COMMENTARY

Violent Death in American Schools in the 21st Century: Reflections Following the 2006 Amish School Shootings

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On October 2, 2006, shootings at the West Nickel Mines Amish School resulted in the homicides of 5 female students and the suicide of the adult male perpetrator. This was the 19th violent death incident in Pennsylvania schools since 1992 and the 9th such incident of the 21st century in the state, based on data collected by the National School Safety Center (NSSC).

Since 1992, both the NSSC and the Centers for Disease Control and Prevention (CDC) have tracked school-associated violent deaths occurring each school year throughout the country. NSSC identifies cases through a newspaper clipping service and voluntary reports from state and local education agencies and maintains a report based on this data collection process. The CDC bases its case finding on both the NSSC report plus the additional data sources. The 2 registries are not expected to be the same because the CDC and NSSC use slightly different criteria for case finding and case definition.

School-associated violent deaths represent less than 1% of all homicides and suicides that occur among school-aged children. Nevertheless, these types of events pose special problems for students, parents, schools, and communities. This commentary reviews the continuing pattern of this public health problem into the 21st century, known risk factors, and actions that can be taken by medical and public health professionals to address this issue.

DESCRIPTIVE EPIDEMIOLOGY OF THE PROBLEM

In 1996, the CDC and its partners published the first comprehensive review of school-associated violent deaths during 1992-1993 and 1993-1994, confirming 105 deaths (76 student deaths) in 25 states. In 2001, the CDC and its partners updated this review by focusing on the subsequent 5-year period.
confirming 253 deaths (172 student deaths). The US Departments of Education and Justice recently reported the total number of student deaths, by year, through 2004-2005, using CDC data on school-associated violent deaths. The total number of school-associated homicides occurring each school year during the 1990s varied between 28 and 34. The number dropped to 13 and 11 during 1999-2000 and 2000-2001, respectively, and has steadily increased to 21 deaths during 2004-2005. No consistent pattern was observed, however, for school-associated suicides. The total number of suicides occurring each year over this 13-year period varied between 1 and 9. The current NSSC report identified more than 400 deaths in 43 states since 1992.

The 2 CDC papers, the current NSSC report, and other investigations provide valuable information on patterns and potential risk factors. Most cases happened in high schools and in suburban or urban settings and involved non-white youths, males, and firearms. A primary motive for these events was an interpersonal dispute. Evaluations of homicide and suicide events in American schools in the 1990s by the CDC and other partners revealed significant temporal variations in these events over the school year. Student homicide rates were highest near the start of each semester, while suicide rates showed no special variation, although the trend was generally higher in the spring semester.

Most events involved only 1 death, although the trend for multiple victim events has increased since the early 1990s. In Colorado, the Columbine High School multiple victim event in April 1999, that resulted in 13 homicides and 2 suicides, has been the largest multiple victim event over the 15-year period. Although “mega” events such as this (events resulting in 5 or more deaths) are very rare, they have happened on several occasions. According to the NSSC report, these events began in March of 1998 with an event in an Arizona middle school, and continued in 1999 with the Columbine incident, in March of 2005 with an event at Minnesota’s Red Lake High School, and in 2006 with the Amish school incident.

The current NSSC report of deaths and events that occurred since 1992 in 43 states reveals pertinent state trends. The 5 states with the highest number of events were California (58 events), Texas (31 events), Florida (24 events), New York (21 events), and Pennsylvania (19 events). The ranking generally corresponds to the ranking of these states by size of the state population. For these states, the occurrence of 1 or more events during every school year was a fairly regular pattern. California showed the greatest regularity, having only 1 school year (2001-2002) with no events or cases. The only mega event among these 5 states happened in Pennsylvania with the Amish school incident. Since 1992, Arizona, Colorado, and Minnesota experienced mega events during 4 or fewer school years.

VIOLENCE INVOLVING AMERICAN YOUTH: A CONTINUING MEDICAL AND PUBLIC HEALTH PROBLEM

In a recent report on violence-related behaviors among American high school students, the CDC noted that declines have occurred in weapon carrying and physical fighting that is consistent with a decline in the national youth homicide rate. The CDC also noted, however, that other types of violent youth behavior have not declined.

The rate of firearm-related deaths among young males in the United States has been shown to be 4.5 times to greater than 50 times higher than rates reported in other selected developed countries. The greatest difference in rates appeared between the United States and England and Wales. Among the leading causes of death for people aged 10-24 in 2003, unintentional injury was ranked first, followed by homicide and suicide. This trend remained the same for males but not for females (homicide was ranked third and suicide was fourth). Among black males, homicide was the leading cause of death, followed by unintentional injury and then suicide.

School-associated violent death has been described as a sentinel health event, underscoring its status as a unique public health problem. Two objectives related to this topic in the Healthy People 2010 initiative are reducing the prevalence of physical fighting among adolescents and reducing the prevalence of carrying a weapon by adolescents on school property.

Although efforts by the CDC and NSSC to monitor violent deaths in American schools have provided useful information, routine surveillance of school-associated violent deaths at the state level is required in the future to better address public concerns and improve prevention initiatives. Progress in this area has already been made by the CDC’s National Center for Injury Prevention and Control (NCIPC). NCIPC is involved with the study of injury and its causes, such as violence in American society. Recently, NCIPC developed the National Violent Death Reporting System (NVDRS), a nationwide, state-based monitoring system designed to provide comprehensive information about patterns and trends in fatal violence. This system will be helpful to answer questions about violence, such as are violent deaths in schools changing. As of January 2007, the CDC was funding 17 states to implement the NVDRS.

The NCIPC also provides useful information on its Web site regarding school-associated violent deaths. This information includes a list of resources that provide additional guidance. An example is the CDC’s School Health Guidelines to Prevent Unintentional Injuries...
and Violence. This report describes efforts to provide social and physical environments that promote safety and prevent violence in schools and outlines 8 recommendations for school health initiatives to reduce violence in schools. Recommendation 3 addresses the health education curricula and instruction. Recommendation 5 addresses the health, counseling, psychological, and social services that can help students who may be at risk of committing violent acts. School health nurses, counselors, and psychologists are critical healthcare providers on the front lines in schools and should be involved with all pertinent school health initiatives.

Physicians, as well as other healthcare providers in the community, should also partner with schools on school-based initiatives to prevent violence. A special issue of the American Journal of Preventive Medicine recently provided valuable information on training healthcare professionals in youth violence prevention. One article describes the positive experience at 3 of the 10 CDC funded Academic Centers of Excellence on Youth Violence Prevention. These centers are designed to benefit the special populations supported by these medical centers.

THE 2006 AMISH SCHOOL SHOOTINGS: THINKING OUTSIDE THE BOX

Based on a review of violent deaths that have occurred in American schools since 1992, an important lesson is that these events can happen anywhere and interventions should not only be targeted at those subgroups that have higher prevalence rates. For example, the perpetrator in the recent Amish school shootings, a mega event, was an adult male, while perpetrators of all previous mega events were male students. Except for Pennsylvania, mega events occurred in states that experienced these events during 4 or fewer school years since 1992.

Although most violent deaths occurred in urban settings and in high schools, the 4 mega events occurred in suburban or rural areas. Two of these events occurred in a middle or elementary school. Other violent death incidents have also occurred in middle and elementary school settings. Also, although incidents involving both homicide and suicide happen only about 20% of the time, 3 of the 4 mega events involved both homicide and suicide.

In a recent article, Dr Peter Lewis, a physician serving as a member of the Steering Committee of Physicians for Social Responsibility, compared actions by industry and federal and state government to the recent tainted spinach episode in the United States to lack of action by these same groups in the wake of the Amish school shootings. In this article, Dr Lewis highlights that the use of firearms in this country is responsible for more injury and death than food outbreaks such as the spinach episode and, therefore, should deserve much greater attention, particularly by government, to protect the public health.

CONCLUSIONS

Although study of the descriptive epidemiology of violent deaths in American schools yields useful information on risk factors and high-risk groups, there is a need for caution since these events continue to occur in unpredictable ways. The 2006 Amish School shootings in a rural area by an adult perpetrator clearly did not fit the mold. The lesson is that intervention strategies are needed in all communities. Additionally, healthcare professionals need to focus on 3 key risk factors in their continuing efforts at health-risk reduction to this problem: 1) most violent deaths are firearm-related, 2) most perpetrators are male, and 3) the usual motive is an interpersonal dispute.

As noted by the NSSC, 32 governors (including Governor Rendell from Pennsylvania) joined NSSC in proclaiming October 15-21 as Safe Schools Week. This initiative is 1 approach to help educate citizens on the importance of this issue. Excellent guidance is also available from the CDC to healthcare professionals, schools, communities, and the general public on various intervention strategies that can be applied within the school setting or at the community level to help reduce violent deaths in American schools.

A major conclusion of this commentary is that firearms continue to be the leading cause of violent deaths in American schools since 1992. All 4 mega events involved the use of firearms. Firearms laws are one of a number of approaches that can be used to reduce firearm-related violence. Reviews of selected US firearms laws using systematic epidemiologic evaluations, however, found insufficient evidence to determine the effectiveness of any of the laws or combination of the laws. US law enforcement officials have also recently criticized efforts by the gun lobby to weaken gun laws. In the article, Police Commissioner Johnson of Philadelphia indicated that after years of decreases in gun violence, that city is experiencing a large increase in gun-related homicides. One of the 2 objectives on school violence included in the Healthy People 2010 initiative relates to reducing the prevalence of carrying a weapon by students. Follow-up on this federal health initiative hopefully will lead to a reduction in homicides and suicides in American schools.

The CDC and its partners highlighted the predominant role of firearms in US school-associated violent deaths during 1992-1994 and recommended that strategies be developed to reduce the availability of firearms in the school environment. Ten years later, that recommendation remains as important as ever. Clearly, better national, state, and local efforts are
required to prevent such deaths and to better address the causes, including the use of firearms. The medical/public health community also needs to be challenged to action and to better respond to school-associated violent deaths as well as other forms of youth violence.

REFERENCES


