

Pragmatic Firearm Advocacy for Pediatricians

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The review article “Pediatric Firearm-Related Injuries in the United States” in this issue of *Hospital Pediatrics* serves as a timely reminder for all health care providers that we cannot afford to be silent about gun violence. An average of 7 children and teens ages 1 to 19 are killed by guns every day in the United States.¹ Pediatric hospitalists are on the front lines of this public health crisis. To uphold our duty as pediatricians to protect and improve the health of children, we must educate ourselves about gun violence and become vocal advocates for sensible, effective solutions.

Although firearm safety has been highly politicized, we as physicians know that this is first and foremost a public health issue. Many analogies can be drawn from history. When motor vehicle collisions became a leading cause of mortality, auto manufacturers blamed collisions on the drivers. When evidence emerged regarding the health threat of tobacco, tobacco companies denied the association of cigarette smoke with disease. After hard-fought battles with these industries, regulations were put in place that dramatically decreased morbidity and mortality from these public health threats.² It is clearly time to do the same for firearms.

As with automobile and tobacco regulations, our advocacy must be a pragmatic one. Pediatricians must understand patient and family values and concerns regarding gun ownership. Pediatricians must be able to communicate the risks of firearm ownership to families and children, address controversies and myths, and understand which interventions have been demonstrated by existing data to be most effective in decreasing injury and death. We must understand federal law and the laws in states where we practice. In this commentary, we present a guideline for pragmatic firearm advocacy for pediatricians: key firearm facts that all pediatricians should know, common myths about firearms, interventions that have been proven effective in decreasing firearm injuries and fatalities, a checklist for hospital pediatricians to follow at discharge, and pragmatic advocacy actions we as physicians can take to address this public health epidemic.

PEDIATRIC FIREARM INJURIES AND DEATHS: 3 KEY FACTS

Firearm Deaths Are Now Tied With Automobile Accidents as the Number 1 Cause of Death for Children Ages 1 to 19 in the United States

Firearms account for >30 000 US deaths per year, of which ~3000 (10%) are in children. This statistic translates into ~7 deaths per day. Although injury (unintentional and intentional) has always accounted for the largest proportion of pediatric mortality, motor vehicle fatalities historically have been the major injury mechanism causing death in children. However, trends in mortality have changed, and recent Centers for Disease Control and Prevention data from 2014 and 2015 show firearm and motor vehicle fatality rates are converging. In 2015 the firearm death rate was 11.01 and the motor vehicle death rate was 11.83 per 10 000 people. Also, 95% of firearm



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fatalities occur within 24 hours of the injury, and in-hospital mortality is almost 4 times higher than that of the next highest injury group.⁵

For Each Death, There Are Multiple Serious Injuries Caused by Firearms

There is a paucity of data on nonfatal firearm injuries; however, there were >7000 hospitalizations for firearm injuries in US children, adolescents, and young adults in 2009.⁴ Gunshot injuries tend to be more difficult to treat, more deadly, and more costly than any other injury group.³ These injuries often result in expensive and prolonged hospitalizations and lifetime disabilities necessitating rehabilitation. A recent study conducted by the Stanford University School of Medicine showed that gun violence costs Americans >\$730 million per year, with Medicaid and the self-paying poor shouldering the majority of the financial burden.⁵ The lethality of firearm injuries and financial drain on the health care system require an emphasis on prevention.

Children of Different Ages Experience Firearm Injury and Death for Different Reasons

Understanding the “intent” of injury is vital to implementing successful interventions to decrease morbidity and mortality. Although firearm injury is not a major cause of death in preschool children, these tragic deaths usually occur unintentionally, while children are playing and exploring their surroundings. Safe storage of firearms is therefore key to preventing unintentional firearm deaths in young children. Suicide by firearm is the third and fourth most common cause of death for children and young adults aged 10 to 14 and 15 to 24 years, respectively.⁶ Many are surprised to learn that more than half (62%) of firearm deaths are suicides. It is important to note that death occurs in <5% of suicide attempts with less lethal means such as medication, in contrast to >90% of suicide attempts involving firearms.⁷ Homicide by firearms is the fourth most common cause of death for children aged 5 to 14 and the second most common cause of death for young adults aged 15 to 24 years. Men and boys, teenagers, and young adults, and

African Americans disproportionately bear the burden of firearm injury and death in our country.

PEDIATRIC FIREARM INJURIES AND DEATHS: 3 MYTHS

The Majority of Firearm Deaths Are Caused by Mass Shootings by the Mentally Ill

The role of mentally unstable people committing murder with firearms has been highlighted in the media since the December 2012 fatal shooting of 20 children (6- and 7-year-olds) and 6 adults at Sandy Hook Elementary School. Mass shootings are defined by the FBI and the Congressional Research Service as “the discharging of firearms multiple times into a group of unarmed victims resulting in four or more deaths.” Although the number of mass shootings has more than doubled since the year 2000, mass shootings account for <1% of all gun homicides (<https://fas.org/sgp/crs/misc/R43004.pdf>). Gun control opponents argue that increased mental health interventions, not firearm safety regulations, would successfully decrease firearm deaths. Although improved mental health resources are desperately needed, most experts agree that increasing mental health resources alone will not significantly decrease firearm morbidity and mortality in our country. The mentally ill are far more likely to be victims of violence than perpetrators. Developed countries with the same rates of mental illness in their population but stricter gun regulations have significantly lower rates of firearm deaths than the United States, demonstrating that gun deaths are driven primarily by availability of guns, not the prevalence of mental health disorders.

A Gun in the House Makes the Household Safer

Some US residents believe that a gun in the house allows for self-defense and a safer home. The National Rifle Association (NRA) has led a careful campaign to frighten Americans with the intent of increasing gun ownership. As the head of the NRA Wayne LaPierre famously said after the tragic Sandy Hook shooting, “The only thing that stops a bad guy with a gun is a good guy

with a gun.” Research demonstrates that this is not the case. A gun in the home is 22 times more likely to be used in domestic homicide, suicide, or unintentional shooting than to be used in self-defense.⁸

My Child Doesn’t Know That We Have a Gun or Would Not Handle the Gun

Although many parents believe that by owning a gun they are keeping their children safe, many do not realize the risks associated with gun ownership for children and adolescents. As highlighted in this month’s review article, almost three-quarters of children living in households with guns knew where they were stored, and more than a third reported having handled the gun.⁹ Although the majority of parents believed that if a child found a gun the child would not touch it, 1 observational study found that the majority handled the gun and 50% pulled the trigger.¹⁰ Additionally, studies have found that one-third of children presenting to health care reported having access to a firearm, and one-fifth stated they would not have difficulties buying one.^{11,12} Children are curious by nature and cannot be trusted to avoid handling firearms in the home. For older children, acquiring a firearm is not perceived as difficult, although it is illegal.

GUN SAFETY LEGISLATION

Pediatricians should have knowledge about federal laws and the laws of their state to effectively discuss firearm safety and counsel their patients. Programs and legislation aimed at decreasing firearm mortality and morbidity generally focus on increasing the safety of the host or gun owner and other citizens (eg, universal background checks, gun owner education and licensing), increasing the safety of the firearm (eg, decreasing the chances that it could be fired accidentally or by someone other than the firearm owner, safe storage, separation of ammunition from the firearm, firearm identification, and gun locks), and increasing the safety of the environment (eg, limitation of military-style assault weapons, establishment of gun safety zones, and limitations of firearms in public places). Given the dearth of firearm research due to

lack of federal funding, information about efficacy is limited. However, there is convincing evidence that background checks before the sale of firearms and ammunition and firearm identification technology are effective ways to decrease firearm deaths. Many studies demonstrate that the simultaneous implementation of laws targeting multiple elements of firearm regulations and greater strictness of firearm laws is significantly associated with reduced firearm related deaths on a national and state level.^{13,14} Laws that relax gun restrictions such as open carry are associated with more firearm deaths.¹⁵ It is important to note that programs to educate children about gun avoidance are not effective.¹⁶ And there is no information to date about the impact or effectiveness of school “active shooter” drills.

A successful public health intervention requires a multipronged approach. Both gun safety legislation to decrease the widespread availability of firearms in our country and education to promote safe firearm ownership are necessary components. As this month’s review demonstrates, universal background checks before purchase of guns should be a top priority for physicians eager to reduce the burden of firearm violence. Additionally, safe firearm storage education and legislation are important components of a comprehensive approach to reducing firearm deaths.

THE PEDIATRICIAN’S CHECKLIST FOR DISCHARGE

As pediatricians, we have a responsibility to advocate for children’s health. Because firearms are a leading killer of children in our country, our advocacy must include working to reduce the burden of firearm morbidity and mortality in the pediatric population. We have a unique opportunity as trusted advisors to educate our patients and their families. The American Academy of Pediatrics recommends pediatrician education on gun violence prevention and pediatrician screening for firearms with at-risk patients. A simple rubric to learn is the “5 Ls.” If there is a gun in the household, is it Locked, is it Loaded, are there Little children, is anyone in the house feeling Low, and is the owner Learned? Once they obtain

this information, pediatricians can counsel and take action as needed (eg, educating families about safe gun storage or recommending removal of firearms in homes with depressed adolescents).

Unfortunately, there are some barriers to effective gun violence education in the health care setting. The Firearm Owners’ Privacy Act was supported by the NRA and passed in Florida in 2011. This Florida gag law, which prohibits physicians from asking patients and families about gun ownership or ammunition, was only recently appealed by a federal court in February of this year. Other states have proposed similar laws despite opposition by the American Academy of Pediatrics and multiple other medical organizations.

CONCLUSIONS

Gun violence is a huge public health threat to children in the United States. As pediatricians we must educate patients about firearm safety in the office, advocate for federal funding of gun violence research, and become vocal supporters of effective legislation at the state and national level. Without action this epidemic will continue or worsen. The time for us to speak up is now. The time for us to be leaders is now.

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