Firearm-related injuries in the United States have reached epidemic proportions. The level of firearm morbidity and mortality sustained here is far higher than anywhere else in the industrialized world. More than 38,000 Americans died because of firearm-related injuries in 1991 (1). More than half of all homicides and suicides are committed with firearms (2). Firearms are the leading cause of death in black men 15 to 34 years of age and are surpassed only by motor vehicles as the leading cause of all U.S. injury-related deaths (2).

Physicians and other health professionals have the opportunity to bring their knowledge and experience to bear in addressing this pervasive problem. The prevention of violence by public health methods is as much a responsibility for physicians as is the treatment of its victims (3). Injury control strategies have successfully led to measurable reduction in morbidity and mortality related to other public health problems, such as motor vehicle accidents. Efforts to produce similar results in the area of firearm injuries can and should be taken.

Background

It is estimated that approximately 200 million firearms are privately owned in the United States (U.S. Bureau of Alcohol, Tobacco, and Firearms, 1991). Half of all U.S. households contain firearms, and one in four contains a handgun (4). Many people report protection from crime as their single most important reason for keeping a gun in the home (5). Evidence suggests, however, that a gun kept in the home is far more likely to be used to kill a family member than an intruder (6). Indeed, most victims of homicide are not killed during the commission of another crime but during the course of an argument, often by persons they know (7). More than 17,000 murders were committed with firearms in the United States in 1992 (8).

More frequent than firearm homicides are suicides, which occur at a rate of more than 18,000 per year. More persons kill themselves with guns than with all other methods combined (9). Studies suggest that the ready availability of firearms is associated with increased risk for suicide in the home (10, 11).

Firearms play a major role in childhood and adolescent morbidity and mortality. More than three fourths of adolescent homicides and slightly more than half of adolescent suicides are firearm related, most from using handguns (12). Older children and teens are most at risk, with black male teenagers disproportionately at risk. In 1990, nearly 3000 children and adolescents aged 19 years and younger were murdered with guns, an increase of 114% since 1985 (2). Every year children are the victims of nearly 500 unintentional shootings (2).

Approaches to Prevention

Numerous, often interacting factors give rise to violent events. Although the underlying interactions are not well understood, many promising preventive interventions are available to break the chain of events that lead to gun violence (13). For example, gun owners and shooters should be required to possess demonstrable skills in the safe use and storage of firearms. Firearm safety training or the ability to pass a firearm safety test (or both) as a prerequisite for acquiring the weapons should be mandatory, and continued ability to meet the conditions for ownership should be monitored. Proper storage practices must be emphasized: In a survey of gun owners, more than half of handgun owners said they sometimes or always kept the gun loaded (14); in another survey (15), 10% of gun owners reported that their guns were currently “loaded, unlocked, and within reach of children.”

In addition to attempts to modify human behavior, increased attention needs to be given to design modification as a way of reducing firearm violence. Built-in safety features, such as triggers that cannot be pulled by young children and signals on a gun that indicate it is loaded, are already feasible. Electronic trigger locks that recognize only the fingerprint of the owner are under development. Currently, no mandatory design or performance standards exist for firearms manufactured in this country for civilian use (16).

Lack of regulatory oversight also extends to ammunition. Efforts have been made to ban armor-piercing bullets, yet rounds with this capability can be purchased by the general public. The Black Talon, a cartridge that explodes into a rosette with razor-like edges that allow for maximum trauma to internal organs and tissue, was withdrawn from the market after excoriating press attention, but similar types of ammunition with more benign names are still available. Although not likely to reduce frequency of injury, limiting the destructive force of ammunition could have a beneficial effect in reducing firearm morbidity and mortality.

Another approach to reducing firearm injury is to eliminate those weapons judged as unreasonably hazardous or a threat to public safety. Recently, Congress banned 19 different assault weapons and their copies with the passage of a federal crime bill. Previous legislative proposals have largely been limited to measures banning lists of...
specific guns; gun makers could circumvent the law by making a few cosmetic changes to a banned gun and renaming it. The crime bill attempts to address this problem by providing a legal definition of assault weapon and assigning the designation to certain types of semiautomatic firearms that feature specific design components (for example, folding stock, bayonet mount, flash suppressor). Such a legislative framework supports efforts to eliminate weapons more suitable for combat than for civilian use (17).

Although news coverage, television, and movies heighten the profile of assault weapons, standard handguns are used in most firearm deaths. Although handguns make up only about one third of all firearms owned in the United States, they account for 80% of all murders committed with firearms (13). Measures such as the Brady law, adopted after years of legislative debate, offer a way to control how these weapons are allocated, potentially keeping them out of the hands of high-risk persons. States in which a police check is already in effect have successfully prevented hundreds of felons from purchasing a handgun from a legal outlet. The 5-day waiting period also gives an impulsive buyer who may have temporary violent intentions time to cool off, although states with computerized criminal records permit immediate acquisition after an instantaneous background check by telephone.

Additional legislation to restrict access to handguns continues to be considered by Congress. The provisions of the Gun Violence Prevention Act (Brady 2), for example, call for a system of licensing-and registration for handguns and would make it unlawful for a person to receive more than one handgun per month or to knowingly sell a handgun to someone who has received a handgun in the last 30 days. Tighter regulations on gun dealers are also proposed, including a sharp increase in the federal license application fee. With more than 246,000 dealers, the United States has more gun dealers than gas stations. Most dealers operate from their homes and ignore many of the rules and regulations their licenses require them to uphold (17).

Other measures, such as a higher firearm tax, with funds earmarked to offset the health care costs associated with gun violence (an estimated $1.4 billion in 1990 [18]) have been proposed, and these measures deserve consideration. The urgency of the situation, however, has led some to favor stronger measures. Although available research does not conclusively show that greater gun availability is linked to more violent events or injuries, some evidence indicates that the ready access of firearms increases the likelihood that a dispute or assault will end in death (19-22). Strict limitations on gun ownership, including prohibition of handgun ownership by private citizens (favored by most persons in the United States according to a 1993 Harris poll [23]), should be strongly considered.

Physicians can help prevent firearm violence by educating their patients about the hazards of firearms. They can encourage safe storage practices, recommending that guns be stored unloaded in a locked area separate from ammunition. They can explain the dangers posed to children and adolescents by guns and recommend ways to make their environments safer, including voluntary removal of the gun from the home. While being sensitive to the fears that lead patients to obtain a gun, they can detail the risks of keeping a gun for protection and discuss alternative approaches to personal and home security. In addition, through participation in community-based or national coalitions, physicians can address public health policy issues and help shape public attitudes.

Preventive measures as part of a coordinated, broad-based effort hold the promise to enhance our current approach to violence. Studies have yielded valuable information, but more research is needed. Additional, ongoing study can help build on our existing knowledge about the causes and effects of firearm violence and on how it can be prevented.

Recommendations

1. The College supports legislative and regulatory measures that would limit the availability of firearms, with particular emphasis on reducing handgun accessibility. These measures should support restrictions to make handgun ownership more difficult, to reduce the number of handguns in homes, and to eliminate assault weapons.

2. The College urges physicians to inform patients about the dangers of keeping firearms, particularly handguns, in the home and to advise them on ways to reduce the risk for injury. If a gun is kept in the home, physicians should counsel their patients about the importance of keeping guns away from children and should recommend voluntary removal of the gun from the home.

3. The College supports the development of coalitions that bring different perspectives together on the issues of firearm morbidity and mortality. These groups, comprising health professionals, injury prevention experts, parents, teachers, police, and others, should build consensus toward public health policy issues and help shape public attitudes.

4. The College supports efforts to improve and modify firearms to make them as safe as possible, including the incorporation of built-in safety devices (such as trigger locks and signals that indicate a gun is loaded). The College also supports efforts to reduce the destructive power of ammunition.

5. The College encourages further research on firearm violence and on intervention and prevention strategies to reduce injuries caused by firearms.


References


