

Firearm-Related Injuries among Youth Ages 15 Through 24

Definition of Firearm-Related Injuries

Firearm related-injuries are physical injuries that result from a firearm being discharged. In this report, five types of firearm-related injuries are addressed:

1. Injuries which occur when an individual intentionally harms someone other than themselves with a firearm. If the injury is non-fatal,¹ it is considered an assault. If it is fatal, it is considered a homicide.
2. Injuries which occur when an individual intentionally harms themselves with a firearm. If the injury is non-fatal, it is considered self-harm. If it is fatal, it is called suicide.
3. Injuries which occur when an individual accidentally harms themselves or another with a firearm. This type of injury is considered unintentional whether or not it is fatal.²
4. Injuries which occur when a police officer or other law enforcement officer harms a person with a firearm in the line of duty. These injuries are considered legal and are termed legal interventions whether or not they are fatal.
5. Firearm-related injuries or deaths in which the intention cannot be determined are deemed undetermined.

¹ Throughout this fact sheet, non-fatal numbers are based on data from hospital emergency departments. The numbers do not represent the full burden of non-fatal firearm-related injuries. <http://www.cdc.gov/ncipc/wisqars/nonfatal/definitions.htm> Additionally, due to a small sample size, some of these estimates are unstable and should be used with caution. These potentially unstable estimates are identified with a red asterisk.*

² In certain cases of negligent handling of a firearm, unintentional firearm-related injuries can be coded as homicides or assaults. There is evidence that unintentional firearm deaths among children are undercounted (Barber & Hemenway, 2011)



The following fact sheet provides information about firearm-related injuries and deaths among 15 through 24 year olds in the United States. It contains a review of data and information about the magnitude of the problem, shows how different demographic groups are impacted, and describes the circumstances surrounding these deaths and injuries. Risk and protective factors and some promising practices in firearm-related injury prevention are also explored. For information on firearm-related injury data on children, see CSN's fact sheet [Firearm Injuries among Children Ages 0 through 14](#).

Magnitude of Firearm-Related Injuries among Youth

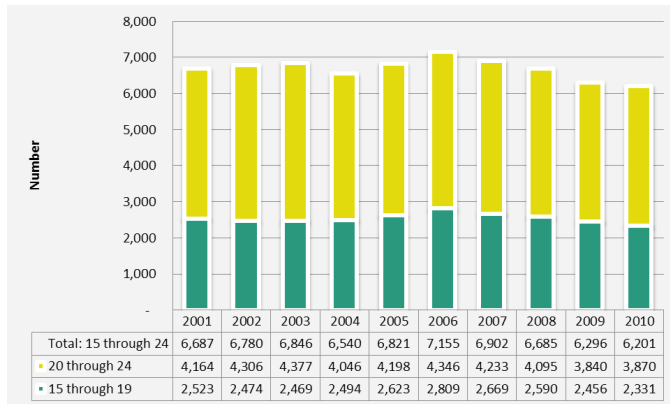
Youth are disproportionately affected by firearm violence. While youth ages 15 through 24 comprised about 14% of the population in 2010, they represented 20% of all firearm-related fatalities and 43% of all non-fatal firearm-related injuries (WISQARS, 2010a). In 2010, a total of 6,201 youth died from firearm-related injuries, accounting for more than one quarter of all injury deaths among youth ages 15 through 24 years and 20% of all deaths among this population (WISQARS, 2010a; WONDER, 2013).

Table 1. Fatalities Associated with Firearms, Injuries, and All Causes among Youth Ages 15 through 24, 2010

Age	Firearm-Related Deaths	Injury Deaths	Deaths from All Causes
15 through 24 years	6,201	22,149	29,551

While the number of firearm deaths and their associated rates in this age group have remained consistent, the rate of fatal firearm-related injuries has been trending downward from 2007 through 2010 for both 15 through 19 year olds and 20 through 24 year olds (Figures 1 and 2).

Figure 1. Number of Fatal Firearm-Related Injuries among Youth Ages 15 through 24, 2001-2010



(WISQARS, 2010a)

Figure 2. Rate of Fatal Firearm-Related Injuries among Youth Ages 15 through 24, 2001-2010

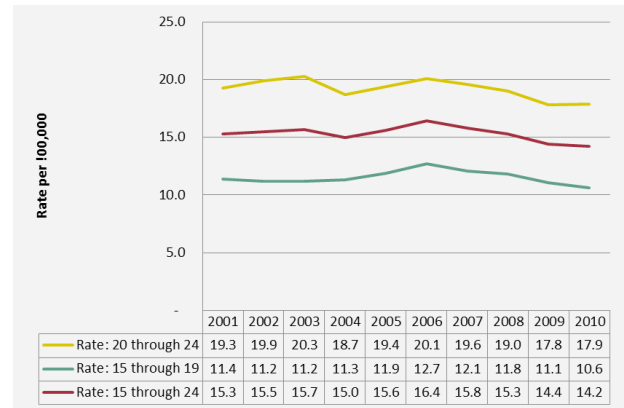
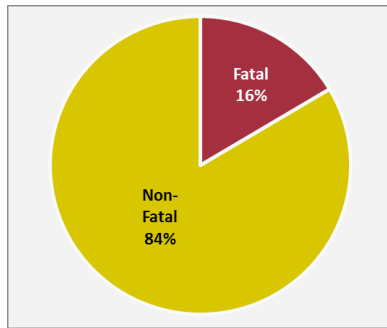


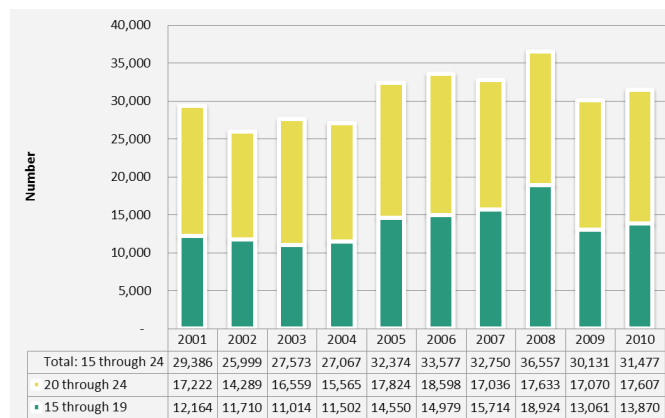
Figure 3. Fatal and Non-Fatal Firearm-Related Injuries among Youth Ages 15 through 24, 2010



An estimated 31,477 youth were non-fatally injured with firearms in 2010; for each fatal firearm-related injury, there were an additional five non-fatal firearm-related injuries in this age group (WISQARS, 2010b). Figure 3 shows the percentage of all firearm-related injuries that were fatal versus non-fatal, highlighting the large proportion that were non-fatal.

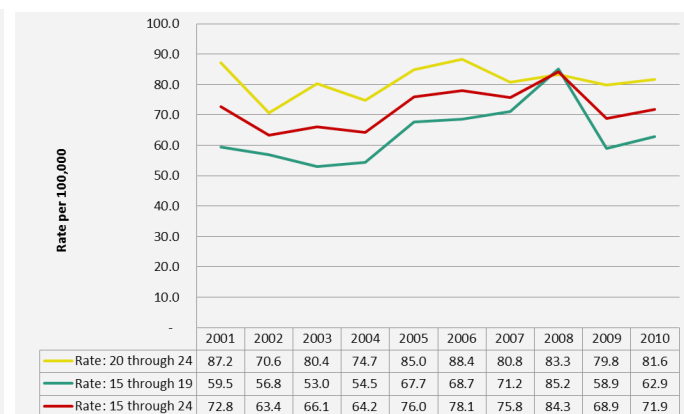
(WISQARS, 2010a, 2010b)

Figure 4. Number of Non-Fatal Firearm-Related Injuries among Youth Ages 15 through 24, 2001-2010



(WISQARS, 2010b)

Figure 5. Rate of Non-Fatal Firearm-Related Injuries among Youth Ages 15 through 24, 2001-2010

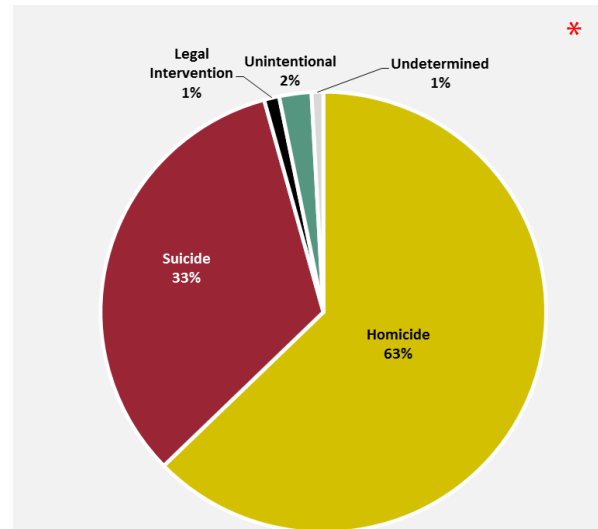


The number and rate of non-fatal firearm-related injuries among youth ages 15 through 24 fluctuated from 2001 through 2010.

Among all causes of death, firearm-related homicide is the second leading cause of death among youth (WISQARS, 2010a). While youth comprised about 14% of the population in 2010, they were 27% of all homicide victims and 33% of all firearm-related homicide victims. On average, between 2001 and 2010, 83% of youth homicides were committed with firearms (WISQARS, 2010a). The firearm homicide rate for youth between the ages of 15 through 24 is 35 times higher in the U.S. when compared with 17 other industrialized nations (Council on Injury Violence and Poison Prevention Executive Committee, 2012).

Figure 6. Fatal Firearm-Related Injuries by Type among Youth Ages 15 through 24, 2010

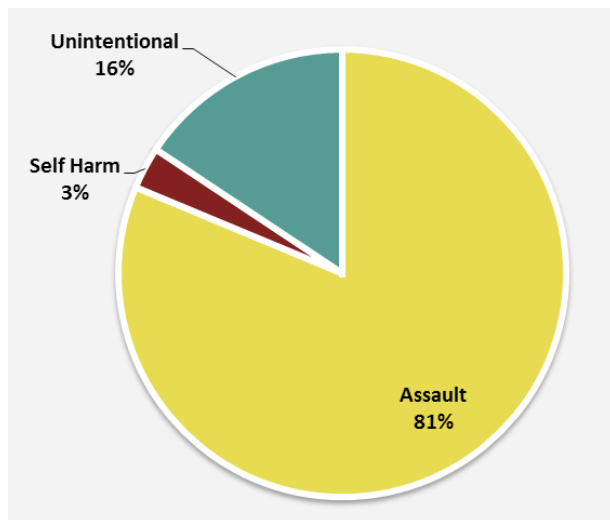
Figure 6 shows fatal firearm-related injuries by type among youth ages 15 through 24 in 2010. Sixty-three percent of these injuries were homicides, 33% were suicides, two percent were unintentional, one percent was the result of legal interventions, and one percent was undetermined.



(WISQARS, 2010a)

As shown in Figure 7, assaults accounted for 81% of non-fatal firearm-related injuries. Sixteen percent were unintentional, and three percent were the result of self-harm. Although the percentage fluctuated slightly since 2001, assaults consistently accounted for a large majority of the non-fatal firearm injuries in this age group.

Figure 7. Non-Fatal Firearm-Related Injuries by Type among Youth Ages 15 through 24, 2010



(WISQARS, 2010b)

Between 2001 and 2010, 48% of suicides among youth ages 15 through 24 involved firearms (The Children’s Safety Network, 2013; WISQARS, 2010a). On average, 73% of firearm-related suicide attempts resulted in death (WISQARS, 2010a, 2010b). Firearm-related youth suicides are often unforeseen and unplanned, “For over one in three, the police or medical examiner noted that a crisis such as an argument with a parent or relationship break-up occurred the same day as the suicide” (Suicide Prevention Resource Center & Harvard Injury Control Research Center, 2002). Additionally, children and adolescents (5-18) who complete suicide often used firearms that belonged to a family member, and in two out of three of these cases, the firearm was kept unlocked (Suicide Prevention Resource Center & Harvard Injury Control Research Center, 2002).

Unintentional firearm-related injuries occur frequently among this age group: for every fatal unintentional shooting, there were more than 70 non-fatal, unintentional shooting injuries in 2010 (T. R. Miller & The Children’s Safety Network, 2013).

Table 2: Fatal and Non-Fatal Firearm Related Injuries by Type among Youth Ages 15 through 24, 2010
(T. R. Miller & The Children’s Safety Network, 2013)

Type of Firearm-Related Injury	Fatal	Non-Fatal
Homicide/Assault	3,889	25,585
Suicide/Self-Harm	2,046	963
Unintentional	68	4,929
Legal Interventions	145	0 *
Undetermined	53	0 *
Total	6,201	31,477

The less urbanized an area is, the higher its suicide rate among youth ages 15 through 24 (Figure 8). Conversely, urban areas have higher homicide rates among 15 through 24 year olds than less urbanized areas (Figure 9).

Figure 8: Rate of Fatal Firearm-Related Suicide among 15-24 Year Olds by Urbanicity, 2010

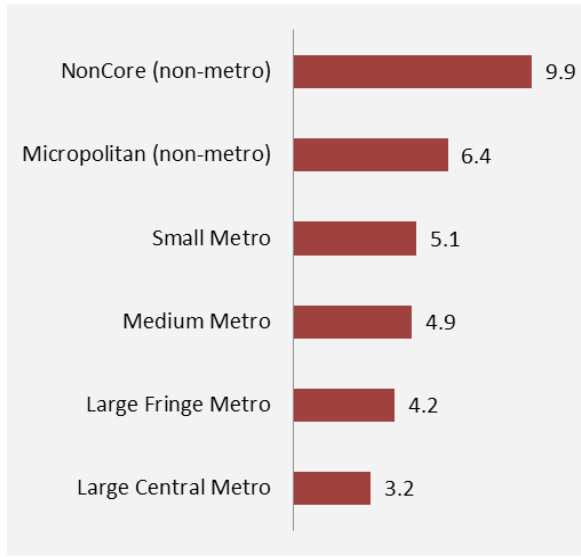
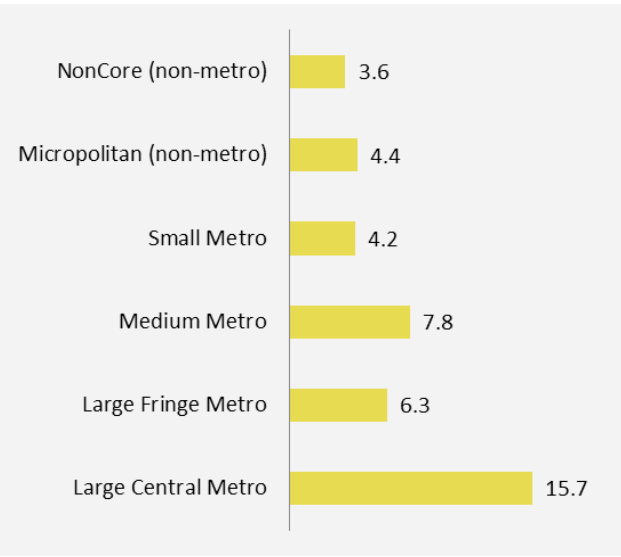


Figure 9: Rate of Fatal Firearm-Related Homicides among 15-24 Year Olds by Urbanicity, 2010

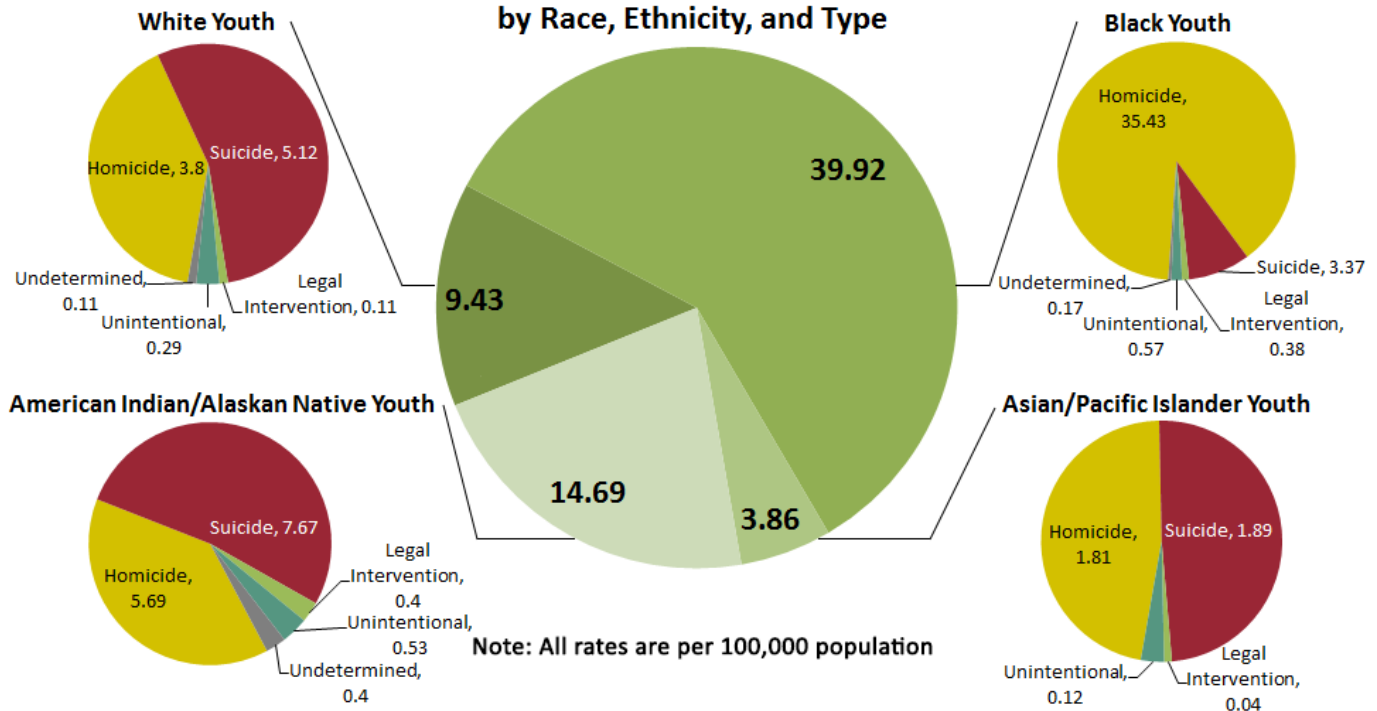


(WONDER, 2013)

Demographics³

20 through 24 year olds are at higher risk for both fatal and non-fatal firearm-related injuries as compared to their 15 through 19 year old counterparts. Males are at much higher risk for fatal and non-fatal firearm-related injuries than females; they constitute around 90% of the victims in both categories.

Figure 10: Rate of Fatal Firearm-Related Injuries * by Race, Ethnicity, and Type

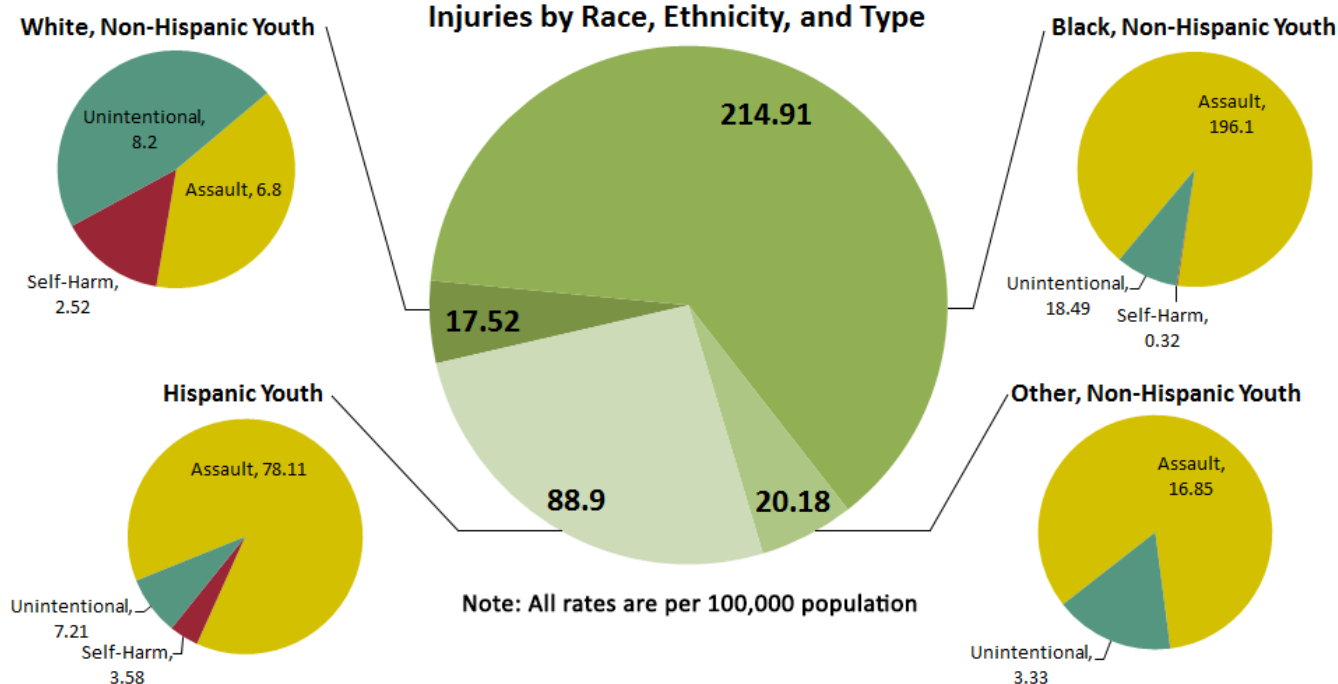


(WISQARS, 2010a)

³ In this section of the fact sheet, the impact of types of firearm-related injuries on specific race/ethnicities is described. The race/ethnicity categorizations used are those that are used in the data source.

When exploring racial/ethnic disparities, it is important to keep population size in mind. For example, while African Americans represented 16% of the population between the ages of 15 and 24 in 2010, they represented 46% of firearm fatalities and 65% of firearm homicide victims in this age group. They also represented a disproportionate number of non-fatal firearm-related injuries. When these numbers are broken down into rates per 100,000 population and by type of firearm-related injury, we see that African-Americans ages 15 through 24 are at a much higher risk for firearm-related homicides and assaults than any other racial/ethnic group. Similarly, American Indians/Alaska Natives ages 15 through 24 are at the highest risk for fatal self-inflicted firearm-related injuries (Figures 10 and 11) (WISQARS, 2010a).

Figure 11: Rate of Non-Fatal Firearm-Related Injuries by Race, Ethnicity, and Type *



(WISQARS, 2010b)

Circumstances of Firearm-Related Injuries among Youth

Of the 1,394 firearm-related deaths among youth ages 15 through 24 in 2010 for which data is available,⁴ 53.3% occurred at a “house or apartment, including a driveway, porch, or yard” (NVDRS, 2010). The second most frequent place of injury was a “public highway, street or road,” which was the location of 20.5% of these deaths (NVDRS, 2010). Of the 465 firearm-related homicides of youth from the ages of 15 through 24 for which data is available, less than 4.3% were deemed “justifiable self-defense/law enforcement,” 28.17% were the result of a crime in progress, and 40.0% were precipitated by a crime. 7.96% of the 465 homicides were related to intimate partner violence, and 15.05% were related to gangs (NVDRS, 2010).

Risk and Protective Factors

Firearm-related injuries are a preventable public health problem. By treating violence like a disease, the Centers for Disease Control and Prevention (CDC) has identified characteristics that make individuals and communities more and less susceptible to perpetrating violence or falling victim to it. These risk and protective factors vary by type of violence, perpetrator, and victim. For example, there are different risk factors for suicide and homicide, and men and women are at different levels of risk for being either perpetrators or victims of violence. Some commonly accepted risk factors for youth violence include being male (since males have a higher injury and mortality rate from violence), being exposed to violence in the family or community, being rejected by peers, and experiencing diminished economic opportunities. Additionally, having an unsecured firearm in the home is a risk factor for self-directed and unintentional firearm-related injuries, and it may even facilitate “in-the-heat-of-the-moment” homicides and assaults. At

⁴ This type of data is available through the National Violent Death Reporting System (NVDRS). As of the beginning of 2014, 16 states participate in NVDRS, therefore the numbers from NVDRS are only a sample of information and do not necessarily represent the national context. While 4,828 homicides of youth from the ages of 15 through 24 were reported in WISQARS in 2010, 1,058 were reported by the states participating in NVDRS in the same year (Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin).

the societal level, there is some evidence suggesting that homicide and suicide rates are higher when and where firearms are more readily available (Miller, Azrael, & Hemenway, 2002; Miller, 2013). Protective factors include positive connectedness to family and other adults, commitment to school, and involvement in social activities. To learn more about risk and protective factors for self-directed, youth, intimate partner and other forms of violence, visit the [CDC's Injury Prevention & Control: Violence Prevention](#) webpage.

Preventing Firearm-Related Injuries among Youth

For detailed information about preventing firearm-related injuries, please read the Children's Safety Network's Prevention of Firearm-Related Injuries & Death: Resource Guide 2013. This guide describes evidence-based strategies for upstream (early) prevention, community interventions which address street and gang violence, firearm safety education, legislation, and other best and promising practices to reduce firearm-related injuries among children and youth.

For additional information about firearm-related injuries among youth, please see:

- Centers for Disease Control and Prevention. Youth Violence: Facts at a Glance and Understanding Youth Violence. Available from: <http://www.cdc.gov/violenceprevention/youthviolence/index.html>
- Department of Health and Human Services (DHHS). Youth violence: A report of the Surgeon General [online]; 2001. Available from: <http://www.surgeongeneral.gov/library/youthviolence/toc.html>.
- Office of Juvenile Justice and Delinquency Prevention Gun Use by Male Juveniles: Research and Prevention. [online]; 2001. Available from: <https://www.ncjrs.gov/pdffiles1/ojjdp/188992.pdf>

Examples of Prevention Efforts for Youth

Cure Violence: Begun as Ceasefire Chicago, Cure Violence is a public health approach to violence which uses a three-pronged approach: 1. detect and interrupt transmission using trained mediators; 2. Identify and change the thinking of the highest potential transmitters using outreach workers; 3. Change community norms. Together, local stakeholders define the parameters of the violence problem, focusing on the actors and tools, and then they design the interventions. This model has been implemented in other cities under various names, such as the [Safe Streets Program in Baltimore, Maryland](#).

- Picard-Fritsche, S., & Cerniglia L. (2010) [Testing a Public Health Approach to Gun Violence](#). Center for Court Innovation.
- Skogan, W.G., Hartness, S.M., Bump, N., & Dubois, J. (2008). [Evaluation of CeaseFire - Chicago](#). Chicago IL, Northwestern University.
- Webster, D. W., Whitehill, J. M., Vernick, J. S., & Parker, E. M. (2012). [Evaluation of Baltimore's Safe Streets Program: Effects on Attitudes, Participants' Experiences, and Gun Violence](#). Baltimore, MD: Johns Hopkins Center for the Prevention of Youth Violence.

Project Safe Neighborhood: This program is the result of collaboration between federal, state, and local agencies, which focuses on deterring and punishing crimes committed with guns in Boston. The Boston Ceasefire program, a problem-oriented policing strategy, was the precursor of Project Safe Neighborhoods and led to the [National Network for Safe Communities](#). This program has been implemented and adapted in several other cities and states under different names, such as: The [Longevity Program in Connecticut](#); High Point Drug Market Intervention in High Point, North Carolina; Project Exile in Richmond, Virginia; and CIRV in Cincinnati, Ohio.

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- Project Safe Neighborhoods - [A national program to reduce gun crime: Final project report](#). East Lansing MI, School of Criminal Justice, Michigan State University.

Striving to Reduce Youth Violence Everywhere (STRYVE): This national initiative, led by the Centers for Disease Control and Prevention, aims to prevent violence before it starts. Geared toward youth from the ages of 10 through 24, STRYVE objectives include: increasing awareness that youth violence can and should be prevented; promoting the use of youth violence prevention approaches that are based on the best available evidence; and providing guidance to communities on how to prevent youth violence. STRYVE online offers trainings, resources and interactive workspaces for communities to plan, build and grow their violence prevention initiatives. For more information, visit: <http://vetoviolence.cdc.gov/stryve/>

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