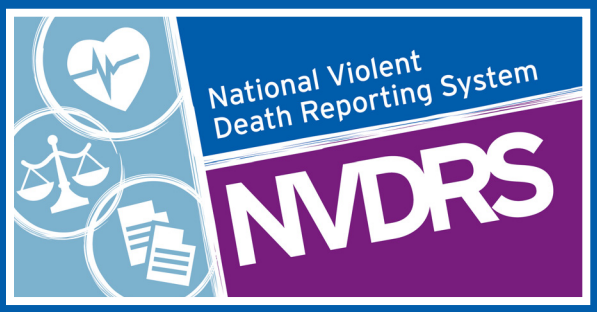

Surveillance for Violent Deaths—National Violent Death Reporting System, 17 States, 2011

National Center for Injury Prevention and Control
Division of Violence Prevention

Surveillance for Violent Deaths – National Violent Death Reporting System, 17 States, 2011

Katherine A. Fowler, PhD[1]

Janet M. Blair, PhD MPH[1]

Linda L. Johnson[2]

[1]Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA

[2]Karna LLC, Atlanta, Georgia

Corresponding author: Katherine A. Fowler, PhD. Division of Violence Prevention, Centers for Disease Control and Prevention, 4770 Buford Hwy NE, MS F-64, Atlanta, GA 30341. Email: kafowler@cdc.gov

Abstract

Problem/Condition: In 2011, an estimated 56,000 persons died in the United States as a result of violence-related injuries. This report summarizes data from CDC's National Violent Death Reporting System (NVDRS) regarding violent deaths from 17 U.S. states for 2011. Results are reported by sex, age group, race/ethnicity, marital status, location of injury, method of injury, circumstances of injury, and other selected characteristics.

Reporting Period Covered: 2011.

Description of System: NVDRS collects data regarding violent deaths obtained from death certificates, coroner/medical examiner reports, law enforcement reports, and secondary sources (e.g., child fatality review team data, supplementary homicide reports, hospital data, and crime laboratory data). NVDRS data collection began in 2003 with seven states (Alaska, Maryland, Massachusetts, New Jersey, Oregon, South Carolina, and Virginia) participating; six states (Colorado, Georgia, North Carolina, Oklahoma, Rhode Island, and Wisconsin) joined in 2004, four (California, Kentucky, New Mexico, and Utah) in 2005, two in 2010 (Ohio and Michigan), and fourteen in 2014 for a total of 32 states. This report includes data from 17 states that collected statewide data in 2011; data from California are not included in this report because data were not statewide and not collected after 2008. Michigan was excluded because data collection was not statewide as of 2011.

Results: For 2011, a total of 18,200 fatal incidents involving 18,693 deaths were captured by NVDRS in the 17 states included in this report. The majority (63.9%) of deaths were suicides, followed by homicides (24.4%), including deaths involving legal intervention (i.e., deaths caused by law enforcement and other persons with legal authority to use deadly force, excluding legal executions. The term legal intervention is the classification adopted by the *International*

Classification of Diseases, Tenth Revision (ICD-10) and does not denote the lawfulness or legality of the circumstances surrounding a death caused by law enforcement), deaths of undetermined intent (11%), and unintentional firearm deaths (0.7%). Suicides occurred at higher rates among males, non-Hispanic whites and American Indian/Alaska Native, and persons aged 45–54 years. Suicides most often occurred in a house or apartment and most frequently involved the use of firearms. Suicides were preceded primarily by a mental health problem, an intimate partner problem, a crisis during the previous or impending 2 weeks, and/or a physical health problem. Homicide rates were highest among males, particularly non-Hispanic black males, and persons aged 15–44 years. The majority of homicides involved the use of a firearm and occurred in a house or apartment, or on a street/highway. Homicides were primarily precipitated by one or more of the following: arguments and interpersonal conflicts, occurrence in conjunction with another crime, or were related to intimate partner violence. When the relationship between the homicide victim and suspected perpetrator was known, it was most frequently either an acquaintance/friend or intimate partner. Unintentional firearm deaths occurred at higher rates among males, non-Hispanic whites, and persons aged 15-19 and 45-54 years. Unintentional firearm deaths most often occurred in a house or apartment, and were most often precipitated by a person unintentionally pulling the trigger of the firearm, while playing with the firearm or while hunting.

Interpretation: This report provides a detailed summary of data from NVDRS for 2011. The results indicate that violent deaths resulting from self-inflicted or interpersonal violence disproportionately affected persons aged <65 years, males, and certain minority populations. For both homicides and suicides, intimate partner problems, interpersonal conflicts, mental health problems, and recent crises were among the primary precipitating factors.

Public Health Action: The continued development and expansion of NVDRS to include all U.S. states, territories, and the District of Columbia is essential to CDC's efforts to reduce the public health impact of violence. NVDRS data can be used to monitor the occurrence of violence-related fatal injuries and assist public health authorities in the development, implementation, and evaluation of programs and policies to reduce and prevent violent deaths. Examples of recent successful applications of NVDRS data include use of Oklahoma VDRS homicide data to help evaluate the effectiveness of a police and advocate intervention at domestic violence incident scenes; use of Utah VDRS data to create policies that support children of intimate partner homicide victims; use of Colorado VDRS data to develop a web-based suicide prevention program targeting middle-aged men; and multi-state efforts to inform and guide suicide prevention for military veterans.

Introduction

In 2011, an estimated 56,000 persons died in the United States as a result of violence-related injuries (*1*). Suicide was the 10th leading cause of death overall in the U.S. and disproportionately affected both young and middle-aged populations. It was among the top 3 leading causes of death for all age groups from 10-34 years, and was among the top 5 leading causes for persons aged 35-54. Homicide was the 16th leading cause of death overall in the U.S. but disproportionately affected young people. It was the 3rd leading cause of death for children aged 1-4 years and young people aged 15-34 years, and was the 5th leading causes of death for children aged 5-14 years and adults aged 35-44 years.

Public health authorities require accurate, timely, and comprehensive surveillance data to better understand and ultimately prevent the occurrence of violent deaths in the United States (*2*). In 2000, in response to an Institute of Medicine Report noting the need for a national fatal intentional injury system (*3*), CDC began planning to implement the National Violent Death Reporting System (NVDRS) (*4*). Some of the goals of NVDRS include to:

- collect and analyze timely, high-quality data that monitor the magnitude and characteristics of violent death at the national, state, and local levels;
- ensure data are disseminated routinely and expeditiously to public health officials, law enforcement officials, policy makers, and the public;
- ensure data are used to develop, implement, and evaluate programs and strategies that are intended to reduce and prevent violent deaths and injuries at the national, state, and local levels; and,
- build and strengthen partnerships among organizations and communities at the national, state, and local levels to ensure that data are collected and used to reduce

and prevent violent deaths and injuries.

NVDRS was conceived as a state-based active surveillance system that would collect data on the characteristics and risk factors associated with all violence-related deaths in participating states, including homicides, suicides, and legal intervention deaths (i.e., deaths caused by law enforcement and other persons with legal authority to use deadly force, excluding legal executions. The term legal intervention is the classification adopted by the *International Classification of Diseases, Tenth Revision* (ICD-10) and does not denote the lawfulness or legality of the circumstances surrounding a death caused by law enforcement), as well as unintentional firearm deaths and deaths of undetermined intent*.

Before implementation of NVDRS, single data sources (e.g., death certificates, law enforcement data systems) provided only limited information and few circumstances from which to understand patterns of violent deaths collected by the system. NVDRS fills this surveillance gap. It is the first system to provide detailed information on circumstances precipitating violent deaths, the first to link multiple source documents on violent deaths to enable the understanding of each death more completely in order to inform the study of patterns of violent deaths, and the first to link multiple deaths that are related to one another (e.g., multiple homicides, suicide pacts, cases of homicide followed by the suicide of the suspected perpetrator).

NVDRS began data collection in 2003 with seven states (Alaska, Maryland, Massachusetts, New Jersey, Oregon, South Carolina, and Virginia) participating; six states (Colorado, Georgia, North Carolina, Oklahoma, Rhode Island, and Wisconsin) joined in 2004, four more (California, Kentucky, New Mexico, and Utah) in 2005; and two (Ohio and Michigan) in 2010. Fourteen new states joined in 2015 (Arizona, Connecticut, Hawaii, Illinois, Indiana, Iowa, Kansas, Maine, Minnesota, New Hampshire, New York, Pennsylvania, Vermont,

Washington), bringing the current total to 32 states (Figure). California concluded its participation in 2008. CDC provides funding for state participation and anticipates that NVDRS will expand to include all 50 states, the District of Columbia, and U.S. territories in the future.

This report summarizes data for 2011 for deaths meeting NVDRS inclusion criteria from the 17 states that collected statewide data in that year (Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin; approximately 30.1% of the U.S. population) (*1*,*5*). California data are not included in this report because data were not collected after 2008. Michigan data were excluded because data collection was not statewide in 2011. The fourteen states that joined in 2015 are not included because they did not collect 2011 data. NVDRS data are updated annually and are available through CDC's Web-based Injury Statistics Query and Reporting System (WISQARS)** at http://www.cdc.gov/injury/wisqars/nvdrs.html.

Methods

NVDRS compiles information from multiple data sources. The core required data sources are: death certificates, coroner/medical examiner reports, and law enforcement reports. In addition, some participating states collect information from secondary sources (e.g., child fatality review team data, supplementary homicide reports, and crime laboratory data). NVDRS collates documents for each death and links deaths that are related (e.g., multiple homicides, a homicide followed by a suicide, or multiple suicides) into a single incident. The ability to analyze linked data permits a comprehensive assessment of violent deaths.

NVDRS defines a violent death as a death resulting either from the intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community. In addition, NVDRS collects information regarding unintentional firearm injury

deaths (i.e., incidents in which the person causing the injury did not intend to discharge the firearm) and deaths of undetermined intent. NVDRS case definitions are coded on the basis of the *International Classification of Diseases, Tenth Revision* (ICD-10) (*6*) or on the basis of manner of death assigned by the coroner, medical examiner, or law enforcement. Cases with selected ICD-10 codes (Box 1) or with a manner of death specified in one of the 3 primary data sources that is consistent with NVDRS case definitions are included in NVDRS. ICD-10 case finding is completed by participating states.

Variables analyzed in NVDRS include the following:

- manner of death (i.e., the intent [homicide/legal intervention, suicide, unintentional, undetermined] of the person inflicting a fatal injury);
- mechanism of injury (i.e., the method used to inflict a fatal injury);
- toxicology findings for all victims with available toxicology results
- circumstances preceding injury (i.e., the events that preceded and were identified by investigators as relevant and therefore might have contributed to the infliction of a fatal injury);
- whether the decedent was a victim (i.e., a person who died as a result of a violence related injury);
- information about suspects (i.e., a person believed to have inflicted a fatal injury on a victim);
- whether the decedent was both a suspect and a victim (i.e., a person believed to have inflicted a fatal injury on a victim who then was fatally injured, such as the perpetrator of a homicide-suicide);
- incident (i.e., an occurrence in which one or more persons sustained a fatal injury

that was linked to a common event or perpetrated by the same suspect during a 24 hour period); and

• type of incident (i.e., a combination of the manner of death and the number of victims in an incident).

Unlike most public health surveillance systems that are based on the person who experiences the event under surveillance, NVDRS is an incident-based system, and all decedents associated with a given incident are grouped in one record. Decisions about whether two or more deaths are related and belong to the same incident are made on the basis of the timing of the injuries rather than on the timing of the deaths. Examples of a violent death incident include 1) a single isolated violent death, 2) two or more related homicides (including legal interventions) when the fatal injuries were inflicted <24 hours apart, 3) two or more related suicides or deaths of undetermined intent when the fatal injuries were inflicted <24 hours apart, and 4) a homicide followed by a related suicide when both fatal injuries were inflicted <24 hours apart.

Data are obtained from individual information sources and entered into source-specific computerized data entry screens (i.e., law enforcement report data are entered into law enforcement report screens and death certificate data into death certificate screens). This permits comparisons of the quality and completeness of individual data sources and allows states to provide feedback to sources regarding the consistency of their data compared with data from other sources. The system also permits electronic importation of some specific data sources (e.g., death certificate data) without requiring manual entry.

Abstraction of identical variables across multiple source documents can result in data inconsistencies, which NVDRS resolves by assigning a primacy (i.e., hierarchical) rule for each variable. The primacy rules are applied to create a final analysis data set that uses data from all

available sources. For each variable in NVDRS, primacy is established on the basis of a hierarchy of assumed reliability of all the sources for a single variable. For example, sex is collected in all three required documents (death certificate, coroner/medical examiner report, and law enforcement report). The primacy rule for sex is expressed as 1) death certificate, 2) coroner/medical examiner report, 3) law enforcement report, which means the analysis file is constructed using the sex recorded in the death certificate. If the sex is left blank or is unknown, the sex recorded in the coroner/medical examiner report is used and if the coroner/medical examiner report does not provide the sex or lists the sex as unknown, the law enforcement report is used.

Manner of Death

A manner (i.e., intent) of death for each decedent is assigned by a trained abstractor who takes into account information from all source documents. Typically, these documents are consistent regarding the manner of death, and the abstractor-assigned manner of death corresponds to that reported in all the source documents. The abstractor assigned manner of death must agree with at least one of the data sources. On rare occasions, when a discrepancy exists among the source documents, the abstractor must assign a manner of death on the basis of the preponderance of evidence in the source documents. For example, if two sources classify a death as a suicide and a third classifies it as undetermined, the death will be likely coded as a suicide.

NVDRS classifies data using one of five abstractor-assigned manners of death:

• **Suicide.** Suicide is defined as a death resulting from the use of force against oneself when a preponderance of the evidence indicates that the use of force was intentional. This category includes deaths of persons who intended only to injure rather than kill themselves, deaths

associated with risk taking behavior without clear intent to inflict fatal injury but associated with high risk of death (e.g., “Russian roulette”) and suicides involving another providing only passive assistance to the decedent (e.g., supplying the means or information needed to complete the act). The category does not include deaths caused by chronic or acute substance abuse without the intent to die, or deaths attributed to autoerotic behavior (e.g., self-strangulation during sexual activity). Corresponding ICD-10 codes included in NVDRS are X60–X84 and Y87.0.

• **Homicide.** Homicide is defined as a death resulting from the use of physical force or power, threatened or actual, against another person, group, or community when a preponderance of evidence indicates that the use of force was intentional. Two special scenarios that the National Center for Health Statistics (NCHS) regards as homicides are included in the NVDRS definition: 1) arson with no intent to injure a person and 2) a stabbing with intent unspecified. This category excludes vehicular homicide without intent to injure, unintentional firearm deaths (a separate category listed below), combat deaths or acts of war, and deaths of unborn fetuses, but includes acts of terrorism. Corresponding ICD-10 codes included in NVDRS are X85–X99, U01-U03, Y00–Y09, and Y87.1.

• **Unintentional firearm**. An unintentional firearm death is defined as a death that results from a penetrating injury or gunshot wound from a weapon that uses a powder charge to fire a projectile and for which a preponderance of evidence indicates that the shooting was not directed intentionally at the decedent. Examples of deaths included in this category include the death of a person as a result of celebratory firing that was not intended to frighten, control, or harm anyone; a soldier shot during a field exercise but not in a combat situation; a person who received a self-inflicted wound while playing with a firearm; and a person who mistakenly thinks a gun is

unloaded and shoots another person. This category excludes firearm injuries caused by unintentionally striking a person with the firearm (e.g., hitting a person on the head with the firearm rather than firing a projectile) and unintentional injuries from non-powder guns (e.g., BB, pellet, or other compressed air-powered or gas-powered guns). Corresponding ICD-10 codes included in NVDRS are W32–W34 and Y86.

• **Undetermined intent.** A death of undetermined intent is defined as a death that results from the use of force or power against oneself or another person for which the evidence indicating one manner of death is no more compelling than evidence indicating another. This category includes coroner/medical examiner rulings (e.g., accident or suicide, undetermined, jumped or fell, or self-inflicted injury) when records give no evidence or opinions in favor of either unintentional or intentional injury. Corresponding ICD-10 codes included in NVDRS are Y10–Y34, Y87.2, and Y89.9.

• **Legal intervention.** A death from legal intervention is a death in which a decedent is killed by a law enforcement officer or other peace officer (a person with specified legal authority to use deadly force), including military police, acting in the line of duty. There are a small subset of legal intervention deaths in which force was applied without clear lethal intent (e.g., during restraint or when applying force with a typically non-deadly weapon, such as a taser), or in which the victim's death occurred while fleeing capture. On average, about 3 cases per year fit the lattermost profile, accounting for an extremely small percentage of the overall total count of legal intervention deaths. This category excludes legal executions. Corresponding ICD-10 codes included in NVDRS are Y35.0–Y35.4, Y35.6, Y35.7, and Y89.0. The term legal intervention is a classification from ICD-10 (Y-35.0) and does not denote the lawfulness or legality of the circumstances surrounding the death. In this report, legal intervention deaths are grouped with

homicides in the analyses of homicide deaths, and then are reported as a separate incident type in further analyses.

Variables Analyzed

NVDRS collects approximately 250 unique variables for each death. The number of variables recorded for each incident depends on the content and completeness of the source documents. Variables include manner of death, demographics, ICD-10 and cause-of-death codes and text descriptors, location and date/time of injury and death, toxicology results, bodily injuries, precipitating circumstances, victim-suspect relationship, and method of injury (Boxes 2 and 3).

Circumstances Preceding Death

The circumstances preceding death are defined as the precipitating events that contributed to the infliction of a fatal injury (Box 3). The circumstances that preceded a fatal injury are reported on the basis of the content of the coroner/medical examiner investigative records and law enforcement investigative reports. Different sets of circumstances are coded for suicide/undetermined deaths, homicide/legal intervention deaths, and unintentional firearm deaths. When selected, the variable "circumstances known" allows the abstractor to select from a list of potential circumstances. Each incident requires the data abstractor to code all circumstances in cases for which the circumstances are known. If circumstances are not known (e.g., for a body found in the woods with no other details) the data abstractor leaves the "circumstances known" variable blank, and these cases are excluded from the denominator for circumstance values. If either the coroner/medical examiner record or the law enforcement report indicates the presence of a circumstance, then the abstractor endorses the circumstance (e.g., if

the law enforcement report indicated that a decedent had disclosed an intent to commit suicide, then the suicidal intent variable is endorsed).

Coding Training and Quality Control

Ongoing coding support for data abstractors is provided through an e-mail help desk, monthly conference calls with all states, and regular conference calls with individual states. States may also conduct additional abstractor training workshops and activities within their state VDRS program at their own discretion. An NVDRS coding manual with CDC-issued standard guidance (e.g., coding criteria and examples) for coding each data element is provided. Software features enhance coding reliability, including automated validation rules and a hover-over feature containing variable-specific information.

States are requested to perform blind re-abstraction of a subset of cases yearly using multiple abstractors to identify inconsistencies. CDC also runs a quality-control analysis in which multiple variables are reviewed for their appropriateness, with special focus on abstractor-assigned variables (e.g., method selection and manner of death). If CDC finds any inconsistencies, CDC notifies the state and asks for a response or correction.

Time Frame

States are required to report all deaths within 6 months of the end of each calendar year for the preceding January–December time frame. States then have an additional 12 months to complete each incident record, for a total of 18 months to complete information for a given incident. Although states typically meet these timelines, additional details sometimes arrive after a deadline has passed. New incidents also might be identified after the deadline (e.g., if a death certificate is revised, new evidence is obtained that changes a manner of death, or a miscoded

ICD-10 coding is corrected to meet NVDRS inclusion criteria). These additional data are incorporated into NVDRS. Analysis files are updated monthly at CDC. On the basis of previous experience, CDC estimates that case counts might increase 1%–2% after the initial 18-month data collection period.

Fatal Injuries During 2011

This report provides preliminary data concerning fatal injuries meeting the NVDRS case definition for violent deaths in 2011 for 17 participating states that were received by CDC as of August 11, 2012. Participating states used vital statistics death certificate files or coroner/medical examiner reports to identify violent deaths meeting NVDRS case definitions. Each state reported all deaths of their residents that occurred within the state and deaths of non-residents in which the fatal injury occurred within the state. Once a death was identified, NVDRS data abstractors linked source documents, linked deaths within each incident, coded data elements, and wrote a short narrative of the incident. State-level data were then consolidated and analyzed for this aggregate report. Numbers, percentages, and crude rates are presented in aggregate for all deaths by abstractor-assigned manner of death. Rates for cells with a frequency of < 20 are not reported because of the instability of those rates (*7*). In addition, rates could not be calculated for some variables (e.g., marital status and precipitating circumstances) because denominators were unknown. Bridged-race 2010 population estimates were used as denominators in the crude rate calculations (*8*). For compatible numerators for rate calculations to be derived, records listing multiple races were recoded to a single race, when possible, using a bridging algorithm provided by NCHS (available at http://www.cdc.gov/nchs/nvss/bridged_race.htm).

Results

All Deaths Captured by NVDRS

Deaths by Manner, Method, and Location

The 17 NVDRS states included in this report collected data concerning 18,200 incidents and 18,693 deaths that occurred during 2011. The crude death rate was 19.8 deaths per 100,000 population. Suicides (n = 11,953; 63.9% of total) accounted for the highest rate of violent deaths (12.6 per 100,000 population) followed by homicide/legal intervention (n = 4,559; 24.4% of total) deaths (4.8 per 100,000 population). Deaths of undetermined intent (n = 2,051, 11% of total) and unintentional firearm deaths (n = 130, 0.7% of total) occurred at lower rates (2.2 and 0.1 per 100,000 population, respectively). Firearms were the method used in 51.1% of included deaths, hanging/strangulation/suffocation for 17.4%, and poisoning for 17% (rates: 10.1, 3.4, and 3.4 per 100,000 population, respectively); rates for other methods were lower. For all deaths, a house or apartment was the most common location (71.1%). The second most common location of injury was a street or highway (7.2%) (Table 1).

Toxicology Results of Decedent

Tests for alcohol were conducted for 70.9% of decedents, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 55.9%, 48.6%, 56.5%, 41.8%, and 56.3% of decedents, respectively. Among decedents who tested positive for alcohol (33.3%), 61.4% had a blood alcohol concentration (BAC) of ≥0.08 g/dL (over the legal limit in all states). Opiates, including heroin and prescription pain medications, were identified in 23.9% of cases tested for these substances, antidepressants in 18.9%, marijuana in 16.8%, cocaine in 7.6%, and amphetamines in 4.1% (Table 2).

Suicides

Sex, Race/Ethnicity, Age Group, and Marital Status

The 17 NVDRS states included in this report collected data during 2011 concerning 11,942 suicide incidents, which included 11,953 suicide decedents (Table 1). Rates of suicide by month of death showed little variation throughout the year (range: 0.9–1.1 per 100,000 population). Overall, the crude suicide rate was 12.6 per 100,000 population (Table 3). The rate for males was nearly four times that for females (20.1 and 5.5 per 100,000 population, respectively; Table 4). Non-Hispanic American Indian/Alaska Natives (AI/ANs) and Non-Hispanic whites had the highest rates of suicide deaths (both 15.7 per 100,000 population). The highest rates of suicide by age group occurred among persons aged 45–54 years, 55–64 years, and 35–44 years (19.7, 16.4, and 16.3 per 100,000 population, respectively). Children aged 10–14 years had the lowest rates of suicide among all age groups (1.4 per 100,000 population). Rates of suicide among adolescents aged 15–19 years (8.2 per 100,000 population) were approximately half of those for persons aged 35–64 years.

Decedents aged 35–64 years accounted for more than half (54.1%) of suicides among males. Suicide rates among males were highest for those aged ≥85 years followed by those aged 75–84 and 45–54 years (40.6, 33.3, and 29.7 per 100,000 population, respectively). Non-Hispanic white males (24.8 per 100,000) and non-Hispanic AI/AN males (23.3 per 100,000) had the highest rates of any male subgroups and had rates that were approximately four times the rate for the group with the lowest rates, Asian/Pacific Islander males (6.5 per 100,000 population). Among females, decedents aged 35–64 years accounted for 61.6% of suicides, and rates were highest among those aged 45–54 years (10 per 100,000). Female suicide rates were highest among non-Hispanic whites (8.1 per 100,000 population) followed by non-Hispanic AI/ANs (7.9

per 100,000 population), and were lowest among non-Hispanic blacks (1.9 per 100,000 population) and Hispanics (2.1 per 100,000 population). Of all suicide decedents aged >18 years, 36.9% were married, 31.9% had never married, and 22.8% were divorced at the time of death (Table 4).

Method and Location of Injury

Firearms were used in more than half of suicides (52.1%), followed by hanging/strangulation/suffocation (25.6%), and poisoning (16.3%) (rates: 6.6, 3.2, and 2.1 per 100,000 population, respectively; Table 3). The most common method used by male suicide decedents was a firearm (57.5%), followed by hanging/strangulation/suffocation (26.3%) (Table 5). Among females, poisons were used most often (36.5%) followed by firearms (33.2%). The most common place of self-inflicted injury was a house or apartment (77.1%), followed by natural areas (4.0%), streets or highways (2.9%), and motor vehicles (2.8%). A total of 132 (1.1%) suicides occurred in a jail or prison setting (118 males and 14 females).

Toxicology Results of Decedent and Precipitating Circumstances

Tests for alcohol were conducted for 66.4% of suicide decedents, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 48.8%, 43.7%, 49.4%, 39.8%, and 49.6% of suicide decedents, respectively (Table 6). Among suicide decedents who tested positive for alcohol (34.4%), 64.3% had a BAC of $\geq$0.08 g/dL. Opiates, including heroin and prescription pain medications, were identified in 20.6% of cases tested for these substances; cocaine and marijuana were identified in 4.6% and 10.9% of tested cases, respectively. Of suicide decedents who were tested for antidepressants, 22.0% were positive at the time of their death (Table 6).

Precipitating circumstances were known for 89.9% of suicide decedents. Overall, mental health problems were the most commonly noted circumstance for suicide decedents, with 39.9% described as experiencing a depressed mood at the time of their deaths (Table 7). Approximately 45.2% were described as having a diagnosed mental health problem; and 32.4% were receiving mental health treatment. Of those with a diagnosed mental disorder, the most frequent diagnoses were depression/dysthymia (76.2%), bipolar disorder (15.3%), and anxiety disorders (12.2%) (Table 8).

Among the 10,746 suicide decedents with known circumstance information, 20.8% had a history of previous suicide attempts, 31.7% had disclosed suicidal intent to another person, and 34.2% left a suicide note (Table 7). Alcohol and/or other substance abuse problems were indicated for 17.7% and 14.8% of suicide decedents respectively. Other than mental health and substance abuse conditions, circumstances noted most often were intimate partner problems (30.7%) and a crisis of some kind in the preceding or impending 2 weeks (24.2%). Physical health problems also were noted in 21.9% of cases, and job or financial problems in 14% and 12% of cases, respectively.

A substantial proportion of female (39.7%) and male (40%) suicide decedents were observed to have a depressed mood at the time of death. The majority of females (62.6%) and 40.1% of males had received a prior diagnosis of a mental health problem. The percentage of females (49.0%) and males (27.5%) being treated for a mental health problem were somewhat lower. Among those with a diagnosed mental health problem, depression/dysthymia, bipolar disorder, and anxiety disorder were the three most common diagnoses for both males and females (Table 8). Slightly more than one-fifth of both male (21.5%) and female (22.9%) suicide decedents were indicated as having physical health problems that contributed to their suicide

(Table 7). Job problems were indicated as a precipitant of the decedent's suicide in higher proportions of males than females (15.5% and 9%, respectively), as were financial problems (12.9% and 8.9%) and recent criminal legal problems (10.5% and 4.2%). Intimate partner problems also were cited as a precipitating factor in a higher percentage of male suicides than female suicides (32.0% and 26.3%, respectively). Other relationship problems (i.e., conflict with friends, family, and associates other than an intimate partner) was cited as a precipitating factor for a larger percentage of female (12.5%) than male (9.1%) suicide decedents. Although occurring in a relatively small percentage of cases, being a perpetrator of interpersonal violence in the month before death was more common among male suicide decedents (4.1%) than being a victim of such violence (0.3%), whereas the proportions were similar for females (1.0% and 1.2%, respectively).

Homicides/Legal Intervention Deaths

Sex, Race/Ethnicity, Age Group, and Marital Status

The 17 NVDRS states included in this report collected data concerning 4,302 homicide incidents (including legal intervention deaths), which included 4,559 homicides during 2011 (Table 9). Rates of homicide by month of death showed little variation throughout the year (range: 0.3–0.5 per 100,000 population). Overall, the crude homicide rate was 4.8 deaths per 100,000 population. The majority of homicide decedents aged ≥18 years (60.1%) had never been married, and 21.7% were married at the time of their death (Table 10). In 51% of homicides, the relation of the victim to the suspect was not known. When a suspect was identified, the suspect most often was an acquaintance or friend (11.9%), a spouse or intimate partner (10.6%), or a stranger (4.7%).

The homicide rate for males was almost four times that for females (7.7 and 2.1 per 100,000 population, respectively) (Table 11). Non-Hispanic blacks accounted for half (50.6%) of homicide deaths and had the highest rate (15.9 deaths per 100,000 population; 28.9 per 100,000 for non-Hispanic black males), followed by AI/ANs (8.5) and Hispanics (5.0). Age-specific homicide rates were highest (11.8 deaths per 100,000 population) among those aged 20–24 years, followed by those aged 25–29 years (9.7 deaths per 100,000 population). The rate for infants aged <1 year was nearly three times that for children aged 1–4 years (6.5 and 2.7 per 100,000 population, respectively). Rates were lowest among children aged 5–14 years and persons aged 65–84 years. The majority of male homicide decedents (55.7%) were aged 15–34 years; males aged 20–24 years had the highest rates of homicide (19.8 per 100,000 population). For females, homicide rates were highest (6.2 deaths per 100,000 population) among infants aged <1 year. This is comparable to the homicide rate for males aged <1 year (6.9 per 100,000).

Method and Location of Injury

Firearms were used in 68.6% of homicides, followed by sharp instruments (12.9%), blunt instruments (6.3%), and personal weapons (e.g., hands, feet, fists; 4.1%) (Table 9). No other single method was used in more than 4.0% of homicides. Firearms were the most common method used in homicides of males (73.4%) and females (51.5%) (Table 12). Hanging/strangulation/suffocation was more common among female homicide decedents than among males (9.4% vs. 1.9%), as was use of blunt instruments (10.7% vs. 5.1%). A house or apartment was the most common location of homicide for both males and females (47.6% and 75.4%, respectively) (Table 12). The next most common location of homicide for both males and females were a street or highway (20.8%), a motor vehicle (4.3%), or a parking lot, public garage or public transport (4.1%).

Toxicology Results of Decedent and Precipitating Circumstances

Tests for alcohol were conducted for 77.2% of homicide decedents, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 63.6%, 49.3%, 64.2%, 46%, and 62.4% of homicide decedents, respectively (Table 13). Among homicide decedents who tested positive for alcohol (33%), 55.5% had a BAC of ≥0.08 g/dL. Marijuana, cocaine, and opiates were identified in 30.9%, 9.8%, and 11.1% of homicide decedents tested, respectively.

Precipitating circumstances were identified for 75.4% of homicide deaths. Approximately one in three of those homicides were precipitated by another crime (Table 14). In 73.6% of cases precipitated by another crime, the crime was in progress at the time of the incident. The type of crime most frequently precipitating the homicide was robbery (35.4%), followed by assault/homicide (32.1%), burglary (14.2%), drug trade*** (9.3%), motor-vehicle theft (4.4%), rape/sexual assault (1.8%), or arson (1.1%) (Table 15). Other common precipitating circumstances were an argument, abuse, or conflict over something other than money or property (34.8%); drug involvement (11.1%); justifiable self-defense, including legal interventions (7.9%); or an argument over money or property (5.4%). In 16% of cases with known circumstance information, intimate partner violence was identified as a contributing factor (Table 14).

An argument, abuse, or a conflict unrelated to money or property was a factor in more homicides among males than among females (38.4% vs. 22.6%). Drug involvement homicides accounted for 13% of male homicides and 5% of female homicides. Intimate partner violence was a precipitating factor in 45.4% of female homicides but only 7.1% of male homicides. In

11.4% of male homicides with known circumstance information, the decedent also used a weapon during the altercation, compared with 1.5% of female homicides (Table 14).

Legal intervention Deaths

The 17 NVDRS states included in this report collected data concerning 185 legal intervention death incidents, which included 199 legal intervention deaths during 2011 (Table 16). Looking at legal intervention deaths separately from other homicides, the vast majority of legal intervention deaths were among males (96.9%). Males aged 20-24 had the highest rates of all groups (1.2 per 100,000). Non-Hispanic white males accounted for the highest percentage of legal intervention deaths (48.7%), but non-Hispanic black males had the highest rate (1.1 per 100,000), almost four times the rate for non-Hispanic white males (0.3 per 100,000; Table 16). Firearms were the method used in almost all legal intervention deaths (94.0%). Most legal intervention deaths occurred in a house (39.7%), a street/highway (24.1%), or, for males, a motor vehicle (11.6%) (Table 17).

Tests for alcohol were conducted for 88.4% of legal intervention decedents, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 79.9%, 63.3%, 82.9%, 59.3%, and 79.9% of legal intervention decedents, respectively (Table 18). Among legal intervention decedents who tested positive for alcohol (39.2%), 71% had a BAC of $\geq$ 0.08 g/dL. Opiates, including heroin and prescription pain medications, were identified in 17.6% of cases tested for these substances; cocaine and marijuana were identified in 9.1% and 33.1% of tested cases, respectively. Of legal intervention decedents who were tested for antidepressants, 10.3% were positive at the time of their death (Table 18).

Precipitating circumstances were identified for 97% of legal intervention deaths. Approximately 74.2% were identified as precipitated by another crime (Table 19). In 84.7% of cases precipitated by another crime, the crime was in progress at the time of the incident. The type of crime most frequently precipitating the legal intervention death was assault/homicide (63.9%), robbery (16.7%), motor vehicle theft (8.3%), or burglary (5.6%) (Table 20). Other common precipitating circumstances were an argument, abuse, or conflict over something other than money or property (15.5%) or drug involvement (6.2%). In 5.7% of cases with known circumstance information, intimate partner violence was identified as a contributing factor (Table 19). The victim reportedly used a weapon in 72.2% of legal intervention deaths.

Deaths of Undetermined Intent

Sex, Race/Ethnicity, Age Group, and Marital Status

The 17 NVDRS states included in this report collected data concerning 2,041 incidents involving 2,051 deaths during 2011 for which a determination of intent could not be made (Table 21). Rates of undetermined death by month of death were 0.2 per 100,000 population throughout the year. Overall, the crude rate of undetermined deaths was 2.2 per 100,000 population. Rates of undetermined death were higher among males than among females (2.7 and 1.7 per 100,000 population, respectively) (Table 22). Although non-Hispanic whites accounted for 75.4% of undetermined deaths, rates were highest among non-Hispanic AI/ANs (5.8 per 100,000 population). Non-Hispanic AI/AN males had the highest rates (6.9 per 100,000 population) of undetermined death compared with males or females of any other racial/ethnic population. More than half (54.2%) of decedents for whom the manner of death was undetermined were aged 35–64 years. Rates were highest (16.8 per 100,000 population) among infants aged <1 year. Among

decedents with an undetermined manner of death at age ≥18 years, 39.1% never had been married, 25.3% were married, and 24.8% were divorced at the time of death (Table 22).

Method and Location of Injury

The most common method of injury in deaths of undetermined intent was poisoning (58.2%) (Table 23). No other known single method accounted for >5% of undetermined deaths overall. The majority of undetermined violent deaths occurred in a house or apartment, making it the most common place of injury for both males and females (69.6% and 81.8%, respectively), followed by a street or highway (3.7% and 1.9% respectively).

Toxicology Results of Decedent and Precipitating Circumstances

Tests for alcohol were conducted for 83.5% of decedents of undetermined intent, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 80.7%, 76.4%, 81.7%, 45%, and 82.5% of decedents, respectively (Table 24). Among decedents who tested positive for alcohol (29.1%), 58.3% had a BAC of ≥0.08 g/dL. Among decedents tested for opiates, 57.3% were positive; of those tested for cocaine, 14.6% were positive; of those tested for marijuana, 14.2% were positive; and of those tested for antidepressants, 28.6% were positive (Table 24).

Precipitating circumstances were known in approximately 76.9% of deaths of undetermined intent. Of those, 25.2% of decedents had an indicated problem with alcohol, and 49.3% had other substance abuse problems (those involving an illicit drug or prescription drug abuse) (Table 25). Although a current depressed mood was reported for only 12.5% of decedents, 42.6% of decedents with known circumstance information had a diagnosed current mental health problem, 33.2% were in mental health treatment at the time of their death, 12.3%

had a history of suicide attempts, 10% had disclosed intent to commit suicide, and 1.6% left a suicide note. Other circumstances noted most often were physical health problems (24.2%), a crisis during the preceding or impending 2 weeks (8.5%), or an intimate partner problem (10.1%) (Table 25). Of those with a current mental health problem, 64.3% had received a diagnosis of depression/dysthymia, 20.3% of bipolar disorder, and 15.3% of an anxiety disorder (Table 26).

Although the percentage of other substance abuse problems was similar among males and females (50.5% and 47.6%, respectively), a greater percentage of male than female decedents were reported to have an alcohol problem (30.3% and 17.6%, respectively) at the time of death (Table 25). Mental health problems were reported in a higher percentage of undetermined deaths of females than of males (52.2% and 36.2%, respectively), and a higher percentage of females were currently in treatment for a mental health problem than males (41.7% and 27.4%, respectively), and/or had a history of suicide attempts (16.7% and 9.3%, respectively) (Table 25).

Unintentional Firearm Deaths

Sex, Race/Ethnicity, and Age Group

The 17 NVDRS states included in this report collected data concerning 130 incidents involving 130 unintentional firearm deaths during 2011 (Table 27). Seventy-three (56%) of these deaths were caused by unintentional firearm injuries that were self-inflicted, 31 (24%) were known to be inflicted by another person (24%), and it was unknown who inflicted the injury in the remaining 26 cases (20%) (data not depicted in table). Males accounted for 86.9% of decedents. The majority (69.2%) were non-Hispanic whites, followed by non-Hispanic blacks (16.9%). Those aged 10–24 accounted for 32.4% of all unintentional firearm deaths. (Table 27).

Firearm Type, Seasonality, and Location of Injury

Handguns accounted for 42.3% of unintentional firearm deaths, while shotguns accounted for 16.9%, and rifles accounted for 13.8%. February had the most unintentional firearm deaths, accounting for 18.5% of the total, while October had the least (3.8%) (Table 27). Approximately 73.8% of all unintentional firearm deaths took place in a house or apartment, followed by natural areas (7.7%) (Table 27).

Context of the Injury and Associated Circumstances

The context of the injury or associated circumstances were known for 74.6% of unintentional firearm deaths. Overall, unintentional firearm injury deaths occurred most commonly while victims were playing with a gun (35.1%), hunting (19.6%), or showing a gun to others (11.3%). The circumstances of injury included unintentionally pulling the trigger (27.8%) and thinking the gun was unloaded, magazine was disengaged, or other (16.5%) (Table 28).

Discussion

Violent deaths occur among men and women and among persons of all ages, races, and ethnicities. NVDRS can help identify populations particularly affected by violence. Furthermore, the system not only provides details on specific manners of violent deaths but also identifies common factors that span multiple domains of violence. These details can increase understanding about the nature of various forms of violence and help shape and direct violence prevention efforts so they are more effective.

NVDRS data have been instrumental in planning, implementing, and evaluating public health policies and practices regarding violent deaths. Oklahoma VDRS data were used to secure a grant from the Department of Justice to help evaluate the effectiveness of the Lethality

Assessment Intervention, a new police and advocate intervention at the scene of domestic violence incidents. In Utah, VDRS data were used to inform the state's Violence and Injury Prevention Program and their multi-disciplinary Domestic Violence Fatality Review Committee to inform a policy change for children of domestic-violence related homicide victims that allows for the Department of Children and Family Services (DFCS) to help the children receive an assessment and get access to intervention services, such as mental health (*9*).

NVDRS data on suicide among middle-aged men were used by the Colorado Department of Public Health and their partners to develop a web-based suicide prevention initiative to engage and help connect men with appropriate resources (*10*). Initial web analytics show that the program had over 285,000 unique visits between mid-2012 and early 2014, with 83% of survey respondents reporting that they would recommend the site to a friend in need, and 73% of respondents reporting they were directed to appropriate resources. The NVDRS is also a useful tool to study the occurrence of and circumstances of suicide among veteran populations (*11*), who are at an increased risk (*12*). Several VDRS states are using the data to inform and guide suicide prevention efforts for veterans in their jurisdictions (*13, 14, 15*).

Data from NVDRS are relevant to two national prevention initiatives, the National Strategy for Suicide Prevention (NSSP) and *Healthy People 2020* (*16,17*). The NSSP is a comprehensive national agenda for suicide prevention (*16*). Consistent with NSSP goals, NVDRS increases the timeliness and usefulness of surveillance systems to inform the development of prevention approaches and the evaluation of the outcome and effectiveness of suicide prevention initiatives. As an example of translating VDRS data into action for state level prevention, VDRS data were used to inform the North Carolina statewide suicide prevention plan (*18*).

Healthy People 2020 objectives represent national goals to prevent disease, disability, injury and premature death, and to promote health equity and improve the health of all groups. It includes objectives for reducing suicides (by 10%), homicides (by 10%), and firearm-related deaths (by 10%), as well as an objective that specifically calls for an increase in the number of states that link data on violent deaths from death certificates, law enforcement, and coroner/medical examiner reports at the state and local levels (*17*). The status of progress towards the *Healthy People 2020* objective to reduce the suicide rate can also be directly measured using NVDRS data on suicide rates in participating states (*12*). Unlike other sources of data on suicide rates, NVDRS also allows for examination of changing patterns in circumstances and risk profiles, which can affect how the rates are reflected. As an example, using suicide data from the Rhode Island VDRS, the working age population was identified as being at increased risk for suicide and suicide attempts. As a result, a symposium was conducted with the two largest employers in the state to increase awareness of depression and suicide among working age adults and provide strategies for integrating suicide prevention into worksites *(9*). One large employee assistance program in the state went on to integrate suicide prevention into its mission statement and now provides training in early identification and referral of at risk employees to their clinical staff as well as their clients.

Limitations

The findings provided in this report are subject to at least eight limitations. First, NVDRS data are available only from a limited number of states and therefore are not nationally representative. Second, the availability, completeness, and timeliness of data are dependent on partnerships among state Violent Death Reporting Systems and state health departments, vital

statistics registrars' offices, coroners/medical examiners, and law enforcement personnel. Data sharing and communication among partners is particularly challenging when states have independent county coroner systems rather than a centralized coroner/medical examiner system, a large number of law enforcement jurisdictions, or both. NVDRS incident data might be limited or incomplete for areas in which these data-sharing relations are not developed fully. Third, toxicology data are not collected consistently across all states or for all alcohol and drug categories. Not all decedents receive toxicology testing, so the percentage of decedents testing positive for specific substances might be affected by selective testing patterns in medical examiner or coroner offices (*19*). Fourth, abstractors are limited to the data included in the investigative reports they receive. Reports might not fully reflect all information known about an incident, particularly in the case of homicides and legal intervention deaths, when data are less readily available until after a full investigation and adjudication is/are complete. Fifth, case definitions present challenges when a single death is classified differently in different documents (e.g., "unintentional" in a law enforcement report, "homicide" in a coroner/medical examiner report, and "undetermined" on the death certificate). NVDRS abstractors reconcile these cases using standardized NVDRS case definitions and select a single manner of death on the basis of all source documents that must match a manner of death noted in at least one of the source documents. Sixth, variations in coding might occur depending on the abstractor's level of experience. For this reason, CDC provides abstractor training and states conduct blinded re-abstraction of cases to test consistency and identify training needs. Seventh, medical and mental health information (e.g., type of conditions and whether the victim was currently receiving treatment) are not often captured directly from medical records but from coroner/medical examiner reports, family members, and friends of the victims. Therefore, the completeness and

accuracy of this information is limited by the knowledge of the informant. Finally, protective factor data (i.e., characteristics or circumstances that reduce the risk for violent death) are not collected by NVDRS because of the nature of death certificates, coroner/medical examiner reports, and law enforcement reports, which typically contain only circumstances associated with risk factors.

Conclusion

Accurate, timely, and comprehensive surveillance data can be used to monitor the occurrence of violence-related fatal injuries and assist public health and other authorities in the development, implementation, and evaluation of programs and policies that reduce and prevent violent deaths and injuries at the national, state, and local levels (*20, 21*). In the states where it operates, analysis and interpretation of NVDRS data have been instrumental in planning, implementation, and evaluation of public health policies and practices regarding violent deaths including enactment of policies to support children of intimate partner violence-related homicides in Utah (*9*), development of a web-based suicide prevention program for middle-aged men in Colorado (*10*), and other initiatives discussed here. Analyses of NVDRS data can also be useful in tracking progress toward goals set out in the NSSP, *Healthy People 2020*, and state prevention plans. Continued development and expansion of NVDRS is critical to the efforts of public health and criminal justice at the federal, state, and local levels to reduce the personal, familial, and societal costs of violence. Further efforts are needed to increase the number of states participating in NVDRS, with the ultimate goal of full national representation, including all 50 states, the District of Columbia, and U.S. territories.

Acknowledgments

Contributors to this report included participating state Violent Death Reporting Systems; participating state agencies, including state health departments, vital registrars' offices, coroners' and medical examiners' offices, crime laboratories, and local and state law enforcement agencies; partner organizations, including the Safe States Alliance (formerly STIPDA), National Violence Prevention Network, National Association for Public Health Statistics and Information Systems, Council of State and Territorial Epidemiologists, and Association of State and Territorial Health Officials; federal agencies, including the Department of Justice (Bureau of Justice Statistics and the Federal Bureau of Investigation), the Department of the Treasury (Bureau of Alcohol, Tobacco, and Firearms); the International Association of Chiefs of Police; other stakeholders, researchers, and foundations, including Harvard University School of Public Health and the Joyce Foundation; and the National Institute for Occupational Safety and Health, and National Center for Health Statistics, CDC.

References

1. CDC. Web-based Injury Statistics Query and Reporting System (WISQARS). Atlanta, GA: US Department of Health and Human Services, CDC; 2013. Available at http://www.cdc.gov/injury/wisqars/index.html.

2. Paulozzi LJ, Mercy J, Frazier L, Annest JL. CDC's National Violent Death Reporting System: background and methodology. Inj Prev 2004; 10:47–52.

3. Institute of Medicine. Reducing the Burden of Injury: Advancing Prevention and Treatment. Washington DC: National Academies Press; 1999. Available at http://www.nap.edu/openbook.php?record_id=6321

4. CDC. Surveillance for violent deaths—National Violent Death Reporting System, 16 states, 2005. MMWR 2008;57(No. SS-3).

5. US Census Bureau. State and county quick facts; 2013. Available at http://quickfacts.census.gov/qfd/index.html.

6. World Health Organization. International classification of diseases, version 10. Geneva, Switzerland: World Health Organization; 2007. Available at http://www.who.int/classifications/icd/en/index.html.

7. Murphy SL, Xu JQ, Kochanek KD. Deaths: Final data for 2010. National vital statistics reports; vol 61 no 4. Hyattsville, MD: National Center for Health Statistics. 2013. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_04.pdf

8. CDC. US census populations with bridged race categories. Hyattsville, MD: US Department of Health and Human Services, CDC; 2013. Available at http://www.cdc.gov/nchs/nvss/bridged_race.htm.

9. NVDRS: Stories from the Frontlines of Violent Death Surveillance (2013). Atlanta (GA): Safe States Alliance. Available at http://www.safestates.org/?NVDRSStories

10. Spencer-Thomas S, Hindman J, Conrad J (2012). ManTherapy™: An innovative approach to suicide prevention for working aged men [White paper]. Available at http://mantherapy.org/pdf/ManTherapy.pdf

11. Bahraini NH, Gutierrez PM, Harwood JE, Huggins JA, Hedegaard H, Chase M, Brenner LA. The Colorado Violent Death Reporting System (COVDRS): validity and utility of the Veteran status variable. Public Health Rep. 2012 May-Jun; 127(3):304-9.

12. Hoffmire CA, Kemp JE, Bossarte RM. Changes in Suicide Mortality for Veterans and Nonveterans by Gender and History of VHA Service Use, 2000-2010. Psychiatr Serv. 2015 Sep 1; 66(9):959-65.

13. Oklahoma State Department of Health, Injury Prevention Service. Suicide among Veterans in Oklahoma. 2005-2012. Available at http://www.ok.gov/health2/documents/OKVDRS_Brief_Suicide_Among%20Veterans.pdf Accessed August 2015.

14. Virginia Department of Health, Office of the Chief Medical Examiner. Military-Related Suicide in Virginia: A Report from the Virginia Violent Death Reporting System. 2003-2010. Available at http://www.vdh.virginia.gov/medExam/documents/2012/pdf/Veterans%20and%20Suicide%20in%20Virginia_final.pdf Accessed August 2015.

15. Oregon Violent Death Reporting System, Oregon Health Authority, Public Health Division. Suicide Among Oregon Veterans 2008-2012. Available at http://public.health.oregon.gov/DiseasesConditions/InjuryFatalityData/Documents/NVDRS/suicide-among-oregon-veterans2008through2012.pdf Accessed August 2015.

16. US Department of Health and Human Services. 2012 National strategy for suicide prevention: goals and objectives for action. Washington, DC: HHS; 2012.

17. US Department of Health and Human Services. Healthy People 2020. Washington, DC: CDC; 2013. Available at http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx.

18. North Carolina Department of Health and Human Services, Division of Public Health, Chronic Disease and Injury Section, Injury and Violence Prevention Branch. (2015). *2015 N.C. Suicide Prevention Plan.* Retrieved from: http://www.injuryfreenc.ncdhhs.gov/preventionResources/Suicide.htm

19. CDC. Toxicology testing and results for suicide victims—13 states, 2004. MMWR 2006; 55:1245–8.

20. Karch D, Logan J. Data consistency in multiple source documents: findings from homicide incidents in the National Violent Death Reporting System, 2003–2004. Homicide Stud 2008; 12:264–76.

21. Logan J, Karch D, Crosby A. Reducing unknown data in violent death surveillance: a study of death certificates, coroner/medical examiner and police reports from the National Violent Death Reporting System, 2003–2005. Homicide Stud 2009; 13:385–97.

Table 1. Number*, percentage,† and rate[§] of violent deaths by incident type, manner of death, method used and location in which injury occurred - National Violent Death Reporting System, 17 states††, 2011

Incident Type	No.	%	Rate
Suicide, single	11,718	64.4	12.4
Homicide, single	3,720	20.4	3.9
Undetermined, single	2,025	11.1	2.1
Unintentional firearm	130	0.7	0.1
Suicide, multiple	11	0.1	**
Homicide, multiple	175	1.0	**
Undetermined, multiple	9	<0.1	**
Legal intervention[§§], single/multiple	185	1.0	**
Homicide followed by suicide	208	1.1	**
Other combinations of deaths	19	0.1	**
Total	**18,200**	**100**	**19.2**
Manner of death			
Homicide/Legal Intervention	4,559	24.4	4.8
Suicide	11,953	63.9	12.6
Undetermined intent	2,051	11.0	2.2
Unintentional firearm	130	0.7	0.1
Total	**18,693**	**100**	**19.8**
Method			
Firearm	9,545	51.1	10.1
Sharp instrument	823	4.4	0.9
Blunt instrument	363	1.9	0.4
Poisoning	3,174	17.0	3.4
Hanging/Strangulation/Suffocation	3,260	17.4	3.4
Personal weapons (hands, feet, fists)	196	1.0	0.2
Fall	226	1.2	0.2
Drowning	180	1.0	0.2
Fire/ Burns	66	0.4	0.1
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	205	1.1	0.2
Intentional neglect	17	0.1	¶
Other (single method)	119	0.6	0.1
Unknown	519	2.8	0.5
Total	**18,693**	**100**	**19.8**
Location			
House	13,286	71.1	14.0
Street/Highway	1,352	7.2	1.4
Motor vehicle	560	3.0	0.6
Bar/Nightclub	87	0.5	0.1
Commercial/Retail Area	215	1.2	0.2
Industrial or construction area	68	0.4	0.1
Office building	41	0.2	0.0
Parking lot/Public garage/Public transport	372	2.0	0.4
Abandoned house/Building/Warehouse	23	0.1	0.0
Park, playground, sports/Athletic area	262	1.4	0.3
Preschool/School/College/School bus	28	0.1	0.0
Hospital or medical facility	73	0.4	0.1
Supervised residential facility	73	0.4	0.1
Farm	54	0.3	0.1
Jail/Prison	178	1.0	0.2
Natural area	666	3.6	0.7
Hotel/Motel	299	1.6	0.3
Railroad tracks	92	0.5	0.1
Other	389	2.1	0.4
Unknown	575	3.1	0.6
Total	**18,693**	**100**	**19.8**

*No. incidents = 18,200 No. victims = 18,455 (98.7 %); no. suspects/victims = 238 (1.3 %).

†Percentages might not total 100% due to rounding

§Per 100,000 population.

¶Rates not reported when number of decedents is <20

††Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 2. Number* and percentage of victims who were tested for alcohol and drugs whose results were positive, by toxicology variable - National Violent Death Reporting System, 17 states†, 2011

Toxicology Variable	Tested		Positive	
	No.	%	No.	%
Blood Alcohol Concentration (BAC)§	13,244	70.9	4,408	33.3
Alcohol< 0.08 g/dL§			1,630	37.0
Alcohol >= 0.08 g/dL§			2,706	61.4
Alcohol positive - level unknown			72	1.6
Amphetamines	10,443	55.9	431	4.1
Antidepressants	9,084	48.6	1,715	18.9
Cocaine	10,565	56.5	805	7.6
Marijuana	7,821	41.8	1,313	16.8
Opiates	10,517	56.3	2,510	23.9
Other drug(s)	10,414	55.7	4,498	43.2

*N=18,693

†Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

§BAC of >=0.08 g/dL used as the standard for intoxication. Other substances indicated if any results were positive; levels for these substances are not measured.

Table 3. Number*, percentage† and rate§ of suicides, by method used and month in which suicide occurred - National Violent Death Reporting System, 17 states††, 2011

Characteristic	No.	%	Rate
Method			
Firearm	6,226	52.1	6.6
Sharp instrument	227	1.9	0.2
Blunt instrument	14	0.1	¶
Poisoning	1,950	16.3	2.1
Hanging/Strangulation/Suffocation	3,062	25.6	3.2
Fall	184	1.5	0.2
Drowning	85	0.7	0.1
Fire/ Burns	30	0.3	<0.1
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	149	1.2	0.2
Intentional neglect, eg, starving	0	0.0	¶
Other (single method)	22	0.2	0.0
Unknown	4	<0.1	¶
Total	**11,953**	**100**	**12.6**
Month			
January	949	7.9	1.0
February	819	6.9	0.9
March	1042	8.7	1.1
April	1025	8.6	1.1
May	1024	8.6	1.1
June	981	8.2	1.0
July	1038	8.7	1.1
August	1067	8.9	1.1
September	1006	8.4	1.1
October	1043	8.7	1.1
November	989	8.3	1.0
December	965	8.1	1.0
Unknown	5	<0.1	¶
Total	**11,953**	**100**	**12.6**

*No. incidents = 11,942; no. decedents = 11,953.

†Percentages might not total 100% due to rounding

§Per 100,000 population.

¶Rates not reported when number of decedents is <20

Table 4. Number, percentage* and rate† of suicides, by decedent's sex, age group, race/ethnicity, and marital status - National Violent Death Reporting System, 17 states§, 2011

Characteristic	Male			Female			Total¶		
	No.	%	Rate	No.	%	Rate	No.	%	Rate
Age group (yrs)									
<10	§§§	§§§	§§§	§§§	§§§	§§§	§§§	§§§	§§§
10-14	65	0.7	2.0	22	0.8	0.7	87	0.7	1.4
15-19	427	4.6	12.8	110	4.2	3.5	537	4.5	8.2
20-24	766	8.2	22.7	165	6.3	5.1	931	7.8	14.0
25-29	787	8.5	24.5	206	7.8	6.5	993	8.3	15.6
30-34	720	7.7	23.2	199	7.5	6.4	919	7.7	14.8
35-44	1,553	16.7	25.2	480	18.2	7.6	2,033	17.0	16.3
45-54	2,005	21.5	29.7	706	26.8	10.0	2,711	22.7	19.7
55-64	1,482	15.9	26.3	442	16.8	7.3	1,924	16.1	16.4
65-74	752	8.1	23.8	199	7.5	5.5	951	8.0	14.0
75-84	539	5.8	33.3	80	3.0	3.6	619	5.2	16.0
85>	215	2.3	40.6	27	1.0	2.4	242	2.0	14.6
Unknown	2	<0.1	¶	0	0.0	¶	2	<0.1	¶
Total	**9,313**	**100**	**20.1**	**2,636**	**100**	**5.5**	**11,949**	**100**	**12.6**
Race/ethnicity									
White, non-Hispanic	7,978	85.7	24.8	2,313	87.7	8.1	10,291	86.1	15.7
Black, non-Hispanic	622	6.7	9.1	127	4.8	1.9	749	6.3	5.2
AI/AN††	132	1.4	23.3	43	1.6	7.9	175	1.5	15.7
A/PI§§	128	1.4	6.5	55	2.1	3.1	183	1.5	4.9
Hispanic¶¶	427	4.6	9.2	92	3.5	2.1	519	4.3	5.4
Other	23	0.2	¶	3	0.1	¶	26	0.2	¶
Unknown	3	<0.1	¶	3	0.2	¶	6	0.1	¶
Total	**9,313**	**100**	**20.1**	**2,636**	**100**	**5.5**	**11,949**	**100**	**12.6**
Marital Status* **									
Married	3,367	37.2	†††	912	35.7	†††	4,279	36.9	†††
Never Married	3,093	34.2	†††	615	24.1	†††	3,708	31.9	†††
Widowed	517	5.7	†††	218	8.5	†††	735	6.3	†††
Divorced	1,895	20.9	†††	756	29.6	†††	2,651	22.8	†††
Married, but Separated	112	1.2	†††	35	1.4	†††	147	1.3	†††
Single, not otherwise specified	15	0.2	†††	4	0.2	†††	19	0.2	†††
Unknown	57	0.6	†††	15	0.6	†††	72	0.6	†††
Total	**9,056**	**100**	**†††**	**2,555**	**100**	**†††**	**11,611**	**100**	**†††**

*Percentages might not total 100% due to rounding. Sex was unknown for n=4 victims.

†Per 100,000 population.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶Rates not reported when number of decedents is <20 or when race/ethnicity or age categories are 'other' or 'unknown'

††American Indian/Alaskan Native.

§§Asian/Pacific Islander.

¶¶Includes persons of any race.

***Includes only decedents aged>=18 years.

†††Rates cannot be computed for marital status because denominators are unknown.

Table 5. Number and percentage* of suicides, by sex of victim, method used, and location in which injury occurred - National Violent Death Reporting System, 17 states,† 2011

Characteristic	Male		Female		Total	
	No.	%	No.	%	No.	%
Method						
Firearm	5,351	57.5	874	33.2	6,225	52.1
Sharp instrument	182	2.0	45	1.7	227	1.9
Blunt instrument	9	0.1	5	0.2	14	0.1
Poisoning	985	10.6	963	36.5	1,948	16.3
Hanging/Strangulation/Suffocation	2,445	26.3	616	23.4	3,061	25.6
Fall	133	1.4	51	1.9	184	1.5
Drowning	54	0.6	31	1.2	85	0.7
Fire/ Burns	23	0.2	7	0.3	30	0.3
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	112	1.2	37	1.4	149	1.2
Intentional neglect, eg, starving	0	0.0	0	0.0	0	0.0
Other (single method)	17	0.2	5	0.2	22	0.2
Unknown	2	<0.1	2	0.1	4	<0.1
Total	**9,313**	**100**	**2,636**	**100**	**11,949**	**100**
Location						
House	7,048	75.7	2,166	82.2	9,214	77.1
Street/Highway	291	3.1	51	1.9	342	2.9
Motor vehicle	267	2.9	62	2.4	329	2.8
Bar/Nightclub	4	<0.1	0	0.0	4	<0.1
Commercial/Retail Area	63	0.7	6	0.2	69	0.6
Industrial or construction area	42	0.5	4	0.2	46	0.4
Office building	27	0.3	3	0.1	30	0.3
Parking lot/Public garage/Public transport	144	1.5	29	1.1	173	1.4
Abandoned house/Building/Warehouse	9	0.1	1	<0.1	10	0.1
Park, playground, sports/Athletic area	152	1.6	27	1.0	179	1.5
Preschool/School/College/School bus	22	0.2	1	<0.1	23	0.2
Hospital or medical facility	32	0.3	9	0.3	41	0.3
Supervised residential facility	34	0.4	14	0.5	48	0.4
Farm	39	0.4	6	0.2	45	0.4
Jail/Prison	118	1.3	14	0.5	132	1.1
Natural area	401	4.3	73	2.8	474	4.0
Hotel/Motel	158	1.7	63	2.4	221	1.8
Railroad tracks	62	0.7	18	0.7	80	0.7
Other	241	2.6	40	1.5	281	2.4
Unknown	159	1.7	49	1.9	208	1.7
Total	**9,313**	**100**	**2,636**	**100**	**11,949**	**100**

*Percentages might not total 100% due to rounding. Sex was unknown for n=4 victims.

†Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 6. Number* and percentage of suicide victims tested for alcohol and drugs whose results were positive, by toxicology variable - National Violent Death Reporting System, 17 states,† 2011

	Tested		Positive¶	
Toxicology variable	**No.**	**%**	**No.**	**%**
Blood Alcohol Concentration (BAC)§	7,937	66.4	2,734	34.4
Alcohol< 0.08 g/dL§			928	33.9
Alcohol >= 0.08 g/dL§			1,759	64.3
Alcohol Positive - Level Unknown			47	1.7
Amphetamines	5,835	48.8	221	3.8
Antidepressants	5,227	43.7	1,151	22.0
Cocaine	5,909	49.4	270	4.6
Marijuana	4,757	39.8	519	10.9
Opiates	5,928	49.6	1,222	20.6
Other drug(s)	5,993	50.1	2,732	45.6

*N=11,953

†Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

§BAC >= 0.08 g/dL used as the standard for intoxication. Other substances indicated if any results were positive; levels for these substances are not measured.

¶ Percent is of those tested.

Table 7. Number* and percentage† of suicides, by sex and precipitating circumstances - National Violent Death Reporting System, 17 states,§ 2011

Associated circumstances	Male		Female		Total	
	No.	%	No.	%	No.	%
Mental Health/Substance Abuse						
Current depressed mood	3,325	40.0	963	39.7	4,288	39.9
Current mental health problem	3,337	40.1	1,519	62.6	4,856	45.2
Current mental health treatment	2,287	27.5	1,190	49.0	3,477	32.4
Alcohol problem	1,552	18.7	347	14.3	1,899	17.7
Other substance abuse problem	1,178	14.2	411	16.9	1,589	14.8
Interpersonal						
Intimate partner problem	2,662	32.0	639	26.3	3,301	30.7
Other relationship problem (non-intimate)	757	9.1	303	12.5	1,060	9.9
Suicide of family member or friend within past five years	146	1.8	48	2.0	194	1.8
Other death of family member or friend within past five years	538	6.5	176	7.2	714	6.6
Perpetrator of interpersonal violence within past month	343	4.1	24	1.0	367	3.4
Victim of interpersonal violence within past month	25	0.3	30	1.2	55	0.5
Life Stressor						
Crisis in past or impending two weeks	2,098	25.2	506	20.8	2,604	24.2
Physical health problem	1,792	21.5	557	22.9	2,349	21.9
Job problem	1,286	15.5	218	9.0	1,504	14.0
Recent criminal legal problem	877	10.5	103	4.2	980	9.1
Non-criminal legal problem	351	4.2	84	3.5	435	4.0
Financial problem	1,072	12.9	216	8.9	1,288	12.0
School problem	137	1.6	36	1.5	173	1.6
Suicide Event						
Left a suicide note	2,682	32.2	997	41.1	3,679	34.2
Disclosed intent to commit suicide	2,631	31.6	777	32.0	3,408	31.7
History of suicide attempt(s)	1,387	16.7	846	34.8	2,233	20.8

*N =10,746 (8,318 males and 2,428 females). Circumstances were unknown for 1,207 deaths. Sex was unknown for n=4 victims.
††Total decedents with known circumstances represents the number of decedents indicated as having one or more circumstances, and will not equal the sum of the column due to the fact that more than one circumstance may be coded per person. Likewise, percentages may exceed 100% because one or more circumstances per person could be coded.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 8. Number* and percentage† of suicide decedents who had received a diagnosis of a current mental health problem, by diagnosis - National Violent Death Reporting System, 17 states,§ 2011

	Male		Female		Total	
Mental health problem	**No.**	**%**	**No.**	**%**	**No.**	**%**
Depression/Dysthymia	2,532	75.9	1169	77.0	3,701	76.2
Bipolar disorder	449	13.5	293	19.3	742	15.3
Schizophrenia	173	5.2	64	4.2	237	4.9
Anxiety disorder	368	11.0	226	14.9	594	12.2
PTSD¶	92	2.8	24	1.6	116	2.4
ADD/ADHD**	92	2.8	16	1.1	108	2.2
Eating disorder	1	<0.1	16	1.1	17	0.4
OCD††	33	1.0	15	1.0	48	1.0
Other	150	4.5	46	3.0	196	4.0

*N = 4,856 (3,337 males and 1,519 females). Diagnosis was unknown for n=247 males and n=115 f

†Total decedents with mental health problems represent the number of decedents indicated as having a current diagnosed mental health problem, and will not equal the sum of the column due to the fact that more than one diagnosis may be coded per person. Likewise, percentages may exceed 100% because two or more diagnosis categories per person could be coded.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.
¶Posttraumatic stress disorder.
**Attention deficit disorder/attention deficit and hyperactivity disorder.
††Obsessive-compulsive disorder.

Table 9. Number,* percentage,† and rate§ of homicides/legal intervention deaths, by method used, and month in which death occurred - National Violent Death Reporting System, 17 states††, , 2011**

Characteristic	No.	%	Rate
Method			
Firearm	3,127	68.6	3.3
Sharp instrument	589	12.9	0.6
Blunt instrument	288	6.3	0.3
Poisoning	27	0.6	<0.1
Hanging/Strangulation/Suffocation	163	3.6	0.2
Personal weapons (hands, feet, fists)	185	4.1	0.2
Fall	10	0.2	¶
Drowning	8	0.2	¶
Fire/ Burns	13	0.3	¶
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	26	0.6	<0.1
Intentional neglect	15	0.3	¶
Other	53	1.2	0.1
Unknown	55	1.2	0.1
Total	**4,559**	**100**	**4.8**
Month			
January	360	7.9	0.4
February	264	5.8	0.3
March	362	7.9	0.4
April	392	8.6	0.4
May	384	8.4	0.4
June	370	8.1	0.4
July	457	10.0	0.5
August	407	8.9	0.4
September	386	8.5	0.4
October	374	8.2	0.4
November	393	8.6	0.4
December	402	8.8	0.4
Unknown	8	0.2	¶
Total	**4,559**	**100**	**4.8**

*No. incidents=4,302; no. victims=4559 and includes 4533 victims and 26 suspects who were subsequently killed.
†Percentages might not total 100% due to rounding.
§Per 100,000 population.
¶Rates not reported when number of decedents is <20
**The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

Table 10. Number and percentage* of homicides/legal intervention† deaths, by victim's marital status and relationship to suspect - National Violent Death Reporting System, 17 states§, 2011

Characteristic	No.	%
Marital Status¶		
Married	900	22.0
Never married	2,487	60.7
Widowed	138	3.4
Divorced	530	12.9
Married, but separated	34	0.8
Single, not otherwise specified	11	0.3
Total	**4,100**	**100**
Relationship		
Spouse/Intimate Partner (Current or Former)	481	21.5
Parent	89	4.0
Child	128	5.7
Other intimate partner involvement**	124	5.5
Other relative	47	2.1
Acquaintance/Friend	543	24.3
Rival gang member	36	1.6
Stranger	214	9.6
Victim injured by a law enforcement officer	194	8.7
Other specified relationship	380	17.0
Total	**2,236**	**100**

*Percentages might not total 100% due to rounding. Marital status was unknown for n=237 victims. Victim-suspect relationship unknown for n=2,422 victims.

†The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death."

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶Includes only those victims equal to or over 18 years of age.

Table 11. Number, percentage,* and rate† of homicides/legal intervention deaths§, by victim's sex, age group, and race/ethnicity - National Violent Death Reporting System, 17 states, 2011**

Characteristic	Male			Female			Total		
Age group (yrs)	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**
<1	42	1.2	6.9	36	3.6	6.2	78	1.7	6.5
1-4	68	1.9	2.7	62	6.1	2.6	130	2.9	2.7
5-9	22	0.6	0.7	20	2.0	0.7	42	0.9	0.7
10-14	25	0.7	0.8	12	1.2	¶	37	0.8	0.6
15-19	351	9.9	10.5	62	6.1	2.0	413	9.1	6.3
20-24	670	18.9	19.8	113	11.2	3.5	783	17.2	11.8
25-29	512	14.4	16.0	104	10.3	3.3	616	13.5	9.7
30-34	444	12.5	14.3	91	9.0	2.9	535	11.7	8.6
35-44	566	15.9	9.2	155	15.4	2.5	721	15.8	5.8
45-54	441	12.4	6.5	151	15.0	2.1	592	13.0	4.3
55-64	247	7.0	4.4	88	8.7	1.4	335	7.3	2.9
65-74	98	2.8	3.1	47	4.7	1.3	145	3.2	2.1
75-84	47	1.3	2.9	32	3.2	1.4	79	1.7	2.0
85>	14	0.4	¶	36	3.6	3.2	50	1.1	3.0
Unknown	3	0.1	¶	0	0.0	¶	3	0.1	¶
Total	**3,550**	**100**	**7.7**	**1,009**	**100**	**2.1**	**4,559**	**100**	**4.8**
Race/ethnicity									
White, non-Hispanic	1036	29.2	3.2	546	54.1	1.9	1582	34.7	2.4
Black, non-Hispanic	1987	56.0	28.9	318	31.5	4.7	2305	50.6	15.9
AI/AN††	75	2.1	13.3	19	1.9	¶	94	2.1	8.5
A/PI§§	46	1.3	2.4	27	2.7	1.5	73	1.6	1.9
Hispanic¶¶	383	10.8	8.2	96	9.5	2.2	479	10.5	5.0
Other	23	0.6	<0.1	3	0.3	¶	26	0.6	<0.1
Unknown	0	0.0	¶	0	0.0	¶	0	0.0	¶
Total	**3,550**	**100**	**7.7**	**1,009**	**100**	**2.1**	**4,559**	**100**	**4.8**

*Percentages might not total 100% due to rounding. Sex was unknown for n=2 victims.

†Per 100,000 population.

§The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

**Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶Rates not reported when number of victims is <20 or when race/ethnicity or age categories are 'other' or 'unknown.'

††American Indian/Alaskan Native.

§§Asian/Pacific Islander.

Table 12. Number and percentage* of homicides/legal intervention† deaths, by victim's sex, method used, and location in which injury occurred - National Violent Death Reporting System, 17 states§, 2011

Method/Location	Male		Female		Total	
	No.	%	No.	%	No.	%
Method						
Firearm	2,607	73.4	520	51.5	3,127	68.6
Sharp instrument	430	12.1	159	15.8	589	12.9
Blunt instrument	180	5.1	108	10.7	288	6.3
Poisoning	18	0.5	9	0.9	27	0.6
Hanging/Strangulation/Suffocation	68	1.9	95	9.4	163	3.6
Personal weapons (hands, feet, fists)	143	4.0	42	4.2	185	4.1
Fall	7	0.2	3	0.3	10	0.2
Drowning	4	0.1	4	0.4	8	0.2
Fire/ Burns	8	0.2	5	0.5	13	0.3
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	19	0.5	7	0.7	26	0.6
Intentional neglect	3	0.1	12	1.2	15	0.3
Other	32	0.9	21	2.1	53	1.2
Unknown	31	0.9	24	2.4	55	1.2
Total	**3,550**	**100**	**1,009**	**100**	**4,559**	**100**
Location						
House	1,689	47.6	761	75.4	2,450	53.7
Street/Highway	876	24.7	71	7.0	947	20.8
Motor vehicle	164	4.6	32	3.2	196	4.3
Bar/Nightclub	79	2.2	2	0.2	81	1.8
Commercial/Retail Area	121	3.4	14	1.4	135	3.0
Industrial or construction area	15	0.4	3	0.3	18	0.4
Office building	8	0.2	3	0.3	11	0.2
Parking lot/Public garage/Public transport	158	4.5	27	2.7	185	4.1
Abandoned house/Building/Warehouse	6	0.2	2	0.2	8	0.2
Park, playground, sports/Athletic area	61	1.7	10	1.0	71	1.6
Preschool/School/College/School bus	1	<0.1	1	0.1	2	<0.1
Hospital or medical facility	13	0.4	2	0.2	15	0.3
Supervised residential facility	8	0.2	4	0.4	12	0.3
Farm	5	0.1	2	0.2	7	0.2
Jail/Prison	36	1.0	0	0.0	36	0.8
Natural area	73	2.1	19	1.9	92	2.0
Hotel/Motel	29	0.8	10	1.0	39	0.9
Railroad tracks	3	0.1	3	0.3	6	0.1
Other	77	2.2	10	1.0	87	1.9
Unknown	128	3.6	33	3.3	161	3.5
Total	**3,550**	**100**	**1,009**	**100**	**4,559**	**100**

Table 13. Number* and percentage of homicide/legal intervention† victims who were tested for alcohol and drugs whose results were positive, by toxicology variable - National Violent Death Reporting System, 17 states§, 2011

	Tested		Positive¶	
Toxicology Variable		**%**	**No.**	**%**
Blood Alcohol Concentration (BAC)**	3,520	77.2	1,163	33.0
Alcohol < 0.08 g/Dl**			507	43.6
Alcohol >= 0.08 g/dL**			646	55.5
Alcohol positive - level unknown			10	0.9
Amphetamines	2,900	63.6	116	4.0
Antidepressants	2,247	49.3	115	5.1
Cocaine	2,927	64.2	287	9.8
Marijuana	2,099	46.0	649	30.9
Opiates	2,844	62.4	315	11.1
Other drug(s)	2,687	58.9	745	27.7

*N = 4,559

†The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶Percent is of those tested.

Table 14. Number* and percentage† of homicides/legal intervention§ deaths, by precipitating circumstances and victim's sex - National Violent Death Reporting System, 17 states¶, 2011

Circumstance	Male		Female		Total	
	No.	%	No.	%	No.	%
Precipitated by another crime	920	34.9	183	22.9	1,103	32.1
Crime in Progress**	687	74.6	125	68.3	812	73.6
Argument over money/property	165	6.3	19	2.4	184	5.4
Jealousy (lover's triangle)	64	2.4	45	5.6	109	3.2
Other argument, abuse, conflict	1,014	38.4	181	22.6	1,195	34.8
Drug involvement	342	13.0	40	5.0	382	11.1
Justifiable self defense/Law enforcement	263	10.0	9	1.1	272	7.9
Brawl	31	1.2	2	0.3	33	1.0
Mercy killing	1	<0.1	5	0.6	6	0.2
Victim was a bystander	34	1.3	17	2.1	51	1.5
Victim was a police officer on duty	17	0.6	1	0.1	18	0.5
Victim was an intervener assisting a crime victim	21	0.8	0	<0.1	21	0.6
Victim used a weapon	301	11.4	12	1.5	313	9.1
Intimate partner-violence-related	187	7.1	363	45.4	550	16.0
Hate crime	4	0.2	1	0.1	5	0.1
Mentally ill suspect	33	1.3	21	2.6	54	1.6
Drive-by shooting	72	2.7	10	1.3	82	2.4
Random violence	55	2.1	12	1.5	67	1.9
Gang-related	130	4.9	12	1.5	142	4.1

*N = 3438 (2638 males and 800 females). Circumstances were unknown for 1121 deaths.

†Percentages might exceed 100% because multiple circumstances can be coded for each decedent.

§The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

¶Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

**Denominator is only cases that were precipitated by another crime.

Table 15.Number and percentage* of homicides/legal intervention† deaths precipitated by another crime, by type of crime - National Violent Death Reporting System, 17 states[§], 2011

Crime type	No.	%
Drug trade	103	9.3
Robbery	391	35.4
Burglary	157	14.2
Motor vehicle theft	49	4.4
Arson	12	1.1
Rape, sexual assault	20	1.8
Assault, homicide	354	32.1
Witness intimidation/Elimination	9	0.8
Other	102	9.2
Unknown	54	4.9

**N =1,103. Percentages might exceed 100% because multiple crimes might have been coded.

[††]The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

[§]Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma,
Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 16. Number, percentage* and rate† of legal intervention§ deaths, by victim's sex, age group, and race/ethnicity - National Violent Death Reporting System, 17 states, 2011**

Characteristic	Male			Female			Total		
Age group (yrs)	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**
<1	0	0.0	¶	0	0.0	¶	0	0.0	¶
1-4	0	0.0	¶	0	0.0	¶	0	0.0	¶
5-9	0	0.0	¶	0	0.0	¶	0	0.0	¶
10-14	0	0.0	¶	0	0.0	¶	0	0.0	¶
15-19	16	8.3	¶	0	0.0	¶	16	8.0	¶
20-24	39	20.2	1.2	0	0.0	¶	39	19.6	0.6
25-29	27	14.0	0.8	0	0.0	¶	27	13.6	0.4
30-34	25	13.0	0.8	1	16.7	¶	26	13.1	0.4
35-44	35	18.1	0.6	3	50.0	¶	38	19.1	0.3
45-54	28	14.5	0.4	2	33.3	¶	30	15.1	0.2
55-64	16	8.3	¶	0	0.0	¶	16	8.0	¶
65-74	6	3.1	¶	0	0.0	¶	6	3.0	¶
75-84	1	0.5	¶	0	0.0	¶	1	0.5	¶
85>	0	0.0	¶	0	0.0	¶	0	0.0	¶
Total	**193**	**100**	**0.4**	**6**	**100**	**0.0**	**199**	**100**	**0.2**
Race/ethnicity									
White, non-Hispanic	94	48.2	0.3	3	0.0	¶	97	48.3	0.1
Black, non-Hispanic	74	37.9	1.1	3	0.0	¶	77	38.3	0.5
AI/AN††	2	1.0	¶	0	0.0	¶	2	1.0	¶
A/PI§§	0	0.0	¶	0	0.0	¶	0	0.0	¶
Hispanic¶¶	23	11.8	0.5	0	0.0	¶	23	11.4	0.2
Other	0	0.0	¶	0	0.0	¶	0	0.0	¶
Total	**195**	**100**	**0.4**	**12**	**100**	**0.0**	**201**	**100**	**0.2**

*Percentages might not total 100% due to rounding.

†Per 100,000 population.

§The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

**Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶Rates not reported when number of victims is <20 or when race/ethnicity or age categories are 'other' or 'unknown.'

††American Indian/Alaskan Native.

§§Asian/Pacific Islander.

Table 17. Number and percentage* of legal intervention† deaths, by victim's sex, method used, and location in which injury occurred - National Violent Death Reporting System, 17 states§, 2011

Method/Location	Male		Female		Total	
	No.	%	No.	%	No.	%
Method						
Firearm	182	94.3	5	83.3	187	94.0
Sharp instrument	1	0.5	0	0.0	1	0.5
Blunt instrument	1	0.5	1	16.7	2	1.0
Poisoning	0	0.0	0	0.0	0	0.0
Hanging/Strangulation/Suffocation	0	0.0	0	0.0	0	0.0
Personal weapons (hands, feet, fists)	3	1.6	0	0.0	3	1.5
Fall	1	0.5	0	0.0	1	0.5
Drowning	0	0.0	0	0.0	0	0.0
Fire/ Burns	0	0.0	0	0.0	0	0.0
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	3	1.6	0	0.0	3	1.5
Intentional neglect	2	1.0	0	0.0	2	1.0
Other	0	0.0	0	0.0	0	0.0
Unknown	0	0.0	0	0.0	0	0.0
Total	**193**	**100**	**6**	**100**	**199**	**100**
Location						
House	74	38.3	5	83.3	79	39.7
Street/Highway	48	24.9	0	0.0	48	24.1
Motor vehicle	22	11.4	1	16.7	23	11.6
Bar/Nightclub	1	0.5	0	0.0	1	0.5
Commercial/Retail Area	12	6.2	0	0.0	12	6.0
Industrial or construction area	0	0.0	0	0.0	0	0.0
Office building	1	0.5	0	0.0	1	0.5
Parking lot/Public garage/Public transport	13	6.7	0	0.0	13	6.5
Abandoned house/Building/Warehouse	0	0.0	0	0.0	0	0.0
Park, playground, sports/Athletic area	0	0.0	0	0.0	0	0.0
Preschool/School/College/School bus	0	0.0	0	0.0	0	0.0
Hospital or medical facility	3	1.6	0	0.0	3	1.5
Supervised residential facility	0	0.0	0	0.0	0	0.0
Farm	1	0.5	0	0.0	1	0.5
Jail/Prison	3	1.6	0	0.0	3	1.5
Natural area	4	2.1	0	0.0	4	2.0
Hotel/Motel	2	1.0	0	0.0	2	1.0
Railroad tracks	0	0.0	0	0.0	0	0.0
Other	7	3.6	0	0.0	7	3.5
Unknown	2	1.0	0	0.0	2	1.0
Total	**193**	**100**	**6**	**100**	**199**	**100**

*Percentages might not total 100% due to rounding.

†The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 18. Number* and percentage of legal intervention† victims who were tested for alcohol and drugs whose results were positive, by toxicology variable - National Violent Death Reporting System, 17 states[§], 2011

Toxicology variable	Tested		Positive[¶]	
	No.	%	No.	%
Blood Alcohol Concentration (BAC)[††]	176	88.4	69	39.2
Alcohol < 0.08 g/dL[††]			20	29.0
Alcohol >= 0.08 g/dL[††]			49	71.0
Unknown			0	0.0
Amphetamines	159	79.9	13	8.2
Antidepressants	126	63.3	13	10.3
Cocaine	165	82.9	15	9.1
Marijuana	118	59.3	39	33.1
Opiates	159	79.9	28	17.6
Other drug(s)	145	72.9	55	37.9

*N = 199

[†]The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

[§]Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

[¶]Percent is of those tested.

[††]BAC of >=0.08 g/dL used as the standard for intoxication. Other substances indicated if any results were positive; levels for these substances are not measured.

Table 19.Number* and percentage† of legal intervention§ deaths, by precipitating circumstances and victim's sex - National Violent Death Reporting System, 17 states¶ 2011

Circumstance	Male		Female		Total	
	No.	%	No.	%	No.	%
Precipitated by another crime	140	74.5	4	66.7	144	74.2
Crime in Progress**	118	84.3	4	100.0	122	84.7
Argument over money/property	0	0.0	0	0.0	0	0.0
Jealousy (lover's triangle)	2	1.1	0	0.0	2	1.0
Other argument, abuse, conflict	30	16.0	0	0.0	30	15.5
Drug involvement	12	6.4	0	0.0	12	6.2
Justifiable self defense/Law enforcement	176	93.6	6	100.0	182	93.8
Brawl	0	0.0	0	0.0	0	0.0
Mercy killing	0	0.0	0	0.0	0	0.0
Victim was a bystander	0	0.0	0	0.0	0	0.0
Victim was a police officer on duty	2	1.1	0	0.0	2	1.0
Victim was an intervener assisting a crime victim	0	0.0	0	0.0	0	0.0
Victim used a weapon	135	71.8	5	83.3	140	72.2
Intimate partner-violence-related	11	5.9	0	0.0	11	5.7
Hate crime	0	0.0	0	0.0	0	0.0
Mentally ill suspect	1	0.5	0	0.0	1	0.5
Drive-by shooting	0	0.0	0	0.0	0	0.0
Random violence	0	0.0	0	0.0	0	0.0
Gang-related	2	1.1	0	0.0	2	1.0

*N = 194 (188 males and 6 females). Circumstances were unknown for 5 deaths.

†Percentages might exceed 100% because multiple circumstances can be coded for each decedent.

§The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

¶Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

**Denominator is only cases that were precipitated by another crime.

Table 20. Number and percentage* of legal intervention† deaths precipitated by another crime, by type of crime - National Violent Death Reporting System, 17 states§, 2011

Crime type	No.	%
Drug trade	2	1.4
Robbery	24	16.7
Burglary	8	5.6
Motor vehicle theft	12	8.3
Arson	0	0.0
Rape, sexual assault	2	1.4
Assault, homicide	92	63.9
Witness intimidation/Elimination	0	0.0
Other	1	0.7
Unknown	3	2.1

*N =144. Percentages might exceed 100% because multiple crimes might have been coded. Type of crime was unknown for n=3 victims.

†The term legal intervention does not denote the lawfulness or legality of the circumstances surrounding the death.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 21. Number,* percentage,† and rate§ of undetermined deaths§§ by method used, and month in which death occurred - National Violent Death Reporting System, 17 states††, 2011

Characteristic	No.	%	Rate
Method			
Firearm	62	3.0	0.1
Sharp instrument	7	0.3	¶
Blunt instrument	61	3.0	0.1
Poisoning	1,197	58.4	1.3
Hanging/Strangulation/Suffocation	35	1.7	<0.1
Personal weapons (hands, feet, fists)	11	0.5	¶
Fall	32	1.6	<0.1
Drowning	87	4.2	0.1
Fire/ Burns	23	1.1	<0.1
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	30	1.5	<0.1
Intentional neglect	2	0.1	¶
Other (single method)	44	2.1	<0.1
Unknown	460	22.4	0.5
Total	**2,051**	**100**	**2.2**
Month			
January	214	10.4	0.2
February	174	8.5	0.2
March	181	8.8	0.2
April	173	8.4	0.2
May	177	8.6	0.2
June	160	7.8	0.2
July	191	9.3	0.2
August	164	8.0	0.2
September	162	7.9	0.2
October	148	7.2	0.2
November	146	7.1	0.2
December	157	7.7	0.2
Unknown	4	0.2	<0.1
Total	**2,051**	**100**	**2.2**

* No. incident= 2041; no. victims = 2051

†Percentages might not total 100% due to rounding.

§Per 100,000 population.

¶Rates not reported when number of decedents is <20

††Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 22. Number, percentage* and rate† of undetermined deaths,§ by victim's sex, age group, race/ethnicity and marital status - National Violent Death Reporting System, 17 states,†† 2011

Characteristic	Male			Female			Total		
Age group (yrs)	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**	**No.**	**%**	**Rate**
<1	113	9.1	18.5	87	10.8	15.0	200	9.8	16.8
1-4	27	2.2	1.1	14	1.7	¶	41	2.0	0.8
5-9	8	0.6	¶	5	0.6	¶	13	0.6	¶
10-14	19	1.5	¶	2	0.2	¶	21	1.0	0.3
15-19	23	1.8	0.7	19	2.4	¶	42	2.0	0.6
20-24	88	7.1	2.6	37	4.6	1.1	125	6.1	1.9
25-29	121	9.7	3.8	48	6.0	1.5	169	8.2	2.7
30-34	112	9.0	3.6	71	8.8	2.3	183	8.9	2.9
35-44	203	16.3	3.3	135	16.8	2.2	338	16.5	2.7
45-54	287	23.0	4.3	209	26.0	3.0	496	24.2	3.6
55-64	167	13.4	3.0	110	13.7	1.8	277	13.5	2.4
65-74	43	3.4	1.4	30	3.7	0.8	73	3.6	1.1
75-84	17	1.4	¶	22	2.7	1.0	39	1.9	1.0
85>	12	1.0	¶	12	1.5	¶	24	1.2	1.4
Unknown	7	0.6	¶	3	0.4	¶	10	0.5	¶
Total	**1,247**	**100**	**2.7**	**804**	**100**	**1.7**	**2,051**	**100**	**2.2**
Race/ethnicity									
White, non-Hispanic	928	74.4	2.9	619	77.0	2.2	1547	75.4	2.4
Black, non-Hispanic	184	14.8	2.7	93	11.6	1.4	277	13.5	1.9
AI/AN§§	39	3.1	6.9	25	3.1	4.6	64	3.1	5.8
A/PI¶¶	13	1.0	¶	11	1.4	¶	24	1.2	0.6
Hispanic***	75	6.0	1.6	51	6.3	1.2	126	6.1	1.3
Other	5	0.4	¶	3	0.4	¶	8	0.4	¶
Unknown	3	0.2	¶	2	0.2	¶	5	0.2	¶
Total	**1,247**	**100**	**2.7**	**804**	**100**	**1.7**	**2,051**	**100**	**2.2**
Marital Status†††									
Married	223	20.8	§§§	222	20.7	§§§	445	25.3	§§§
Never married	495	46.3	§§§	192	17.9	§§§	687	39.1	§§§
Widowed	41	3.8	§§§	64	6.0	§§§	105	6.0	§§§
Divorced	254	23.7	§§§	181	16.9	§§§	435	24.8	§§§
Married, but separated	11	1.0	§§§	7	0.7	§§§	18	1.0	§§§
Single, not otherwise specified	26	2.4	§§§	8	0.7	§§§	34	1.9	§§§
Unknown	20	1.9	§§§	12	1.1	§§§	32	1.8	§§§
Total	**1,070**	**100**	§§§	**686**	**64**	§§§	**1,756**	**100**	§§§

*Percentages might not total 100% due to rounding.

†Per 100,000 population.

§Deaths that result from the use of force or power against oneself or another person for which evidence indicating one manner of death is no more compelling than evidence indicating another.

¶Rates not reported when number of decedents is <20 or when race/ethnicity is "other" or "unknown"

††Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

§§American Indian/Alaskan Native

¶¶Asian/Pacific Islander

***Includes persons of all races.

†††Includes only those decedents aged >18 years.

§§§Rates cannot be computed for marital status because denominators are unknown.

Table 23. Number and percentage* of undetermined deaths,[§] by decedent's sex, method used, and location in which injury occurred - National Violent Death Reporting System, 17 states,[††] 2011

	Male		Female		Total	
Characteristic	**No.**	**%**	**No.**	**%**	**No.**	**%**
Method						
Firearm	46	3.7	16	2.0	62	3.0
Sharp instrument	6	0.5	1	0.1	7	0.3
Blunt instrument	47	3.8	14	1.7	61	3.0
Poisoning	693	55.6	501	62.3	1,194	58.2
Hanging/Strangulation/Suffocation	22	1.8	13	1.6	35	1.7
Personal weapons (hands, feet, fists)	9	0.7	2	0.2	11	0.5
Fall	24	1.9	8	1.0	32	1.6
Drowning	69	5.5	18	2.2	87	4.2
Fire/ Burns	14	1.1	9	1.1	23	1.1
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	21	1.7	8	1.0	29	1.4
Intentional neglect, eg, starving a baby	0	0.0	2	0.2	2	0.1
Other	23	1.8	21	2.6	44	2.1
Unknown	273	21.9	191	23.8	464	22.6
Total	**1,247**	**100**	**804**	**100**	**2,051**	**100**
Location						
House	868	69.6	658	81.8	1,526	74.4
Street/Highway	46	3.7	15	1.9	61	3.0
Motor vehicle	23	1.8	9	1.1	32	1.6
Bar/Nightclub	1	0.1	0	0.0	1	<0.1
Commercial/Retail area	8	0.6	0	0.0	8	0.4
Industrial or construction area	2	0.2	1	0.1	3	0.1
Office building	0	0.0	0	0.0	0	0.0
Parking lot/Public garage/Public transport	9	0.7	4	0.5	13	0.6
Abandoned house/Building/Warehouse	4	0.3	1	0.1	5	0.2
Park, playground, sports/Athletic area	10	0.8	1	0.1	11	0.5
Preschool/School/College/School bus	3	0.2	0	0.0	3	0.1
Hospital or medical facility	14	1.1	3	0.4	17	0.8
Supervised residential facility	8	0.6	4	0.5	12	0.6
Farm	1	0.1	0	0.0	1	<0.1
Jail/Prison	8	0.6	2	0.2	10	0.5
Natural area	76	6.1	14	1.7	90	4.4
Hotel/Motel	25	2.0	14	1.7	39	1.9
Railroad tracks	6	0.5	0	0.0	6	0.3
Other	15	1.2	2	0.2	17	0.8
Unknown	120	9.6	76	9.5	196	9.6
Total	**1,247**	**100**	**804**	**100**	**2,051**	**100**

*Percentages might not total 100% due to rounding.

§Deaths that result from the use of force or power against oneself or another person for which evidence indicating one manner of death is no more compelling than evidence indicating another.

Table 24. Number* and percentage of victims of undetermined intent† tested for alcohol and drugs whose results were positive, by toxicology variable - National Violent Death Reporting System, 17 states,§ 2011

Toxicology variable	Tested		Positive**	
	No.	%	No.	%
Blood Alcohol Concentration (BAC)¶	1,712	83.5	499	29.1
Alcohol < 0.08 g/dL¶			193	38.7
Alcohol >= 0.08 g/dL¶			291	58.3
Alcohol positive - level unknown			15	3.0
Amphetamines	1,655	80.7	90	5.4
Antidepressants	1,567	76.4	448	28.6
Cocaine	1,676	81.7	244	14.6
Marijuana	922	45.0	131	14.2
Opiates	1,692	82.5	969	57.3
Other drug(s)	1,685	82.2	1,012	60.1

*N = 2,051

†Deaths that result from the use of force or power against oneself or another person for which evidence indicating one manner of death is no more compelling than evidence indicating another.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶BAC >= 0.08 g/dL used as the standard for intoxication. Other substances indicated if any results were positive; levels for these substances are not measured.

** Percent is of those tested

Table 25. Number* and percentage† of deaths of undetermined intent,§ by victim's sex and precipitating circumstances - National Violent Death Reporting System, 17 states,¶ 2011

Characteristic	Male		Female		Total	
	No.	%	No.	%	No.	%
Mental health/Substance abuse						
Current depressed mood	128	12.7	82	12.1	210	12.5
Current mental health problem	366	36.2	353	52.2	719	42.6
Current mental health treatment	277	27.4	282	41.7	559	33.2
Alcohol problem	306	30.3	119	17.6	425	25.2
Other substance abuse problem	510	50.5	322	47.6	832	49.3
Interpersonal						
Intimate partner problem	90	8.9	80	11.8	170	10.1
Other relationship problem (non-intimate)	51	5.0	31	4.6	82	4.9
Suicide of family member or friend within past five years	7	0.7	4	0.6	11	0.7
Other death of family member or friend within past five years	35	3.5	20	3.0	55	3.3
Perpetrator of interpersonal violence within past month	3	0.3	1	0.1	4	0.2
Victim of interpersonal violence within past month	7	0.7	12	1.8	19	1.1
Life stressor						
Crisis in past or impending two weeks	76	7.5	68	10.1	144	8.5
Physical health problem	223	22.1	185	27.4	408	24.2
Job problem	43	4.3	14	2.1	57	3.4
Recent criminal legal problem	38	3.8	13	1.9	51	3.0
Non-criminal legal problem	9	0.9	7	1.0	16	0.9
Financial problem	34	3.4	17	2.5	51	3.0
School problem	7	0.7	3	0.4	10	0.6
Suicide event						
Left a suicide note	12	1.2	15	2.2	27	1.6
Disclosed intent to commit suicide	102	10.1	66	9.8	168	10.0
History of suicide attempt(s)	94	9.3	113	16.7	207	12.3

*N = 1577 (954 males and 623 females). Circumstances were unknown for 474 deaths.

†Percentages might exceed 100% because multiple circumstances might have been coded.

§Deaths that result from the use of force or power against oneself or another person for which evidence indicating one manner of death is no more compelling than evidence indicating another.

¶Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 26. Number* and percentage† of victims of undetermined intent§ who had received a diagnosis of a current mental health problem, by diagnosis - National Violent Death Reporting System, 17 states,¶ 2011

	Male		Female		Total	
Mental health problem	**No.**	**%**	**No.**	**%**	**No.**	**%**
Depression/Dysthymia	222	60.7	240	68.0	462	64.3
Bipolar disorder	57	15.6	89	25.2	146	20.3
Schizophrenia	35	9.6	20	5.7	55	7.6
Anxiety disorder	54	14.8	56	15.9	110	15.3
PTSD**	24	6.6	11	3.1	35	4.9
ADD/ADHD††	11	3.0	4	1.1	15	2.1
Eating disorder	0	0.0	3	0.8	3	0.4
OCD§§	3	0.8	2	0.6	5	0.7
Other	16	4.4	15	4.2	31	4.3

*N = 719 (366 males and 353 females). Diagnosis was unknown for n=43 victims.

†Total decedents with mental health problem represents the number of decedents indicated as having a current diagnosed mental health problem, and will not equal the sum of the column due to the fact that more than one diagnosis may be coded per person. Likewise, percentages may exceed 100% because two or more diagnosis categories per person could be coded.

§Deaths that result from the use of force or power against oneself or another person for which evidence indicating one manner of death is no more compelling than evidence indicating another.

¶Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

**Posttraumatic stress disorder.

††Attention deficit disorder/hyperactivity disorder.

§§Obsessive compulsive disorder.

Table 27. Number* and percentage† of unintentional firearm deaths, by victim's sex, race/ethnicity, age group, month in which the death occurred, and location of injury - National Violent Death Reporting System, 17 states,§ 2011

Characteristic	No.	%
Sex		
Male	113	86.9
Female	17	13.1
Total	**130**	**100**
Race/ethnicity		
White, non-Hispanic	90	69.2
Black, non-Hispanic	22	16.9
AI/AN**	4	3.1
A/PI¶	2	1.5
Hispanic††	12	9.2
Total	**130**	**100**
Age		
<1	0	0.0
1-4	10	7.7
5-9	6	4.6
10-14	11	8.5
15-19	20	15.4
20-24	11	8.5
25-29	10	7.7
30-34	4	3.1
35-44	9	6.9
45-54	24	18.5
55-64	7	5.4
65-74	8	6.2
75-84	7	5.4
85>	3	2.3
Total	**130**	**100**
Month		
January	10	7.7
February	24	18.5
March	9	6.9
April	9	6.9
May	12	9.2
June	7	5.4
July	11	8.5
August	8	6.2
September	11	8.5
October	5	3.8
November	14	10.8
December	10	7.7
Total	**130**	**100**
Location		
House	96	73.8
Street/Highway	2	1.5
Motor vehicle	3	2.3
Bar, nightclub	1	0.8
Commercial/Retail Area	3	2.3
Industrial/construction areas	1	0.8
Parking lot/Public garage	1	0.8
Sports/Athletic area, Park, playground,	1	0.8
Supervised residential facility	1	0.8
Farm	1	0.8
Natural area	10	7.7
Other§§	4	3.1
Unknown	6	4.6
Total	**130**	**100**
Firearm Type		
Handgun	55	42.3
Shotgun	22	16.9
Rifle	18	13.8
Other firearm	3	2.3
Unknown	32	24.6
Total	**130**	**100**

*N = 130

†Percentages may not total 100% due to rounding.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

¶Asian/Pacific Islander.

**American Indian/Alaskan Native.

††Includes persons of any race.

§§Includes military training exercise, private land campsites and private hunting land attached to homes.

Table 28. Number* and percentage† of unintentional firearm deaths, by co
circumstances of injury - National Violent Death Reporting System, 17 stat

Circumstances	No.	%
Context of Injury		
Hunting	19	19.6
Target shooting	1	1.0
Loading/Unloading gun	6	6.2
Cleaning gun	8	8.2
Showing gun to others	11	11.3
Playing with gun	34	35.1
Other context of injury	29	29.9
Circumstances of Injury		
Thought unloaded, magazine disengaged, or other	16	16.5
Unintentionally pulled trigger	27	27.8
Other mechanism of injury	44	45.4

*N = 97 Circumstances were unknown for 33 deaths.

†Percentages may exceed 100% because multiiple circumstances might have been coded. Therefore number and percentage are still reported when number of decedents is <5 because no particular circumstance identifies a single decedent.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Table 28. Number* and percentage† of unintentional firearm deaths, by context and circumstances of injury - National Violent Death Reporting System, 17 states,§ 2011

Circumstances	No.	%
Context of Injury		
Hunting	19	19.6
Target shooting	1	1.0
Loading/Unloading gun	6	6.2
Cleaning gun	8	8.2
Showing gun to others	11	11.3
Playing with gun	34	35.1
Other context of injury	29	29.9
Circumstances of Injury		
Thought unloaded, magazine disengaged, or other	16	16.5
Unintentionally pulled trigger	27	27.8
Other mechanism of injury	44	45.4

*N = 97 Circumstances were unknown for 33 deaths.

†Percentages may exceed 100% because multiiple circumstances might have been coded. Therefore number and percentage are still reported when number of decedents is <5 because no particular circumstance identifies a single decedent.

§Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin.

Footnotes

*****To be included in NVDRS, deaths of undetermined intent must have some evidence that there is a possibility that the intent was purposeful, including use of a weapon or other evidence that force was used to inflict the injury. Most commonly, the coroner/medical examiner (C/ME) is unsure if the death is a suicide or unintentional.

**Frequencies and rates of violent deaths included in this report will differ slightly from the frequencies and rates of violent deaths reported by NVDRS WISQARS. This is due to the exclusion by NVDRS WISQARS of non-resident deaths that occur in participating states. NVDRS tracks both resident and occurrent violent deaths in the overall dataset, and the numbers in this report reflects both.

***Drug trade is defined as the buying, selling, or passing of drugs in exchange for goods or money, whereas drug involvement includes drug use in addition to drug trade.

BOX 1. *International Classification of Diseases, Tenth Revision* (ICD-10) codes used in the National Violent Death Reporting System		
Manner of death	**Death ≤1 year after injury**	**Death >1 year after injury**
Intentional self-harm (suicide)	X60–X84	Y87.0
Assault (homicide)	X85–X99, Y00–Y09	Y87.1
Event of undetermined intent	Y10–Y34	Y87.2, Y89.9
Unintentional exposure to inanimate mechanical forces (firearms)	W32–W34	Y86 determined to be attributable to firearms
Legal intervention (excluding executions, Y35.5)	Y35.0–Y35.4, Y35.6–Y35.7	Y89.0
Terrorism	U01, U03	U02

BOX 2. Methods used to inflict injury — National Violent Death Reporting System, 17 states, 2011

- Firearm: method that uses a powder charge to fire a projectile
- Sharp instrument: knife, razor, machete, or pointed instrument (e.g., chisel or broken glass)
- Blunt instrument: club, bat, rock, or brick
- Poisoning: street drug, alcohol, pharmaceutical, carbon monoxide, gas, rat poison, or insecticide
- Hanging/strangulation/suffocation: hanging by the neck, manual strangulation, or plastic bag over the head
- Personal weapons: hands, fists, or feet
- Fall: being pushed or jumping
- Drowning: inhalation of liquid in bathtub, lake, or other source of water/liquid
- Fire/burn: inhalation of smoke or the direct effects of fire or chemical burns
- Shaking: shaking a baby, child, or adult
- Motor vehicle: car, bus, or motorcycle
- Other transport vehicle: train or airplane
- Intentional neglect: starvation, lack of adequate supervision, or withholding of health care
- Other: any method other than those listed above
- Unknown: method not reported or not known

BOX 3. Circumstances preceding fatal injury, by manner of death — National Violent Death Reporting System, 17 states, 2011

Suicide/Undetermined Intent

- Current depressed mood: decedent was perceived by self or others to be depressed.
- Current mental health problem: decedent has been identified as having a mental health disorder or syndrome listed in the Diagnostic and Statistical Manual, Version IV (DSM-IV), with the exception of alcohol and other substance dependence (these are captured in separate variables).
- First/second type of mental illness diagnosis: identifies the DSM-IV diagnosis made by a medical or mental health practitioner.
- Current treatment for mental illness: decedent was currently receiving mental health treatment as evidenced by a current prescription for a psychotropic medication or visit to a mental health professional in the previous 2 months.
- Alcohol/other substance problem: decedent was perceived by self or others to have a problem with, or to be addicted to, alcohol or other drugs.

- Person left a suicide note: decedent left a note, e-mail message, video, or other communication indicating intent to die by suicide.
- Disclosed intent to die by suicide: decedent had previously expressed suicidal feelings to another person with time for that person to intervene; disclosure only at the time of the event, with no opportunity to intervene, is not coded as "disclosed intent to commit suicide."
- History of suicide attempts: decedent was known to have made previous attempts, regardless of the severity of those attempts.
- Crisis during previous 2 weeks: a very current crisis or acute precipitating event appears to have contributed to the suicide. This is designed to measure impulsivity. The crisis event must have occurred in the previous 2 weeks or be impending in the following 2 weeks (e.g., a trial for a criminal offense begins the following week).
- Physical health problem: decedent was experiencing physical health problems that are believed to have contributed to the suicide (e.g., a recent cancer diagnosis or chronic pain).
- Intimate partner problem: problems with a current or former intimate partner that appear to have contributed to the suicide.
- Other relationship problem: problems with a family member, friend, or associate (other than an intimate partner) that appear to have contributed to the suicide.
- Job problem: decedent was either experiencing a problem at work or was having a problem with joblessness.
- School problem: decedent was experiencing a problem such as poor grades, bullying, social exclusion at school, or performance pressures.
- Financial problem: decedent was experiencing problems such as bankruptcy, overwhelming debt, or foreclosure of a home or business.
- Suicide of friend or family in previous 5 years: decedent was distraught over, or reacting to, a relatively recent suicide of a friend or family member.
- Other death of friend or family in previous 5 years: decedent was distraught over, or reacting to, a relatively recent non-suicide death of a friend or family member.
- Recent criminal legal problem: decedent was facing criminal legal problems that appear to be associated with the suicide.
- Other legal problem: decedent was facing civil legal problems (e.g., a child custody or civil lawsuit).
- Perpetrator of interpersonal violence in previous month: decedent perpetrated interpersonal violence (e.g., being sought by police for assault or having been issued a restraining order resulting from recent violence) during the previous month.
- Victim of interpersonal violence in previous month: decedent was the target of interpersonal violence in the past month.

Homicide/Legal Intervention

- Precipitated by another crime: incident occurred as the result of another serious crime.
- Nature of crime: identifies the actual crime (e.g., robbery or drug trafficking).
- Crime in progress: serious crime was in progress at the time of the death.

- Argument over money/property: conflict between decedent and suspect was over money or property (including drugs).
- Other argument, abuse, conflict: conflict between decedent and suspect was over something other than money, property, or drugs.
- Jealousy ("lovers' triangle"): jealousy or distress over an intimate partner's relationship or suspected relationship with another person led to the homicide.
- Intimate-partner violence–related: homicide is related to conflict between current or former intimate partners; includes the death of actual intimate partners and non-intimate partner decedents killed to cause pain to an intimate partner (e.g., child or parent).
- Drug involvement: drug dealing or illegal drug use is suspected to have played a role in precipitating the homicide.
- Gang-related: homicide is suspected to have resulted from gang activity or gang rivalry; not used if the decedent was a gang member but the homicide did not appear to result from gang activity.
- Hate crime: decedent was intentionally selected because of his/her actual or perceived gender, religion, sexual orientation, race/ethnicity, or disability.
- Brawl: mutual physical fight involving three or more persons.
- Decedent was a bystander: decedent was not directly involved in the incident (e.g., pedestrian walking past a gang fight).
- Decedent was a police officer on duty: a law enforcement officer killed in the line of duty.
- Decedent was an intervener assisting a crime victim: decedent was attempting to assist a crime victim at the time of the incident (e.g., a child attempts to intervene and is killed while trying to assist a parent who is being assaulted).
- Mercy killing: the decedent wished to die because of terminal or hopeless disease or condition, and documentation indicates that the decedent wanted to be killed.

Unintentional Firearm Death

- Hunting: death occurred anytime after leaving home for a hunting trip and before returning home from a hunting trip; the shooting need not have been during an active hunt to be coded.
- Target shooting: a shooter was aiming for a target and unintentionally hit a person; can be at a shooting range or an informal backyard setting (e.g., teenagers shooting at signposts on a fence).
- Self-defensive shooting: self-inflicted shooting in which the decedent was attempting to use a gun in self-defense.
- Celebratory firing: shooter fired the gun upward in a celebratory manner with no intention of threatening or endangering others.
- Loading/unloading gun: firearm discharged when the shooter was loading/unloading ammunition.
- Cleaning gun: firearm discharged when the shooter was cleaning the gun.
- Showing gun to others: showing the gun to another person when the gun discharged or the trigger was pulled.

- Playing with gun: the shooter and one or more others were playing with a gun when it discharged.
- Thought safety was engaged: shooter thought the gun was inoperable because the safety was engaged.
- Thought unloaded/magazine disengaged: shooter thought the gun was unloaded because the magazine was disengaged.
- Thought gun was unloaded/other: shooter thought the gun was unloaded for other unspecified reason.
- Unintentionally pulled trigger: shooter unintentionally pulled the trigger (e.g., while grabbing the gun or holding it too tightly).
- Bullet ricochet: bullet ricocheted from its intended target and unintentionally struck the decedent.
- Gun defect or malfunction: gun had a defect or malfunctioned as determined by a trained firearm examiner.
- Fired while holstering/unholstering: gun was being replaced or removed from holster/clothing.
- Dropped gun: gun discharged when it was dropped or when something was dropped on it.
- Fired while operating safety/lock: shooter unintentionally fired the gun while operating the safety lock.
- Gun mistaken for toy: gun was mistaken for a toy and was fired without the user understanding the danger.

Figure. Thirty-two U.S. states currently participating in the National Violent Death Reporting System.