



Legislative Council Staff

Nonpartisan Services for Colorado's Legislature

Memorandum

Room 029 State Capitol, Denver, CO 80203-1784
Phone: (303) 866-3521 • Fax: (303) 866-3855
lcs.ga@state.co.us • leg.colorado.gov/lcs

July 10, 2019

TO: Members of the School Safety Committee

FROM: Jessika Shipley, Principal Research Analyst, 303-866-3528
Elizabeth Burger, Deputy Director, 303-866-6272

SUBJECT: School Safety and Related Factors

Summary

This memorandum responds to your request related to school safety in the United States. The memorandum also provides information on the following issues that you identified as relating to school safety:

- youth suicide rates in Colorado;
- incidents of gun violence in Colorado; and
- accidental firearm-related deaths and youth.

Approach and Methodology

You asked for information to answer the question: are schools more or less safe now than at the time of the shooting at Columbine High School?¹ The safety of students, faculty, staff, and visitors at schools can encompass a number of different factors and measurements. As an indicator of how complex this topic can be, one study referenced in this memorandum explores 22 different indicators of school safety on a range of topics including violent deaths, victimization, bullying, hate crimes, disciplinary actions, threats, drug use, and fights.

As a measurement of school safety, this memorandum highlights available information on active shooter situations in schools and other causes of school-related deaths. The memorandum highlights federal sources of data on school-related deaths that were available for the requested time period. The memorandum also summarizes studies that have analyzed the occurrence of death in schools as a

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¹The shooting at Columbine High School occurred on April 20, 1999.

measure of school safety; some of the studies referenced in this memorandum analyzed data from a shorter period of time than requested. As noted above, there may be other factors to consider besides deaths when assessing the relative safety of schools, and staff can provide information on additional school safety-related measures upon request.

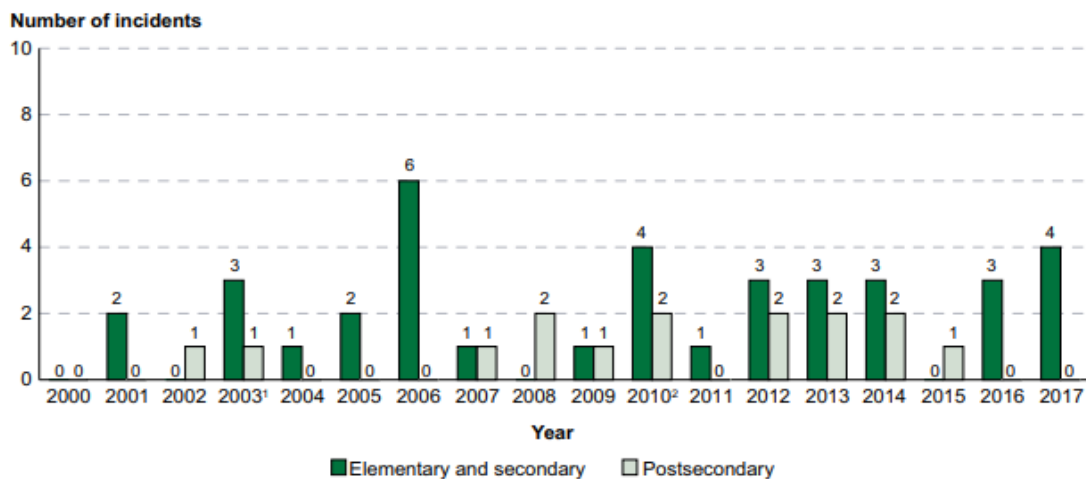
Data On School-Related Deaths

National Center for Education Statistics and Bureau of Justice Statistics data on active shooters. Since 1998, the federal National Center for Education Statistics and the Bureau of Justice Statistics have published an annual report on school crime and student safety. The latest version of the report was released in April 2019, and includes data from 2015 through 2017.²

An “active shooter” situation describes a situation in which one or more individuals actively engaged or attempted to engage in killing a large number of people in a populated area. The report found that nationally, from 2000 to 2017, there were 37 active shooter incidents at elementary and secondary schools and 15 active shooter incidents at postsecondary institutions. Educational settings were the second most common location for active shooter incidents to occur, behind commerce settings.

The number of active shooter incidents at elementary and secondary schools from 2000 and 2017 ranged from zero incidents in a year (in 2000, 2002, 2008, and 2015) to six in a year (in 2006). At postsecondary institutions, the annual number of active shooter incidents per year ranged from zero to a maximum of two in a year over the reported time period. Chart 1, reproduced from the report, shows the number of active shooter incidents at elementary/secondary and postsecondary schools from 2000 to 2017.

Chart 1: Active Shooter Incidents at Elementary/Secondary and Postsecondary Schools, 2000-2017



¹ The elementary and secondary schools count includes one active shooter incident at a county board of education meeting.

² The elementary and secondary schools count includes one active shooter incident at a city school board meeting.

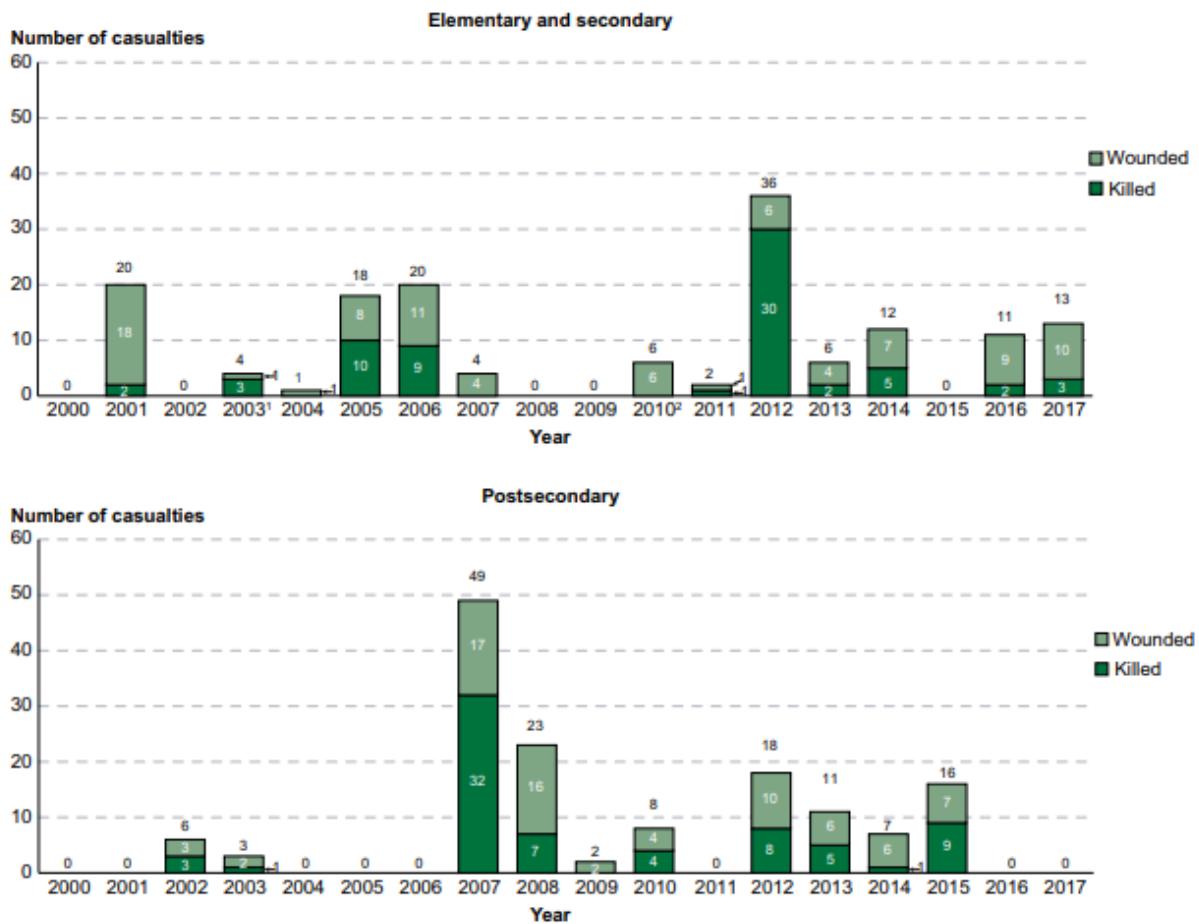
NOTE: The Federal Bureau of Investigation (FBI) defines an active shooter as “one or more individuals actively engaged in killing or attempting to kill people in a populated area.”

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *A Study of Active Shooter Incidents in the United States Between 2000 and 2013, Active Shooter Incidents in the United States in 2014 and 2015, and Active Shooter Incidents in the United States in 2016 and 2017*, retrieved August 10, 2018, from <https://www.fbi.gov/about/partnerships/office-of-partner-engagement/active-shooter-resources>.

²Musu, L., Zhang, A., Wang, K., Zhang, J., and Oudekerk, B.A. (2019). Indicators of School Crime and Safety: 2018 (NCES 2019-047/NCJ 252571). National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC. Accessed at: <https://nces.ed.gov/pubs2019/2019047.pdf>

From 2000 to 2017, there were 153 casualties (67 killed and 86 wounded) in active shooter incidents at elementary and secondary schools. The largest number of casualties in elementary and secondary school shootings occurred in 2012, with 36 casualties. At postsecondary institutions, 143 casualties (70 killed and 73 wounded) in active shooter incidents occurred over the time period. The largest number of casualties occurred in 2007 with 49 casualties. Chart 2, reproduced from the report, shows the number of casualties at elementary/secondary and postsecondary schools from active shooter incidents between 2000 and 2017.

Chart 2: Number of Active Shooter Incident Casualties at Elementary/Secondary and Postsecondary Schools, 2000 through 2017



¹ Includes one active shooter incident at a county board of education meeting.

² Includes one active shooter incident at a city school board meeting.

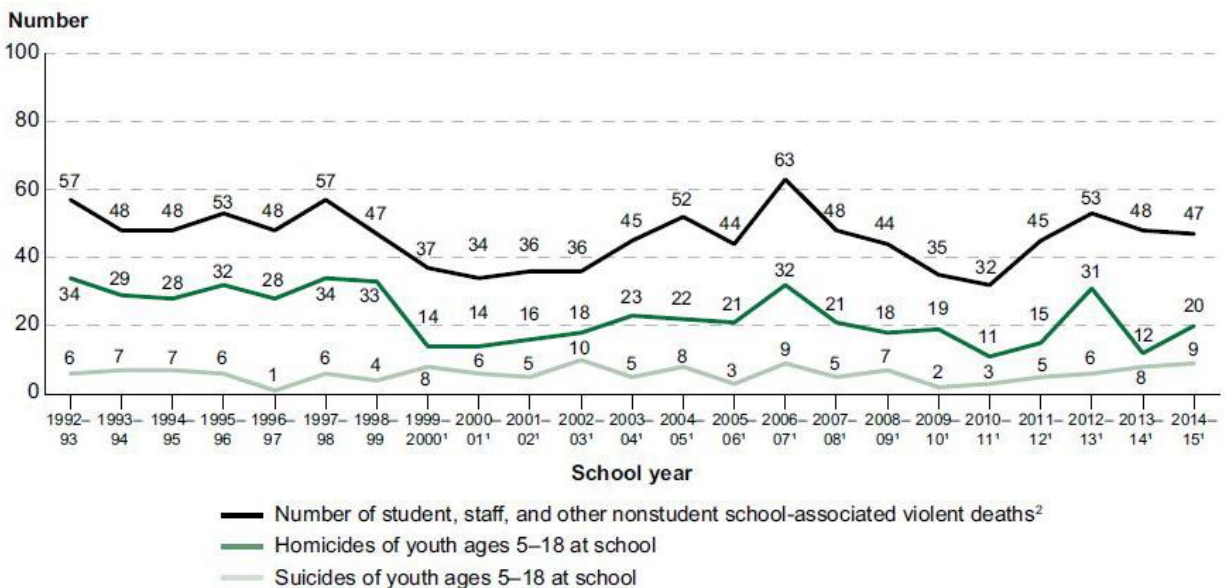
NOTE: The Federal Bureau of Investigation (FBI) defines an active shooter as "one or more individuals actively engaged in killing or attempting to kill people in a populated area." Number of casualties excludes active shooters.

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *A Study of Active Shooter Incidents in the United States Between 2000 and 2013*, *Active Shooter Incidents in the United States in 2014 and 2015*, and *Active Shooter Incidents in the United States in 2016 and 2017*, retrieved August 10, 2018, from <https://www.fbi.gov/about/partnerships/office-of-partner-engagement/active-shooter-resources>.

Centers for Disease Control and Prevention data on school-associated violent deaths. The federal Centers for Disease Control and Prevention (CDC) annually reports on school-associated violent

deaths, and has collected this data since 1992.³ A school-associated violent death is defined as a fatal injury (e.g., homicide, suicide, or intervention involving law enforcement) that occurs on school property, on the way to or from school, or during or on the way to or from a school-sponsored event. This data may include deaths that occur while the victim was attending or travelling to or from a school-sponsored event, and may include not only student deaths, but deaths of staff, community members, and parents. Chart 3, reproduced from the CDC, shows the number of such deaths in school years 1992-93 to 2014-15. According to a CDC analysis of this data, between 1 and 2 percent of homicides of youth aged 5 to 18 happen on school grounds or on the way to or from school. Homicide is the second leading cause of death among this age group.

Chart 3: Number of Student, Staff, and Other non-Student Violent Deaths and Number of Homicides and Suicides of Youth Ages 5 to 18 at School, School Years 1992-93 to 2014-15



Footnotes:

¹ The data from 1999—2000 onward are subject to change until law enforcement reports have been obtained and interviews with school and law enforcement officials have been completed. The details learned during the interviews can occasionally change the classification of a case.

² A school-associated violent death is defined as “a homicide, suicide, or legal intervention death (involving a law enforcement officer), in which the fatal injury occurred on the campus of a functioning elementary or secondary school in the United States,” while the victim was on the way to or from regular sessions at school, or while the victim was attending or traveling to or from an official school-sponsored event. victims include students, staff members, and others who are not students or staff members, from July 1, 1992, through June 30, 2015.

NOTE: “At school” includes on the property of a functioning primary or secondary school, on the way to or from regular sessions at school, and while attending or traveling to or from a school-sponsored event. In this indicator, the term “at school” is comparable in meaning to the term “school-associated.” SOURCE: Centers for Disease Control and Prevention (CDC), 1992-2015 School-Associated Violent Death Surveillance System (SAVD-SS) (partially funded by the U.S. Department of Education, Office of Safe and Healthy Students), unpublished tabulation (June 2018 Analysis of School-Related Death Data

Studies of School-Related Deaths

Staff reviewed several studies that analyzed school-related death data to draw conclusions about school safety. Some of the questions addressed by these studies are highlighted below.

³Centers for Disease Control and Prevention, School Associated Violent Death Study. Accessed at: <https://www.cdc.gov/violenceprevention/youthviolence/schoolviolence/SAVD.html>

Do homicides occur at schools more often than other locations? A study of national homicide data examined 18,873 homicide cases recorded in the Federal Bureau of Investigation's (FBI) National Incident Based Reporting System (NIBRS) from 2005 to 2010 to determine whether schools were more likely than other places to be the sites of homicides. The study found that the most frequent locations for homicides were residences (52 percent), highways/roads/alleys (24 percent), parking lots/garages/terminals (6 percent), and other locations (6 percent). The study found that 0.3 percent of homicides and 0.8 percent of multiple casualty homicides in this sample occurred in schools.⁴

Do active shooter situations occur at schools more often than other locations? A 2014 FBI report assessed active shooter incidents from 2000 to 2013.⁵ Although not specifically focused on schools, the report found that there was an increase over the time period in both the number of active shooter events occurring and the number of people killed and injured in such events. Of the events examined, the FBI reports that active shooter events most frequently occurred at businesses (including retail stores, offices, and factories/warehouses) (46 percent of incidents), while incidents occurring at K-12 schools and institutions of higher education comprised 24 percent of incidents. The FBI did not assess whether the proportion of active shooter events occurring at schools had grown or lessened over the time period.

What is the risk of being killed by shooting at school? Using the CDC data described on page 4 of the memorandum, the authors of a study of school safety and trends over time calculated a rate of likelihood to be involved in a fatal shooting at a school by comparing the number of fatal shooting incidents at schools with public and private school enrollment figures. This rate ranged from a high of .55 students killed per million in the 1992-93 school year to a low of .07 students killed per million in several different years. The study's authors conclude after its height in 1992-93, the homicide risk for students declined steadily throughout the 1990s and since 2000, has remained relatively flat – with the exception of the 2012-13 academic year during which 20 students and 6 adults were killed at Sandy Hook Elementary School – with an average risk as low as one in 10 million.⁶

What are the leading causes of death at schools? A 2004 study that examined the relative risks of deaths in schools found that there were approximately 1,300 people killed in school and school-related incidents nationally between 1998 and 2012, or an average of 87 deaths per year. Of that number, the following causes were identified: school transportation-related (40 percent); homicides (32 percent); suicides (9 percent); active shooter (4 percent); and interpersonal disputes (4 percent).⁷

⁴ Prevalence and Offense Characteristics of Multiple Casualty Homicides: Are Schools at Higher Risk Than Other Locations? Erin K. Nekvasil and Dewey G. Cornell University of Virginia Francis L. Huang University of Missouri Psychology of Violence © 2015 American Psychological Association 2015, Vol. 5, No. 3, 236–245. Accessed at: <https://assets.documentcloud.org/documents/4413597/School-Safety-Cornell-Clean.pdf>

⁵ Blair, J. Pete, and Schweit, Katherine W. A Study of Active Shooter Incidents, 2000 - 2013. Texas State University and Federal Bureau of Investigation, U.S. Department of Justice, Washington D.C. 2014. Accessed at: <https://www.fbi.gov/file-repository/active-shooter-study-2000-2013-1.pdf/view>

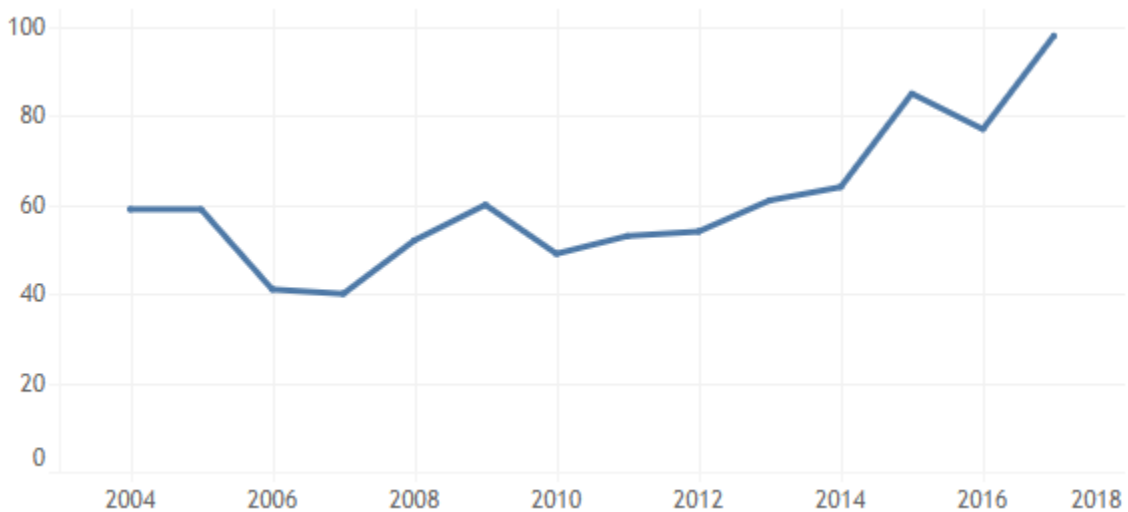
⁶ Harvey Shapiro, The Wiley Handbook on Violence in Education: Forms, Factors, and Preventions. James Alan Fox and Emma E. Fridel, Chapter 1: The Menace of School Shootings in America: Panic and Overresponse. 2018. Accessed at: https://media.wiley.com/product_data/excerpt/78/11189666/1118966678-521.pdf

⁷ Satterly Jr., Stephen C. Report of Relative Risks of Death in U.S. K-12 Schools. 2014. Accessed at: https://safehavensinternational.org/wp-content/uploads/2014/08/Relative_Risks_of_Death_in_U.S._K-12_Schools.pdf

Youth Suicide Rates in Colorado

The Colorado Department of Public Health and Environment reports that between 2004 and 2017, there were 852 suicides of youth between the ages of 10 and 19. The following chart, reproduced from the Department of Public Health and Environment, shows the increase in the number of suicides in this age range over this time period.

Chart 4: Number of Suicides Per Year, Ages 10-19, 2004-2017



Source: Department of Public Health and Environment.

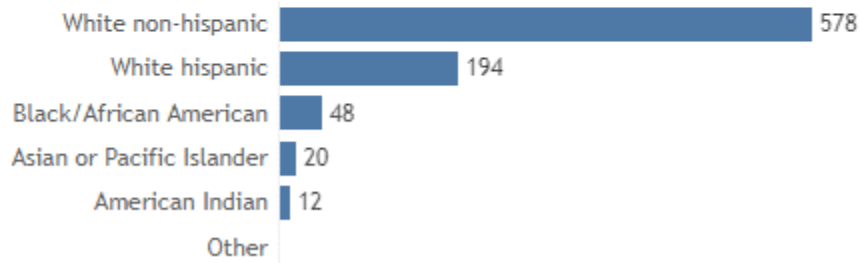
Chart 5 provides information on the sex and race/ethnicity of youth suicide victims from 2004 to 2017.

Chart 5: Suicides by Sex and Race/Ethnicity, Ages 10-19, 2004-2017

by sex



by race/ethnicity



Source: Department of Public Health and Environment.

Incidents of Gun Violence in Colorado

The term “gun violence” encompasses a number of things including suicides, described above, and accidental or unintentional firearm deaths, described below. It also includes homicides and injuries that occur during criminal acts. Chart 6, produced from data compiled by the CDC on underlying causes of death, shows the number of gun homicides in Colorado for individuals from birth to 24 years old from 1999 to 2017. Chart 7 shows the number of gun homicides in Colorado for all ages from 1999 to 2017.

Chart 6: Colorado Gun Homicides, Ages 0-24, 1999-2017*

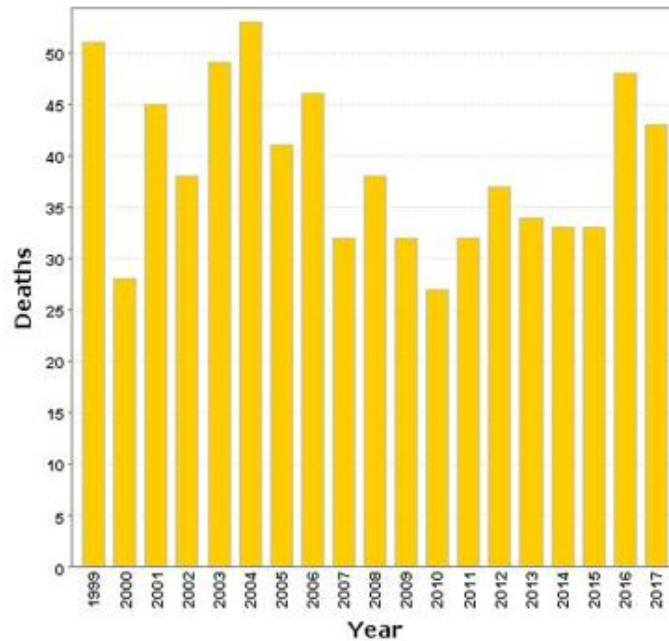
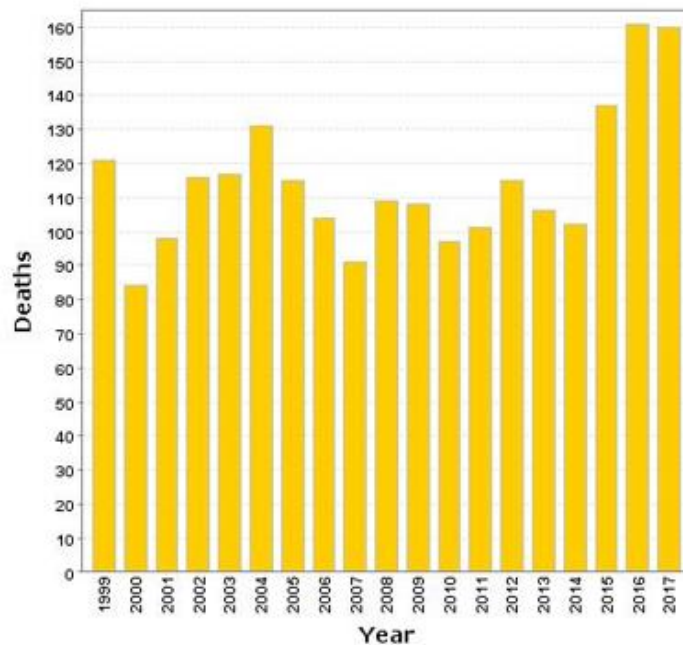


Chart 7: Colorado Gun Homicides, All Ages, 1999-2017*



* Source: Centers for Disease Control and Prevention, Wonder Database, accessed at: <https://wonder.cdc.gov/ucd-icd10.html>

Accidental Firearm-related Deaths and Youth

According to the Department of Public Health and Environment, fewer than ten accidental firearm deaths occur in Colorado each year. For 2005 to 2012, 15 (or 26 percent) of 58 accidental firearm deaths happened to children and youth ages 0 to 19. For every accidental firearm death during this period, there were approximately 15 firearm homicides and 57 firearm suicides, mostly among white males.⁸

⁸ Firearm Deaths in Colorado 2005-2012. Colorado Department of Public Health and Environment. Accessed at: <https://www.colorado.gov/pacific/sites/default/files/Firearm-Deaths-in-Colorado-2005-2012.pdf>.