24-1 38. et seq (2009).
- See generally Ind Code Ann § 35-47-1-1 et seq (2010). See generally Iowa Code § 702.7 (2008); 724.1 et seq (2010).
- See generally Kansas Stat Ann § 21-4201 et seq (2009) 41.
- See generally Ky Rev Stat Ann § 237.060 et seq (2009); 431.064 (2007); 527.010 et seq (1994).
- See generally La Rev Stat Ann § 14:35.3, 91, 95 et seq (2009); 40:1379.3, 1751 et seq (2008).

- See generally Me Rev Stat Ann title 15 § 393 (2007).
- See generally Md Code Crim Law § 4 (2010); Public Safety § 5 (2010).
- See generally Mass Gen Laws 140 § 121 et seq (2004).
- See generally Mich Comp Laws Ann 3.111 et seq (2004); § 28.421 et seq (2008); 750.222 et seq (2001).
- See generally Minn Stat § 609.165 (2003); 609.66 et seq (2005); 624.71 et seq (1969).
- See generally Miss Code Ann 45-9-101 (2009); 97-37-1 et seq 49. (2007).
- See generally Mo Rev Stat § 407.500, 505 (2008); 571.010 et seq 50.
- See generally Mont Code Ann § 45-8-301 et seq (2009); 46-18-801 51. (1997).
- 52. See generally Neb Rev Stat § 28-1201 et seq (2009); 69-2401 et seq (2009).
- See generally Nev Rev Stat § 202.253 et seq (2005). 53
- See generally NH Rev Stat Ann § 159-D et seq (1999) 54
- 55. See generally NJ Rev Stat § 2C:39-1 et seq (2002); 2C:58-1 et seq (1979)
- See generally NM Stat Ann § 30-7-1 et seq (2010). 56.
- See generally NY Crim Proc Law § 265.00 (2004) and 400.00; Gen Bus Law Art 39-DD.
- See generally NC Gen Stat § 14-269.7 et seq (1994); 14-402 et seq (2009)
- See generally ND Cent Code § 62.1-01 et seq (2004).
- See generally Ohio Rev Code § 2923.11 et seq (2008).
- See generally Okla Stat 21 § 1271.1 et seq (19944).
- See generally Or Rev Stat § 166.170 et seq (2009). See generally Pa Cons Stat 18§ 6101 et seq (1995).
- 64. See generally RI Gen Laws § 8-8.1-3 (2005); 11-47-1 et seq
- 65. See generally SC Code Ann § 16-23-10 et seq (2004); 23-31-10 et seq (1971).
- See generally SD Codified Laws § 23-7 et seq (2009). See generally Tenn Code Ann § 39-17-1301 et seq (2009). 66.
- 67.
- See generally Tex Penal Code § 30.06; 42.12; 46.01 et seq (2003). 68.
- See generally Utah Code Ann § 53-5-702 et seq (2005); 76-10-501 et seq (2001).
- See generally Vt Stat Ann § 13-4003 et seq (2009). 70.
- See generally Va Code Ann § 18.2-279 et seq (2005); 54.1-4201.1 71. (2005).
- 72. See generally Wash Rev Code § 9.41.010 et seq (2009).
- See generally W Va Code § 61-7-2 et seq (2002).
- See generally Wis Stat § 175.30 et seq (2009); 175.35 (2009); 941.20 et seq (2008).
- See generally Wyo Stat § 6-8-101 et seq (1983).
- District of Columbia v Heller, 554 U.S.\_128 S. Ct. 2783 (2008).
- Carr BG, Wiebe DJ, Richmond TS, Cheney R, Branas CC. A randomised controlled feasibility trial of alcohol consumption and the ability to appropriately use a firearm. Inj Prev 2009;15:409-12.
- Frattaroli S, Webster DW, Teret SP. Unintentional gun injuries, firearm design, and prevention: what we know, what we need to know, and what can be done. J Urban Health 2002;79:49-59.
- Vernick JS, Meisel ZF, Teret SP, Milne JS, Hargarten SW. "I didn't know the gun was loaded": an examination of two safety devices that can reduce the risk of unintentional firearm injuries. J Public Health Policy 1999;20:427-40.
- Teret SP, Culross PL. Product-oriented approaches to reducing youth gun violence. Future Child 2002;12:118-31.
- Teret SP, Lewin NL. Policy and technology for safer guns: an update. Ann Emerg Med 2003;41:32-4.