Firearm Injuries: Data to Drive Prevention

Thomas Simon, PhD Senior Director for Scientific Programs

Division of Violence Prevention National Center for Injury Prevention and Control Centers for Disease Control and Prevention (CDC)





57 lives lost to firearm homicide every day (20,958 in 2021) 72 lives lost to firearm suicide every day (26,328 in 2021)

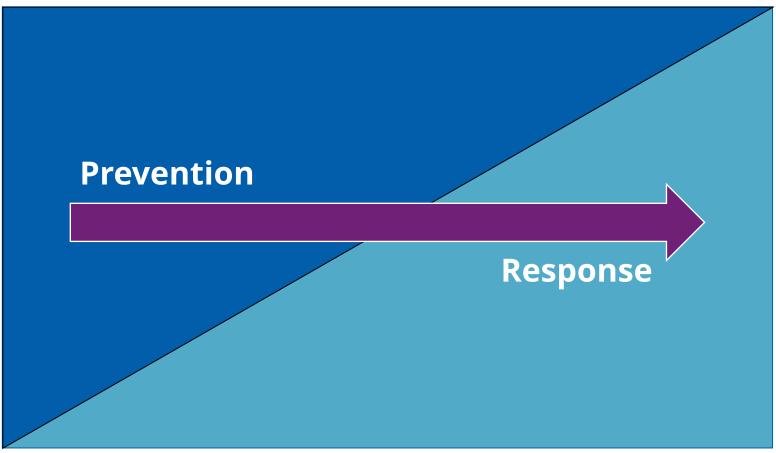
The Public Health Model



Data, partnerships, and experience are the foundations of the public health approach to violence prevention

Violence is a Public Health Problem

Public Health



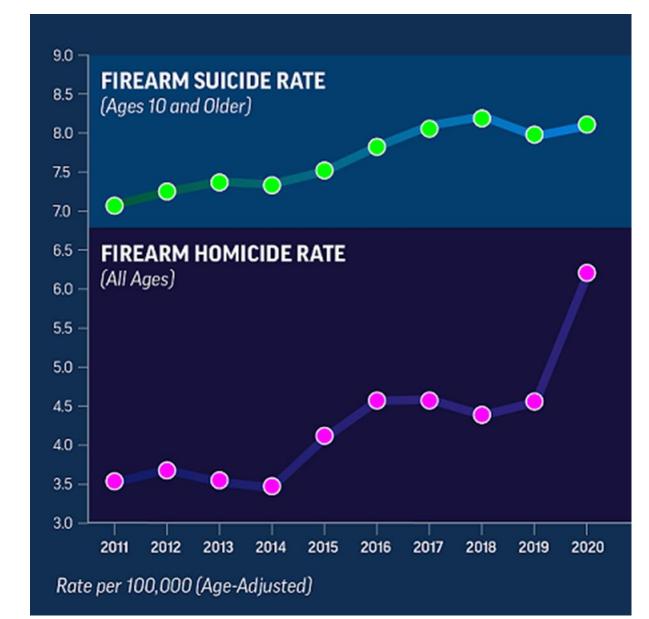
Criminal Justice/Service System

Epidemiologic Trends and Patterns



Firearm Homicides Rose Sharply, and Firearm Suicides Remained High

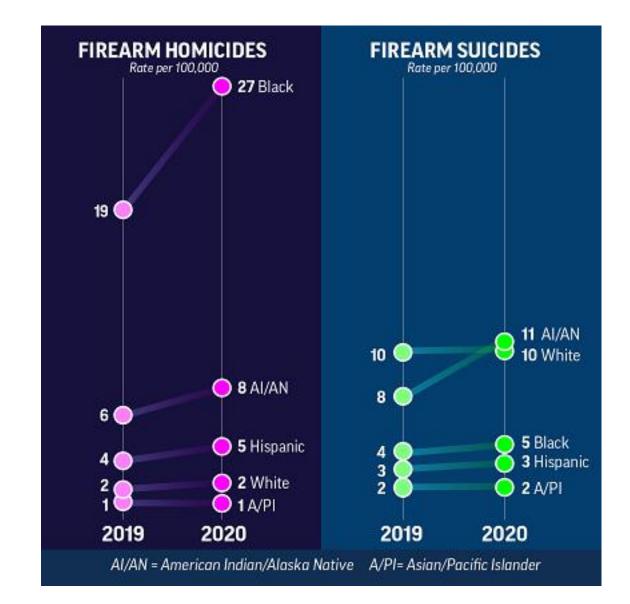
From 2019 to 2020, the firearm homicide rate increased about 35%, while the firearm suicide rate remained high.



Kegler SR, Simon TR, Zwald ML, et al. *Vital Signs*: Changes in Firearm Homicide and Suicide Rates — United States, 2019–2020. MMWR Morb Mortal Wkly Rep 2022;71:656–663. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7119e1external icon</u>.

Widening Disparities

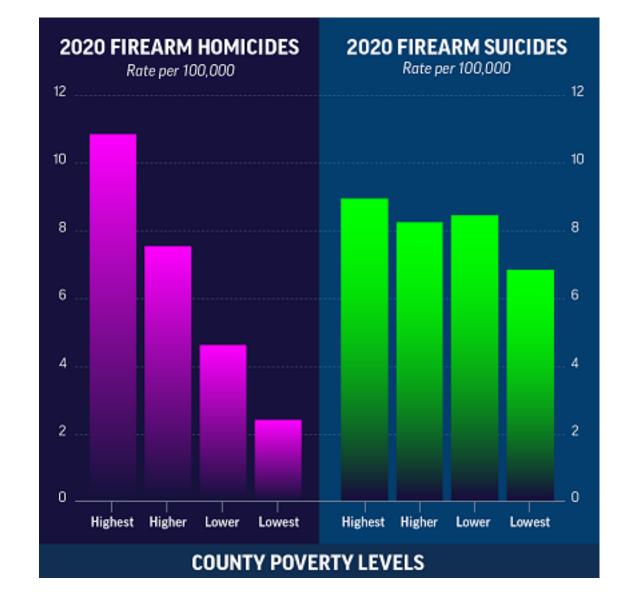
The firearm homicide rate increased most for Black people, and the suicide rate increased most for American Indian/Alaska Native people.



Kegler SR, Simon TR, Zwald ML, et al. *Vital Signs*: Changes in Firearm Homicide and Suicide Rates — United States, 2019–2020. MMWR Morb Mortal Wkly Rep 2022;71:656–663. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7119e1external icon</u>.

Conditions of Poverty Are Associated with Firearm Deaths

Counties with the highest poverty level had firearm homicide rates 4.5 times as high and firearm suicide rates 1.3 times as high as counties with the lowest poverty level.



Kegler SR, Simon TR, Zwald ML, et al. *Vital Signs*: Changes in Firearm Homicide and Suicide Rates — United States, 2019–2020. MMWR Morb Mortal Wkly Rep 2022;71:656–663. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7119e1external icon</u>.

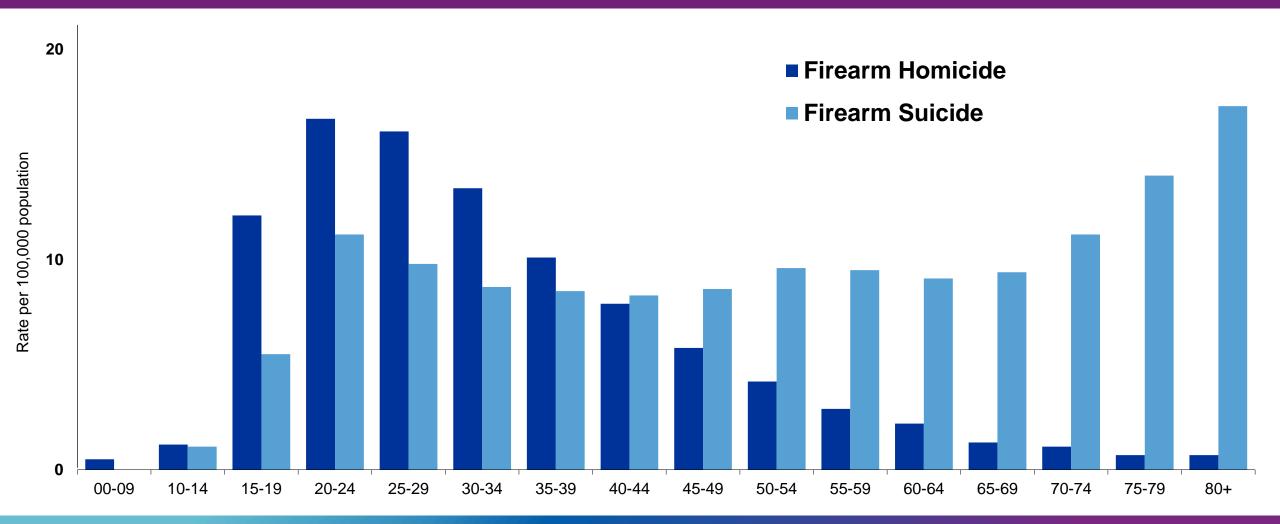
Continued increases from 2020 to 2021

Firearm homicide and suicide rates each increased by 8% from 2020 to 2021

- Nearly 9,000 more lives lost in 2021 than in 2019
- Firearms were used:
 - 81% of homicides
 - 55% of suicides

Simon TR, Kegler SR, Zwald ML, et al. *Notes from the Field*: Increases in Firearm Homicide and Suicide Rates — United States, 2020–2021. MMWR Morb Mortal Wkly Rep 2022;71:1286–1287. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7140a4</u>.

Rates of firearm-related death by age group and intent, U.S., 2021



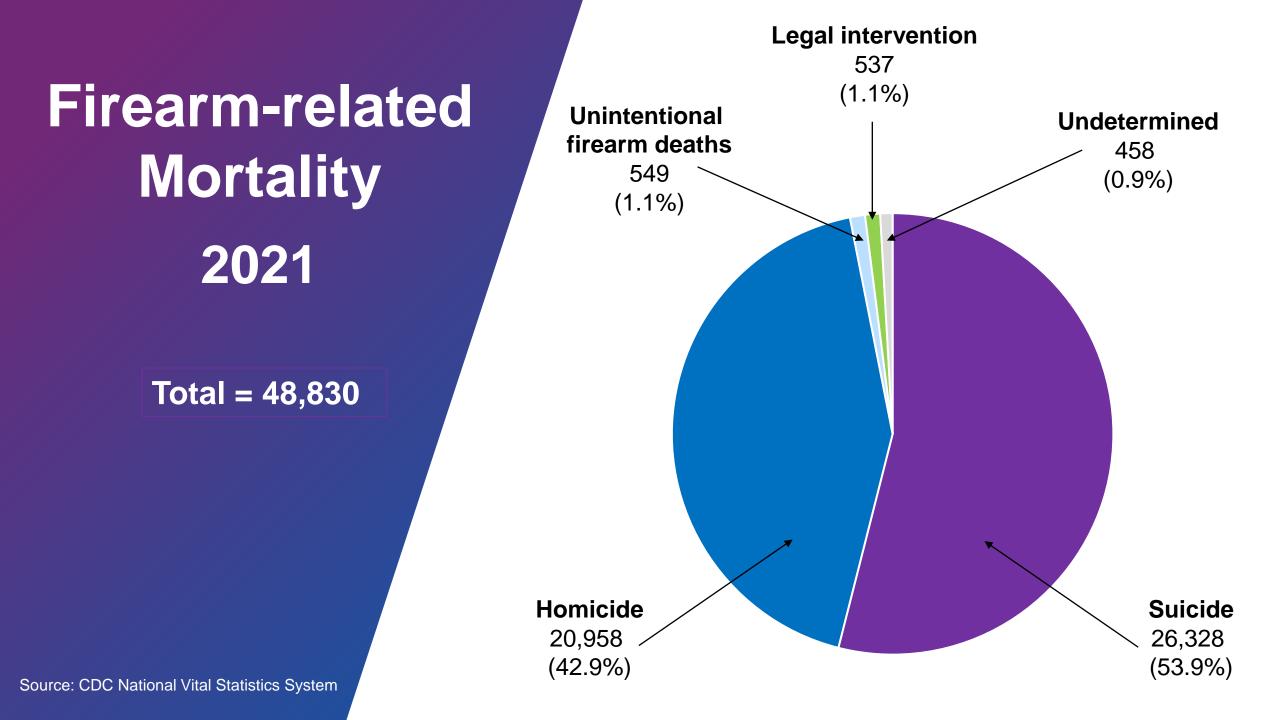
Homicide as a Leading Cause of Death

More children and teens died from firearm injuries than motor vehicle crashes

Unintentional Injury 8,125 **Firearm Injuries** 4.733 Homicide 3,553 Motor Vehicle Crashes 4,321 **Suicide** 2,950 Poisoning/Overdose 2,079 Cancer 1,670 Suffocation 1,409 **Birth Defects** 964 Drowning 960 Heart Disease 639 Other Injuries 1,491 COVID-19 547 Stroke 215 Chronic Respiratory Dis. 191 Diabetes 157

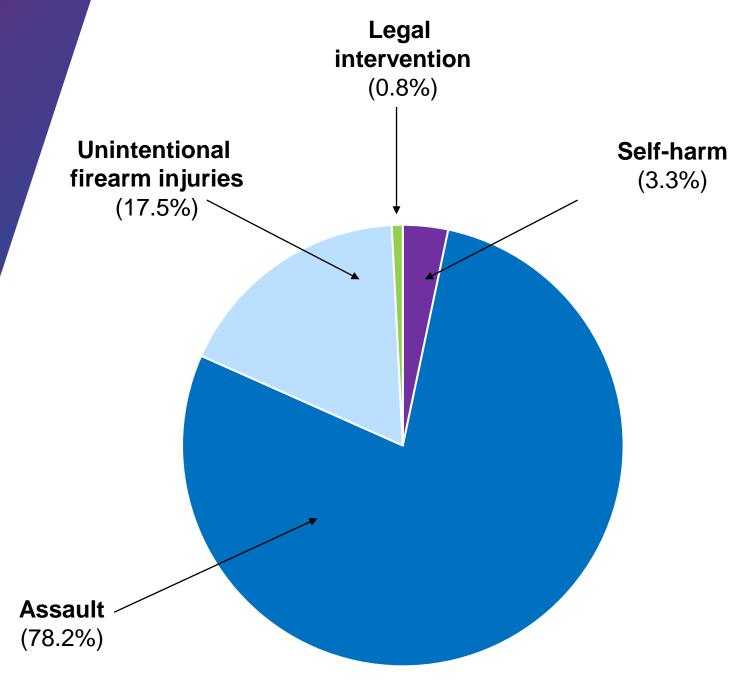
Leading Causes of Death, Ages 1-19, 2021*

Source: National Vital Statistics System; *Counts by mechanism are regardless of intent



Nonfatal Firearm-related Injury Emergency Department Visits

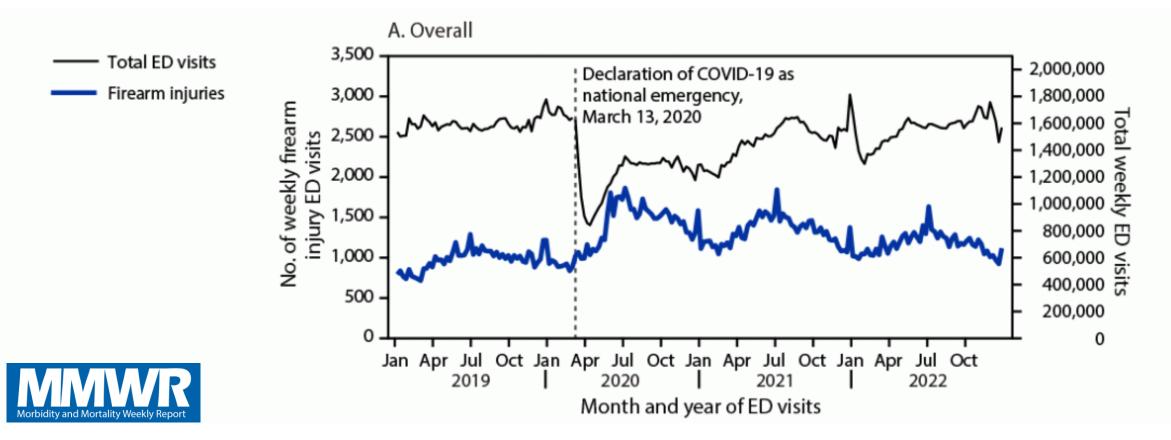
> Average Annual Estimates 2018-2020



Source: NEISS-Firearm Injury Surveillance Study, 2018-2020

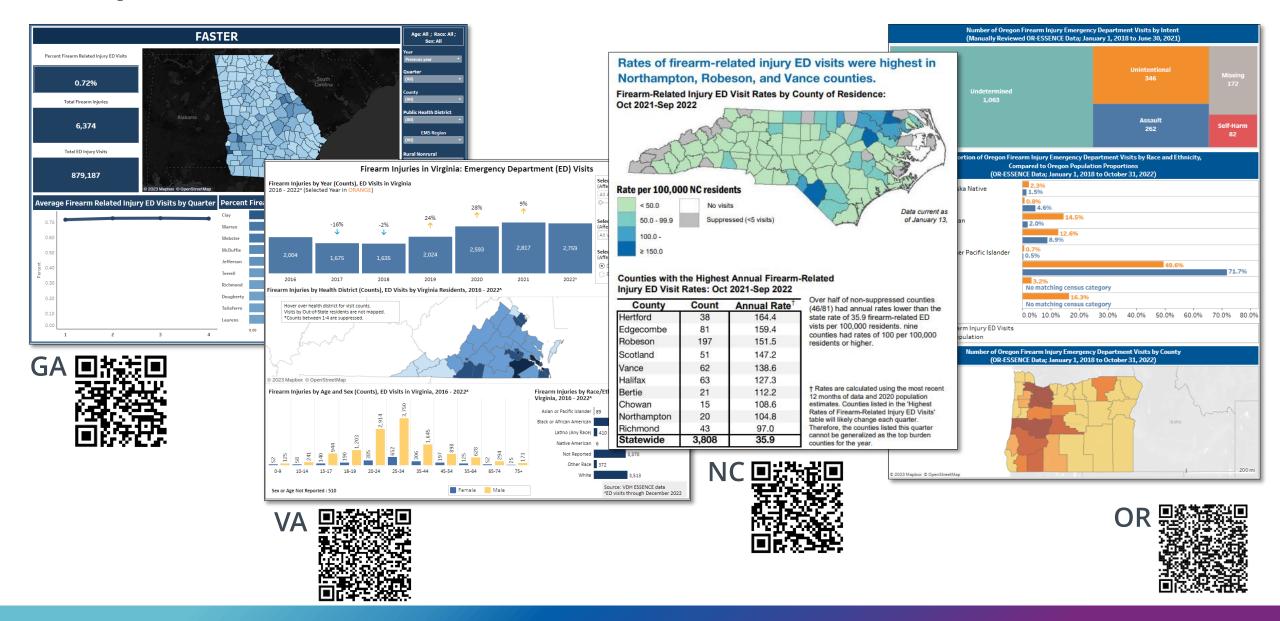
ED visits for firearm injuries during 2020, 2021, and 2022 were 37%, 36%, and 20% higher, respectively, than 2019.

Emergency Department Visits for Firearm Injuries Before and During the COVID-19 Pandemic — United States, January 2019–December 2022



Zwald ML, Van Dyke ME, Chen MS, et al. Emergency Department Visits for Firearm Injuries Before and During the COVID-19 Pandemic — United States, January 2019–December 2022. MMWR Morb Mortal Wkly Rep 2023;72:333–337. DOI: <u>http://dx.doi.org/10.15585/mmwr.mm7213a2</u>

Sample FASTER Data Dashboards



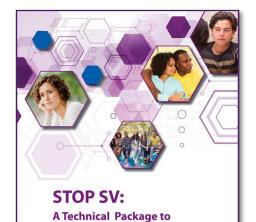
CDC's Resources for Action: Violence and Suicide Prevention



bit.ly/CDC-Tech-Packages



Preventing Child Abuse and Neglect: A Technical Package for Policy, Norm, and Programmatic Activities

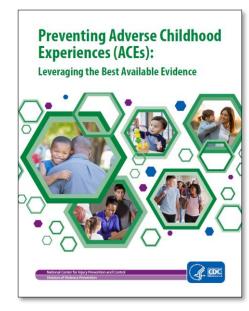


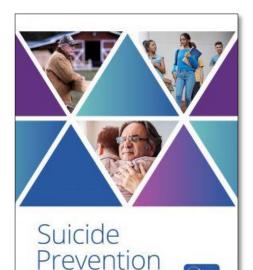
Prevent Sexual Violence

A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors



Preventing Intimate Partner Violence Across the Lifespan: A Technical Package of Programs, Policies, and Practices





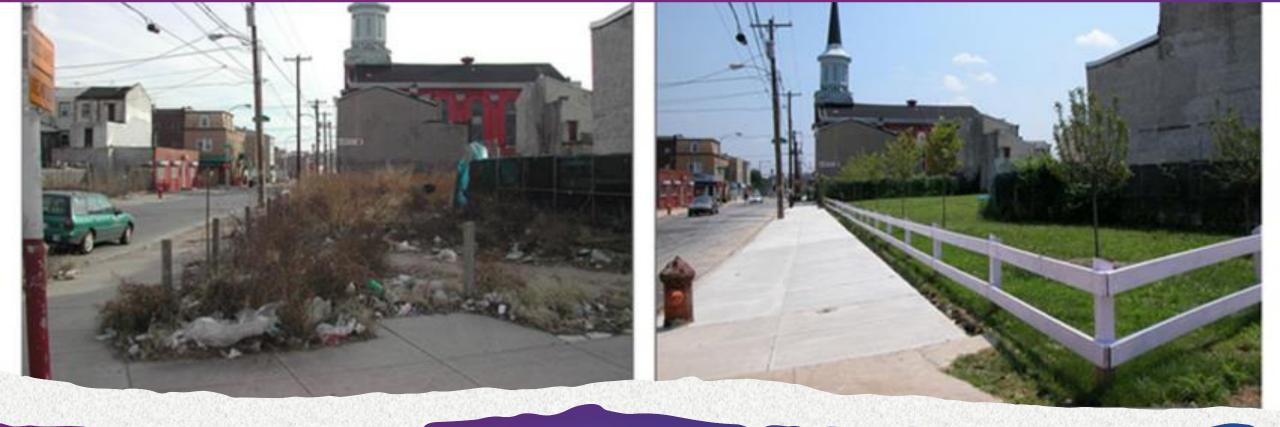
RESOURCE FOR ACTION



Help people experiencing the greatest risk

+ Community Outreach Programs

+ Hospital-Community Partnerships



Address the locations associated with the greatest risk

+Environmental Design +Safe Passages

Image Source: Eugenia C Garvin et al. Inj Prev 2013;19:198-203



Address the underlying conditions that contribute to risk and disparities

 + Economic and household security



Firearm Violence Prevention Research

+ Focus on populations or settings experiencing the greatest risk

+ Etiological Questions

- Reasons for increases, carrying, storage
- Modifiable risk & protective factors

+ Evaluation Questions

- Suicide, assaults, unintentional injuries
- Policy evaluation
- Strategies for different populations
- Unintended consequences





CDC Foundation

- Independent non-profit created by Congress
- Mobilizes philanthropic and private-sector resources to support CDC's work
 - Launching new programs
 - Expanding promising programs
 - Establishing pilot projects
- Collaborations provide external support to complement government investments

Firearm Violence Prevention Website www.cdc.gov/violenceprevention/firearms

- Fast Facts
 - Definitions
 - Statistics
 - Secure storage
- Funded Research
 - Funding opportunities
 - Current awards
- Funded Surveillance
 - FASTER description
 - Recipients
- Resources
 - CDC articles and MMWR reports
 - Federal and non-federal resources



Thank you!

Resources

Firearm Violence Prevention → <u>bit.ly/CDC-Firearms</u>



Prevention Resources → bit.ly/CDC-Tech-Packages



The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.