



Published in final edited form as:

Suicide Life Threat Behav. 2010 December ; 40(6): 609–611. doi:10.1521/suli.2010.40.6.609.

Who are the owners of firearms used in adolescent suicides?

Renee M. Johnson, PhD, MPH^{1,2}, Catherine Barber, MPA², Deborah Azrael, PhD², David E. Clark, MD^{2,3}, and David Hemenway, PhD²

¹ Dept. of Community Health Sciences, Boston University School of Public Health, Harvard School of Public Health (HSPH); Boston, MA

² Harvard Injury Control Research Center, Harvard School of Public Health, Boston, MA

³ Dept. of Surgery, Maine Medical Center, Harvard School of Public Health (HSPH); Boston, MA

Abstract

In this brief report we examine the source of firearms used in adolescent suicides using data from the National Violent Injury Statistics System (NVISS), the pilot to the CDC's National Violent Death Reporting System, a uniform reporting system for violent and firearm-related deaths. Data represent the 63 firearm suicides among youth (<18 yrs) that occurred in 2001 or 2002, in one of four states (CT; ME; UT; WI) or two metropolitan counties (San Francisco, CA; Allegheny County, PA). Four-fifths of the suicides took place in the decedents' homes, and – when the firearm owner was known – most of the firearms were owned by parents. Findings replicate results from previous research, and highlight the importance of limiting youth access to firearms.

Introduction

Homes are the primary settings where young people obtain firearms used in suicides; this includes decedents' own homes, as well as those of relatives or friends.^{1–4} In a study of suicides among youth (<21 years) in California, authors found that 65% happened in the decedent's home, and about 57% of the firearms used were owned by a family member.⁴ In 17% of the cases the firearm used belonged to the victim.⁵ Although the few relevant studies are consistent in showing that firearms used in adolescent suicides come from residences, those studies are based on data from the 1990s, have small sample sizes, and cover limited geographic areas.^{1–4} To replicate previous findings, this brief report examines the source of firearms used in adolescent suicides using a new data source.

Methods

In this study we examine adolescent suicide deaths (< 18 years) that involved a firearm, and identify the owners of firearms used and the location of the injury. Data come from the *National Violent Injury Statistics System* (NVISS), the pilot to the CDC's National Violent Death Reporting System, a uniform reporting system for violent and firearm-related deaths. NVISS includes information drawn from death certificates, medical examiner files, law enforcement records, and crime laboratories.^{5–6} Data represent all youth suicides (<18 yrs) that occurred in 2001 or 2002, in one of four states (CT; ME; UT; WI) or two metropolitan counties (San Francisco, CA; Allegheny County, PA).

Corresponding Author: Renee M. Johnson, Boston University School of Public Health, Dept. of Community Health Sciences, Crosstown Center, 801 Massachusetts Ave., Third Floor, Boston, MA 02118, Tel: (617) 432-4666, FAX: (617) 432-4483, rjohnson@bu.edu.

Results

There were 145 youth suicides in the six NVISS sites; 43% involved a firearm (n=63). Of the 63 youth firearm suicide decedents, most were White (95%), male (87%), non-Hispanic (92%), and aged 15–17 years (75%). Fifty-two percent used handguns, and 81% of the suicides took place in the victim's home. Notably, data showed that at least 27% of the decedents had received mental health care at some point, 19% were in treatment at the time of their death, and 19% had previously attempted suicide. A common circumstance noted was a recent relationship problem involved family, friends, or intimate partners (57%). The owner of the firearm used in the suicide was unknown for 19 of the decedents. Among those for whom firearm owner information was available (44), 33 of the firearms were owned by parents, 3 were owned by other relatives, and 8 were owned by the decedent.

Comment

Most adolescent suicide decedents in the NVISS dataset committed suicide at their home with a firearm owned by a parent. Decedents were nearly as likely to use a long gun as a handgun. Our findings are consistent with existing research,¹⁻⁴ and confirm the importance of limiting access to all types of firearms for youth who are at high risk for suicide attempts. This may include adolescents with major depression, other mental health problems, or previous suicide attempts. Because one-third of the decedents had received mental health care treatment, mental health care clinics continue to be an important setting for counseling parents about reducing young people's access to firearms. As the remaining two-thirds may have never been seen by a mental health care provider, other settings are also important.

The results have several limitations. First, data come from a limited number of U.S. states and counties and are not broadly generalizable, and the small number of decedents limits the statistical reliability of the findings. Unfortunately, information on the owner of the firearm was unavailable in 30% of the cases. However, even if – in all of those cases – the owner was not a parent, the modal owner of the firearms used would still be a parent. Lastly, NVISS data depend on original source documents from coroners, medical examiners, and law enforcement, which vary in quality and completeness.

Because youth suicide decedents frequently use firearms that they obtain from their parents, parents should be encouraged to limit access to firearms by their children, especially teenagers with acute and chronic emotional disturbances.

Acknowledgments

Funding for the NVISS pilot was provided by the Atlantic Philanthropies; the Center on Crime, Communities and Culture of the Open Society Institute; the Joyce Foundation, the John D. and Catherine T. MacArthur Foundation, the David and Lucile Packard Foundation, and the Annie E. Casey Foundation.

References

1. Brent DA, Perper JA, Allman CJ, Moritz GM, Wartella ME, Zelenak JP. The presence and accessibility of firearms in the homes of adolescent suicides: a case-control study. *JAMA*. 1991; 266:2989–95. [PubMed: 1820470]
2. Grossman DC, Reay DT, Baker SA. Self-inflicted and unintentional firearm injuries among children and adolescents: the source of the firearm. *Archives of Pediatrics and Adolescent Medicine*. 1999; 153:875–8. [PubMed: 10437764]
3. Shah S, Hoffman RE, Wake L, Marine WM. Adolescent suicide and household access to firearms in Colorado: results of a case-control study. *Journal of Adolescent Health*. 2000; 26:157–63. [PubMed: 10706163]

4. Wright MA, Wintemute GJ, Claire BE. Gun suicide by young people in California: descriptive epidemiology and gun ownership. *Journal of Adolescent Health*. 2008; 43:619–622. [PubMed: 19027653]
5. Harvard School of Public Health. NVISS Workgroup. Boston, MA: Harvard School of Public Health; 2004. Uniform Data Elements: National Violent Injury Statistics System (NVISS), Release 3.0. Available at:
<http://www.hsph.harvard.edu/hicrc/nviss/documents/-Uniform%20Data%20Elements%20Manual%203.0.pdf>
6. Barber C, Azrael D, Hemenway D, Olson LM, Nie C, Schaecter J, Walsh S. Suicides and suicide attempts following homicide: victim-suspect relationship, weapon type, and presence of antidepressants. *Homicide Studies*. 2008; 12:285–297.