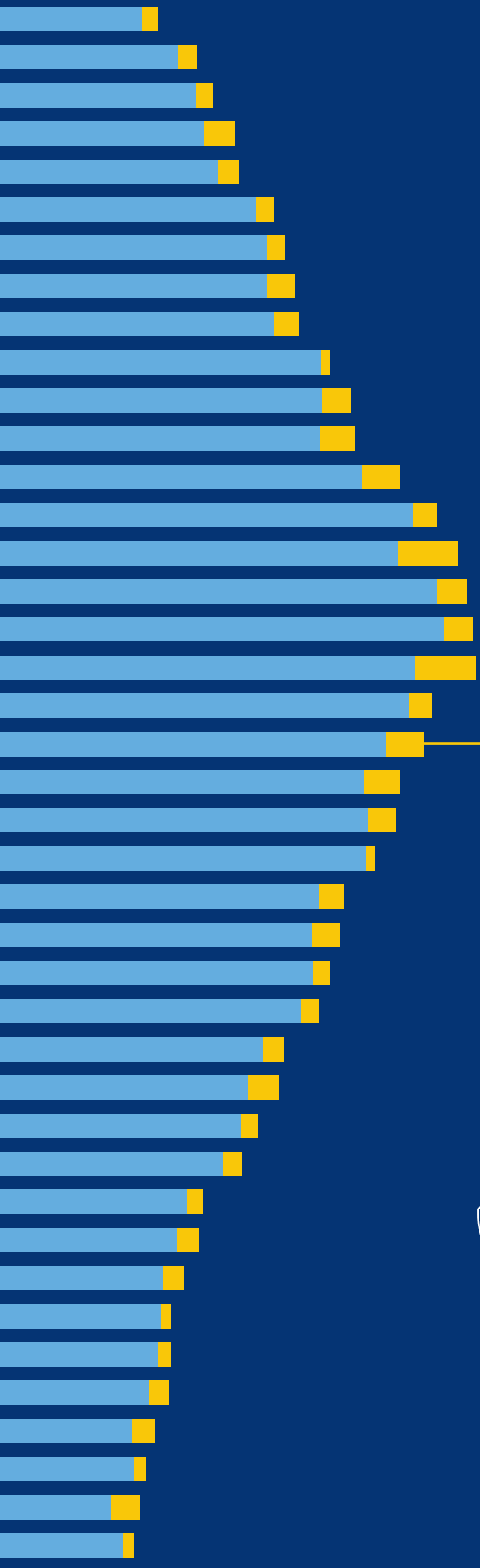

U.S. Gun Violence in 2021:

An Accounting of a Public Health Crisis

AN ANNUAL REPORT FROM THE JOHNS HOPKINS CENTER FOR GUN VIOLENCE SOLUTIONS

JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

Center for
Gun Violence Solutions

June 2023

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About this Report

About the Johns Hopkins Center for Gun Violence Solutions

The Johns Hopkins Center for Gun Violence Solutions combines the expertise of highly respected gun violence researchers with the skills of deeply experienced gun violence prevention advocates. We use a public health approach to conduct rigorous scientific research to identify a range of innovative solutions to gun violence. Because gun violence disproportionately impacts communities of color, we ground our work in equity and seek insights from those most impacted on appropriate solutions. Using the best available science, our Center works toward expanding evidence-based advocacy and policy-making efforts. This combination of expertise creates a unique opportunity to turn public health research into action that reduces deaths and injuries from gun violence.

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We would also like to acknowledge the former staff members of the Educational Fund to Stop Gun Violence who created the foundation from which much of this report is based.

How to Cite this Report

Davis, A., Kim, R., & Crifasi, C. K. (2023). A Year in Review: 2021 Gun Deaths in the U.S. Johns Hopkins Center for Gun Violence Solutions. Johns Hopkins Bloomberg School of Public Health.

Data Source

This report outlines gun death data from 2021, the most recent year of finalized data available. All data were accessed using the Centers for Disease Control's Underlying Cause of Death database, part of the Wide-ranging Online Data for Epidemiologic Research (WONDER) database. The Underlying Cause of Death database contains data based on death certificates for U.S. residents and is the most reliable national source of gun death data available in the U.S.

Introduction

Gun violence is an ongoing public health crisis in the United States that impacts the health and well-being of all of us. In 2020, during the first year of the COVID-19 pandemic, the U.S. experienced an unprecedented spike in gun homicides. Many believed that this spike would be short-lived; levels of gun violence would subside as institutions effectively responded to the pandemic and people returned to their daily routines. This, unfortunately, was not the case.

In 2021, for the second straight year, gun deaths reached the highest number ever recorded. Nearly 49,000 people died from gun violence in the U.S. in 2021. **Each day, an average of 134 people died from gun violence—one death every 11 minutes.**

Gun homicides continued to rise in 2021, increasing 7.6% over the previous year. Gun suicides reached record levels, increasing 8.3%, the largest one-year increase recorded in over four decades. **Guns, once again, were the leading cause of death among children and teens in 2021 accounting for more deaths than COVID-19, car crashes, or cancers.**[1]

Coincident with the rise in gun-related deaths were record gun sales. Millions of first-time purchasers, including Black and Hispanic/Latino people, and women of all races and ethnicities, bought guns during the pandemic at unprecedented levels.[2] Many of these purchasers were motivated by gun industry marketing claims that guns make you safer. Yet, this is far from the truth; gun ownership greatly increases the risk of dying by suicide and homicide.[3]

While it is too early to tell whether this surge in gun purchases contributed directly to the rise in gun violence the country is experiencing, we know that over the long run this influx of guns will only exacerbate the public health crisis of gun violence and worsen health disparities.

Fortunately, there are evidence-based, equitable solutions to prevent gun violence. These solutions are supported by most people, including gun owners. In spite of this wide support, many policymakers have been unwilling to follow the evidence and enact policies that will save lives.

Each year it is our mission to provide policymakers and the public accurate and up-to-date data on gun fatalities and illustrate the enormous toll gun violence has on our country. This report is an update of "A Year in Review: 2020 Gun Deaths in the U.S." It uses 2021 firearm fatality data released by the CDC in January 2023.

We recognize that each data point discussed in this report is a person who died by gun violence. This loss has an immeasurable impact on families, friends, and communities; data can only partly illuminate the true burden of gun violence. In addition to analyzing the data, we must listen to and uplift the voices of those directly impacted by gun violence, their loved ones, and their communities.

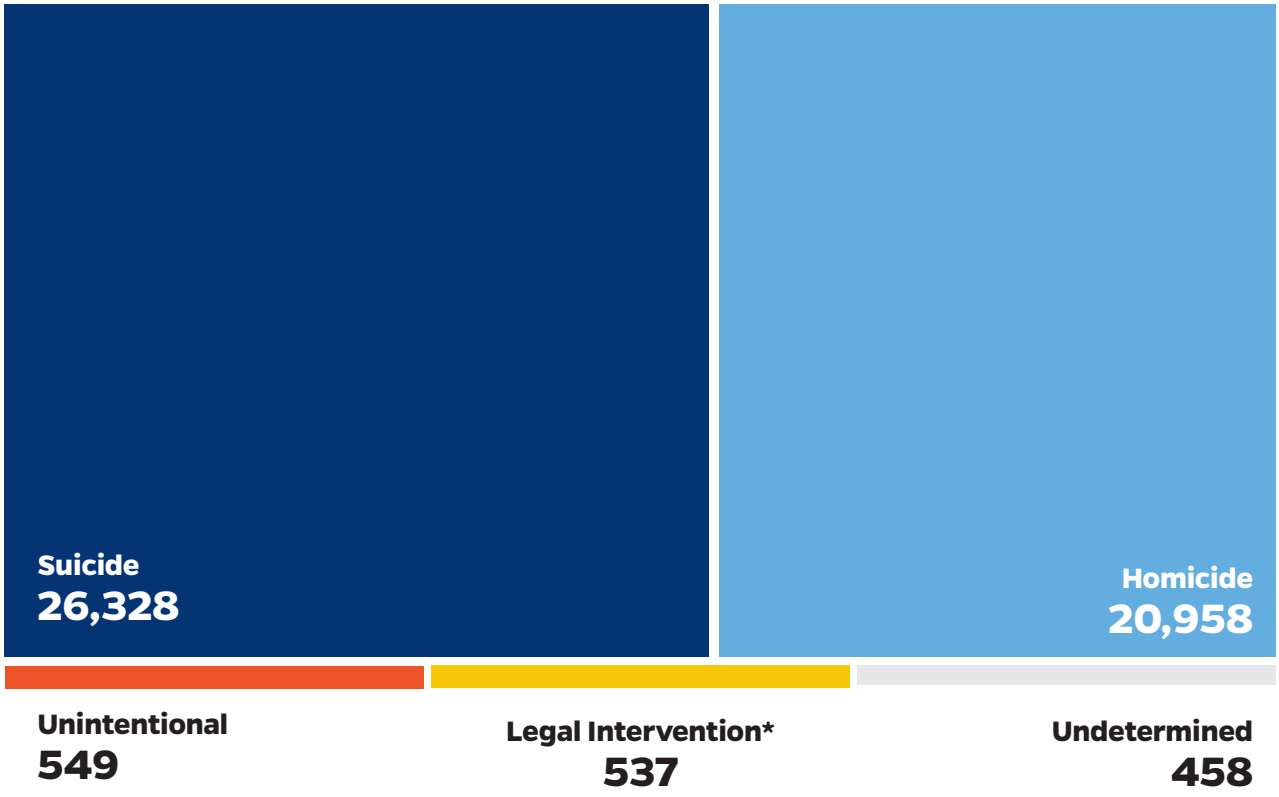
Yet even on its own, the 2021 CDC data paints an alarming picture of the epidemic of gun violence. It illustrates how people from all walks of life are impacted. These deaths, and the associated pain and suffering, can be prevented. By leveraging the data outlined in this report, we can improve gun violence prevention strategies and create a more peaceful future, free from gun violence.

An Overview of U.S. Gun Deaths in 2021

The United States reached an all-time record number of gun deaths in 2021. 48,830 lives were lost to firearms in 2021, an increase of over 3,600 deaths from 2020—the previous record high.[4] This was driven by large rises in both gun homicides and gun suicides. In 2021 the U.S. experienced:

- 20,958 gun homicides, the highest number ever recorded, as well as the highest gun homicide rate since 1994. The gun homicide rate increased 7.6% from 2020 to 2021.
- A record high number of gun suicides in 2021—over 26,328 deaths. The gun suicide rate was the highest since the CDC began recording such data in 1968. The gun suicide rate increased 8.3% from 2020 to 2021, the largest one-year increase in over four decades.

48,830 lives were lost to gun violence in 2021



* The CDC data classification "legal intervention" under-counts police-involved gun fatalities, classifying them as other types of gun deaths. To address this gap, media sources like the Washington Post's Fatal Force database have tracked police-involved shootings in recent years, reporting that 1,048 people were shot and killed by police in 2021.

Five Fast Facts for Firearm Fatalities in 2021

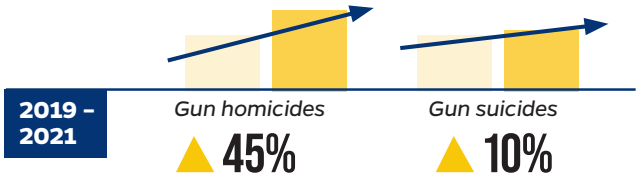
There were

48,830

gun deaths in the U.S., the highest number of gun deaths ever

Someone was killed by a gun every 11 minutes

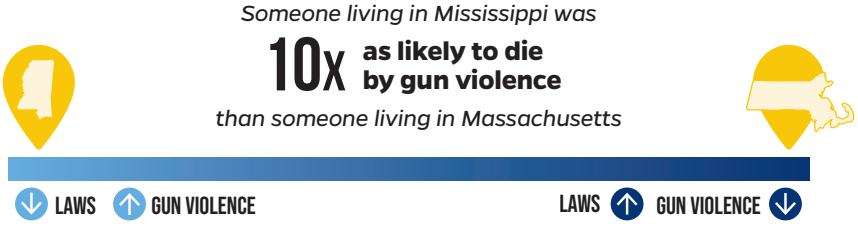
Guns drove the increases in homicides and suicides during the pandemic



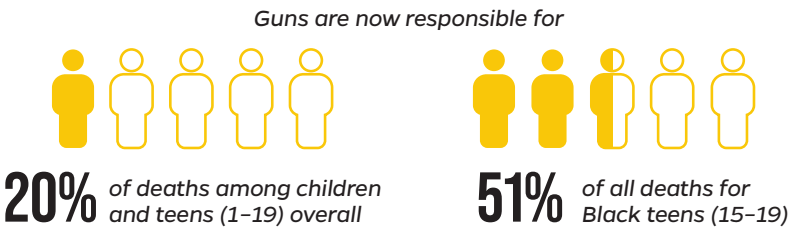
There were 9,123 more gun deaths in 2021 compared to 2019

Gun violence disproportionately impacts Black Americans

States with stronger gun laws consistently have lower rates of gun violence



Gun violence was the leading cause of death for children and teens ages 1–19



Gun Deaths Over Time

A Spike in Gun Violence During the COVID-19 Pandemic

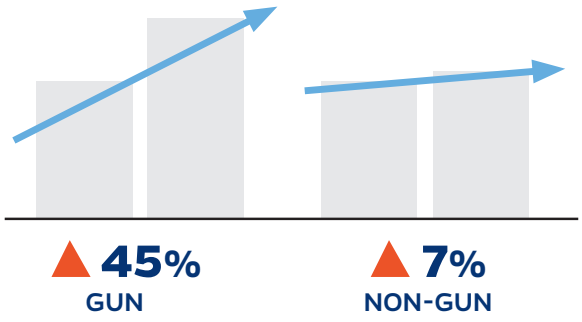
During the first two years of the COVID-19 pandemic, communities across the U.S. experienced a historic and unprecedented spike in gun deaths. There were 9,123 more gun deaths in 2021 than in 2019. In addition to the pandemic, the rise coincided with record increases in gun sales and widespread social unrest.

Guns were responsible for the rise in overall violence during the pandemic.

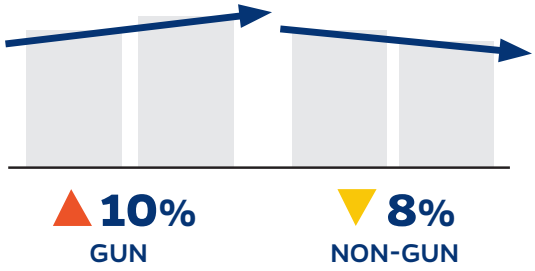
Amidst the rise in violence during the COVID-19 pandemic, guns alone were responsible for the dramatic increase in homicides from 2019 to 2021, the largest two-year increase ever recorded by the CDC. Over this time period, the gun homicide rate increased 45% while the non-gun homicide rate increased by 7%.

A similar trend occurred with suicides. The overall suicide rate increased slightly from 2019 to 2021, driven by a gun suicide rate that increased 10%. Meanwhile, the non-gun suicide rate *decreased 8%. In other words, guns were entirely responsible for the rise in suicides during the pandemic.*

CHANGE IN HOMICIDE RATE, 2019–2021



CHANGE IN SUICIDE RATE, 2019–2021



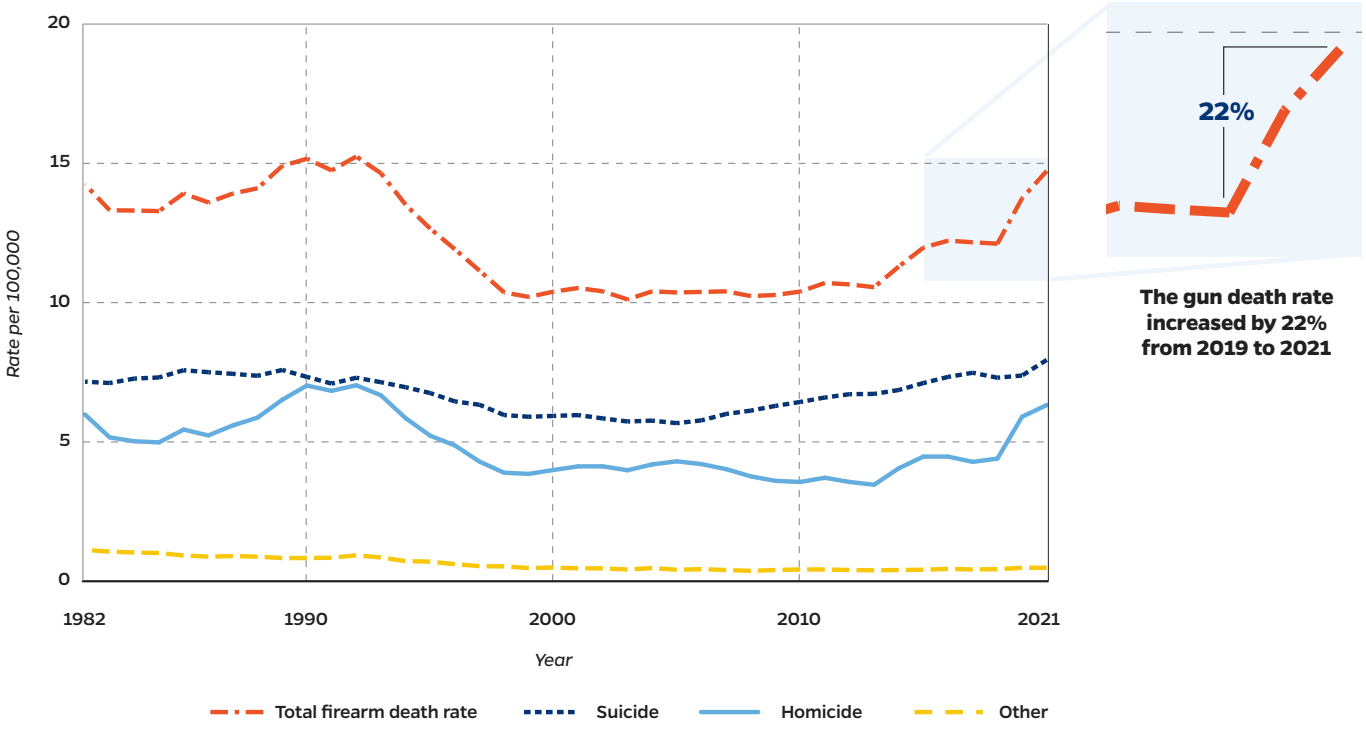
Gun Deaths Over the Last 40 Years

The crisis of gun violence in the U.S. is not new. Over the past four decades, nearly 1.4 million people have died from gun violence. This is more than the total number of Americans who have died in wars fought throughout U.S. history.[5]

The firearm suicide rate was elevated through the 1980s and early 1990s before steadily decreasing through the mid-2000s. Since then, the gun suicide rate has persistently increased, returning to the highs of the late 1980s. The gun suicide rate in 2021 was the highest rate ever recorded by the CDC.

The firearm homicide rate peaked in the early 1990s, declined significantly, and then leveled off in the 2000s and early 2010s reaching a 40-year low in 2014. Since then, the gun homicide rate spiked in 2015 and 2016 and again in 2020 and 2021. The rate is up 83% from its 2014 low. Put another way, if the gun homicide rate had remained where it was a mere seven years earlier, an estimated 9,500 fewer people would have been killed with guns in 2021.

FIGURE 1: Firearm Death Rate Over the Past 40 Years, 1982–2021*



WHY USE RATES?

The numbers of gun deaths can help illustrate the burden of gun violence in a particular population. However, because the total population varies by geographic area and over time, firearm death rates (typically measured as the number of gun deaths per 100,000 people) provide an important measure for comparison.

For example, 2021 had the highest **number** of gun deaths ever, but not the highest **rate** because the U.S. population has grown. While there were fewer gun **deaths** in the early 1990s, the gun death **rate** in the early 1990s was higher than it is today because the number of gun deaths compared to the population was higher.†

* The gun death rates depicted in the graph below are classified from two versions of the International Classification of Diseases (ICD). The data from 1983 to 1998 were classified using ICD 9 codes, and from 1999 to 2021 classified using ICD 10. Crude rates were used for this graph to maintain consistency across time periods.

† Rates in this report, unless otherwise stated, are age-adjusted. Age adjustment allows for accurate comparisons among populations with different age distributions. To learn more about age adjustment see the definition in the glossary.

The Lethality and Availability of Firearms

Due to their high lethality and availability, firearms fuel our country's high suicide and homicide rates.

Four out of every five homicides and more than half of all suicides are by firearm.

Homicides

In 2021, 81% of all homicides were by firearm, the highest proportion of homicides carried out by firearm in history.

The graph below illustrates how over the past decade the number of non-gun homicides remained consistent while the number of gun homicides increased drastically driving up the percentage of gun homicides from 70% of all homicides in 2012 to 81% in 2021.

FIGURE 2: Percentage of Homicides by Gun, 2012–2021

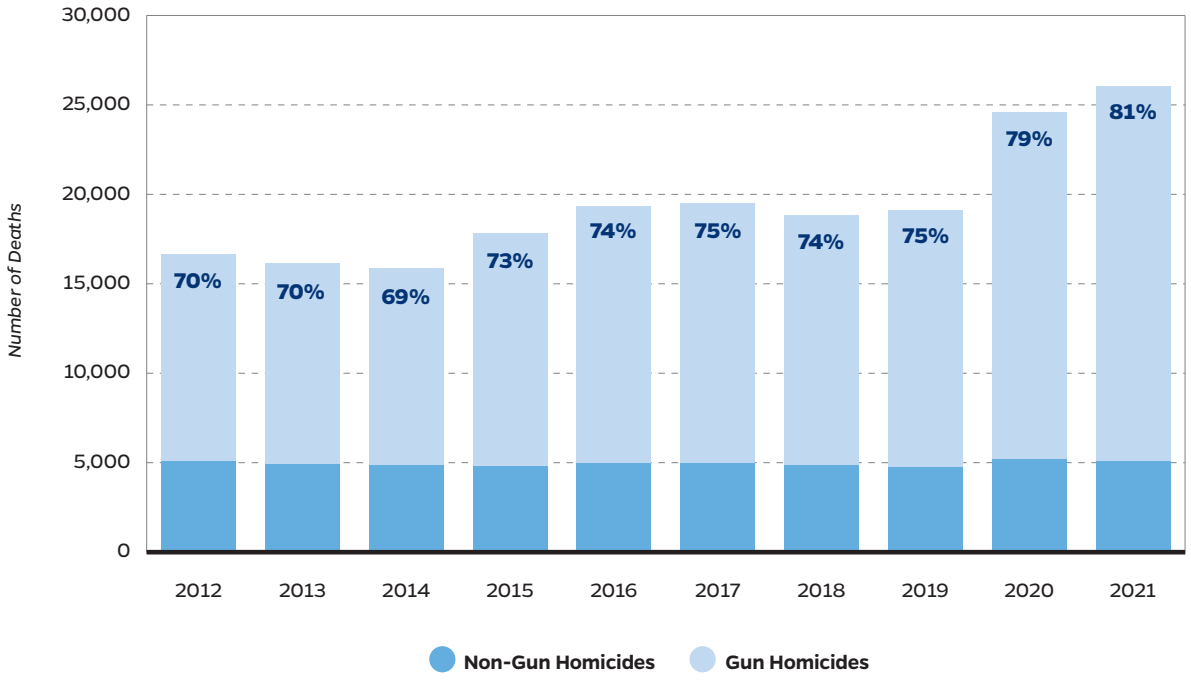
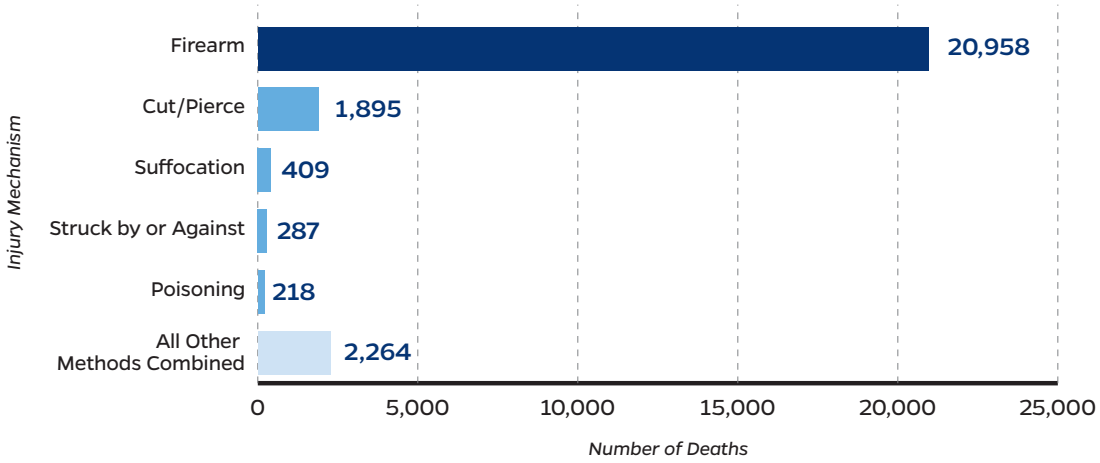


FIGURE 3: Homicides by Method, 2021*

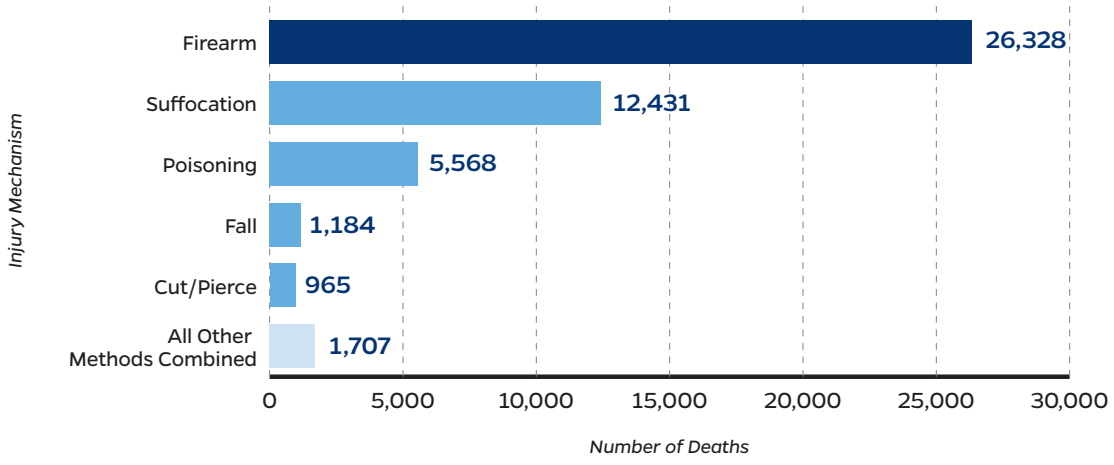


- In 2021, guns were used in homicides 11 times more than the second most common method of homicide (cutting/piercing) and 51 times more than suffocation.
- The lethality and availability of guns drive our country's high homicide rate. Compared to other high-income countries, the U.S. has similar levels of violent assault. However, because the U.S. has more guns and weaker gun laws, violent assaults are far more often deadly, and the homicide rate in the U.S. is 7.5 times higher than its peer countries.[6]

Suicides

In 2021, 55% of all suicides were by firearm. Access to lethal means, like firearms, greatly increases the risk that a suicide attempt will result in death. Ninety percent of suicide attempts involving firearms are fatal.[7]

FIGURE 4: Suicides by Method, 2021†



* The "All other methods combined" category includes: Unspecified Injury (1,376 deaths), Other specified, not elsewhere classified Injury (464), Other specified, classifiable Injury (166), Other land transport (113), Fire/Flame (108), Drowning (24), and Fall (12).
† The "All other methods combined" category includes: Other specified, classifiable Injury (697 deaths), Drowning (459), Fire/Flame (195), Other land transport (157), Other specified, not elsewhere classified Injury (112), and Unspecified Injury (85).

- Guns are used in suicides twice as often as the second most common method of suicide (suffocation) and 27 times more often than cutting/piercing.
- Due to their lethality, firearms account for more than half of all suicide deaths even though they make up less than 10% of all suicide attempts.[8] Drug poisoning and cutting account for approximately 80% of all suicide attempts, but fewer than 5% of these attempts are fatal.[9]

POLICY PREVIEW

Policy Solutions that Address Accessibility of Guns Among High-Risk People

To effectively prevent violence, policymakers need to address the easy access and availability of firearms that drive our country's high rates of suicide and homicide. Policy solutions that limit firearm accessibility among those at an elevated risk for violence or self-harm save lives.

The following two policies address this issue:

- Prevent prohibited people from purchasing a gun through **permit-to-purchase laws** which require individuals to undergo a background check and thorough vetting process before buying a gun.
- Remove firearms from individuals at elevated risk for violence through strong **Domestic Violence Protection Order (DVPO) laws and Extreme Risk Protection Orders (ERPOs)**.

For more information about these policies, see the recommendation section on page 26 of this report.

The Burden of Gun Violence Relative to Other Injuries and Diseases

The Leading Cause of Death Among Young People

Firearms were the leading cause of death for children and teens ages 1–19, prematurely taking the lives of 4,733 young people in 2021. When young people are shot and killed, they lose decades of potential: the potential to grow up, have a family, contribute to society, and pursue their passions in life. These losses are felt across neighborhoods and communities.

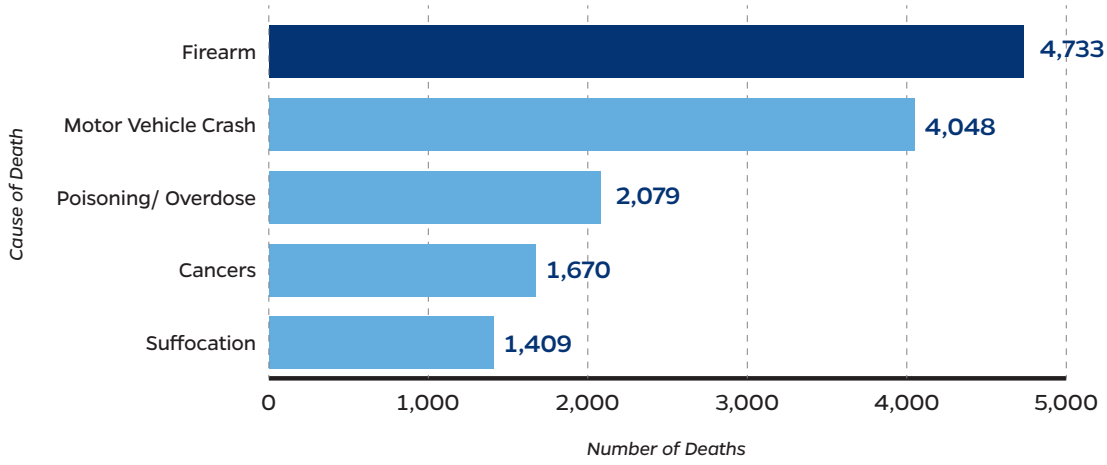
Compared to other causes of death, gun violence often poses a larger burden on society in terms of years of potential life lost. Years of potential life lost calculations estimate the average time a person would have otherwise been expected to live if they did not die prematurely. In 2020, firearm deaths accounted for 1,131,105 years of potential life lost before the age of 65—more than diabetes, stroke, and liver disease combined.[10]

Firearms also have a much larger burden on young people in terms of mortality than COVID-19. In fact, young people under the age of 30 were nearly four times as likely to die by firearm than by COVID-19 in 2021.[11] These comparisons are not meant to diminish the unprecedented toll of the COVID-19 pandemic and the devastating effect it had on many of the same communities disproportionately impacted by gun violence. However, it does help illuminate the often overlooked public health epidemic of gun violence that impacts our country year after year.

IMPACT ON CHILDREN, TEENS, AND YOUNG ADULTS

- Homicides are the most common type of gun death among children and teens; 64% of child and teen gun deaths were homicides and 30% were suicides.
- While teenagers account for the majority of these deaths, younger children are not immune. A total of 434 children ages 0–12 were killed by guns in 2021.
- Toddlers and young children are also impacted by gun violence; 153 children ages 0–4 died by gun violence in 2021 (87 gun homicides and 54 unintentional gun injuries).
- Black children and teens face alarmingly high rates of gun violence. More than half (51%) of all Black teens (15–19) who died in 2021 were killed by a gun.
- Gun violence remains the leading cause of death for young adults under the age of 25.

FIGURE 5: Leading Causes of Death, Ages 1–19*



POLICY PREVIEW

Pass Child Access Prevention Laws

Children and teens in the U.S. experience high rates of gun injuries and deaths. Many of these injuries and deaths are preventable through safe and secure gun storage practices. However, many states lack laws requiring owners to secure their guns when not in use. Child Access Prevention (CAP) laws require that guns in households with a child or teen must be kept unloaded and locked when unattended. These laws promote responsible firearm storage practices protecting children and teenagers from gun deaths, including unintentional shootings and gun suicides.

FIREARM FATALITIES COMPARED TO CAR CRASHES

More people now die by guns than in car crashes. In 2021, there were 48,830 and 45,404 deaths, respectively. While the total number of deaths are similar, there are vast differences in exposure to motor vehicles compared to firearms. The average person spends around eight hours per week in their car.[12] Cars are a part of our daily lives, while, for many people, firearms are not.

45,404 Car crashes **<** **48,830** Gun deaths

* We chose not to include infant deaths in our analysis, as infants (under age 1) are at a unique risk for age-specific causes of death, including perinatal period deaths and congenital anomalies. In 2021, 19 infants were killed by firearms. There were 1,830 deaths classified as "all other diseases" making it the fourth leading cause of death behind poisoning/overdose.

Gun Deaths by Demographic Groups

While nobody is immune to gun violence, some demographic groups are at much higher risk than others. This is a result of social and economic factors that contribute to the likelihood of violence. For example, gun homicides are highly concentrated within neighborhoods composed of predominantly Black and Hispanic/Latino residents. These neighborhoods face a host of systemic inequalities—hypersegregation, discrimination, lack of economic opportunities, and under-resourced public services. As a result, young Black and Hispanic/Latino people, particularly males, are disproportionately impacted by gun homicide. In contrast, elderly white men are at increased risk for gun suicide because this demographic is likely to live in more rural communities with limited availability of mental health services and easy access to firearms.[13,14]

By sex: Males are much more likely to die by all forms of gun violence than females.

- Nearly nine in ten (87%) firearm suicide decedents, and 84% of firearm homicide fatalities were male in 2021.
- Males were five times as likely to die by firearm homicide than females.
- Males were nearly seven times as likely to die by firearm suicide than females.
- While males are at elevated risk for gun violence overall, females are more likely to experience domestic violence with a firearm.
  - Nearly half of all women murdered in the U.S. are killed by a current or former intimate partner, and more than half of these intimate partner homicides are by firearm.[15]
  - Women are five times more likely to be murdered by an abusive partner when the abuser has access to a gun.[16]

DOMESTIC VIOLENCE, FIREARMS, AND COVID-19

Research shows that access to firearms is one of the primary predictors of lethality in abusive relationships. Even when not used fatally, firearms are often used to threaten or coerce. The added stressors of the COVID-19 pandemic, including economic hardship, social isolation, and increased gun purchasing led to an increase in domestic violence.[17]

The CDC WONDER database does not include information about how many deaths were related to domestic violence, so we do not have an accurate count of how many people die by domestic violence in this country each year. However, according to the CDC's National Violence Death Reporting System, there were 1,638 domestic violence-related gun homicides in 2020 within the 48 states that reported data.[18]

By age: In general, young people are most impacted by gun homicides and elderly people are most impacted by gun suicides.

- Young people ages 15–34 years old are at the highest risk for dying by firearm homicide. They had a gun homicide rate twice the national average and accounted for three out of every five gun homicide deaths.
- Elderly people ages 75 and older are at the highest risk for dying by gun suicide. They had a gun suicide rate twice the national average.

By race/ethnicity: In general, white people are overrepresented among gun suicide decedents and Black people are disproportionally impacted by gun homicides.

A NOTE ABOUT CDC DEMOGRAPHIC CATEGORIES

Since this report is an analysis of CDC WONDER data, we used demographic categories and labels provided by the CDC. We acknowledge that these categorizations are not inclusive of all racial, ethnic, and gender identities. However, the CDC's recent addition of single race classifications is an important step in the right direction to ensure that all racial, ethnic, and gender identities are recognized and represented in the data. For this report, we chose to include the same racial or ethnic categories as in the previous years to maintain consistency across our reports.

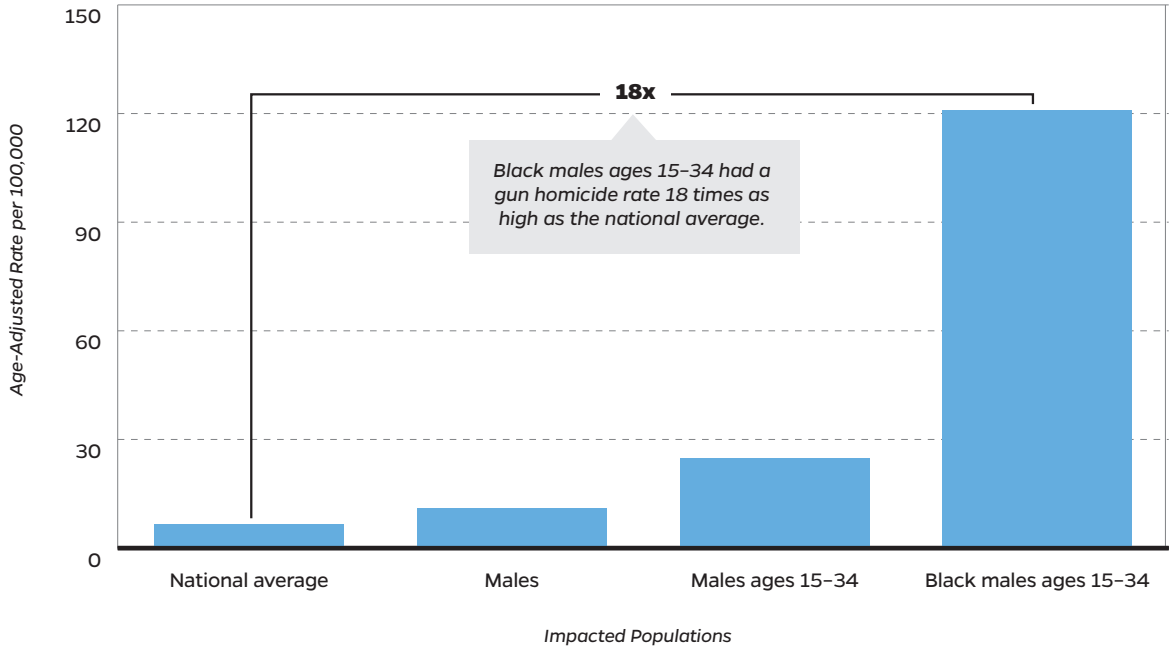
While Hispanic origin is classified by the CDC as an ethnicity, not a race category, we chose to use "Hispanic or Latino" as a distinct category regardless of race and selected "Not Hispanic or Latino" for each of the race categories. This ensured that individuals were not counted twice in different demographic groups and follows common practice used by the CDC for data analyses.

Ultimately, more nuanced and inclusive data classification is needed to understand and address how gun violence impacts different demographic groups.

BLACK/AFRICAN AMERICAN:

- Black people are at highest risk for gun homicide. They were nearly 14 times as likely to die by gun homicide than their white counterparts.
- Young Black males (15–34) are disproportionately impacted—although they represented 2% of the total population in the U.S., they accounted for 36% of all gun homicides in 2021. Their firearm homicide rate was 24 times higher than white males of the same age group.
- The firearm homicide rate among young Black females ages 15–34 was nine times as high compared to their white counterparts.

FIGURE 6: Firearm Homicide Rates by Disproportionately Impacted Populations, 2021



HISPANIC/LATINO:

- Hispanic/Latino males were 2.8 times as likely to die by firearm homicide than white males.
- Hispanic/Latino females were 1.3 times as likely to die by firearm homicide compared to their white counterparts.
- The gun suicide rate among male Hispanic/Latinos increased by 2.3 times from 4.06 deaths per 100,000 people in 2012 to 5.90 per 100,000 in 2021.

POLICY PREVIEW

Investing in Community Violence Intervention Programs

Community violence intervention programs (CVI) focus on those who are most at risk of experiencing or committing an act of gun violence. CVI provides a public health approach to gun violence prevention, interrupting cycles of violence, and addressing the unique needs of the community where systemic racism, disinvestment, and trauma occur. Investing in robust CVI infrastructure can reduce gun violence in Black and Hispanic/Latino communities and address racial disparities.

AMERICAN INDIAN/ALASKA NATIVE:*

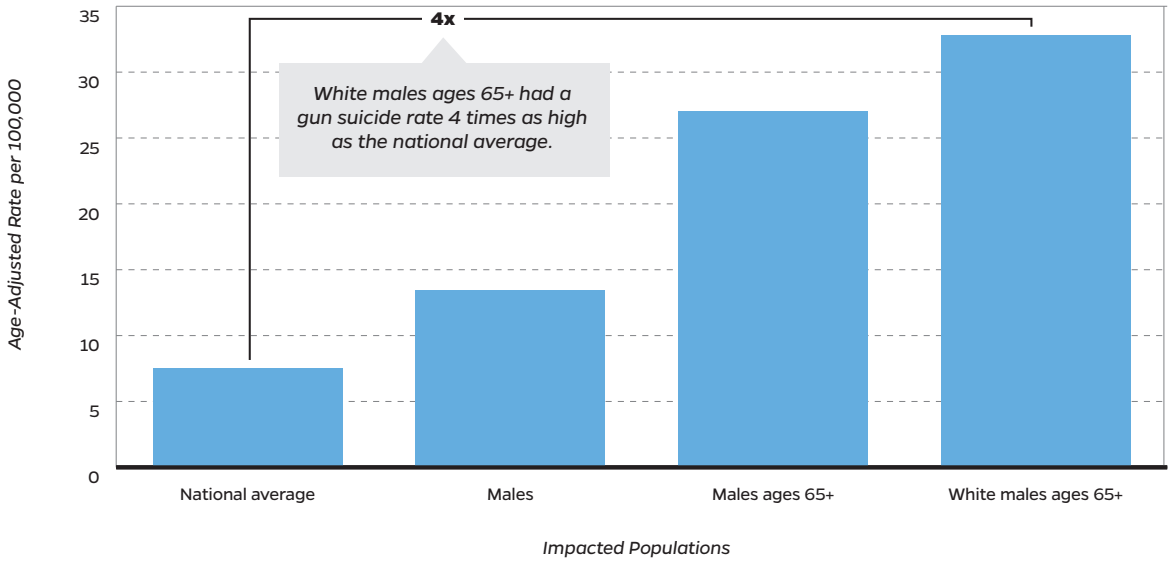
- American Indian/Alaska Native people were 3.5 times as likely to die by firearm homicide compared to their white counterparts.
- American Indian/Alaska Native females were 2.6 times as likely to die by firearm homicide than white females.
- The suicide rate among American Indian/Alaska Native people was 1.3 times higher than the overall gun suicide rate.

WHITE:

- White males are overrepresented among gun suicide deaths. White males accounted for nearly 30% of the U.S. population but 70% of all firearm suicide deaths in 2021.
- White men over the age of 34 made up 18% of the U.S. population but accounted for 53% of all gun suicides in 2021.
- White females were overrepresented among female gun suicides deaths. In 2021, white females made up nearly 60% of the female population in the U.S. but accounted for 81% of all female firearm suicide deaths.

* The data on this demographic group may under-report the true number of victims of gun violence. This is a result of incomplete and inconsistent reporting of missing persons especially among females, as well as misclassification of race and ethnicity categories among American Indian/Alaska Native people.

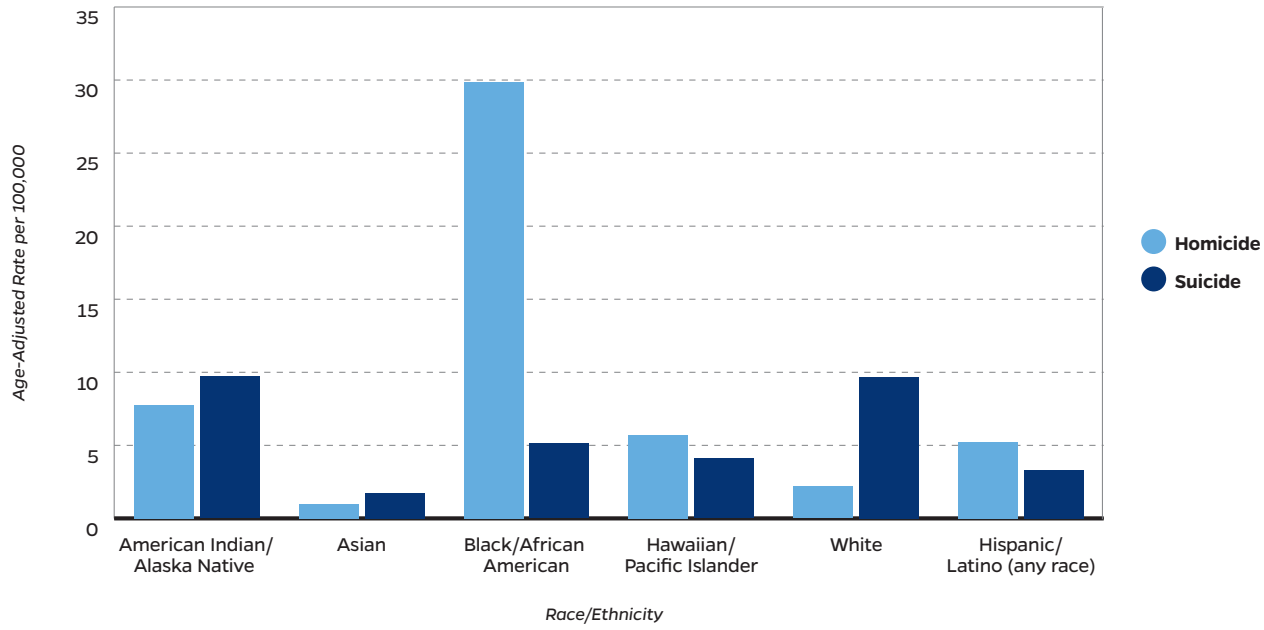
FIGURE 7: Firearm Suicide Rates by Disproportionately Impacted Populations, 2021



ASIAN:

- Although Asian people had the lowest gun death rates of all races and ethnicities, 576 Asian people died by firearms in 2021.
- Unlike other races and ethnicities, the gun homicide rate among Asian people has remained relatively stable over the last decade (2012–2021), at a rate far below the national average.
- The proportion of suicides carried out by firearm among Asian people was far lower than other racial or ethnic groups. In 2021, 26% of all suicides among Asian people were by firearm while 58% of all suicides among white people were by firearm.

FIGURE 8: Gun Death Rates by Race/Ethnicity, 2021

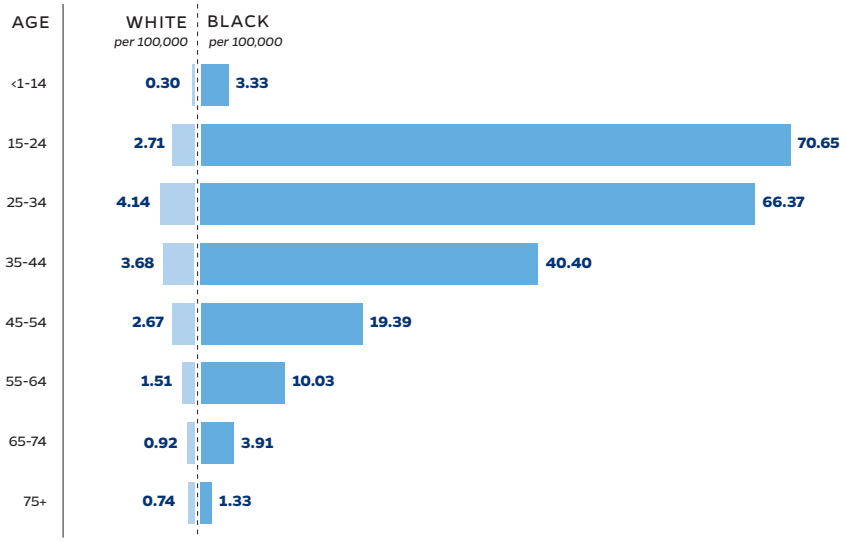


COMPARING IMPACTED POPULATIONS BY AGE AND RACIAL GROUP

The following graphs illustrates the age and racial differences in who is impacted by gun homicide and gun suicide.

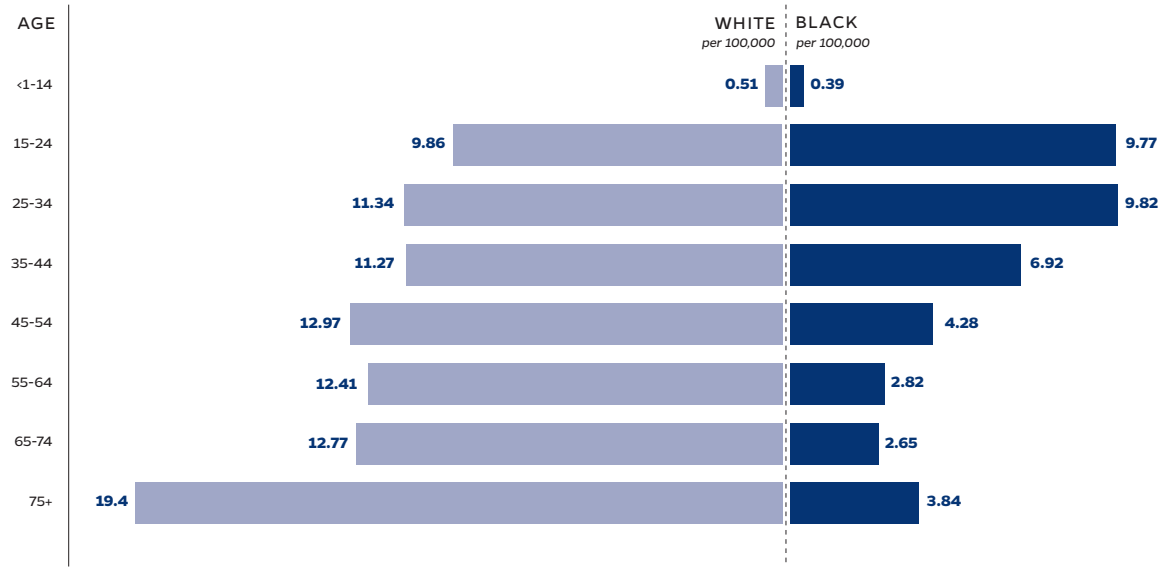
Black people, across all age ranges, were at higher risk for gun homicide than white people. The risk for gun homicide was greatest among teens and young adults ages 15–34. This age group of Black people had drastically higher rates of gun homicide than whites.

FIGURE 9: Difference in Gun Homicide Rates by Race and Age, 2021



Among Black people, the risk for gun suicide peaks at a young age; those ages 15–34 are at highest risk for gun suicide. Conversely, the risk for gun suicide among white people increases with age; those ages 75 and older were at the highest risk of dying by gun suicide.

FIGURE 10: Difference in Gun Suicide Rates by Race and Age, 2021



THE DISPROPORTIONATE IMPACT ON RACIAL/ETHNIC GROUPS DURING THE COVID-19 PANDEMIC, 2019–2021

Black and Hispanic/Latino people experienced the highest relative increases in gun homicides from 2019 to 2021.

- The gun homicide rate increased 49% among Black people (from 20.00 to 29.88 deaths per 100,000 people).
- The gun homicide rate increased 44% among Hispanic/Latinos (from 3.62 to 5.23 deaths per 100,000 people).

American Indian/Alaska Native and Black people experienced the highest relative increases in gun suicides from 2019 to 2021.

- The gun suicide rate increased 55% among American Indian/Alaska Native people (from 6.28 to 9.71 deaths per 100,000 people).
- The gun suicide rate increased 38% among Black people (from 3.72 to 5.13 deaths per 100,000 people).

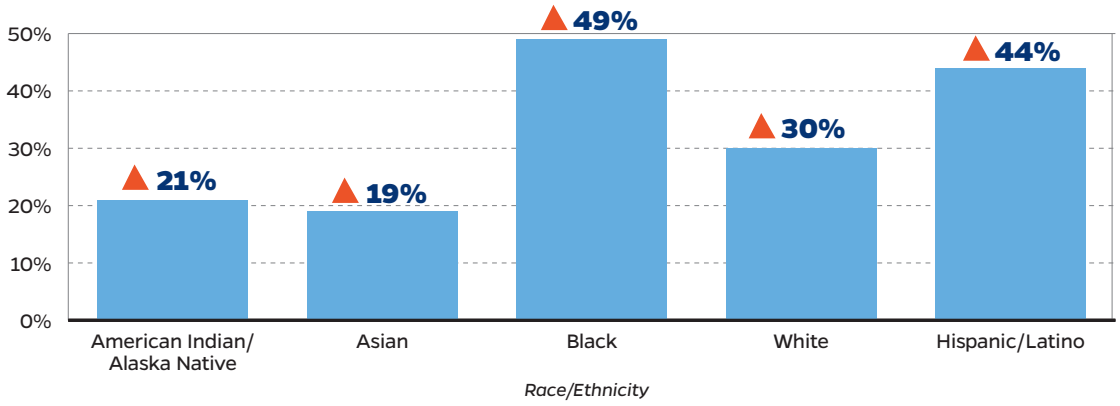
Black females were particularly impacted by the rise in gun deaths relative to females of other races and ethnicities.

- Their firearm homicide rate increased 77% (from 4.22 to 7.47 deaths per 100,000 people).
- Their firearm suicide rate increased 64% (from 0.80 to 1.31 deaths per 100,000 people).

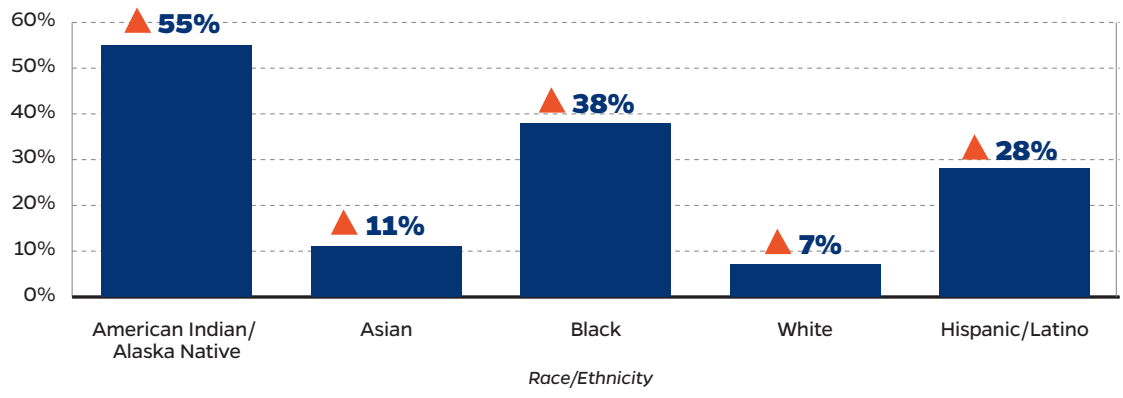
Black males ages 15–34 also experienced large increases in gun deaths.

- Their firearm homicide rate increased 43% (from 84.27 to 120.79 deaths per 100,000 people).
- Their firearm suicide rate increased 55% (from 11.04 to 17.15 deaths per 100,000 people).

From 2019 to 2021, the gun homicide rate increased by:



From 2019 to 2021, the gun suicide rate increased by:



The Geography of Gun Violence

Gun death rates vary widely across the United States due to differences in socio-economic factors, demographics, and, importantly, gun policies.

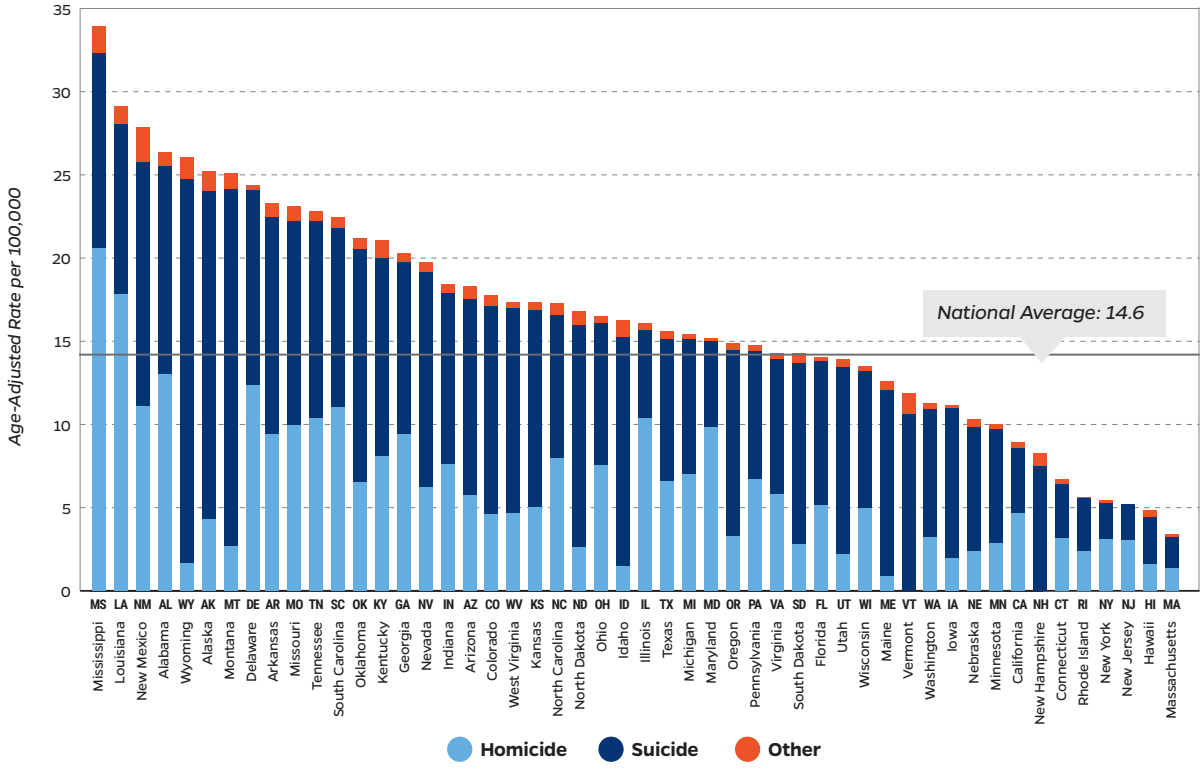
In general, the states with the highest gun death rates tend to be states in the South or Mountain West, with weaker gun laws and higher levels of gun ownership, while gun death rates are lower in the Northeast, where gun violence prevention laws are stronger. For example, the gun death rate in Mississippi, the state with the highest gun death rate, was 10 times higher than the gun death rate in Massachusetts, the state with the lowest rate in 2021. In other words, someone living in Mississippi was 10 times as likely to die by gun violence as someone in Massachusetts.

The figure below displays state gun death rates in 2021, ranking from highest to lowest, and compares them to the national gun death rate. Additionally, it shows the proportion of deaths attributed to homicide, suicide, and other intents.

While two states might have similar overall gun death rates, the type of gun violence driving that rate can differ entirely. Wyoming and Alabama, for example, have similar gun death rates, as illustrated by comparable bar heights in the graph below. Yet, 49% of gun deaths in Alabama were homicides while in Wyoming, only 6% were.

Gun violence manifests itself differently across states; but the end result—a preventable death—is the same. To examine graphs of state gun homicides and suicides separately see Appendices 10–11.

FIGURE 11: Gun Death Rates by State, Ranked Highest to Lowest, 2021*

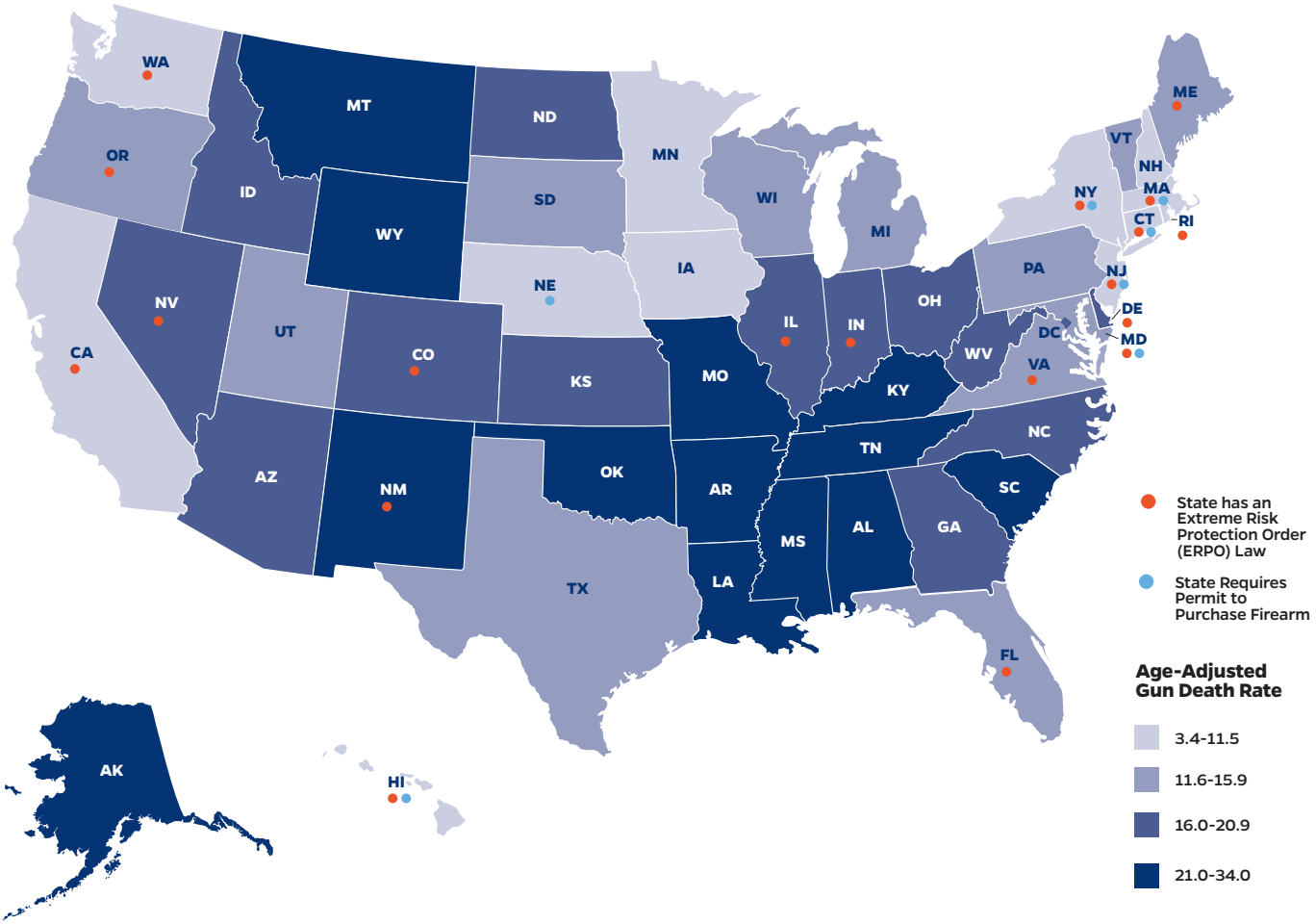


* The total number of gun homicide deaths in New Hampshire and Vermont were less than 10 and thus repressed by CDC. Gun homicide deaths are thus listed as "other gun death rate" for these two states. Additionally, "other intents" include legal intervention, unintentional, and unclassified.

State Gun Laws and Gun Death Rates

The states with the lowest gun death rates in 2021 have some of the strongest gun violence prevention laws in the country. The map below depicts state gun death rates divided into quartiles. Overlayed on this map is an indicator of whether the state has a permit-to-purchase law or an Extreme Risk Protection Order (ERPO) law. These two laws were chosen because there is promising research, including research conducted at the Center for Gun Violence Solutions, demonstrating the effectiveness of these laws in reducing gun suicides and homicides. These laws also indicate whether the state has a range of other gun violence prevention laws. For example, nearly all of the states with permit-to-purchase laws also have strong concealed carry and safe storage laws. The map highlights that states with ERPO and permit-to-purchase laws tend to have lower rates of gun violence than states without these laws. While this report only highlights this correlation, research finds that after controlling for a wide range of variables, strong state gun laws are associated with lower levels of gun deaths.[19,20]

FIGURE 12: Gun Death Rates and Gun Policies by State, 2021



STATE GUN LAW RANKINGS AND GUN DEATH RATES

Multiple organizations examine state gun laws and release yearly reports outlining where states rank. These organizations range from gun violence prevention advocacy organizations to gun rights groups. Below we examine how these state gun law rankings relate to the overall gun death rates in 2021.

We chose to use "Best States for Gun Owners, 2021," a state ranking published by Guns & Ammo magazine which ranks the most "gun-friendly" states with the least restrictive gun laws.[21] We also used the "The Annual Scorecard" produced by Giffords Law Center to Prevent Gun Violence which ranks states based on the strength of their gun violence prevention laws.[22] As illustrated below, regardless of the ranking system used, states with the lowest gun death rates had the strongest gun violence prevention laws. These states have a wide range of gun violence prevention policies including: universal background checks, laws that require a permit to purchase a firearm, Extreme Risk Protection Order laws, child access prevention and safe storage laws, strong concealed carry laws and restrictions on open carry, strong domestic violence protection order laws with firearm prohibitions, funding of community violence intervention programs, limits on large capacity magazines, minimum age of 21 to purchase a handgun, among others.

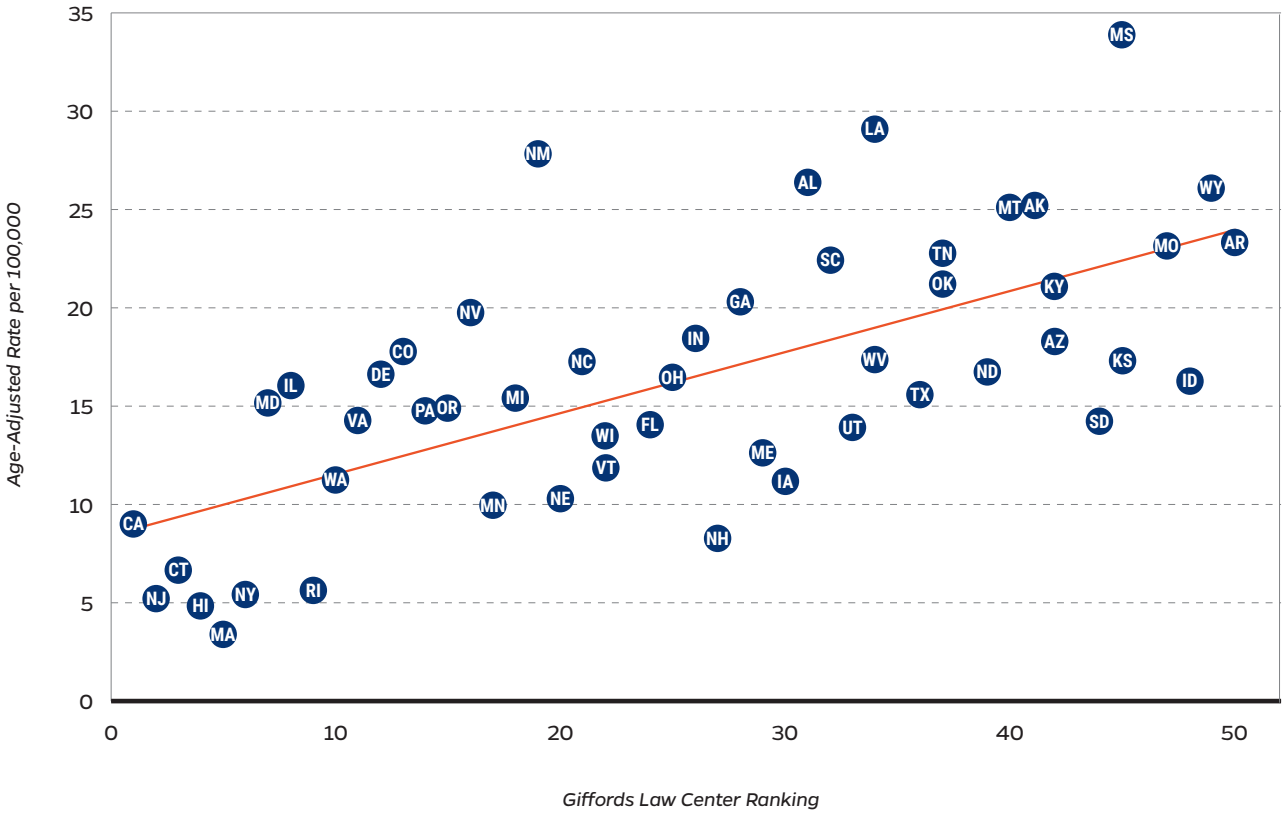
The five states with the lowest overall gun death rates in 2021 were:

States with Lowest Gun Death Rate	State Ranking[23]	
	▲ *Giffords Law Center*	▼ *Guns & Ammo*
1. Massachusetts	5th	48th
2. Hawaii	4th	49th
3. New Jersey	2nd	47th
4. New York	6th	50th
5. Rhode Island	9th	43rd

The scatterplot below illustrates the relationship between strong gun violence prevention laws, as ranked by Giffords Law Center, and lower gun death rates in 2021. Appendix 12 includes a scatterplot using the ranking of "gun-friendly" states produced by Guns & Ammo with the same trend.

The evidence is clear: States with stronger gun laws have lower rates of gun violence.

FIGURE 13: Gun Death Rates Compared to Giffords State Gun Law Rankings, 2021



POLICY PREVIEW

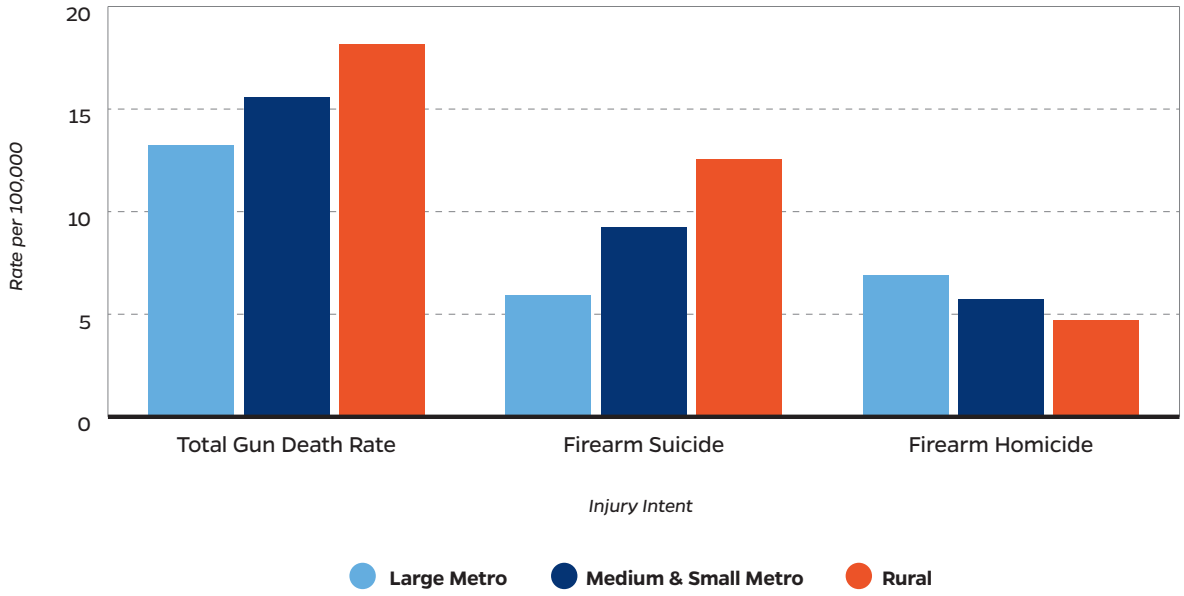
Regulate Guns in Public

Research highlights how carrying firearms in public places poses a threat to public safety. To reduce gun violence, states should strengthen their concealed and open carry laws. They should do this by prohibiting the open carry of firearms in certain public places, including protests, demonstrations, schools, polling places, hospitals, and government buildings. States should regulate the carrying of concealed firearms in public by requiring a rigorous permitting process that includes fingerprinting and training. Lastly, states with "stand your ground" laws, which allow armed individuals to use deadly force in a public area without first attempting to retreat, should repeal such laws.

A Closer Look: Gun Violence Across Counties and Urbanization Levels

Gun violence in the United States is not uniquely an "urban" or a "rural" issue. While the narratives around gun violence tend to focus on major cities like Chicago or Philadelphia, rural and suburban communities in the U.S. are also impacted by gun violence. The CDC's 2021 gun fatality data clustered by county urbanization level (large metro, small & medium metro, and rural) highlight this reality. Gun suicide disproportionately impacts rural counties while gun homicides impact the most urban counties slightly more than rural ones. Overall, rural counties are most impacted by gun deaths; they have a gun death rate 1.4 times as high as large metro counties.

FIGURE 14: Gun Death Rates by Urbanization, 2021*



FIREARM HOMICIDES

- Overall, urban counties had a higher gun homicide rate in 2021 than rural counties. However, many individual rural counties had homicide rates far higher than large cities.
- Ten of the 20 counties with the highest gun homicide rates from 2019 to 2021 were rural.
- Out of 3,142 counties, Lowndes County, Alabama, with only 10,000 residents, had the country's highest homicide rate from 2019 to 2021. Meanwhile, Cook County (Chicago), which often captures the media's attention around violence, had the 61st highest gun homicide rate.

While high rates in sparsely-populated counties represent small total numbers of deaths, these rates are alarmingly high and indicate a significant burden on many rural communities across the U.S., not just in cities. Policy solutions are needed to address the crisis of gun homicides in our biggest cities as well as in rural America.

* The 2013 urban classifications were combined for simplification. Large Central Metro and Large Fringe Metro classifications were combined as "Large Metro." Medium Metro and Small Metro classifications were combined as "Medium & Small Metro." Lastly, Micropolitan and Noncore classifications were combined as "Rural." Crude rates were used for this analysis because CDC WONDER does not report age-adjusted rates by urban classification.

CONCENTRATED FIREARM VIOLENCE

This urbanization data illustrate that both rural and urban communities are impacted by gun violence, yet this does not mean that all communities are equally impacted. In fact, gun homicide tends to occur in highly concentrated geographic areas with a small percentage of the overall population. One analysis in 2015 found that 26% of all firearm homicides in the U.S. occurred in census tracts that contained only 1.5% of the population.[24]

The CDC does not provide census tract gun fatality data, which is needed to truly understand concentrations of gun violence.

Despite this gap in data, even an examination of 2021 county-level data can illustrate geographic disparities of firearm violence in the U.S. For example, in Maryland from 2019 to 2021, someone living in Baltimore City was 18 times as likely to die by firearm homicide as someone living 40 miles away in Montgomery County.[25]

Geographic disparities in gun violence help to shed light on the upstream factors including poverty, lack of opportunity, and concentrated disadvantage that, when combined with easy access to firearms by individuals at heightened risk, contribute to violence.

FIREARM SUICIDES

Firearm suicide rates are closely related to urbanization. The more rural a county is, the higher the firearm suicide rate is.

- In 2021, rural counties had the highest rate of firearm suicide, 2.1 times as high as the most urban counties.
- Fourteen out of the 20 counties with the highest gun suicide rates from 2019 to 2021 were rural counties.
- Park County, Colorado, had the highest gun suicide rate from 2019 to 2021.

Rural counties tend to have limited access to mental health services, high rates of alcohol use, and the highest rates of gun ownership. Nearly six in ten people in rural areas have a gun in their household (compared to three in ten people in urban areas), allowing for easier accessibility and exposure to guns.[26] The combination of social and economic disparities, and high level of gun ownership results in higher firearm suicide rates in rural communities.[27]

Policy Recommendations

In 2020, the outbreak of COVID-19 exacerbated the ongoing gun violence epidemic impacting individuals, families, and communities. Unfortunately, the rise in gun violence persisted into 2021. Provisional data from the first nine months of 2022 suggests that gun deaths continue to remain at record high levels.[28] Gun violence affects all of us. It remains the leading cause of death for young people and it disproportionately impacts both communities of color in cities and those in the most rural communities.

Below, we highlight promising policy recommendations to stop gun violence in all its forms. For more information on gun violence solutions, visit our website.

Prevent Prohibited People from Purchasing a Gun Through Permit-to-Purchase Laws

Currently, it is easier to legally purchase a gun than it is to drive a car in all but a handful of states. More than half of all states do not require background checks on private purchases, meaning that people convicted of a felony or who are otherwise prohibited from possessing a gun can purchase one from a private seller on the spot, with no questions asked.

To address this dangerous gap, states should implement firearm permit-to-purchase laws (also known as gun purchaser licensing) that require all prospective gun purchasers to obtain a license prior to buying a gun from a dealer or a private seller. Permit-to-purchase laws enhance universal background checks by establishing a licensing application process. The additional components of permit-to-purchase laws—fingerprinting, a more thorough vetting process, and a built-in waiting period—all play a vital role in preventing people with a history of violence, those at risk for future interpersonal violence or suicide, and gun traffickers from obtaining firearms. Research shows that permit-to-purchase laws are among the most effective policies in reducing many forms of gun violence including gun homicides, suicides, mass shootings, and shootings by police.[29,30,31]

Remove Firearms from Individuals Determined to Be at Elevated Risk for Violence

In some cases, people who are not otherwise prohibited from owning a gun may be at clear risk of violence to themselves or others, often during a time of crisis or in a domestic violence situation. Strong Domestic Violence Protection Orders (DVPOs) and Extreme Risk Protection Orders (ERPOs) include mechanisms to temporarily remove firearms from individuals at risk for suicide or violence against others.

States should enact and implement Extreme Risk Protection Orders (ERPOs) and enhance existing Domestic Violence Protection Orders (DVPOs) to include firearm relinquishment requirements for respondents.

- DVPOs are civil court orders to protect people experiencing domestic abuse, including dating partners. These orders prohibit the purchasing or possession of firearms. Research shows that the stronger the DVPO protections, the stronger the life-saving benefits. For example, the largest reductions in intimate partner homicide connected to DVPO firearm restrictions are those that extend to dating partners, temporary or emergency orders, and those that explicitly require defendants to surrender their firearms.[32]

- ERPO laws create a civil process allowing law enforcement, family members, and, in some states, medical professionals and other parties to petition a court to temporarily prohibit someone at risk of harming themselves or others from possessing or acquiring firearms. ERPO laws are associated with lower rates of firearm suicide and have been successfully used in response to threats of mass shootings.[33]

Invest in Community Violence Intervention

As outlined in this report, Black and Hispanic/Latino people, particularly teens and young men, face alarmingly high rates of gun homicide. This violence is often concentrated in poor, under-resourced, racially segregated neighborhoods that face a legacy of discriminatory policies. Within these neighborhoods, violence is further concentrated among small groups of individuals caught in cycles of victimization, trauma, and retaliation.[34]

Community violence intervention (CVI) programs aim to identify and support the small number of people at risk for violence by helping them peacefully resolve conflicts and providing them with wraparound mental health and social supports. These programs can also address the dangerous environments which facilitate violence including blighted properties. CVI is most effective when cities also establish inter-agency processes, like a Homicide Review Commission, to identify the drivers of violence within a city and deploy resources comprehensively to address these drivers of violence.[35]

Promising CVI programs include: violence interruption programs, group violence intervention strategies, violence reduction through blight remediation, hospital-based violence intervention programs, programs that use cognitive behavioral therapy, and programs that provide life coaching and case management to those at risk for violence. When properly funded, implemented, and sustained, CVI programs can effectively reduce gun violence within the communities most impacted by gun homicide.[36, 37,38]

States and cities should invest in community violence intervention programs and build the infrastructure to support these lifesaving programs.

Adopt Child Access Prevention (CAP) Laws to Promote Safe and Secure Storage Practices

Millions of parents store their guns unlocked and loaded even though guns are the leading cause of death for children in the U.S. Improperly storing guns increases the risk of unintentional (accidental) shootings, suicide, and homicide among children and youth.[39]

More than half of all U.S. gun owners do not practice safe firearm storage.[40] In fact, 4.6 million minors in the U.S. live in homes with at least one gun that is loaded and unlocked, exposing children to firearms and increasing the risk of gun violence among children and youth.[41]

Many of these deaths can be prevented through strong Child Access Prevention (CAP) laws which require that guns stored in households with a child or teen be kept secured when unattended. Strong CAP laws are an effective tool to promote responsible firearm storage practices by holding negligent gun owners accountable when a child gains unauthorized access to a firearm. These laws are linked to sizable reductions in child and teen gun deaths, including reductions in youth suicide, accidental shootings, and homicides.[42,43] Strong state CAP laws play an important role reducing gun violence among children and teens.

Regulate the Carrying of Guns in Public

Carrying firearms in public places poses a serious threat to safety. Over the last four decades, states have weakened their public carry laws making it easier for people to carry a loaded firearm in public places. Today, a permit is no longer required in the majority of states to carry a concealed gun in public. As a result, an estimated six million adults carry loaded handguns in public each day.[44]

Permissive public carry and "stand your ground" laws increase violence by allowing people with violent histories to carry their firearms in public, providing more opportunities for armed intimidation and shootings in response to hostile interactions, and increasing criminals' access to guns from thefts from motor vehicles. These permissive laws also make it difficult for law enforcement to respond to potentially lethal threats to public safety—including threats of political violence—when many civilians are legally armed in public settings. The research demonstrates just how dangerous these permissive laws are. For example, when states weakened or removed concealed carry permitting requirements they experienced a 29% increase in violent crimes.[45] Similarly, the passage of state "stand your ground" laws were linked to a 8% increase in homicide rates.[46]

To reduce gun violence, states should strengthen their concealed and open carry laws and repeal "stand your ground" laws:

- **States should prohibit the open carry of firearms in public places** particularly in sensitive places including protests, demonstrations, schools, polling places, hospitals, and government buildings.
- **States should pass strong concealed carry permitting laws.** Permitting laws should prohibit people with a violent misdemeanor conviction or a recent conviction of alcohol or substance misuse from obtaining a permit. Firearms safety training, live fire practice, and fingerprinting should be required as part of the application process.[47] States should also prohibit the concealed carry of firearms at specified, sensitive places including protests, demonstrations, schools, polling places, hospitals, and government buildings.
- **States should repeal "stand your ground" laws**, which allow armed individuals to avoid criminal prosecution for the use of deadly force even when the person could easily and safely retreat.

The ongoing crisis of gun violence is preventable. We must address this crisis through a public health approach pushing for equitable, evidence-based gun violence solutions.

The Appendix

Appendix 1: Gun Deaths by Intent, 2021

	Gun deaths total, 2021	Average daily gun deaths, 2021	Gun death rate (age-adjusted) per 100,000, 2020
Suicide	26,328	72	7.53
Homicide	20,958	57	6.66
Unintentional	549	2	0.17
Legal Intervention	537	1	0.17
Undetermined Intent	458	1	0.14
Total	48,830	134	14.65

Appendix 2: Gun Deaths Among Children and Teens, 2021

	Child and teen gun deaths total, 2021	Average weekly child and teen gun deaths, 2021	Child and teen gun death rate per 100,000, 2021
Homicide	3,057	59	3.72
Suicide	1,421	27	1.73
Unintentional	168	3	0.20
Undetermined Intent	93	2	0.11
Legal Intervention	13	<1	unreliable
Total	4,752	91	5.79

Appendix 3: United States Gun Deaths by Intent, 2012–2021

	Total Gun Deaths	Firearm Suicide Deaths	Firearm Homicide Deaths	Unintentional Gun Deaths	Legal Intervention Deaths	Gun Deaths by Undetermined Intent
2012	33,563	20,666	11,622	548	471	256
2013	33,636	21,175	11,208	505	467	281
2014	33,594	21,386	11,008	461	464	275
2015	36,252	22,018	12,979	489	484	282
2016	38,658	22,938	14,415	495	510	300
2017	39,773	23,854	14,542	486	553	338
2018	39,740	24,432	13,958	458	539	353
2019	39,707	23,941	14,414	486	520	346
2020	45,222	24,292	19,384	535	611	400
2021	48,830	26,328	20,958	549	537	458

Appendix 4: United States Gun Death Rates by Intent, 2012–2021

	Gun Death Rate (age-adjusted) per 100,000	Firearm Suicide Rate (age-adjusted) per 100,000	Firearm Homicide Rate (age-adjusted) per 100,000	Unintentional Gun Death Rate (age-adjusted) per 100,000	Legal Intervention Gun Death Rate (age-adjusted) per 100,000	Undetermined Gun Death Rate (age-adjusted) per 100,000
2012	10.51	6.31	3.79	0.19	0.15	0.09
2013	10.43	6.41	3.63	0.16	0.15	0.09
2014	10.31	6.37	3.53	0.14	0.17	0.08
2015	11.06	6.51	4.17	0.15	0.14	0.09
2016	11.78	6.75	4.63	0.17	0.17	0.09
2017	11.99	6.93	4.65	0.16	0.17	0.09
2018	11.9	7.04	4.44	0.14	0.19	0.10
2019	11.86	6.84	4.59	0.16	0.17	0.09
2020	13.62	6.95	6.19	0.17	0.20	0.12
2021	14.65	7.53	6.66	0.17	0.17	0.14

Appendix 5: United States Gun Death Numbers by Demographic Groups, 2021

	Total Gun Deaths	Firearm Homicide Deaths	Firearm Suicide Deaths
Female	6,964	3,362	3,392
American Indian or Alaska Native (non-Hispanic)	76	38	32
Asian (non-Hispanic)	107	58	42
Black (non-Hispanic)	1,941	1,611	280
White (non-Hispanic)	3,986	1,119	2,749
Hispanic/Latino (any race)	727	463	242
Other	127	73	47
Male	41,866	17,596	22,936
American Indian or Alaska Native (non-Hispanic)	390	147	209
Asian (non-Hispanic)	469	146	310
Native Hawaiian or Pacific Islander (non-Hispanic)	63	34	25
Black (non-Hispanic)	13,349	11,110	1,885
White (non-Hispanic)	22,068	2,945	18,448
Hispanic/Latino (any race)	5,014	2,992	1,795
Other	513	222	264

Appendix 6: United States Gun Death Rates by Demographic Groups, 2021

	Total Gun Death Rate (age-adjusted) per 100,000	Firearm Homicide Rate (age-adjusted) per 100,000	Firearm Suicide Rate (age-adjusted) per 100,000
Female (all races/ethnicities)	4.61	2.29	2.19
American Indian or Alaska Native (non-Hispanic)	6.31	3.10	2.74
Asian (non-Hispanic)	1.03	0.54	0.42
Black (non-Hispanic)	9.01	7.47	1.31
White (non-Hispanic)	3.90	1.18	2.60
Hispanic or Latino (any race)	2.31	1.45	0.77
More than one race	2.98	1.65	1.12
Male (all races/ethnicities)	27.49	11.68	14.96
American Indian or Alaska Native (non-Hispanic)	32.07	12.38	16.91
Asian (non-Hispanic)	4.82	1.50	3.21
Native Hawaiian or Pacific Islander (non-Hispanic)	18.85	10.26	7.49
Black (non-Hispanic)	63.96	52.95	9.30
White (non-Hispanic)	18.85	3.18	17.08
Hispanic or Latino (any race)	15.33	8.78	5.90
More than one race	13.20	5.14	7.42

Appendix 7: State Variations, 2021

State	Ranking, Highest to Lowest Total Gun Death Rate	Total Gun Deaths	Total Gun Death Rate (age-adjusted) per 100,000	Total Gun Deaths Among Children and Teens (Ages 0-19)	Child and Teen Gun Death Rate per 100,000	Firearm Homicide Deaths	Firearm Homicide Rate (age-adjusted) per 100,000	Ranking, Highest to Lowest Firearm Homicide Rate	Firearm Suicide Deaths	Firearm Suicide Rate (age-adjusted) per 100,000	Ranking, Highest to Lowest Firearm Suicide Rate
Alabama	4	1,315	26.37	143	11.44	650	13.85	3	623	11.66	11
Alaska	6	182	25.23	17	Unreliable	31	4.12	30	142	19.92	3
Arizona	17	1,365	18.29	106	5.86	430	6.25	22	879	11.22	18
Arkansas	8	698	23.3	67	8.57	281	9.86	10	391	12.52	9
California	43	3,576	8.95	292	2.98	1,861	4.82	28	1,575	3.79	44
Colorado	18	1,064	17.79	83	5.96	276	4.79	29	745	12.24	10
Connecticut	45	248	6.68	22	2.65	116	3.48	32	122	2.89	46
Delaware	23	158	16.60	18	Unreliable	80	9.05	12	76	7.36	38
District of Columbia	*	185	24.37	14	Unreliable	169	22.33	*	12	Unreliable	*
Florida	34	3,142	14.07	229	4.81	1,150	5.91	24	1,928	7.85	32
Georgia	14	2,200	20.33	244	8.65	1,021	9.65	11	1,115	10.04	25
Hawaii	49	71	4.84	Suppressed	Suppressed	23	1.58	44	42	2.82	47
Idaho	25	309	16.28	20	3.85	28	1.53	45	262	13.64	6
Illinois	26	1,995	16.05	249	7.96	1,292	10.76	7	656	4.92	42
Indiana	16	1,251	18.43	137	7.73	517	7.92	16	695	9.90	26
Iowa	40	364	11.17	36	4.35	64	2.18	42	293	8.77	28
Kansas	20	503	17.33	63	8.02	145	5.24	27	345	11.63	12
Kentucky	13	947	21.08	93	8.22	364	8.59	13	534	11.39	15
Louisiana	2	1,314	29.1	203	16.97	804	18.39	2	463	9.66	27
Maine	37	178	12.62	Suppressed	Suppressed	12	Unreliable	*	158	10.94	20
Maryland	29	915	15.19	72	4.74	592	10.27	9	310	4.68	43
Massachusetts	50	247	3.38	11	Unreliable	99	1.47	46	136	1.75	50
Michigan	28	1,544	15.43	117	4.85	701	7.51	17	810	7.54	35
Minnesota	42	573	9.99	43	2.94	164	3.10	36	393	6.59	41
Mississippi	1	962	33.92	114	14.77	583	21.20	1	333	11.07	19
Missouri	9	1,414	23.16	151	9.8	609	10.63	8	747	11.51	14
Montana	7	280	25.09	29	11.09	30	2.94	37	239	21.09	2
Nebraska	41	200	10.31	22	4.09	46	2.42	41	145	7.39	37
Nevada	15	633	19.78	39	5.09	199	6.39	21	413	12.70	8
New Hampshire	44	123	8.29	Suppressed	Suppressed	Suppressed	Suppressed	*	111	7.35	39
New Jersey	48	475	5.24	45	2.01	276	3.29	34	195	1.94	49

State	Ranking, Highest to Lowest Total Gun Death Rate	Total Gun Deaths	Total Gun Death Rate (age-adjusted) per 100,000	Total Gun Deaths Among Children and Teens (Ages 0-19)	Child and Teen Gun Death Rate per 100,000	Firearm Homicide Deaths	Firearm Homicide Rate (age-adjusted) per 100,000	Ranking, Highest to Lowest Firearm Homicide Rate	Firearm Suicide Deaths	Firearm Suicide Rate (age-adjusted) per 100,000	Ranking, Highest to Lowest Firearm Suicide Rate
New Mexico	3	578	27.84	47	8.87	230	11.69	4	305	13.91	4
New York	47	1,078	5.43	94	2.04	613	3.26	35	439	2.01	48
North Carolina	21	1,839	17.28	216	8.34	850	8.40	14	916	8.17	30
North Dakota	22	128	16.78	11	Unreliable	20	2.78	39	102	13.30	7
Ohio	24	1,911	16.49	221	7.6	872	8.00	15	991	8.05	31
Oklahoma	12	836	21.22	77	7.21	257	6.81	19	551	13.70	5
Oregon	30	670	14.9	33	3.44	146	3.59	31	505	10.88	21
Pennsylvania	31	1,905	14.78	181	6	861	7.27	18	997	7.15	40
Rhode Island	46	64	5.63	Suppressed	Suppressed	27	2.47	40	36	3.03	45
South Carolina	11	1,136	22.43	128	10.23	558	11.65	5	546	10.13	24
South Dakota	33	128	14.25	13	Unreliable	25	2.87	38	98	10.76	22
Tennessee	10	1,569	22.8	151	8.84	714	10.89	6	814	11.28	17
Texas	27	4,613	15.6	502	6.05	1,942	6.62	20	2,528	8.54	29
Utah	35	450	13.93	39	3.72	70	2.08	43	364	11.39	16
Vermont	38	83	11.88	Suppressed	Suppressed	Suppressed	Suppressed	*	74	10.20	23
Virginia	32	1,248	14.3	141	6.68	505	6.11	23	709	7.82	33
Washington	39	896	11.24	75	4.05	254	3.38	33	617	7.51	36
West Virginia	19	319	17.33	16	Unreliable	86	5.41	25	227	11.60	13
Wisconsin	36	793	13.52	85	5.94	290	5.35	26	484	7.80	34
Wyoming	5	155	26.08	18	Unreliable	10	Unreliable	*	137	22.75	1

*Denotes where the state firearm homicide or suicide rate is unreliable and cannot be compared

Appendix 8: Rise in Firearm Homicides by State, 2019–2021

State	Age-Adjusted Rate (per 100,000), 2019	Age-Adjusted Rate (per 100,000), 2020	Age-Adjusted Rate (per 100,000), 2021	2019-2021 Rate Difference	Percent Change
Alabama	10.67	12.36	13.85	30%	3.18
Alaska	7.2	3.75	4.12	-43%	-3.08
Arizona	4.11	5.48	6.24	52%	2.13
Arkansas	7.38	10.06	9.85	33%	2.47
California	3.18	4.49	4.82	52%	1.64
Colorado	2.89	4.07	4.79	66%	1.90
Connecticut	1.97	3.06	3.48	77%	1.51
Delaware	5.21	8.67	9.04	74%	3.83
District of Columbia	16.52	20.35	22.33	35%	5.81
Florida	5.2	6.35	5.91	14%	0.71
Georgia	6.67	8.63	9.65	45%	2.98
Hawaii	Unreliable	Unreliable	1.58	NA	NA
Idaho	Unreliable	1.55	1.53	NA	NA
Illinois	6.58	9.74	10.76	64%	4.18
Indiana	5.53	7.76	7.92	43%	2.39
Iowa	1.72	2.85	2.18	27%	0.46
Kansas	3.51	5.79	5.24	49%	1.73
Kentucky	4.82	8.11	8.59	78%	3.77
Louisiana	12.35	17.1	18.39	49%	6.04
Maine	Unreliable	Unreliable	Unreliable	NA	NA
Maryland	8.19	9.27	10.27	25%	2.08
Massachusetts	1.39	1.93	1.47	6%	0.08
Michigan	4.95	7.3	7.51	52%	2.56
Minnesota	1.9	2.53	3.10	63%	1.20
Mississippi	13.08	17.89	21.20	62%	8.12
Missouri	9.33	11.98	10.63	14%	1.30
Montana	2.29	3.46	2.94	28%	0.65
Nebraska	2.09	2.65	2.42	16%	0.33
Nevada	3.99	4.97	6.39	60%	2.40
New Hampshire	1.48	Suppressed	Suppressed	NA	NA
New Jersey	2.39	3.12	3.29	38%	0.9

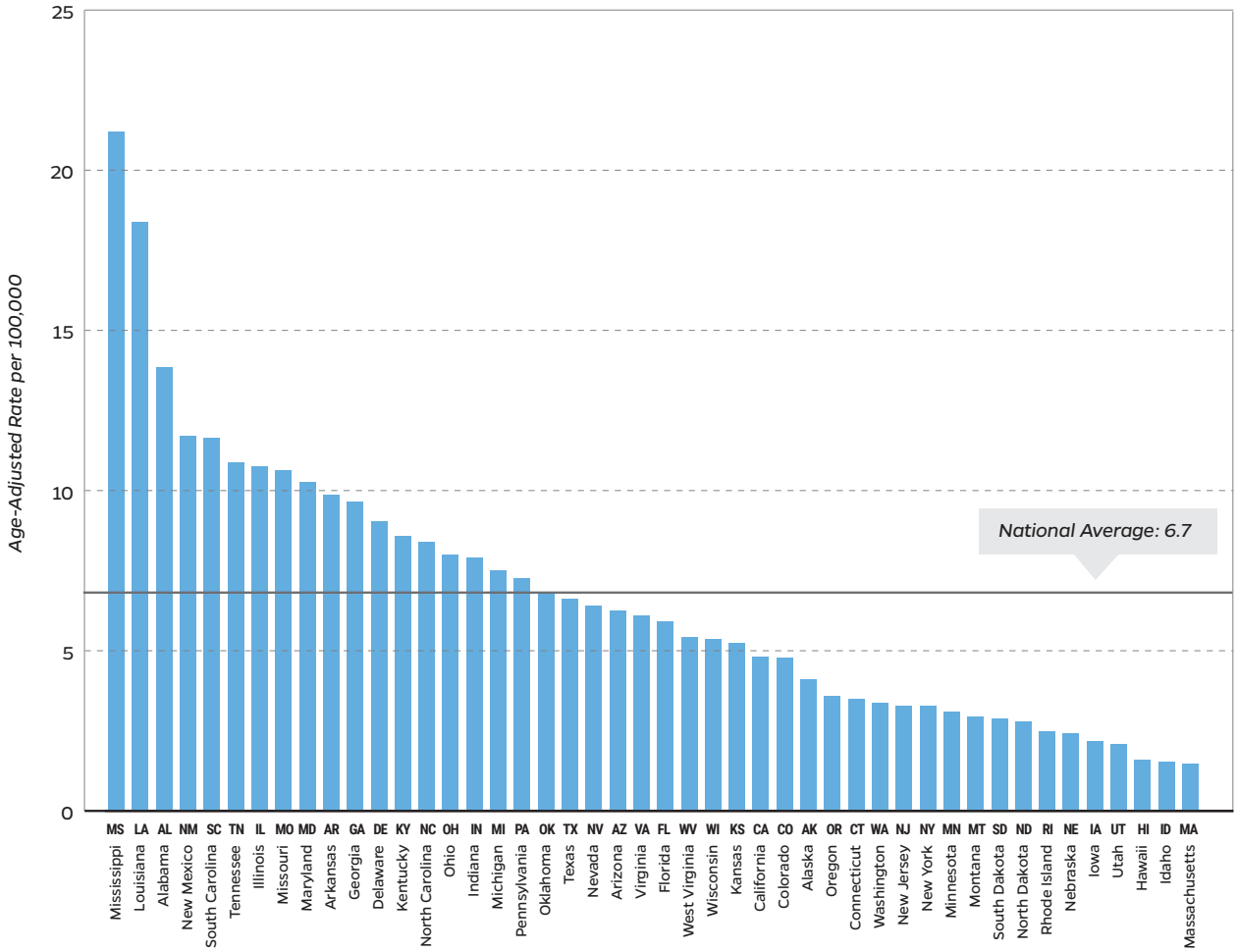
State	Age-Adjusted Rate (per 100,000), 2019	Age-Adjusted Rate (per 100,000), 2020	Age-Adjusted Rate (per 100,000), 2021	2019-2021 Rate Difference	Percent Change
New Mexico	8.16	7.54	11.69	43%	3.53
New York	1.74	3.04	3.26	87%	1.52
North Carolina	5.41	7.34	8.40	55%	2.99
North Dakota	Unreliable	Unreliable	2.78	NA	NA
Ohio	5.21	7.61	8.00	54%	2.79
Oklahoma	6.56	7.07	6.81	4%	0.25
Oregon	1.88	2.65	3.59	91%	1.71
Pennsylvania	4.65	6.75	7.27	56%	2.62
Rhode Island	Unreliable	2.22	2.47	NA	NA
South Carolina	9.5	10.9	11.65	23%	2.15
South Dakota	Unreliable	3.29	2.87	NA	NA
Tennessee	7.37	10.03	10.89	48%	3.52
Texas	4.5	5.96	6.62	47%	2.12
Utah	1.6	2.28	2.08	30%	0.48
Vermont	Suppressed	Suppressed	Suppressed	NA	NA
Virginia	4.18	5.33	6.11	46%	1.93
Washington	2.22	2.81	3.38	52%	1.16
West Virginia	4.86	5.52	5.41	11%	0.55
Wisconsin	2.82	4.62	5.35	90%	2.53
Wyoming	Unreliable	Unreliable	Unreliable	NA	NA

Appendix 9: Rise in Firearm Suicides by State, 2019–2021

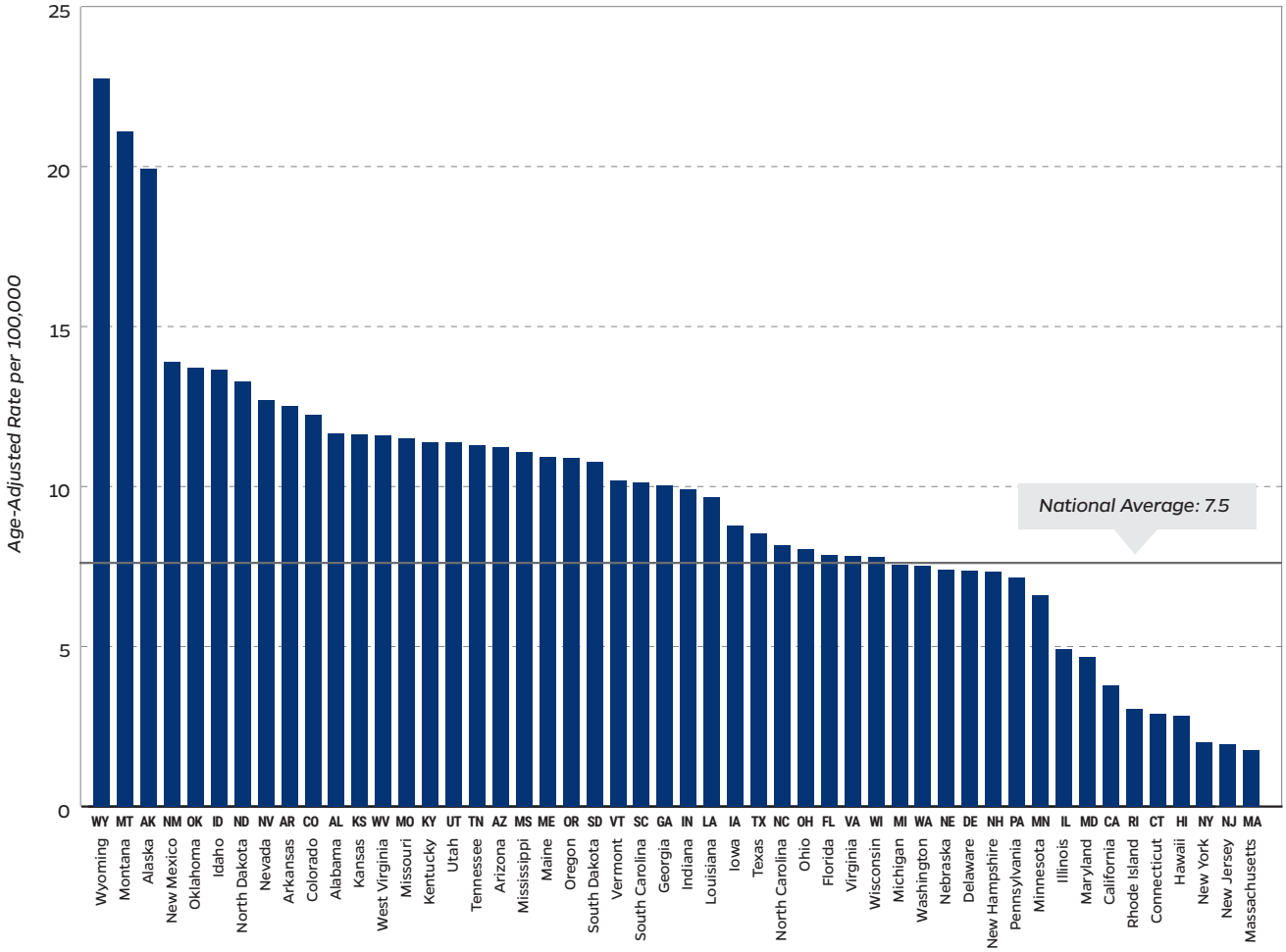
State	Age-Adjusted Rate (per 100,000), 2019	Age-Adjusted Rate (per 100,000), 2020	Age-Adjusted Rate (per 100,000), 2021	2019-2021 Rate Difference	Percent Change
Alabama	10.59	10.55	11.66	10%	1.07
Alaska	15.68	17.78	19.92	27%	4.24
Arizona	10.40	10.42	11.22	8%	0.82
Arkansas	10.83	11.54	12.52	16%	1.69
California	3.74	3.63	3.78	1%	0.04
Colorado	10.71	10.77	12.24	14%	1.53
Connecticut	3.08	2.67	2.89	-6%	-0.19
Delaware	4.35	5.64	7.36	69%	3.01
District of Columbia	Unreliable	Suppressed	Unreliable	NA	NA
Florida	7.27	6.94	7.85	8%	0.58
Georgia	8.65	8.52	10.04	16%	1.39
Hawaii	2.81	2.05	2.82	0%	0.01
Idaho	12.25	15.07	13.64	11%	1.39
Illinois	3.96	4.05	4.92	24%	0.96
Indiana	8.08	8.65	9.90	23%	1.82
Iowa	6.96	8.03	8.77	26%	1.81
Kansas	9.83	10.40	11.63	18%	1.80
Kentucky	9.28	11.03	11.39	23%	2.11
Louisiana	9.23	8.52	9.66	5%	0.43
Maine	9.85	8.84	10.94	11%	1.09
Maryland	4.07	4.09	4.68	15%	0.61
Massachusetts	1.87	1.75	1.75	-6%	-0.12
Michigan	6.98	7.10	7.54	8%	0.56
Minnesota	5.96	5.96	6.59	11%	0.63
Mississippi	9.92	9.35	11.07	12%	1.15
Missouri	10.70	11.21	11.51	8%	0.81
Montana	15.31	15.82	21.09	38%	5.78
Nebraska	7.70	6.99	7.39	-4%	-0.31
Nevada	10.67	11.12	12.70	19%	2.03
New Hampshire	8.86	8.16	7.35	-17%	-1.51
New Jersey	1.71	1.82	1.94	13%	0.23

State	Age-Adjusted Rate (per 100,000), 2019	Age-Adjusted Rate (per 100,000), 2020	Age-Adjusted Rate (per 100,000), 2021	2019-2021 Rate Difference	Percent Change
New Mexico	12.68	13.73	13.91	10%	1.23
New York	2.09	2.12	2.01	-4%	-0.08
North Carolina	6.99	7.85	8.17	17%	1.18
North Dakota	10.29	10.45	13.29	29%	3.00
Ohio	7.85	7.24	8.05	3%	0.20
Oklahoma	11.52	13.18	13.70	19%	2.18
Oregon	10.16	9.63	10.88	7%	0.72
Pennsylvania	6.77	6.47	7.15	6%	0.38
Rhode Island	2.90	2.70	3.03	4%	0.13
South Carolina	9.84	10.30	10.13	3%	0.29
South Dakota	11.25	9.63	10.76	-4%	-0.49
Tennessee	10.22	10.50	11.28	10%	1.06
Texas	7.65	7.78	8.54	12%	0.89
Utah	10.78	10.83	11.38	6%	0.60
Vermont	8.03	10.24	10.20	27%	2.17
Virginia	7.25	7.69	7.82	8%	0.57
Washington	7.96	7.67	7.51	-6%	-0.45
West Virginia	10.16	11.53	11.60	14%	1.44
Wisconsin	6.78	7.15	7.80	15%	1.02
Wyoming	19.08	20.91	22.75	19%	3.67

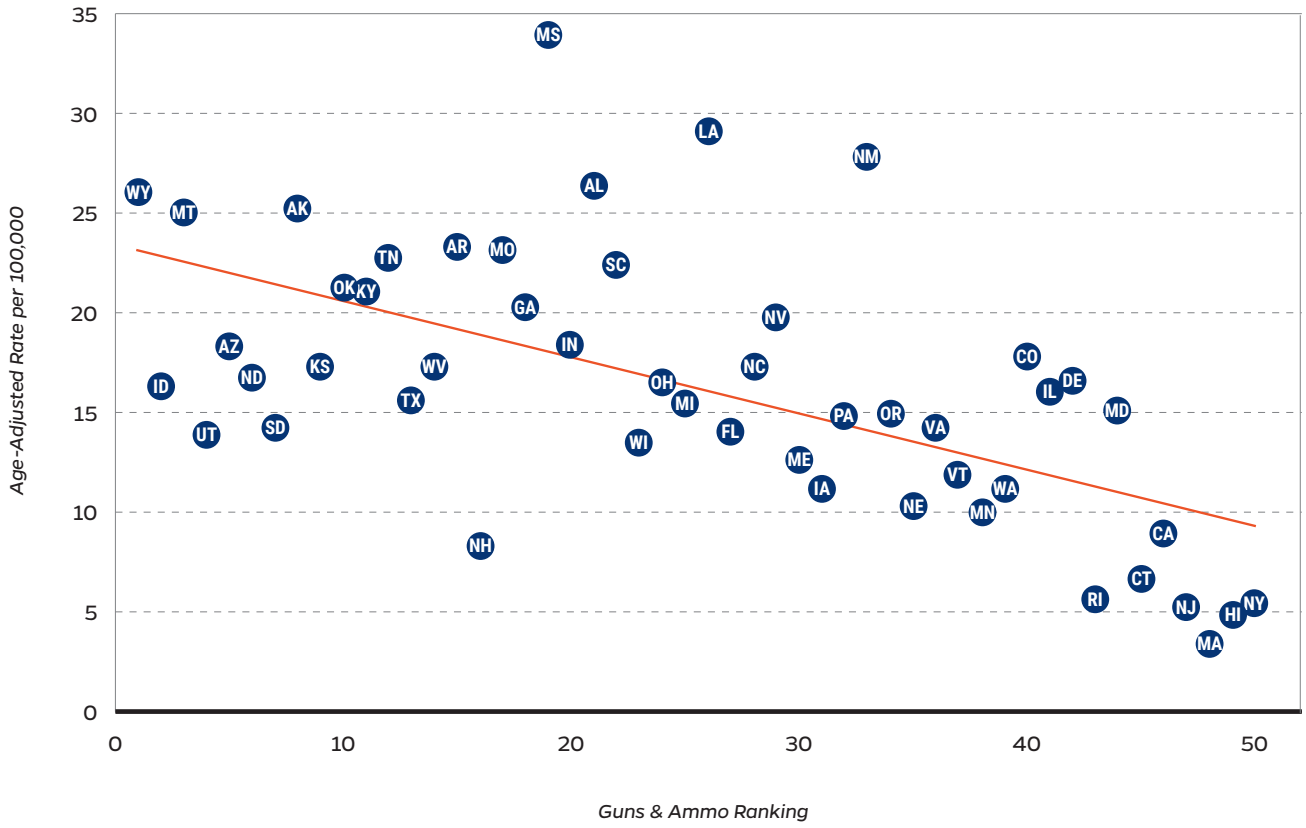
Appendix 10: Gun Homicide Rates by State, Ranked Highest to Lowest, 2021



Appendix 11: Gun Suicide Rates by State, Ranked Highest to Lowest, 2021



Appendix 12: Gun Death Rates Compared to Guns & Ammo State Gun Law Rankings, 2021



Glossary

Age-adjusted rate: The rates of almost all causes of death vary by age. Age adjustment is a technique for "removing" the effects of age from crude rates to allow meaningful comparisons across populations with different underlying age structures. Age-adjusted death rates are weighted averages of the age-specific death rates, where the weights represent a fixed population by age. An age-adjusted rate represents the rate that would have existed had the age-specific rates of the particular year prevailed in a population whose age distribution was the same as that of the fixed population. Age-adjusted rates should be viewed as relative indexes rather than as direct or actual measures of mortality risk.

Burden of injury: Describes the impact of a health problem (injury), including death and loss of health due to injuries, related financial costs, and other indicators.

Cause of death: Based on medical information—including injury diagnoses and external causes of injury—entered on death certificates filed in the U.S. This information is classified and coded per the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD–10).

> *International Classification of Diseases (ICD):* Causes of death are classified per the International Classification of Disease. Deaths for 1999 and beyond are classified using the 10th Revision (ICD-10). ICD is designed to promote international comparability in the collection, processing, classification, and presentation of mortality statistics. This includes providing a format for reporting causes of death on the death certificate. The reported conditions are then translated into medical codes through the use of the classification structure and the selection and modification rules contained in the applicable revision of the ICD, published by the World Health Organization (WHO).
>
> *Underlying Cause of Death database:* The database contains mortality data based on information from all death certificates filed in the 50 states and the District of Columbia. Deaths of nonresidents (e.g. nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other territories of the U.S.) and fetal deaths are excluded. Each death certificate identifies a single underlying cause of death and demographic data.

County classification: The CDC categorizes all counties into six levels of urbanization that incorporate population number and density. From largest and most urban to smallest and most rural, they are:

> *Large central metro counties:* Counties part of a metropolitan statistical area with ≥1 million population and covers a principal city; most urban, large cities.
>
> *Large fringe metro counties:* Counties part of a metropolitan statistical area with ≥1 million population but does not cover a principal city; akin to suburbs.
>
> *Medium metro counties:* Counties part of a metropolitan statistical area of 250,000–999,999 population.
>
> *Small metro counties:* Counties part of a metropolitan statistical area of less than 250,000 population.

Micropolitan (non-metro) counties: Counties part of a micropolitan statistical area (has an urban cluster of ≥10,000 but <50,000 population).

Non-core (non-metro) counties: Counties not part of a metropolitan or micropolitan statistical area; the most rural counties.

Injury intent: Describes whether an injury was caused by an act carried out on purpose by oneself or by another person(s), with the goal of injuring or killing. For the CDC data used in this report, all injury-related causes of death are classified by intent and by mechanism, determined according to the ICD-10 external cause of injury coded as the underlying cause of death on the death certificate.

Homicide: Injuries inflicted by another person with the intent to injure or kill, by any means. Excludes injuries due to legal intervention and operations of war. The ICD-10 cause of death codes for firearm homicide include X93 Assault by handgun discharge; X94 Assault by rifle, shotgun, and larger firearm discharge; X95 Assault by other and unspecified firearm and gun discharge; and *U01.4 Terrorism involving firearms.

Legal intervention: Injuries inflicted by the police or other law-enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal actions. Excludes injuries caused by civil insurrections. The ICD-10 cause of death code for legal intervention by firearm is Y35.0 Legal intervention involving firearm discharge.

Suicide: An intentionally self-inflicted injury that results in death. The ICD-10 cause of death codes for firearm suicide are X72 Intentional self-harm by handgun discharge; X73 Intentional self-harm by rifle, shotgun, and larger firearm discharge; and X74 Intentional self-harm by other and unspecified firearm and gun discharge.

Undetermined intent: Events where available information is insufficient to enable a medical or legal authority to make a distinction between accident, self-harm, and assault. The ICD-10 cause of death codes for firearm deaths of undetermined intent are Y22 Handgun discharge, undetermined intent; Y23 Rifle, shotgun, and larger firearm discharge, undetermined intent; and Y24 Other and unspecified firearm discharge, undetermined intent.

Unintentional: Unintentional injury that results in death. The ICD-10 cause of death codes for unintentional firearm deaths are W32 Accidental handgun discharge and malfunction; W33 Accidental rifle, shotgun, and larger firearm discharge; and W34 Accidental discharge and malfunction from other and unspecified firearms and guns.

Injury mechanism or method: The cause, or mechanism, of injury is the way in which the person sustained the injury; how the person was injured; or the process by which the injury occurred.

Suppressed: Rates are marked as "suppressed" when there are zero to nine deaths.

Unreliable: Rates are marked as "unreliable" when the death count is less than 20.

ENDNOTES

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