



## RESIDENT ARTICLE

# The Firearm Epidemic: How Can Pediatric Trainees Improve Firearm Safety?

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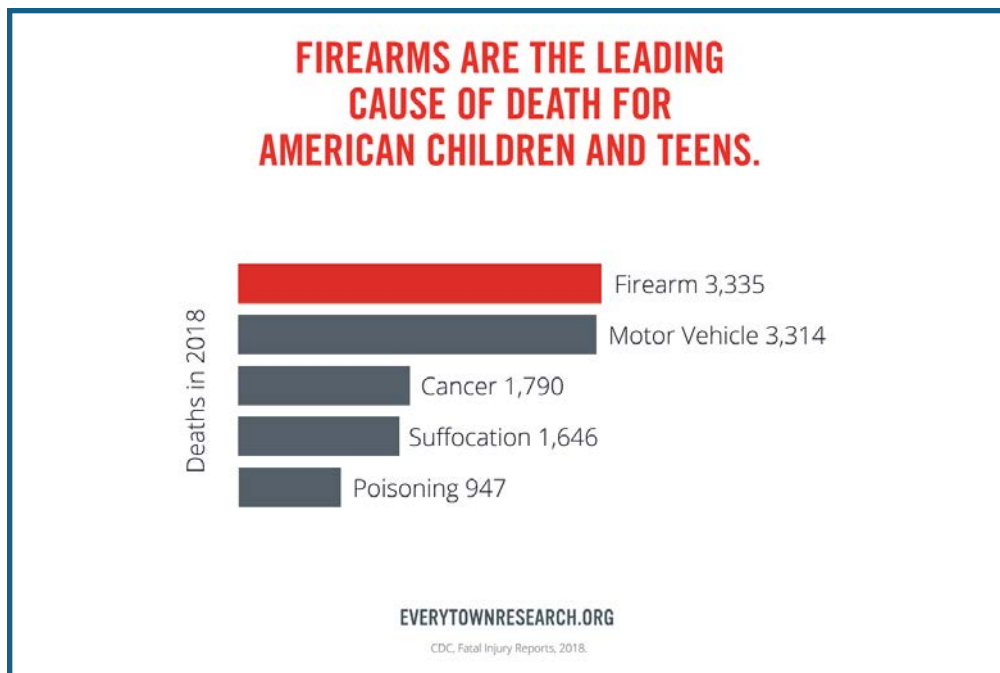
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It was a routine Wednesday afternoon at my resident continuity clinic. I was wrapping up a five-year-old well-child visit with my standard “Safety Check,” which by seven months into intern year had become well engrained. The father patiently listened as I provided anticipatory guidance on key safety topics, including smoke detectors, bike helmets, medication storage, and firearm safety. I concluded with a quick “Do you have any questions?” as I scooted out the door late to my next patient. “Silly question,” he asked, “How do gun locks work?” Great question. Embarrassed, I confessed I had never used a firearm lock, but would look up resources for him, including the cost and where to find one. I left the room flustered and disappointed in my lack of knowledge on a topic so important for my patients’ safety. How could I effectively counsel on firearms if I knew nothing about them myself?

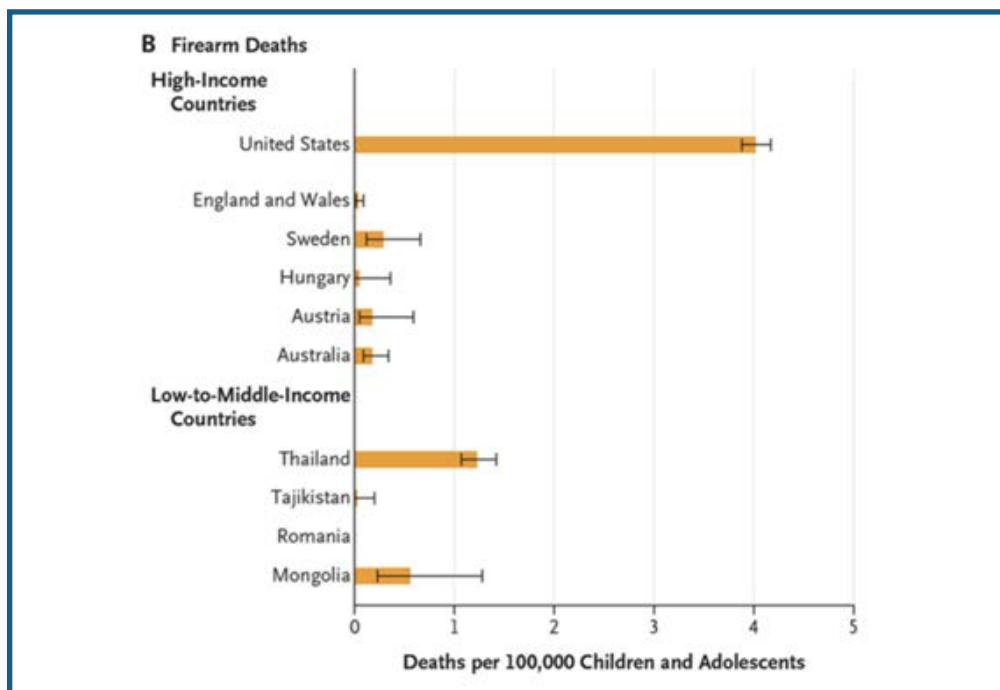
## THE FIREARM EPIDEMIC

According to recent data from the Centers for Disease Control and Prevention, firearms are now the leading cause of death for American children and teenagers (Figure 1).<sup>1,2</sup> Roughly every 40 minutes, a child or teenager is wounded with a firearm.<sup>2</sup> Of firearm-related deaths, approximately 59% are homicide, 35% are suicide, and 4% are unintentional deaths.<sup>3</sup> The rate of firearm-related deaths among children and adolescents in the United States is almost 37 times higher than the overall rate in other high-income countries (Figure 2).<sup>3</sup> In 2018, more children in the US died from a firearm than from motor vehicle accidents (3,314 deaths) or cancer (1,790 deaths).<sup>1</sup>

In the United States, one in three children live in a home with a firearm. Of these homes, 43% store firearms unlocked and 7% store them unlocked and loaded.<sup>4</sup> People with a firearm in the home are at two times the risk of homicide and three times the risk of suicide.<sup>5</sup> Although firearm-related injury rates have declined over the past three decades, there was a 28% relative increase between 2013-2018. Racial disparities in firearm-related deaths have not only persisted, but, sadly, increased. Firearm-related deaths are 3.7 times higher in African American youth compared to white youth. Geographic disparities also exist, with higher rates in urban compared to rural areas.<sup>3</sup>



**Figure 1**  
*Leading Causes of Death in American Children and Teens in 2018. Reprinted with permission from ©Everytown for Gun Safety Support Fund 2020.<sup>2</sup> Data from the National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS) Fatal Injury Reports, Center for Disease Control and Prevention.*



**Figure 2**  
*Global Comparison of Firearm Mortality in Children and Adolescents in 2016. Reprinted with permission from the New England Journal of Medicine. Cunningham RM, Walton MA, Carter PM. The Major Causes of Death in Children and Adolescents in the United States. N Engl J Med. 2018;379(25):2468-2475.<sup>3</sup>*

The current shelter-in-place orders and rise in firearm sales<sup>6</sup> during the Coronavirus 2019 pandemic may lead to a sharp increase in firearm-related injuries. Social distancing can lead to isolation, which is strongly associated with an increased risk of suicide.<sup>7</sup> Increased familial stress can lead to higher rates of domestic violence and child abuse. Lastly, children are spending more time at home, which may increase the likelihood of access to unsafely stored firearms.

## SAFE FIREARM STORAGE - IS COUNSELING ENOUGH?

The American Academy of Pediatrics (AAP) recommends discussing firearm safety at every well-child check, starting at prenatal and newborn visits.<sup>8</sup> Specifically, the AAP advises that the absence of firearms in the home is the most reliable and effective measure to prevent firearm-related injuries in children and adolescents. If a family decides to keep a firearm in the home, it should be unloaded, locked in a safe or with a locking device, and stored separately from locked ammunition. Additionally, pediatricians should counsel parents to ask about firearms in the homes in which their children play, since greater than one third of unintentional shootings occur in the homes of friends, neighbors, or relatives.<sup>9</sup>

Despite the recommendations above, the efficacy of physician counseling on firearm safety is unknown. Previous studies have found that firearm safety counseling during well-child visits, including recommendations on firearm removal or safe storage and written storage instructions, has no significant reduction in firearm removal or storage practices.<sup>10,11</sup> Providing discount coupons for firearm locks has been shown to have large though nonsignificant increase in the purchase of firearm locks.<sup>10,11</sup> Conversely, providing families with free firearm locks during visits significantly increases safe storage practices.<sup>12,11</sup> Innovative models of delivery, such as waiting room tablet modules, may also be an effective way to increase safe storage practices.<sup>13</sup>

## PEDIATRIC TRAINEES, WHY ARE WE NOT ASKING ABOUT FIREARMS?

As pediatricians, we have the unique opportunity to prevent firearm-related injuries by counseling families on safe storage during routine well-child visits. Although the AAP recommends counseling on firearm safety at every well-child visit, only 65% of pediatric residents strongly agree they ask families about the presence of guns in the home and only 21% ask parents who have firearms to remove them from the home.<sup>14</sup> Though firearms are the leading cause of death in American children and teens, only 10% of pediatric residents strongly agree that firearm counseling is a high priority.<sup>15</sup> There are various self-reported reasons why residents do not counsel on firearm safety, including discomfort on the topic, perceived ineffectiveness in their counseling ability, uncertainty of how to use storage devices, fear of offending parents, and lack of time.<sup>15,16</sup> In short, pediatric trainees are not adequately educated on firearm safety.

## 10 WAYS PEDIATRIC TRAINEES CAN IMPROVE FIREARM SAFETY

### Individual Trainee Level

1. Familiarize yourself with firearm safety resources.
2. Conduct a firearm safety check, including screening, counseling, and provision of a free firearm lock, at every well-child visit.
3. Identify high risk patients.

### Residency Level

4. Help develop an evidence-based firearm safety curriculum for your residency program, including interactive simulations, motivational interviewing, and hands-on practice using firearm locks.
5. Educate medical students about firearm safety by speaking at a Pediatric Interest Group meeting, Pediatric Clerkship lecture, or one-on-one with students at your clinic.
6. Conduct quality improvement projects to improve efficacy of firearm safety checks, such as EMR template changes, innovative modes of delivery, work-flow changes, etc.
7. Develop research questions and design projects to help expand the limited research on firearm safety.

### Community Level

8. Partner with your local police department and community organizations, such as Moms Demand Action for Gun Sense in America, to collect free firearm locks and other resources for your clinic.
9. Talk with community members, in particular firearm owners, about how pediatricians can effectively frame our message.
10. Advocate at the local, state, and national level for legislation that will protect children from firearm-related injuries.

## Firearm Safety Resources for Pediatricians and Families:

- [Healthychildren.org](http://Healthychildren.org)
- [EverytownResearch.org](http://EverytownResearch.org)
- BE SMART Campaign: [besmartforkids.org](http://besmartforkids.org)
- The Eddie Eagle GunSafe Program: [eddieeagle.nra.org](http://eddieeagle.nra.org)
- Project ChildSafe: [projectchidsafe.org](http://projectchidsafe.org)

## CONCLUSION

Firearms are the leading cause of death in American children and teenagers. Pediatric trainees must rise to the occasion and join pediatricians, public health experts, and leaders across the country in efforts to end our firearm epidemic. Our medical training is the time to learn best practices and develop skills we will implement throughout the rest of our careers. Through formal education, community partnership, advocacy, quality improvement, and research, we can improve firearm safety in our communities. If we do not learn about firearm safety now, when will we?

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