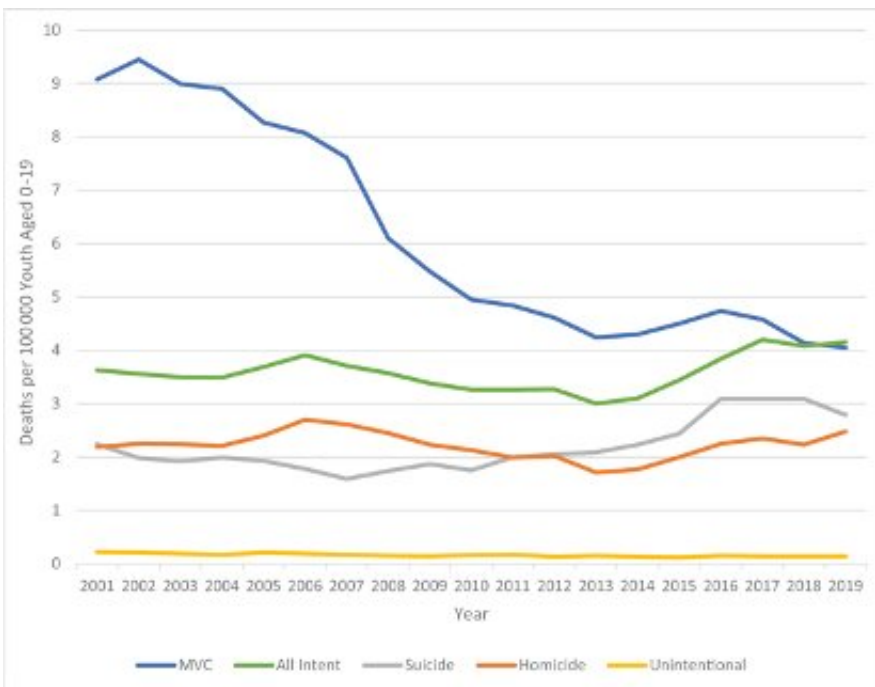


Firearms kill more children than car crashes, new report finds

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Firearm injury and motor vehicle collision mortality among youth aged 0–19 from 2001–2019. Data are derived from the CDC and NCHS. All Intent = all firearm deaths (homicide, suicide, and unintentional); Homicide, firearm homicide deaths; MVC, motor vehicle traffic collision; Suicide, firearm suicide deaths; Unintentional, unintentional firearm deaths. Credit: Annie Andrews, MUSC

Gun violence in the United States has increased to the point that it now kills more children than any other cause, including car accidents, and

pediatricians may not be entirely prepared.

While health care providers are taught to recognize and treat many [public health crises](#), including the opioid crisis, the COVID-19 pandemic, and the obesity crisis, violence related to firearms has not always been seen through that lens.

In an analysis of the most recent data available through the CDC, clinical researchers from the Medical University of South Carolina revealed that firearm injuries are now the leading cause of death among children under 19, and the racial gap between black and white youth is widening. The article, recently published in the journal *Pediatrics*, calls for physicians and other health care workers to recognize this as an epidemiological and public health challenge and to help find solutions.

Annie Andrews, M.D., a pediatrician and assistant professor of pediatrics at MUSC, led the charge to describe the most up-to-date statistics on firearm-related injuries and death to set the stage for efforts to find evidence-based solutions.

"When I became a pediatrician, I never thought that I would care for so many children who had been shot," Andrews said. "It's not something that you think about when you consider what a pediatrician does, but as a hospital-based doctor for the past 12 years I've seen it happen again and again. And I started to get really worried about this."

When Andrews and her team looked at the data, they saw that gun-related deaths in children surpassed deaths caused by motor vehicle collisions beginning in 2019. And while the death rate due to car accidents has steadily declined since 2001, the firearm death rate has continued to climb, with increased homicide and [suicide rates](#) driving a 14% total increase over the last two decades.

But the team also noted a large gap in risk based on race: the overall firearm-related death rate was more than four times higher for black children than for white children, and the homicide rate was over 14 times higher for black children.

"One of the really striking things that we were able to highlight was the health inequities embedded in pediatric firearm injury," said Andrews. "We're reporting here that it became the number one cause of death for children in 2019, but for decades it's already been the leading cause of death for [black children](#) in this country."

The study points out that the gap has been increasing since 2013, which is a crucial finding for those working to design preventative interventions and policies.

Stored guns are safer guns

Taming a complex, systemic crisis will require a multipronged approach, according to Andrews. And two main types of programs show the most immediate promise from a health care perspective: secure gun storage counseling and hospital-based violence intervention programs. Andrews and her team also suggest that medical training should incorporate professional guidance on [gun violence](#) for all students, not just those who specialize in emergency medicine.

"We teach [trauma surgeons](#) how to care for victims of gun violence," said Andrews. "But in my training as a pediatrician I didn't learn anything about the prevention of these injuries or even how to talk to families in a culturally sensitive way about gun ownership and secure firearm storage."

When researchers look at gun violence data, they look at three categories—unintentional injuries, homicide and suicide—and while

different solutions are needed for each category, secure firearm storage can help reduce the incidence of all three.

Andrews says that encouraging parents to use secure storage—keeping guns locked and unloaded and separate from ammunition—can keep young children safe from accidental gunshots that can happen when they find a gun and pull the trigger on a loaded weapon.

Safe storage can also have a huge impact on suicide by preventing impulsive actions that teenagers may take following a tough time at school or a bad breakup. Andrews suggests that if the means are not available while the impulse is strong, these kids will have a better chance to survive.

And secure storage may reduce the incidence of school shootings by limiting easy access to guns. Seventy-six percent of school shooters under the age of 18 [use a weapon from home or from the home of someone they know](#), so making it more difficult to obtain these weapons could have an impact.

Hospital support and grassroots local engagement

Beyond secure firearm storage, hospital-based violence intervention programs provide a means for [health care professionals](#) to address community gun violence, and there are many models that have shown evidence of success. Cities and states across the country are implementing evidence-based programs that work with health care resources, law enforcement support and local communities at the neighborhood and even street block level to prevent violence, and especially to de-escalate situations to prevent repeat or retaliatory violence.

In Charleston, MUSC has partnered with numerous grassroots

organizations to create a hospital-based program called Turning the Tide. Ashley Hink, M.D., is a trauma surgeon at MUSC and serves as the medical director of Turning the Tide. She described the program by emphasizing partnerships.

"With our program we can work with our pediatrics and emergency medicine colleagues to identify teenagers that are at very high risk of violence," she said. "And we can then offer interventions and support through a host of local resources."

She points to violence interruption as a critical part of the program's strategy. After receiving a call from the police or hospital that a violent event has occurred on their street or in their neighborhood, trained community members can respond on-site. They go into the neighborhood to encourage the people involved in the conflict not to retaliate or escalate the situation with more violence. Such programs have been shown to be effective but require adequate funding, which has been a challenge in some areas.

Andrews encourages all health care professionals to acknowledge that gun violence is a public health crisis. "We need to critically ask ourselves what we can do to prevent these injuries that happen every day," she said. "And once an injury has occurred, we need to figure out what we can do to prevent patients from getting harmed again in the future."

MUSC has been addressing the rise in gun violence locally by speaking with parents about secure gun storage and offering safety locks during well child checks, and this effort has been well received. The culture at the hospital has also evolved to add training on pediatric [firearm injuries](#) for residents and active engagement in the Turning the Tide program.

Reversing gun violence against children is a big challenge, but Andrews and Hink hope that local, state, and national changes over time will

indeed turn the tide.

More information: Annie L. Andrews et al, Pediatric Firearm Injury Mortality Epidemiology, *Pediatrics* (2022). [DOI: 10.1542/peds.2021-052739](https://doi.org/10.1542/peds.2021-052739)

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