The American College of Preventive Medicine Policy Recommendations on Reducing and Preventing Firearm-Related Injuries and Deaths

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The American College of Preventive Medicine Policy Committee makes policy guidelines and recommendations on preventive medicine and public health topics for public health decision makers. After a review of the current evidence available in 2016, the College is providing a consensus-based set of policy recommendations designed to reduce firearm-related morbidity and mortality in the U.S. These guidelines address seven general areas pertaining to the public health threat posed by firearms: gun sales and background checks, assault weapons and high-capacity weapons, mental health, research funding, gun storage laws, and physician counseling.


Introduction

In 2002, the American College of Preventive Medicine (ACPM) issued its first statement that raised concern about the firearm violence epidemic in the U.S. and advocated for policies to reduce this leading cause of injury and death among the American public. The 2002 statement focused on handguns; this statement expands ACPM’s recommendations to include all firearms and provides an updated public health and legislative context for these recommendations.

Gun violence is a public health problem. Firearm-related deaths in the U.S. remain the highest in the industrialized countries.1 Firearms were involved in the deaths of more than 33,500 people in the U.S. in 2013, including homicides, suicides, and unintentional deaths, accounting for more than 17% of the injury deaths that year.2 Unintentional injury is the leading cause of death in Americans aged 1–44 years.3 Firearm injury is the third leading cause of injury-related death in the U.S., only after poisonings and motor vehicle crashes.2 There were 11,000 homicides and 21,000 suicides that involved firearms in 2013,2 and there were more than 81,000 non-fatal firearm injuries in 2014.4 Collectively, Americans own between 270 million and 310 million firearms, approximately 101.05 per 100 people.5 In 2014, a total of 13,576 children aged <20 years were treated in emergency rooms for nonfatal firearm injuries, and adolescents aged 15–19 years were more than twice as likely to have nonfatal firearm injuries than the general population.4 Children playing with guns in the absence of their parents account for 89% of the unintentional shooting deaths of children at home.6,7 Gun violence costs the country approximately $174 billion annually in lost work, health care, emergency systems, policy and criminal justice, claims processing, and decreased quality of life.8 It results in more than $48 billion in medical and work loss costs each year by annual estimates.9

Fatal and nonfatal firearm violence seriously threatens the safety and welfare of Americans. Since 1966 when Charles Whitman, an ex-Marine sniper, killed his wife, mother, and 14 more people at the University of Texas before police shot him, there have been more than 125 events in the U.S. in which a lone shooter has shot four or more individuals.10 Although these highly publicized mass shootings make up less than 1% of firearm-related deaths, they have had significant physical and psychological impacts on individuals in both physical and virtual proximity.10 These violent acts have increased the public’s interest in protecting children, communities, and law enforcement from the harmful effects of gun violence.

As a national organization of physicians dedicated to prevention, ACPM believes in a comprehensive public health approach to addressing the issue of gun violence. ACPM

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supports effective policies and legislation at all levels of the government that are intended to prevent and reduce injuries and deaths related to firearms.

Methods

The ACPM’s Policy Committee, which is charged with recommending legislative initiatives and policy positions, developed these recommendations. The committee reviewed available literature through May 2016 on the relationship between gun sales and background checks on firearm-related mortality, the relationship between mental health and gun violence, and the impact of firearm safety measures on health outcomes. The ACPM Prevention Practice Committee reviewed the draft recommendations, after which the Policy Committee considered it formally. The policy recommendations were approved by the ACPM Policy Committee on February 24, 2016, and by the ACPM Board of Regents on February 27, 2016.

Policy Recommendations

The following statements represent the official policy positions and recommendations of ACPM. The evidence base for each policy recommendation follows.

Gun Sales and Background Checks

ACPM supports:

- Expansion of federal legislation, the Brady Handgun Violence Protection Act of 1998, to require background checks for all firearms purchasers including sales by gun dealers, sales at gun shows, sales made online, and private gun transfers between individuals.11
- Adoption of state legislation to mandate universal background checks, either as part of a permit to purchase licensing system for all gun sales, or by mandating universal background checks in the absence of a permit law.11
- Mandatory reporting for the theft or loss of a firearm within a specified time after the owner has become aware of its loss.12
- Waiting period: ACPM supports legislation to require anyone who purchases a firearm to wait at least 5 days before taking delivery of the firearm.13
- Enforcement: ACPM supports the aggressive enforcement of current laws against the illegal purchase, possession, and sale of guns.13
- Straw man sales: ACPM supports penalties and prosecution of individuals who legally purchase firearms for those who are banned from possessing them.11

Assault Weapons and High-Capacity Weapons

ACPM supports:

- Bans on the possession, manufacture, transfer, sale, and import of assault weapons, defined as certain semi-automatic firearms with features, such as the ability to accept large-capacity magazines, that are useful in criminal and military applications, but unnecessary in shooting sports or self-defense.14
- Laws that prohibit the use of armor-piercing rounds that disproportionately affect law enforcement officers.

Mental Health

ACPM supports:

- Improved access to mental health care and reducing the risk of firearm-related deaths and injuries through effective treatment and prevention.11
- Fully funding the federal incentives for states to provide information about disqualifying mental illnesses to the National Instant Check System for firearm purchasers.12
- Ensured access to mental health care for the diagnosis and treatment of mental illnesses and substance use disorders.11
- Legislation that protects patient–physician confidentiality.11

Research Funding

ACPM supports:

- Removing the Dickey amendment from the Federal Omnibus Spending Bill.
- Adequate funding of federal agencies to study the effect of gun violence and unintentional gun-related injury on public health and safety.15
- A regular report from the U.S. Surgeon General on the state of the problem of firearm violence in the U.S. and progress toward solutions.12
- Repeal of the 2717(c) firearms provision of the Affordable Care Act that prohibits DHHS from collecting information regarding presence of firearms in home.14
- Unrestricted access to data for research to enable the development of evidence-based policies to reduce the rate of firearm injuries and deaths.15
- Additional research on proposed or current policy proposals, laws, and regulations for which there are limited or conflicting data on their effectiveness in reducing preventable firearm-related injuries and death.15
- Adequate funding of the National Violent Death Reporting System within the U.S. Centers for Disease Control and Prevention (CDC) that collects detailed surveillance data on firearm-related homicides, suicides, and unintentional deaths.14
Safe Gun Storage Laws
ACPM supports:

- Laws that subject guns to consumer product regulations regarding child access, safety, and design. These include trigger locks, lock boxes, personalized safety mechanisms, and trigger pressures that are too high for young children.14
- Child Access Protection (CAP) laws that impose criminal penalties on those who do not store their firearms appropriately.14
- Expansion of CAP laws to make it a felony offense for a gun owner if a child is injured as a result of accessing an unsecured gun.14

Physician Counseling
ACPM opposes:

- Any state and/or federal legislation that interferes with a physician’s free speech and patient–physician relationship.
- Any laws or regulations that forbid physicians to discuss a patient’s or their parent’s/guardian’s gun ownership.

ACPM supports:

- Physician assessment and intervention, when appropriate, with patients who are at high risk for injuring themselves or others due to firearm access.15
- Physicians’ ability to speak openly to their patients about firearms, fully answering questions, and advising them on the course of behaviors that promote health and safety.15,16
- Physicians’ ability to document these conversations in the medical record as they are required to do with the discussion of other health-related behaviors.15

Evidence Base for Policy Recommendations
Gun Sales and Background Checks
Guns are sold in both primary and secondary markets. Primary markets include licensed gun dealers who follow mandated background check procedures. However, up to 40% of gun sales take place in secondary markets where people are allowed to sell from their personal supply without the involvement of licensed dealers or background checks.17 These secondary markets include sales online and at gun shows.17 Secondary markets and theft are responsible for the majority of guns supplied to criminals.17

The regulation of these secondary markets has shown to be beneficial. In a systematic review of the literature assessing published studies on the effects of gun laws from 1950 to 2014, it was found that in states that require background checks for all gun sales there were lower rates of intimate partner homicides and male suicides.18 Additionally in a cross-sectional study, states with universal background checks were shown to have a 48% lower rate of gun trafficking.19 Fewer regulations on background checks can lead to a higher prevalence of guns, which in turn leads to a three times higher homicide rate of law enforcement officers as determined by an analysis of the Federal Bureau of Investigation database.20

Assault Weapons and Large-Capacity Magazines
Assault weapons include military-style semi-automatic weapons with a detachable magazine capable of holding more than ten rounds. The Federal Assault Weapons Ban of 1994 imposed a 10-year ban on the “manufacture, transfer, and possession” of semi-automatic firearms with certain features useful for criminal activity, but unnecessary in shooting sports and self-defense.21 These features included the ability to accept large-capacity ammunition magazines, along with threaded barrels for attaching silencers, flash hiders, folding rifle stocks, and pistol grips on rifles.21 Owing to the availability of non-banned “substitute” assault weapons and magazines, the gradual nature of the ban’s expected impact, and the paucity of data for mass shootings, it is difficult to assess the national impact of this law on violent crime.21 However, the limited available data indicate that assault-type weapons and semi-automatic handguns are used in the majority of mass shootings.21 Further, gun attacks with semi-automatic firearms tend to result in more fired shots, wounded people, and inflicted wounds per victim compared with attacks with other firearms.21 Given the public health burden associated with mass shootings, the Federal Assault Weapons Ban should be re-enacted with explicit attention given to the status of imported guns and magazines, and no loopholes allowing for cosmetic changes to weapons.

Mental Health
Although accounting for only 3%–5% of violent events overall, mental illness is an important factor in firearm-related suicide.22 Those with substance abuse disorders are seven times more likely to be involved in violent events than those with mental illness alone.22 Concomitant substance abuse and mental illness greatly increases the risk of violence.24 However, it is difficult to determine which specific individuals will become violent and when.22 Early identification and treatment is critical to the reduction of detrimental outcomes in individuals suffering from mental illness.22–24 Thus, access to mental health care plays a crucial role in preventing gun violence.
health care is critical for all individuals who have a mental illness or substance use disorder.

Research Funding
A 1993 study funded by CDC’s National Center for Injury Prevention identified gun ownership as a risk factor for homicide in the home.25 Subsequently, the Dickey amendment to the 1996 Omnibus Consolidated Appropriations Bill stated that for the 1997 fiscal year no funds provided to CDC could be used to advocate or promote gun control. Subsequent attempts to remove the Dickey amendment have failed and, although the amendment only bans gun control advocacy and promotion, it has impacted federal-level funding of firearm-related epidemiologic, intervention, and evaluation research.26 Following the Sandy Hook Elementary shooting in 2013, President Barack Obama issued an executive order to CDC to research the causes of gun violence but funding to support this order remains limited.26 It is necessary for Congress to provide adequate funding to conduct proper research to study the causes and consequences of firearm violence, the outcome of legislation and strategies to reduce firearm-related injuries.

Safe Gun Storage Laws
Safe gun storage, including guns unloaded and locked and ammunition stored separately, reduces unintentional injury and suicide risk for children and adolescents.14 CAP laws enacted in 18 states and the District of Columbia hold the adult gun owner criminally responsible if a minor uses a gun that has been stored insecurely; however, these laws do not generally specify the mode of safe storage.27 In a longitudinal study from 1976 to 2001, CAP laws were associated with an 8.3% reduction in firearm suicides in those aged 14–17 years.27 Additionally, CAP laws were associated with fewer unintentional firearm deaths in children aged <15 years with a reduction in incidence of 23%.28 Another longitudinal study of state hospital data from 1988 to 2003 showed that CAP laws were associated with lower rates of nonfatal firearm injuries in those aged <18 years.29 CAP laws have proven to be effective in addressing multiple levels of gun violence that affects children and should be expanded.

Table 1. Summary of Recommendations From Other Professional Organizations

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<th>Restrictions on assault weapons</th>
<th>Mental health services</th>
<th>Increased research funding</th>
<th>Expanded gun storage laws</th>
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**Physician Counseling**

Patients trust their physicians to advise them on issues that affect their health, and doctors can play an important role in reducing firearm-related injuries and deaths. A systematic review of studies assessing patient interventions conducted 1992–2014 identified 13 studies of healthcare provider interventions designed to reduce firearm-related risks. Two high-quality RCTs demonstrated that provider interventions increased the use of firearm cable locks and decreased risky behavior, such as weapons carriage. Additionally, two quasi-experimental studies linked brief provider counseling with improved firearm storage among family medicine patients and families seeking care at a pediatric clinic. In the pediatric clinic, this intervention was paired with the supply of free firearm safety locks. Although one study found that firearm-owning parents of adolescents diagnosed with major depression rarely removed firearms from the house according to provider recommendations, two separate studies found that physician interventions were associated with reduced firearm access among admitted adult patients and suicidal teens treated in the emergency department. Although the remaining patient-level interventions, most of which were systematically determined to be underpowered, low quality, or not theoretically based, failed to detect changes in firearm safety behaviors following patient interventions, physician counseling appears to improve firearm storage practices, particularly when paired with the provision of free firearm safety devices.

**Conclusions**

Firearm-related injuries and deaths continue to pose a significant public health threat in the U.S. Since 2002, ACPM has officially advocated for research to characterize the public health burden associated with firearms, policies to reduce the rate of firearm injuries and deaths in the U.S., and action to implement firearm policies in order to reduce the associated public health impact. Recommendations on gun violence prevention have been established by other professional organizations and are listed in Table 1 and in detail in Appendix Table 1 (available online). These recommendations are overwhelmingly consistent with those of ACPM. The implementation of the preceding recommendations would make critical steps forward toward gun violence prevention.

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**References**


Appendix

Supplementary data

Supplementary data associated with this article can be found at http://dx.doi.org/10.1016/j.amepre.2016.09.023.