Surveillance for Violent Deaths — National Violent Death Reporting System, 16 States, 2010

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Abstract

Problem/Condition: An estimated 55,000 persons die annually 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 16 U.S. states for 2010. 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: 2010.

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, and two in 2010 (Ohio and Michigan), for a total of 19 states. This report includes data from 16 states that collected statewide data in 2010; data from California are not included in this report because data were not collected after 2009. Ohio and Michigan were excluded because data collection, which began in 2010, did not occur statewide until 2011.

Results: For 2010, a total of 15,781 fatal incidents involving 16,186 deaths were captured by NVDRS in the 16 states included in this report. The majority (62.8%) of deaths were suicides, followed by homicides and deaths involving legal intervention (i.e., deaths caused by law enforcement and other persons with legal authority to use deadly force, excluding legal executions) (24.4%), deaths of undetermined intent (12.2%), and unintentional firearm deaths (0.7%). Suicides occurred at higher rates among males, non-Hispanic whites, American Indians/Alaska Natives, and persons aged 45–54 years. Suicides most often occurred in a house or apartment and involved the use of firearms. Suicides were preceded primarily by a mental health or intimate partner problem, a crisis during the previous 2 weeks, or a physical health problem. Homicides occurred at higher rates among males and persons aged 20–24 years; rates were highest among non-Hispanic black males. The majority of homicides involved the use of a firearm and occurred in a house or apartment or on a street/highway. Homicides were precipitated primarily by arguments and interpersonal conflicts or in conjunction with another crime.

Interpretation: This report provides a detailed summary of data from NVDRS for 2010. The results indicate that violent deaths resulting from self-inflicted or interpersonal violence disproportionately affected persons aged <55 years, males, and certain minority populations. For homicides and suicides, relationship problems, interpersonal conflicts, mental health problems, and recent crises were among the primary precipitating factors. Because additional information might be reported subsequently as participating states update their findings, the data provided in this report are preliminary.

Public Health Action: For the occurrence of violent deaths in the United States to be better understood and ultimately prevented, accurate, timely, and comprehensive surveillance data are necessary. 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 at the national, state, and local levels. NVDRS data have been used to enhance prevention programs. Examples include use of linked NVDRS data and adult protective service data to better target elder maltreatment prevention programs and improve staff training to identify violent death risks for older adults in North Carolina, use of Oklahoma VDRS homicide data to help evaluate the effectiveness of a new police and advocate intervention at domestic violence incident scenes, and data-informed changes in primary care practice in

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Oregon to more effectively address older adult suicide prevention. The continued development and expansion of NVDRS is essential to CDC's efforts to reduce the personal, familial, and societal impacts of violence. Further efforts are needed to increase the number of states participating in NVDRS, with an ultimate goal of full national representation.

Introduction

An estimated 55,000 persons die annually in the United States as a result of violence-related injuries (*1,2*). Homicide is the second leading cause of death for persons aged 15–24 years, the third leading cause for persons aged 1–4 and 25–34 years, and the fourth leading cause for persons aged 5–9 and 10–14 years. Suicide is the second leading cause of death for persons aged 25–34 years, the third leading cause for persons aged 10–14 and 15–24 years, and the fourth leading cause for persons aged 35–44 and 45–54 years (*1*).

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 (*3*). In 2000, CDC began planning to implement the National Violent Death Reporting System (NVDRS) (*4,5*). NVDRS has several system-specific goals, which include to:

- collect and analyze timely, high-quality data that monitors 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 risk-factor data concerning all violence-related deaths, 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), as well as unintentional firearm deaths and deaths of undetermined intent. NVDRS data are used to assist the development, implementation, and evaluation of programs and strategies designed to reduce and prevent these deaths at the national, state, and local levels.

Before implementation of NVDRS, single data sources (e.g., death certificates or law enforcement data systems) provided only limited information and few circumstances from which to understand patterns of deaths collected by the system. NVDRS fills this gap in surveillance; it is the first system to provide detailed information on circumstances precipitating violent deaths, the first to link multiple source documents on violence-related deaths to enable researchers to understand each death more completely, and the first to link multiple deaths that are related to one another (e.g., multiple homicides, multiple suicides, and 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, for a total of 19 states (Figure). California concluded its participation in 2009. CDC provides funding for state participation and anticipates that NVDRS will expand to include all 50 states, the District of Columbia (DC), and U.S. territories in the future.

This report summarizes data for 2010 for deaths meeting NVDRS inclusion criteria from 16 states that collected statewide data (approximately 27.6% of the U.S. population) (*1,6*). California data are not included in this report because data were not collected after 2009. Data for Ohio and Michigan were excluded because data collection did not occur statewide until 2011. Because additional information might be reported subsequently as participating states update their findings, the data provided in this report are preliminary. 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, including death certificates, coroner/medical examiner records, and law enforcement reports. In addition, some participating states collect information from secondary sources (e.g., child fatality review team data, supplementary homicide reports, hospital data, crime laboratory data, and Bureau of Alcohol, Tobacco, Firearms, and Explosives trace information concerning firearms). 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.

FIGURE. States participating in the National Violent Death Reporting System, by year of initial data collection — United States, 2003–2010
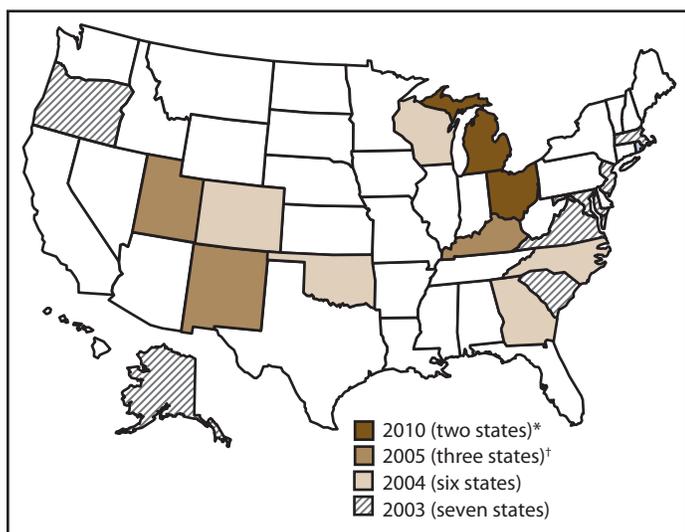
* Ohio and Michigan are excluded from the analysis in this report because data collection did not begin until 2011.
† California collected data in four counties during 2005–2009.

NVDRS defines a violent death as a death resulting either from the intentional use of physical force or power 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 cases are coded on the basis of the *International Classification of Diseases, Tenth Revision* (ICD-10) or on the basis of manner of death assigned by the coroner, medical examiner, or law enforcement (7). Cases with selected ICD-10 codes are included in NVDRS (Box 1). ICD-10 case findings are 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) (Box 2);
- 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);
- whether the decedent was a suspect (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 and then was fatally injured);
- incident (i.e., an occurrence in which one or more persons sustained a fatal injury that was linked to a common event 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).

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). In addition to allowing independent entry of each source, this approach permits later review of what each source contributed and identification of missing sources. This permits comparisons of the quality and completeness of state-specific data sources and allows states to provide feedback to sources regarding the consistency of their data compared with data from other sources. In addition, the system permits automatic electronic importation of specific data sources 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

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 of injury — National Violent Death Reporting System, 16 states, 2010

- 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

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 record, and law enforcement report). The primacy for sex is expressed as death certificate/coroner/medical examiner record/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 record is used and if the coroner/medical examiner record 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. 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 coded as a suicide.

NVDRS classifies deaths 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 for death (e.g., "Russian roulette") and suicides involving 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. Corresponding ICD-10 codes included in NVDRS are X85–X99, Y00–Y09, and Y87.1.
- **Unintentional firearm**. An unintentional firearm death is 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; and a person who received a self-inflicted wound while playing with a firearm. 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 with a method of firearm.

- **Undetermined intent.** A death of undetermined intent is 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. This category excludes legal executions. Corresponding ICD-10 codes included in NVDRS are Y35.0–Y35.4, Y35.6, Y35.7, and Y89.0. For the purposes of analyses in this report, legal intervention deaths are grouped with homicides.

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, decedent-suspect relationship, and method of injury (Boxes 2 and 3).

Circumstances Preceding Death

The circumstances preceding death are defined as the precipitating events that might have 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. The variable "circumstances known" is a gateway variable to 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 detail) the data abstractor leaves the gateway 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 that the circumstance is reported to be true, then the abstractor enters data as confirmed (e.g., if the law enforcement report indicated that a decedent had disclosed an intent to commit suicide, then suicidal intent is accepted to be true).

Coding Training and Quality Control

Ongoing coding support is provided through an e-mail help desk, monthly conference calls with all states, and regular conference calls with individual states. A coding manual 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 reabstraction of cases 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 questions any variable, 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. 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 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 2010

This report provides preliminary data concerning fatal injuries meeting the NVDRS case definition in 2010 for 16 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 state residents that occurred elsewhere. 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. These narratives were reviewed for all incidents in which coded data were unclear or incomplete. 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

BOX 3. Circumstances preceding fatal injury, by manner of death — National Violent Death Reporting System, 16 states, 2009

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).
- 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 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 an 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 member 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 member in previous 5 years: decedent was distraught over, or reacting to, a relatively recent nonsuicide 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: 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).

BOX 3. (*Continued*) Circumstances preceding fatal injury, by manner of death — National Violent Death Reporting System, 16 states, 2009

- 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.
- 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.
- 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.
- 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.

of the instability of those rates. To maintain confidentiality, the number, percentage, and rate are not reported when number of decedents is <5 or if indicated, the entire category is not reported to prevent calculation of cells with <5. 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 rate calculations (*7*). 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 16 NVDRS states included in this report collected data concerning 15,781 incidents and 16,186 deaths that occurred during 2010. The crude death rate was 19.7 deaths per 100,000 population. Suicides (n = 10,167; 62.8% of total) accounted for the highest rate of violent deaths (12.4 per 100,000 population) followed by homicide/legal-intervention (n = 3,949; 24.4% of total) deaths (4.8 per 100,000 population). Deaths of

undetermined intent (n = 1,973; 12.2% of total) and unintentional firearm deaths (n = 97; 0.7% of total) occurred at lower rates (2.4 and 0.1 per 100,000 population, respectively). Firearms accounted for 49.6% of included deaths, poisoning for 17.3%, and hanging/strangulation/suffocation for 16.7% (rates: 9.8, 3.4, and 3.3 per 100,000 population, respectively); rates for other methods were lower. For all deaths, a house or apartment was the most common location (70.1%). The second most common location of injury (7.2%) was a street or highway (Table 1).

Toxicology Results of Decedent

Tests for alcohol were conducted for 69.8% of decedents, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 53.1%, 44.5%, 53.9%, 36.9%, and 53.9% of decedents, respectively. Among decedents who tested positive for alcohol (33.5%), 63.1% had a blood alcohol concentration (BAC) of ≥0.08 g/dL (the legal limit in all states). Opiates, including heroin and prescription pain killers, were identified in 24.0% of cases tested for these substances, antidepressants in 20.4%, marijuana in 15.2%, cocaine in 7.8%, and amphetamines in 4.0% (Table 2).

Suicides

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

The 16 NVDRS states included in this report collected data during 2010 concerning 10,154 suicide incidents, which included 10,167 suicide decedents (Table 3). Rates of suicide by month of death showed little variation throughout the year (range: 0.9–1.2 per 100,000 population). Overall, the crude suicide rate was 12.4 per 100,000 population (Table 4). The rate for males was nearly four times that for females (19.8 and 5.3 per 100,000 population, respectively). Non-Hispanic American Indian/Alaska Natives (AI/ANs) had the highest rate (16.5 per 100,000 population) of suicide deaths, followed by non-Hispanic whites (15.4 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, (19.3, 16.8, and 15.9 per 100,000 population, respectively). Children aged 10–14 years had the lowest rates of suicide among all age groups (1.3 per 100,000 population). Rates of suicide among adolescents aged 15–19 years (7.6 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 (54.3%) of suicides among males. Rates among males were highest for those aged ≥85 years followed by those aged 75–84 and 45–54 years (43.6, 30.4, and 29.3 per 100,000 population, respectively). Non-Hispanic AI/AN males and white males had

the highest rates of any racial/ethnic population (25.1 and 24.6 per 100,000 population, respectively) and had rates that were more than three times the rate for the group with the lowest rates, Asian/Pacific Islander males. Among females, decedents aged 35–64 years accounted for 64.9% of suicides. Rates for females peaked at 9.7 per 100,000 among those aged 45–54 years. Female suicide rates were highest among non-Hispanic AI/ANs (8.3 per 100,000 population) followed by non-Hispanic whites (6.6 per 100,000 population). Among females, the lowest rates of suicide were among non-Hispanic blacks (1.6 per 100,000 population) and Hispanics (2.2 per 100,000 population). Of all suicide decedents aged ≥18 years, 39.1% were married, 30.0% had never married, and 22.0% were divorced at the time of death.

Method and Location of Injury

Firearms were used in more than half of suicides (51.7%), followed by hanging/strangulation/suffocation (24.7%), and poisoning (16.4%) (rates: 6.4, 3.1, and 2.0 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 (25.0%) (Table 5). Among females, poisons were used most often (37.0%) followed by firearms (30.6%). The most common place of self-inflicted injury was a house or apartment (75.4%), followed by natural areas (4.1%), and streets or highways (3.2%). A total of 134 (1.3%) suicides occurred in a jail or prison setting (121 males and 13 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 46.3%, 40.4%, 47.3%, 36.6%, and 47.6% of suicide decedents, respectively (Table 6). Among suicide decedents who tested positive for alcohol (33.4%), 64.9% had a BAC of ≥0.08 g/dL. Opiates, including heroin and prescription pain killers, were identified in 20.0% of cases tested for these substances; cocaine and marijuana were identified in 4.6% and 10.2% of tested cases, respectively. Of suicide decedents who were tested for antidepressants, 23.8% were positive at the time of their death (Table 6).

Precipitating circumstances were known for 88.8% of suicide decedents. Overall, mental health problems were the most commonly noted circumstance for suicide decedents, with 40.4% described as experiencing a depressed mood at the time of their deaths (Table 7). Approximately 44.0% were described as having a diagnosed mental health problem; 31.0% were receiving mental health treatment. Of those with a diagnosed mental disorder, 75.9% had received a diagnosis of depression/

dysthymia, 13.9% had received a diagnosis of bipolar disorder, and 11.1% received a diagnosis of anxiety disorder (Table 8).

Among 9,032 suicide decedents with known circumstance information, 20.9% had a history of previous suicide attempts, 33.2% disclosed their intent before committing suicide, and 33.3% left a suicide note (Table 7). Other than mental health conditions, circumstances noted most often were intimate partner problems (31.2%) and a crisis of some kind in the preceding or impending 2 weeks (26.9%). Physical health problems also were noted in 22.4% of cases with circumstance information and job or financial problems in 15.4% and 13.6% of deaths, respectively.

A substantial proportion of female (42.7%) and male (39.8%) suicide decedents were observed to have a depressed mood at the time of death. The majority of females (61.9%) and 38.9% of males received a diagnosis of a mental health problem. The percentages of females (47.1%) and males (26.5%) 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 males and females (Table 8). Slightly more than one fifth of both male (21.9%) and female (24.5%) suicide decedents experienced physical health problems in the period before their deaths (Table 7). In the period preceding their deaths, job problems were noted in higher proportions of males than females (16.5% and 11.5%, respectively), as were financial problems (14.2% and 11.2%) and criminal legal problems (10.6% and 4.1%). Intimate partner problems also were cited as a precipitating factor in a higher percentage of male suicides than female suicides (32.3% and 27.0%, respectively). Although occurring in only a limited percentage of cases, being a perpetrator of interpersonal violence in the month before death was more common among male suicide decedents (4.0%) than being a victim of such violence (0.3%), whereas the proportions were similar for females (1.4% and 1.1%, respectively).

Homicides/Legal Intervention

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

The 16 NVDRS states included in this report collected data concerning 3,760 homicide incidents, which included 3,949 homicides during 2010 (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 (57.3%) had never been married, and 21.8% were married at the time of their death (Table 10). For

homicide decedents, the relation of the victim to the suspect was as follows: not known (52.5%), an acquaintance or friend (11%), a spouse or intimate partner (10.2%), and a stranger (4.5%).

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 (49.6%) of homicide deaths and had the highest rate (15.2 deaths per 100,000 population), followed by AI/ANs (10.0) and Hispanics (5.1). Black males had the highest rate of homicide deaths compared with males or females of any other race/ethnicity (27.5 per 100,000 population). Age-specific homicide rates were highest (11.7 deaths per 100,000 population) among those aged 20–24 years, followed by those aged 25–29 years (10.7 deaths per 100,000 population). The rate for infants aged <1 year was nearly three times that for children aged 1–4 years (6.7 and 2.3 per 100,000 population, respectively). Rates were lowest among children aged 5–14 years and persons aged 65–74 years. The majority of all male homicide decedents (57.7%) were aged 15–34 years; males aged 20–24 years had the highest rates of homicide (19.9 per 100,000 population). For females, homicide rates were highest (4.3 deaths per 100,000 population) among infants aged <1 year.

Method and Location of Injury

Firearms were used in 66.2% of homicides, followed by sharp instruments (12.7%) and blunt instruments (6.5%) (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 (71.3%) and females (47.9%) (Table 12). Hanging/strangulation/suffocation was more common among female homicide decedents than among males (11.5% and 1.9%, respectively). A house or apartment was the most common location of homicide for both males and females (46.8% and 73.0%, respectively) (Table 12). The next most common location of homicide for males was a street or highway (23.8%), a parking lot, public garage or public transport (4.7%), and a commercial/retail area (3.4%); for females, the next most common locations were a street or highway (5.8%), a natural area (2.9%), a motor vehicle (2.9), and a parking lot, public garage, or public transport (2.9%).

Toxicology Results of Decedent and Precipitating Circumstances

Tests for alcohol were conducted for 74.1% of homicide decedents, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 59.5%, 42.9%, 60.0%, 37.8%, and 58.3% of homicide decedents, respectively (Table 13). Among tested homicide decedents who tested positive for alcohol (36.7%), 58.9% had a BAC of ≥0.08 g/dL. Marijuana,

cocaine, and opiates were identified in 29.7%, 10.3%, and 10.9% of homicide decedents tested, respectively.

Precipitating circumstances were identified for 73.4% of homicide deaths. More than one in three of those homicides were precipitated by another crime (Table 14). In 68.2% of cases precipitated by another crime, the crime was in progress at the time of the incident. The precipitating crime was most often robbery (38.8%), followed by assault/homicide (31.9%), drug trade (11.2%), burglary (9.4%), motor-vehicle theft (4.5%), arson (3.0), or rape/sexual assault (2.9%) (Table 15). Other common precipitating circumstances were an argument, abuse, or conflict over something other than money or property (35.8%); drug involvement* (12.3%); justifiable self-defense, including legal interventions (6.8%); or an argument over money or property (7.1%). Intimate partner violence was identified as a contributing factor in 16.5% of cases with known circumstance information (Table 14).

An argument, abuse, or a conflict unrelated to money or property was a factor in more homicides among males than among females (40.2% and 22.3%, respectively). Drug involvement homicides accounted for 14.4% of male homicides and 5.7% of female homicides. Intimate partner violence was a precipitating factor in 46.0% of female homicides but only 7.1% of male homicides. In 10.9% of male homicides with known circumstance information, the decedent also used a weapon during the altercation, compared with 1.4% of female homicides (Table 14).

Deaths of Undetermined Intent

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

The 16 NVDRS states included in this report collected data concerning 1,964 incidents involving 1,973 deaths during 2010 for which a determination of intent could not be made (Table 16). 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 2.4 per 100,000 population. Rates of undetermined death were higher among males than among females (3.0 and 1.8 per 100,000 population, respectively) (Table 17). Although non-Hispanic whites accounted for 72.8% of undetermined deaths, rates were highest among AI/ANs (4.5 per 100,000 population). AI/AN males had the highest rates (4.6 per 100,000 population) of undetermined death compared with males or females of any other racial/ethnic population. More than half (53.7%) of decedents for whom the manner of death was undetermined

were aged 35–64 years. Rates were highest (27.8 per 100,000 population) among infants aged <1 year. Among decedents with an undetermined manner of death at age ≥18 years, 38.2% never had been married, 27.6% were married, and 26.1% were divorced at the time of death (Table 17).

Method and Location of Injury

The most common method of injury among undetermined deaths was poisoning (56.8%) (Table 18). No other known single method accounted for >3.3% of undetermined deaths overall. Among both males and females for which the method of injury was known, poisoning was reported for 53.9% and 61.2% of deaths, respectively. 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 (73.9% and 84.5%, respectively). Among males, a natural area was the second most common setting, accounting for 4.6% of deaths. Among females, a street or highway was the second most common setting, accounting for 2.2% of deaths.

Toxicology Results of Decedent and Precipitating Circumstances

Tests for alcohol were conducted for 79.3% of decedents of undetermined intent, and drug tests for amphetamines, antidepressants, cocaine, marijuana, and opiates were conducted for 76.5%, 70.2%, 77.4%, 37.6%, and 79.3% of decedents, respectively (Table 19). Among decedents who tested positive for alcohol (27.9%), 63.3% had a BAC of ≥0.08 g/dL. Among decedents tested for opiates, 56.2% were positive; of those tested for cocaine, 13.9% were positive; of those tested for marijuana, 10.0% were positive; and of those tested for antidepressants, 29.9% were positive (Table 19).

Precipitating circumstances were known in approximately 79.4% of deaths of undetermined intent. Of those, 27.8% of decedents had a problem with alcohol, and 51.3% had other substance abuse problems (e.g., those involving an illicit drug or prescription abuse) (Table 20). Although a current depressed mood was reported for only 15.4% of decedents, 39.7% of decedents with known circumstance information had a diagnosed current mental health problem, 30.5% were in mental health treatment at the time of their death, 12.6% had a history of suicide attempts, 11.5% had disclosed intent to commit suicide, and 1.5% left a suicide note. Other circumstances noted most often were physical health problems (27.4%), a crisis during the preceding or impending 2 weeks (12.1%), or an intimate partner problem (12.1%) (Table 20). Of those with a current mental health problem, 61.0% had received a diagnosis of depression/dysthymia, 23.0% of bipolar disorder, and 18.1% of an anxiety disorder (Table 21).

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* 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.

Although the percentage of other substance abuse problems was similar among males and females (52.4% and 49.8%, respectively), a greater percentage of male than female decedents were reported to have an alcohol problem (33.9% and 18.9%, respectively) at the time of death (Table 20). Mental health problems were reported in a higher percentage of undetermined deaths of females than of males (50.9% and 32.2%, respectively) and a higher percentage of females were currently in treatment for a mental health problem than males (41.7% and 22.8%, respectively) and had a history of suicide attempts (18.3% and 8.8%, respectively) (Table 20).

Unintentional Firearm Deaths

Sex, Race/Ethnicity, and Age Group

The 16 NVDRS states included in this report collected data concerning 97 incidents involving 97 unintentional firearm deaths during 2010 (Table 22). Males accounted for 84.5% of decedents. The majority (73.9%) were non-Hispanic whites, followed by non-Hispanic blacks (13.6%). Those aged 10–24 accounted for 40.2% of all unintentional firearm deaths.

Firearm Type, Seasonality, and Location of Injury

Handguns accounted for 41.2% of unintentional firearm deaths, shotguns for 11.3%, and rifles for 19.6%. No more than 11 unintentional firearm deaths occurred in any given month (Table 22). Approximately 67.0% of all unintentional firearm deaths took place in a house or apartment, followed by natural areas (14.4% each) (Table 22).

Context of the Injury and Associated Circumstances

The context of the injury or associated circumstances were known for 83.5% of unintentional firearm deaths. Overall, unintentional firearm injury deaths occurred most commonly while victims were playing with a gun (32.1%), hunting, or showing a gun to others (both 13.6%). The most frequently reported circumstances of injury included unintentionally pulling the trigger (38.3%) and thinking the gun was unloaded, magazine was disengaged, or other (13.6%) (Table 23).

Discussion

Violent deaths occur among men and women and among persons of all ages, races, and ethnicities. NVDRS data 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 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. Examples include use of Oklahoma VDRS data to help evaluate the effectiveness of the Lethality Assessment Intervention, a new police and advocate intervention at the scene of a domestic violence incident. NVDRS data on circumstances surrounding suicide among older adults in Oregon also assisted in integration of older adult suicide prevention efforts into primary care practice (8). This change in practice has coincided with an 8% decrease in suicide among men aged ≥65 years (8).

Data from NVDRS are relevant to two national prevention initiatives, the National Strategy for Suicide Prevention (NSSP) and *Healthy People 2020* (9,10). NSSP is a comprehensive national agenda for suicide prevention (8). NVDRS is particularly relevant to the NSSP goals of increasing the timeliness and usefulness of surveillance systems relevant to suicide prevention and evaluating the outcome and effectiveness of suicide prevention interventions. One related objective specified in the NSSP is to improve the usefulness and quality of suicide-related data (9). As a result of the NVDRS data verification process, the Massachusetts VDRS has improved the quality of data on all deaths from vital records, medical examiners, and law enforcement. Massachusetts also used VDRS data to identify and disseminate new findings about an increase in suicides among middle aged white males (8).

As an example of translating VDRS data into action for prevention, the Virginia Department of Behavioral Health and Developmental Services, a key partner of the VDRS, used regional data to bring together mental health, public health, and other violence prevention advocates to examine available resources, develop regional suicide prevention plans, and successfully request funding for a state suicide prevention coordinator to address suicide issues across the lifespan (8).

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. *Healthy People 2020* includes objectives for reducing suicides (by 10%), homicides (by 10%), and firearm-related (by 10%) deaths, 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 (10). 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 (10). 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. 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 (8). One large employee assistance program in the state integrated 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. In North Carolina, VDRS data were linked to Adult Protective Service data and used to quantify and describe violent deaths among persons aged ≥18 years in care of Adult Protective Services for the first time. The linked data were then used to better target elder maltreatment prevention programs and improve staff training to identify violent death risks for older adults (8).

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, coroner/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. The percentage of decedents testing positive might be affected by selective testing biases in medical examiner or coroner offices (11). 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, when data are less readily available until after prosecutions are complete. Fifth, case definitions present challenges when a single death is classified differently in various 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. Sixth, although coding support is available daily, variations in coding might occur depending on the abstractor's level of experience. For this reason, states conduct blinded reabstraction of cases to verify consistency and identify training needs. Seventh, medical and mental health information (e.g., types 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 certificate, coroner/medical examiner records, 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 (12,13). 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 workplace suicide prevention in Rhode Island (8), and establishment of a cross-sector suicide prevention coordinator in Virginia (8). Analyses of NVDRS data also can be useful in tracking progress toward goals set out in the NSSP and *Healthy People 2020* as demonstrated by the identification of groups at highest risk for suicide in Massachusetts and Rhode Island; and improvements in data quality in Massachusetts and improved linkages between data sources in North Carolina (8). 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, DC, and U.S. territories.

Acknowledgments

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/ncipc/wisqars/default.htm.
2. Doll L, Bonzo S, Mercy J, Sleet D, Hass E, eds. Handbook of injury and violence. New York, NY: Springer; 2007.
3. Paulozzi LJ, Mercy J, Frazier L, Annest JL. CDC's National Violent Death Reporting System: background and methodology. Inj Prev 2004;10:47–52.
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. 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.
8. CDC. NVDRS: stories from the frontlines of violent death surveillance (2013). Atlanta, GA: Safe States Alliance; 2013.
9. US Department of Health and Human Services. 2012 National strategy for suicide prevention: goals and objectives for action. Washington, DC: HHS; 2012.
10. US Department of Health and Human Services. Healthy People 2020. Washington, DC: CDC; 2013. Available at http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx.
11. CDC. Toxicology testing and results for suicide victims—13 states, 2004. MMWR 2006;55:1245–8.
12. 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.
13. 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 incidents by incident type, manner of death, method used, and location in which injury occurred — National Violent Death Reporting System, 16 states,¶ 2010

Incident type	No.	(%)	Rate
Suicide, single	9,948	(63.0)	**
Homicide, single	3,307	(21.0)	**
Undetermined, single	1,951	(12.4)	**
Unintentional firearm, single	97	(0.6)	**
Suicide, multiple	13	(0.1)	**
Homicide, multiple	123	(0.8)	**
Undetermined, multiple	9	(0.1)	**
Legal intervention, single/multiple	133	(0.8)	**
Homicide followed by suicide	190	(1.2)	**
Other combinations of deaths	10	(0.1)	**
Total	**15,781**	**100**	**
Manner of death			
Homicide/Legal Intervention	3,949	(24.4)	4.8
Suicide	10,167	(62.8)	12.4
Undetermined intent	1,973	(12.2)	2.4
Unintentional firearm	97	(0.7)	0.1
Total	**16,186**	**100**	**19.7**
Method			
Firearm	8,031	(49.6)	9.8
Sharp instrument	664	(4.1)	0.8
Blunt instrument	306	(1.9)	0.4
Poisoning	2,803	(17.3)	3.4
Hanging/Strangulation/Suffocation	2,706	(16.7)	3.3
Personal weapons (hands, feet, fists)	138	(0.9)	0.2
Fall	222	(1.4)	0.3
Drowning	159	(1.0)	0.2
Fire/Burns	88	(0.5)	0.1
Motor vehicles (e.g., buses, motorcycles, and other transport vehicles)	168	(1.0)	0.2
Intentional neglect	9	(0.1)	††
Other (single method)	98	(0.6)	0.1
Unknown	794	(4.9)	1.0
Total	**16,186**	**(100)**	**19.7**
Location			
House or apartment	11,340	(70.1)	13.8
Street/Highway	1,168	(7.2)	1.4
Motor vehicle	365	(2.3)	0.4
Bar/Nightclub	58	(0.4)	0.1
Commercial/Retail Area	203	(1.3)	0.2
Industrial or construction area	60	(0.4)	0.1
Office building	44	(0.3)	0.1
Parking lot/Public garage/Public transport	307	(1.9)	0.4
Abandoned house, building, or warehouse	27	(0.2)	0.0
Park, playground, or sports/athletic area	262	(1.6)	0.3
Preschool/School/College/School bus	21	(0.1)	0.0
Hospital or medical facility	82	(0.5)	0.1
Supervised residential facility	66	(0.4)	0.1
Farm	36	(0.2)	0.0
Jail/Prison	165	(1.0)	0.2
Natural area	583	(3.6)	0.7
Hotel/Motel	265	(1.6)	0.3
Railroad tracks	70	(0.4)	0.1
Other	622	(3.8)	0.8
Unknown	442	(2.7)	0.5
Total	**16,186**	**(100)**	**19.7**

* No. of incidents = 15,781; no. of victims = 15,974 (98.7 %); no. of suspects/victims = 212 (1.3%).
† Percentages might not total 100% because of rounding.
§ Per 100,000 population.
¶ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
** Because the number of victims varies in incidents involving multiple deaths, population denominators cannot be determined to compute rates.
†† Rates not reported when number of decedents is <20.

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, 16 states,[†] 2010

Toxicology Variable No.	Tested		Positive	
	No.	(%)	No.	(%)[§]
BAC[¶]	11,295	(69.8)	3,781	(33.5)
<0.08 g/dL			1,232	(32.6)
≥0.08 g/dL			2,386	(63.1)
Alcohol positive, level unknown			163	(4.3)
Amphetamines	8,593	(53.1)	348	(4.0)
Antidepressants	7,207	(44.5)	1,469	(20.4)
Cocaine	8,732	(53.9)	678	(7.8)
Marijuana	5,978	(36.9)	908	(15.2)
Opiates	8,731	(53.9)	2,098	(24.0)
Other drug(s)	8,719	(53.9)	3,514	(40.3)

Abbreviation: BAC = blood alcohol concentration.
* N = 16,186.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[§] Percentage 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 3. Number,* percentage,[†] and rate[§] of suicides, by method used, and month in which suicide occurred — National Violent Death Reporting System, 16 states,[¶] 2010

Characteristic	No.	(%)	Rate
Method			
Firearm	5,254	(51.7)	6.4
Sharp instrument	159	(1.6)	0.2
Blunt instrument	**	**	**
Poisoning	1,666	(16.4)	2.0
Hanging/Strangulation/Suffocation	2,514	(24.7)	3.1
Fall	177	(1.7)	0.2
Drowning	93	(0.9)	0.1
Fire/ Burns	41	(0.4)	0.0
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	109	(1.1)	0.1
Intentional neglect (e.g., starving)	**	**	**
Other (single method)	13	(0.1)	[††]
Unknown	136	(1.3)	0.2
Total	**10,167**	**(100)**	**12.4**
Month			
January	793	(7.8)	1.0
February	774	(7.6)	0.9
March	824	(8.1)	1.0
April	866	(8.5)	1.1
May	885	(8.7)	1.1
June	862	(8.5)	1.0
July	983	(9.7)	1.2
August	958	(9.4)	1.2
September	840	(8.3)	1.0
October	831	(8.2)	1.0
November	779	(7.7)	0.9
December	762	(7.5)	0.9
Unknown	10	(0.1)	[††]
Total	**10,167**	**(100)**	**12.4**

* No. of incidents = 10,154; no. of decedents = 10,167.
[†] Percentages might not total 100% because of rounding.
[§] Per 100,000 population.
[¶] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
** Number, percentage, and rate not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5 decedents.
[††] 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, 16 states,[§] 2010

Characteristic	Male			Female			Total[¶]		
	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate
Age group (yrs)									
<10	**	**	**	**	**	**	**	**	**
10–14	54	(0.7)	1.9	19	(0.9)	0.7	73	(0.7)	1.3
15–19	350	(4.4)	11.8	87	(4.0)	3.1	437	(4.3)	7.6
20–24	641	(8.0)	22.0	132	(6.0)	4.7	773	(7.6)	13.5
25–29	689	(8.7)	24.4	150	(6.8)	5.4	839	(8.3)	15.0
30–34	610	(7.7)	22.8	142	(6.5)	5.3	752	(7.4)	14.0
35–44	1,326	(16.7)	24.1	443	(20.1)	7.9	1,769	(17.4)	15.9
45–54	1,736	(21.8)	29.3	600	(27.3)	9.7	2,336	(23.0)	19.3
55–64	1,258	(15.8)	26.7	386	(17.5)	7.6	1,644	(16.2)	16.8
65–74	638	(8.0)	24.1	138	(6.3)	4.5	776	(7.6)	13.7
75–84	415	(5.2)	30.4	62	(2.8)	3.2	477	(4.7)	14.5
≥85	188	(2.4)	43.6	27	(1.2)	2.9	215	(2.1)	15.7
Unknown	**	**	**	**	**	**	**	**	**
Total	**7,965**	**(100)**	**19.8**	**2,201**	**(100)**	**5.3**	**10,167**	**(100)**	**12.4**
Race/Ethnicity									
White, non-Hispanic	6,746	(84.7)	24.6	1,888	(85.8)	6.6	8,634	(84.9)	15.4
Black, non-Hispanic	558	(7.0)	9.2	110	(5.0)	1.6	668	(6.6)	5.2
American Indian/Alaska Native	132	(1.7)	25.1	45	(2.0)	8.3	177	(1.7)	16.5
Asian/Pacific Islander	124	(1.6)	7.7	57	(2.6)	3.2	181	(1.8)	5.4
Hispanic[§§]	388	(4.9)	8.4	93	(4.2)	2.2	481	(4.7)	5.4
Other	**	**	**	**	**	**	**	**	**
Unknown	**	**	**	**	**	**	**	**	**
Total	**7,965**	**(100)**	**19.8**	**2,201**	**(100)**	**5.3**	**10,167**	**(100)**	**12.4**
Marital status[¶¶]									
Married	3,041	(39.2)	***	826	(38.8)	***	3,867	(39.1)	***
Never married	2,460	(31.7)	***	503	(23.6)	***	2,963	(30.0)	***
Widowed	421	(5.4)	***	175	(8.2)	***	596	(6.0)	***
Divorced	1,604	(20.7)	***	575	(27.0)	***	2,179	(22.0)	***
Married, but separated	41	(0.5)	***	7	(0.3)	***	48	(0.5)	***
Single, not otherwise specified	62	(0.8)	***	18	(0.8)	***	80	(0.8)	***
Unknown	127	(1.6)	***	25	(1.2)	***	153	(1.5)	***
Total	**7,756**	**(1000)**	***	**2,129**	**(100)**	***	**9,886**	**(100)**	***

* Percentages might not total 100% because of rounding.
[†] Per 100,000 population.
[§] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[¶] Sex is missing for one victim. Consequently, totals are one greater than reports for males and females.
** Number, percentage, and rate not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5 decedents.
[††] Rates not reported when number of decedents is <20 or when race/ethnicity or age categories are 'other' or 'unknown.'
[§§] 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, 16 states,[†] 2010

Characteristic	Male No.	Male (%)	Female No.	Female (%)	Total[§] No.	Total[§] (%)
Method						
Firearm	4,580	(57.5)	673	(30.6)	**5,254**	**(51.7)**
Sharp instrument	127	(1.6)	32	(1.5)	**159**	**(1.6)**
Blunt instrument	¶	¶	¶	¶	**¶**	**¶**
Poisoning	852	(10.7)	814	(37.0)	**1,666**	**(16.4)**
Hanging/Strangulation/Suffocation	1,992	(25.0)	522	(23.7)	**2,514**	**(24.7)**
Fall	129	(1.6)	48	(2.2)	**177**	**(1.7)**
Drowning	55	(0.7)	38	(1.7)	**93**	**(0.9)**
Fire/Burns	28	(0.4)	13	(0.6)	**41**	**(0.4)**
Motor vehicles (e.g., buses, motorcycles, and other transport vehicles)	89	(1.1)	20	(0.9)	**109**	**(1.1)**
Intentional neglect (e.g., starving)	¶	¶	¶	¶	**¶**	**¶**
Other (single method)	5	(0.1)	8	(0.4)	**13**	**(0.1)**
Unknown	104	(1.3)	32	(1.5)	**136**	**(1.3)**
Total	**7,965**	**(100)**	**2,201**	**(100)**	**10,167**	**(100)**
Location						
House or apartment	5,867	(73.7)	1,794	(81.5)	**7,662**	**(75.4)**
Street/Highway	268	(3.4)	54	(2.5)	**322**	**(3.2)**
Motor vehicle	201	(2.5)	32	(1.5)	**233**	**(2.3)**
Bar/Nightclub	¶	¶	¶	¶	**¶**	**¶**
Commercial/Retail area	64	(0.8)	6	(0.3)	**70**	**(0.7)**
Industrial or construction area	34	(0.4)	6	(0.3)	**40**	**(0.4)**
Office building	27	(0.3)	¶	¶	**¶**	**¶**
Parking lot/Public garage/Public transport	104	(1.3)	18	(0.8)	**122**	**(1.2)**
Abandoned house, building, or warehouse	10	(0.1)	¶	¶	**¶**	**¶**
Park, playground, sports/athletic area	136	(1.7)	20	(0.9)	**156**	**(1.5)**
Preschool/School/College/School bus	¶	¶	6	(0.3)	**¶**	**¶**
Hospital or medical facility	34	(0.4)	18	(0.8)	**52**	**(0.5)**
Supervised residential facility	27	(0.3)	10	(0.5)	**37**	**(0.4)**
Farm	30	(0.4)	¶	¶	**¶**	**¶**
Jail/Prison	121	(1.5)	13	(0.6)	**134**	**(1.3)**
Natural area	354	(4.4)	61	(2.8)	**415**	**(4.1)**
Hotel/Motel	144	(1.8)	52	(2.4)	**196**	**(1.9)**
Railroad tracks	49	(0.6)	7	(0.3)	**56**	**(0.6)**
Other	331	(4.2)	55	(2.5)	**386**	**(3.8)**
Unknown	151	(1.9)	45	(2.0)	**196**	**(1.9)**
Total	**7,965**	**(100)**	**2,201**	**(100)**	**10,167**	**(100)**

* Percentages might not total 100% because of rounding.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[§] Sex is missing for one victim. Consequently, totals are one greater than reports for males and females.
¶ Number and percentage not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5 decedents.

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, 16 states,[†] 2010

Toxicology variable	Tested No.	Tested (%)	Positive[§] No.	Positive[§] (%)
BAC[¶]	**6,755**	**(66.4)**	**2,259**	**(33.4)**
<0.08 g/dL			689	(30.5)
≥0.08 g/dL			1,467	(64.9)
Alcohol positive, level unknown			103	(4.6)
Amphetamines	4,705	(46.3)	161	(3.4)
Antidepressants	4,106	(40.4)	977	(23.8)
Cocaine	4,805	(47.3)	221	(4.6)
Marijuana	3,718	(36.6)	379	(10.2)
Opiates	4,835	(47.6)	968	(20.0)
Other drug(s)	4,984	(49.0)	2,163	(43.4)

Abbreviation: BAC = blood alcohol concentration.
* N = 10,167.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[§] Percentage 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 7. Number* and percentage[†] of suicides, by sex and precipitating circumstances — National Violent Death Reporting System, 16 states,[§] 2010

Precipitating circumstances	Male No.	Male (%)	Female No.	Female (%)	Total No.	Total (%)
Mental health/Substance abuse						
Current depressed mood	2,797	(39.8)	854	(42.7)	**3,651**	**(40.4)**
Current diagnosed mental health problem	2,738	(38.9)	1,237	(61.9)	**3,975**	**(44.0)**
Current mental health treatment	1,863	(26.5)	941	(47.1)	**2,804**	**(31.0)**
Alcohol problem	1,278	(18.2)	287	(14.4)	**1,565**	**(17.3)**
Other substance abuse problem	896	(12.7)	329	(16.5)	**1,225**	**(13.6)**
Interpersonal						
Intimate partner problem	2,275	(32.3)	540	(27.0)	**2,816**	**(31.2)**
Other relationship problem (non-intimate)	677	(9.6)	240	(12.0)	**917**	**(10.2)**
Suicide of family member or friend within past 5 years	130	(1.8)	40	(2.0)	**170**	**(1.9)**
Other death of family member or friend within past 5 years	412	(5.9)	134	(6.7)	**546**	**(6.0)**
Perpetrator of interpersonal violence within past month	282	(4.0)	27	(1.4)	**309**	**(3.4)**
Victim of interpersonal violence within past month	22	(0.3)	21	(1.1)	**43**	**(0.5)**
Life stressor						
Crisis in past or impending 2 weeks	1,985	(28.2)	446	(22.3)	**2,431**	**(26.9)**
Physical health problem	1,537	(21.9)	489	(24.5)	**2,026**	**(22.4)**
Job problem	1,160	(16.5)	229	(11.5)	**1,389**	**(15.4)**
Recent criminal legal problem	746	(10.6)	81	(4.1)	**827**	**(9.2)**
Non-criminal legal problem	306	(4.4)	68	(3.4)	**374**	**(4.1)**
Financial problem	1,001	(14.2)	223	(11.2)	**1,224**	**(13.6)**
School problem	109	(1.5)	24	(1.2)	**133**	**(1.5)**
Suicide event						
Left a suicide note	2,244	(31.9)	768	(38.4)	**3,012**	**(33.3)**
Disclosed intent to commit suicide	2,337	(33.2)	660	(33.0)	**2,997**	**(33.2)**
History of suicide attempt(s)	1,208	(17.2)	679	(34.0)	**1,887**	**(20.9)**
Total suicides with circumstances	**7,033**	**(100.0)**	**1,998**	**(100.0)**	**9,032**	**(100.0)**

* N = 9,032 (7,033 males, 1,998 females, and one unknown sex). Circumstances were unknown for 1,135 deaths.
[†] Percentages might exceed 100% because multiple circumstances might have been coded.
[§] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and 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, 16 states,§ 2010

Mental health problem	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Depression/Dysthymia	2,044	(74.7)	974	(78.7)	**3,018**	**(75.9)**
Bipolar disorder	318	(11.6)	233	(18.8)	**551**	**(13.9)**
Schizophrenia	138	(5.0)	49	(4.0)	**187**	**(4.7)**
Anxiety disorder	284	(10.4)	159	(12.9)	**443**	**(11.1)**
Post-traumatic stress disorder	77	(2.8)	31	(2.5)	**108**	**(2.7)**
Attention deficit disorder/attention deficit and hyperactivity disorder	66	(2.4)	¶	¶	**¶**	**¶**
Eating disorder	¶	¶	10	(0.8)	**¶**	**¶**
Obsessive-compulsive disorder	¶	¶	¶	¶	**18**	**(0.5)**
Other	122	(4.5)	50	(4.0)	**172**	**(4.3)**
Unknown	243	(8.9)	101	(8.2)	**344**	**(8.7)**
Total decedents with a mental health problem	2,738		1,237		**3,975**	

* N = 3,975 (2,738 males and 1,237 females).
† Percentages might exceed 100% because multiple diagnosis categories might have been coded.
§ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
¶ Number and percentage not reported when number of decedents reported is <5 or category had to be suppressed to prevent calculation of cells with <5 decedents.

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, 16 states,¶ 2010

Characteristic	No.	(%)	Rate
Method			
Firearm	2,615	(66.2)	3.2
Sharp instrument	503	(12.7)	0.6
Blunt instrument	258	(6.5)	0.3
Poisoning	17	(0.4)	**
Hanging/Strangulation/Suffocation	159	(4.0)	0.2
Personal weapons (hands, feet, fists)	135	(3.4)	0.2
Fall	13	(0.3)	**
Drowning	11	(0.3)	**
Fire/ Burns	21	(0.5)	0.0
Motor vehicles (e.g., buses, motorcycles, and other transport vehicles)	22	(0.6)	0.0
Intentional neglect	7	(0.2)	**
Other	44	(1.1)	0.1
Unknown	144	(3.6)	0.2
Total	**3,949**	**(100)**	**4.8**
Month			
January	313	(7.9)	0.4
February	248	(6.3)	0.3
March	287	(7.3)	0.3
April	316	(8.0)	0.4
May	358	(9.1)	0.4
June	352	(8.9)	0.4
July	379	(9.6)	0.5
August	342	(8.7)	0.4
September	350	(8.9)	0.4
October	356	(9.0)	0.4
November	330	(8.4)	0.4
December	310	(7.9)	0.4
Unknown	8	(0.2)	**
Total	**3,949**	**(100)**	**4.8**

* No. of incidents = 3,760; no. of victims = 3,949, and includes 3,930 victims and 19 suspects who were subsequently killed.

† Percentages might not total 100% because of rounding.

§ Per 100,000 population.

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

** Rates not reported when number of decedents is <20.

TABLE 10. Number and percentage* of homicides/legal intervention deaths, by victim's marital status and relationship to suspect — National Violent Death Reporting System, 16 states,[†] 2010

Characteristic	No.	(%)
Marital status[§]		
Married	779	(21.8)
Never married	2,045	(57.3)
Widowed	113	(3.2)
Divorced	490	(13.7)
Married, but separated	21	(0.6)
Single, not otherwise specified	33	(0.9)
Unknown	86	(2.4)
Total	**3,567**	**(100)**
Relationship		
Spouse/Intimate partner (current or former)	401	(10.2)
Parent	89	(2.3)
Child	125	(3.2)
Other intimate partner involvement[¶]	31	(0.8)
Other relative	97	(2.5)
Acquaintance/Friend	436	(11.0)
Rival gang member	34	(0.9)
Stranger	179	(4.5)
Victim injured by a law enforcement officer	164	(4.2)
Other specified relationship	320	(8.1)
Relationship unknown/Missing	2073	(52.5)
Total	**3,949**	**(100)**

* Percentages might not total 100% because of rounding.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[§] Includes only those victims aged >18 years.
[¶] Death because of intimate partner-related violence but not between the intimate partners themselves (e.g., child killed by mother's boyfriend or teenager kills his mother's boyfriend).

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, 16 states,§ 2010

Characteristic	Male			Female			Total		
	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate
Age group (yrs)									
<1	49	(1.6)	9.1	22	(2.6)	4.3	71	(1.8)	6.7
1–4	63	(2.0)	2.8	37	(4.3)	1.7	100	(2.5)	2.3
5–9	13	(0.4)	¶	15	(1.7)	¶	28	(0.7)	0.5
10–14	27	(0.9)	0.9	8	(0.9)	¶	35	(0.9)	0.6
15–19	334	(10.8)	11.3	56	(6.5)	2.0	390	(9.9)	6.8
20–24	578	(18.7)	19.9	89	(10.3)	3.2	667	(16.9)	11.7
25–29	515	(16.7)	18.2	85	(9.9)	3.0	600	(15.2)	10.7
30–34	355	(11.5)	13.3	75	(8.7)	2.8	430	(10.9)	8.0
35–44	469	(15.2)	8.5	147	(17.1)	2.6	616	(15.6)	5.5
45–54	376	(12.2)	6.3	150	(17.4)	2.4	526	(13.4)	4.3
55–64	190	(6.2)	4.0	82	(9.5)	1.6	272	(6.9)	2.8
65–74	63	(2.0)	2.4	42	(4.9)	1.4	105	(2.7)	1.8
75–84	38	(1.2)	2.8	34	(3.9)	1.8	72	(1.8)	2.2
≥85	11	(0.4)	¶	16	(1.9)	¶	27	(0.7)	2.0
Unknown	6	(0.2)	¶	4	(0.5)	¶	10	(0.3)	¶
Total	**3,087**	**(100)**	**7.7**	**862**	**(100)**	**2.1**	**3,949**	**(100)**	**4.8**
Race/Ethnicity**									
White, non-Hispanic	897	(29.1)	3.3	472	(54.8)	1.7	1369	(34.8)	2.4
Black, non-Hispanic	1669	(54.1)	27.5	283	(32.8)	4.2	1952	(49.6)	15.2
American Indian/Alaska Native	90	(2.9)	17.1	17	(2.0)	¶	107	(2.7)	10.0
Asian/Pacific Islander	31	(1.0)	1.9	21	(2.4)	1.2	52	(1.3)	1.5
Hispanic	388	(12.6)	8.4	65	(7.5)	1.5	453	(11.5)	5.1
Other	12	(0.4)	¶	††	††	††	††	††	††
Unknown	0	(0.0)	¶	††	††	††	††	††	††
Total	**3,087**	**(100)**	**7.7**	**862**	**(100)**	**2.1**	**3,949**	**(100)**	**4.8**

* Percentages might not total 100% because of rounding.
† Per 100,000 population.
§ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
¶ Rates not reported when number of decedents is <20 or race/ethnicity or age categories are "other" or "unknown".
** Includes persons of any race.
†† Number, percentage, and rate not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.

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, 16 states,[†] 2010

Method/Location	Male No.	Male (%)	Female No.	Female (%)	Total No.	Total (%)
Method						
Firearm	2,202	(71.3)	413	(47.9)	**2,615**	**(66.2)**
Sharp instrument	353	(11.4)	150	(17.4)	**503**	**(12.7)**
Blunt instrument	185	(6.0)	73	(8.5)	**258**	**(6.5)**
Poisoning	11	(0.4)	6	(0.7)	**17**	**(0.4)**
Hanging/Strangulation/Suffocation	60	(1.9)	99	(11.5)	**159**	**(4.0)**
Personal weapons (hands, feet, fists)	98	(3.2)	37	(4.3)	**135**	**(3.4)**
Fall	12	(0.4)	§	§	**§**	**§**
Drowning	§	§	§	§	**§**	**§**
Fire/ Burns	14	(0.5)	7	(0.8)	**21**	**(0.5)**
Motor vehicles (e.g., buses, motorcycles, and other transport vehicles)	17	(0.6)	5	(0.6)	**22**	**(0.6)**
Intentional neglect	§	§	§	§	**§**	**§**
Other	29	(0.9)	15	(1.7)	**44**	**(1.1)**
Unknown	94	(3.0)	50	(5.8)	**144**	**(3.6)**
Total	**3,087**	**(100)**	**862**	**(100)**	**3,949**	**(100)**
Location						
House or apartment	1,444	(46.8)	629	(73.0)	**2,073**	**(52.5)**
Street/Highway	735	(23.8)	50	(5.8)	**785**	**(19.9)**
Motor vehicle	91	(2.9)	25	(2.9)	**116**	**(2.9)**
Bar/Nightclub	49	(1.6)	§	§	**§**	**§**
Commercial/Retail Area	106	(3.4)	20	(2.3)	**126**	**(3.2)**
Industrial or construction area	11	(0.4)	§	§	**§**	**§**
Office building	7	(0.2)	6	(0.7)	**13**	**(0.3)**
Parking lot/Public garage/Public transport	144	(4.7)	25	(2.9)	**169**	**(4.3)**
Abandoned house, building, or warehouse	10	(0.3)	§	§	**§**	**§**
Park, playground, or sports/athletic area	76	(2.5)	11	(1.3)	**87**	**(2.2)**
Preschool/School/College/School bus	§	§	§	§	**§**	**§**
Hospital or medical facility	7	(0.2)	6	(0.7)	**13**	**(0.3)**
Supervised residential facility	5	(0.2)	§	§	**§**	**§**
Farm	§	§	§	§	**§**	**§**
Jail/Prison	24	(0.8)	§	§	**§**	**§**
Natural area	60	(1.9)	25	(2.9)	**85**	**(2.2)**
Hotel/Motel	29	(0.9)	11	(1.3)	**40**	**(1.0)**
Railroad tracks	0	(0.0)	§	§	**§**	**§**
Other	179	(5.8)	17	(2.0)	**196**	**(5.0)**
Unknown	107	(3.5)	24	(2.8)	**131**	**(3.3)**
Total	**3,087**	**(100)**	**862**	**(100)**	**3,949**	**(100)**

* Percentages might not total 100% because of rounding.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
§ Number and percentage not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.

TABLE 13. Number* and percentage of homicide/legal intervention victims tested for alcohol and drugs whose results were positive, by toxicology variable — National Violent Death Reporting System, 16 states,[†] 2010

Toxicology Variable	Tested		Positive	
	No.	(%)	No.	(%)[§]
BAC[¶]	**2,927**	**(74.1)**	**1,073**	**(36.7)**
<0.08 g/dL			390	(36.3)
≥0.08 g/dL			632	(58.9)
Alcohol positive, level unknown			51	(4.8)
Amphetamines	2,348	(59.5)	133	(5.7)
Antidepressants	1,696	(42.9)	78	(4.6)
Cocaine	2,368	(60.0)	243	(10.3)
Marijuana	1,494	(37.8)	443	(29.7)
Opiates	2,301	(58.3)	250	(10.9)
Other drug(s)	2,154	(54.6)	475	(22.1)

Abbreviation: BAC = blood alcohol concentration.
* N = 3,949.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[§] Percentage is of those tested.
[¶] 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.

TABLE 14. Number* and percentage[†] of homicide/legal intervention deaths, by precipitating circumstances and victim's sex — National Violent Death Reporting System, 16 states,[§] 2010

Circumstance	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Precipitated by another crime	832	(37.9)	145	(20.6)	**977**	**(33.7)**
Crime in progress[¶]	583	(70.1)	83	(57.2)	**666**	**(68.2)**
Argument over money/property	170	(7.7)	35	(5.0)	**205**	**(7.1)**
Jealousy (lover's triangle)	74	(3.4)	34	(4.8)	**108**	**(3.7)**
Other argument, abuse, conflict	882	(40.2)	157	(22.3)	**1,039**	**(35.8)**
Drug involvement	317	(14.4)	40	(5.7)	**357**	**(12.3)**
Justifiable self-defense/Law enforcement	188	(8.6)	10	(1.4)	**198**	**(6.8)**
Brawl	45	(2.1)	**	**	**	**
Mercy killing	**	**	5	(0.7)	**	**
Victim was a bystander	27	(1.2)	16	(2.3)	**43**	**(1.5)**
Victim was a police officer on duty	7	(0.3)	**	**	**	**
Victim was an intervener assisting a crime victim	8	(0.4)	0	(0.0)	**8**	**(0.3)**
Victim used a weapon	240	(10.9)	10	(1.4)	**250**	**(8.6)**
Intimate partner-violence-related	155	(7.1)	324	(46.0)	**479**	**(16.5)**
Hate crime	6	(0.3)	0	(0.0)	**6**	**(0.2)**
Mentally ill suspect	28	(1.3)	29	(4.1)	**57**	**(2.0)**
Drive-by shooting	108	(4.9)	8	(1.1)	**116**	**(4.0)**
Random violence	33	(1.5)	6	(0.9)	**39**	**(1.3)**
Gang related	131	(6.0)	6	(0.9)	**137**	**(4.7)**
Injured at work[††]	52	(2.4)	19	(2.7)	**71**	**(2.4)**

* N = 2,900 (2,195 males and 705 females). Circumstances were unknown for 1,049 deaths.
[†] Percentages might exceed 100% because multiple circumstances might have been coded.
[§] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[¶] Denominator only includes cases that were precipitated by another crime.
** Number and percentage not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.
[††] Denominator represents all homicides and legal interventions with known data for injured at work.

TABLE 15. Number and percentage* of homicides/legal intervention deaths precipitated by another crime, by type of crime — National Violent Death Reporting System, 16 states,[†] 2010

Crime type	No.	(%)
Drug trade	109	(11.2)
Robbery	379	(38.8)
Burglary	92	(9.4)
Motor vehicle theft	44	(4.5)
Arson	29	(3.0)
Rape, sexual assault	28	(2.9)
Assault, homicide	312	(31.9)
Witness intimidation/Elimination	5	(0.5)
Other	85	(8.7)
Unknown	45	(4.6)
Total	**977**	

* Percentages might exceed 100% because multiple crimes might have been coded.
[†] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.

TABLE 16. Number,* percentage,† and rate§ of undetermined deaths¶ by method used, and month in which death occurred — National Violent Death Reporting System, 16 states,** 2010

Characteristic	No.	(%)	Rate
Method			
Firearm	65	(3.3)	0.1
Sharp instrument	††	††	††
Blunt instrument	44	(2.2)	0.1
Poisoning	1,120	(56.8)	1.4
Hanging/Strangulation/Suffocation	33	(1.7)	0.0
Personal weapons (hands, feet, fists)	††	††	††
Fall	32	(1.6)	0.0
Drowning	55	(2.8)	0.1
Fire/ Burns	26	(1.3)	0.0
Motor vehicles (e.g., buses, motorcycles, and other transport vehicles)	37	(1.9)	0.0
Intentional neglect	††	††	††
Other (single method)	41	(2.1)	0.0
Unknown	514	(26.1)	0.6
Total	**1,973**	**(100)**	**2.4**
Month§§			
January	189	(9.6)	0.2
February	161	(8.2)	0.2
March	189	(9.6)	0.2
April	162	(8.2)	0.2
May	157	(8.0)	0.2
June	150	(7.6)	0.2
July	159	(8.1)	0.2
August	150	(7.6)	0.2
September	167	(8.5)	0.2
October	170	(8.6)	0.2
November	158	(8.0)	0.2
December	158	(8.0)	0.2
Total	**1,973**	**(100)**	**2.4**

* No. of incidents = 1,964; no. of victims = 1,973.
† Percentages might not total 100% because of 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.
** Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
†† Number, percentage, and rate not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.
§§ The month of death was unknown for three cases.

TABLE 17. Number, percentage,* and rate[†] of undetermined deaths,[§] by victim's sex, age group, race/ethnicity, and marital status — National Violent Death Reporting System, 16 states,[¶] 2010

Characteristic	Male			Female			Total		
	No.	(%)	Rate	No.	(%)	Rate	No.	(%)	Rate
Age group (yrs)									
<1	184	(15.3)	34.1	109	(14.1)	21.1	293	(14.9)	27.8
1–4	11	(0.9)	0.5	14	(1.8)	0.7	25	(1.3)	0.6
5–9	**	**	**	**	**	**	**	**	**
10–14	7	(0.6)	††	5	(0.6)	††	12	(0.6)	††
15–19	41	(3.4)	1.4	10	(1.3)	††	51	(2.6)	0.9
20–24	74	(6.2)	2.5	32	(4.1)	1.1	106	(5.4)	1.9
25–29	109	(9.1)	3.9	49	(6.3)	1.8	158	(8.0)	2.8
30–34	95	(7.9)	3.6	48	(6.2)	1.8	143	(7.2)	2.7
35–44	193	(16.1)	3.5	139	(18.0)	2.5	332	(16.8)	3.0
45–54	264	(22.0)	4.4	209	(27.0)	3.4	473	(24.0)	3.9
55–64	152	(12.7)	3.2	103	(13.3)	2.0	255	(12.9)	2.6
65–74	32	(2.7)	1.2	24	(3.1)	0.8	56	(2.8)	1.0
75–84	19	(1.6)	††	8	(1.0)	††	27	(1.4)	0.8
85>	9	(0.8)	††	13	(1.7)	††	22	(1.1)	1.6
Unknown	**	**	**	**	**	**	**	**	**
Total	**1,199**	**(100)**	**3.0**	**774**	**(100)**	**1.8**	**1,973**	**(100)**	**2.4**
Race/Ethnicity									
White, non-Hispanic	868	(72.4)	3.2	568	(73.4)	2.0	1,436	(72.8)	2.6
Black, non-Hispanic	209	(17.4)	3.4	135	(17.4)	2.0	344	(17.4)	2.7
America Indian/Alaska Native	24	(2.0)	4.6	24	(3.1)	4.4	48	(2.4)	4.5
Asian/Pacific Islander	16	(1.3)	1.0	**	**	**	**	**	††
Other	**	**	**	0.0	(0.0)	0.0	5.0	(0.3)	††
Unknown	**	**	**	**	**	**	**	**	**
Hispanic[§§]	76	(6.3)	1.6	44	(5.7)	1.0	120	(6.1)	1.3
Total	**1,199**	**(100)**	**3.0**	**774**	**(100)**	**1.8**	**1,973**	**(100)**	**2.4**
Marital status[¶¶]									
Married	231	(23.7)	***	215	(33.5)	***	446	(27.6)	***
Never married	454	(46.5)	***	163	(25.4)	***	617	(38.2)	***
Widowed	31	(3.2)	***	53	(8.3)	***	84	(5.2)	***
Divorced	234	(24.0)	***	188	(29.3)	***	422	(26.1)	***
Married, but separated	6	(0.6)	***	5	(0.8)	***	11	(0.7)	***
Single, not otherwise specified	6	(0.6)	***	8	(1.2)	***	14	(0.9)	***
Unknown	14	(1.4)	***	9	(1.4)	***	23	(1.4)	***
Total	**976**	**(100)**	*****	**641**	**(100)**	*****	**1,617**	**(100)**	*****

 * Percentages might not total 100% because of 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.
 ¶ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
 ** Number, percentage, and rate not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.
 †† Rate not reported when number of decedents is <20 or when race/ethnicity is "other" or "unknown."
 §§ Includes persons of any race.
 ¶¶ Includes only those decedents aged >18 years.
 *** Rates cannot be computed for marital status because denominators are unknown.

TABLE 18. Number and percentage* of undetermined deaths,[†] by decedent's sex, method used, and location in which injury occurred — National Violent Death Reporting System, 16 states,[§] 2010

Characteristic	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Method						
Firearm	49	(4.1)	16	(2.1)	**65**	**(3.3)**
Sharp instrument	¶	¶	0	(0.0)	**¶**	**¶**
Blunt instrument	29	(2.4)	15	(1.9)	**44**	**(2.2)**
Poisoning	646	(53.9)	474	(61.2)	**1,120**	**(56.8)**
Hanging/Strangulation/Suffocation	25	(2.1)	8	(1.0)	**33**	**(1.7)**
Personal weapons (hands, feet, fists)	¶	¶	¶	¶	**¶**	**¶**
Fall	23	(1.9)	9	(1.2)	**32**	**(1.6)**
Drowning	34	(2.8)	21	(2.7)	**55**	**(2.8)**
Fire/Burns	21	(1.8)	5	(0.6)	**26**	**(1.3)**
Motor vehicles (e.g., buses, motorcycles and other transport vehicles)	22	(1.8)	15	(1.9)	**37**	**(1.9)**
Intentional neglect (e.g., starving a baby)	0	(0.0)	¶	¶	**¶**	**¶**
Other	31	(2.6)	10	(1.3)	**41**	**(2.1)**
Unknown	314	(26.2)	200	(25.8)	**514**	**(26.1)**
Total	**1,199**	**(100)**	**774**	**(100)**	**1,973**	**(100)**
Location						
House or apartment	886	(73.9)	654	(84.5)	**1,540**	**(78.1)**
Street/Highway	39	(3.3)	17	(2.2)	**56**	**(2.8)**
Motor vehicle	11	(0.9)	4	(0.5)	**15**	**(0.8)**
Bar/Nightclub	¶	¶	0	(0.0)	**¶**	**¶**
Commercial/Retail area	¶	¶	¶	¶	**5**	**(0.3)**
Industrial or construction area	7	(0.6)	0	(0.0)	**7**	**(0.4)**
Office building	¶	¶	0	(0.0)	**¶**	**¶**
Parking lot/Public garage/Public transport	13	(1.1)	¶	¶	**¶**	**¶**
Abandoned house/Building/Warehouse	5	(0.4)	0	(0.0)	**5**	**(0.3)**
Park, playground, sports/Athletic area	13	(1.1)	5	(0.6)	**18**	**(0.9)**
Preschool/School/College/School bus	0	(0.0)	¶	¶	**¶**	**¶**
Hospital or medical facility	7	(0.6)	10	(1.3)	**17**	**(0.9)**
Supervised residential facility	17	(1.4)	5	(0.6)	**22**	**(1.1)**
Farm	¶	¶	0	(0.0)	**¶**	**¶**
Jail/Prison	5	(0.4)	¶	¶	**¶**	**¶**
Natural area	55	(4.6)	14	(1.8)	**69**	**(3.5)**
Hotel/Motel	21	(1.8)	8	(1.0)	**29**	**(1.5)**
Railroad tracks	8	(0.7)	¶	¶	**¶**	**¶**
Other	31	(2.6)	7	(0.9)	**38**	**(1.9)**
Unknown	73	(6.1)	38	(4.9)	**111**	**(5.6)**
Total	**1,199**	**(100)**	**774**	**(100)**	**1,973**	**(100)**

* Percentages might not total 100% because of 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.
[§] Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
[¶] Number and percentage are not reported when number of decedents is <5 or if indicated, the entire category is not reported to prevent calculation of cells with <5.

TABLE 19. Number* and percentage of decedents of undetermined intent[†] tested for alcohol and drugs whose results were positive, by toxicology variable — National Violent Death Reporting System, 16 states,[§] 2010

Toxicology variable	Tested		Positive	
	No.	(%)	No.	(%)[¶]
BAC**	**1,564**	**(79.3)**	**436**	**(27.9)**
<0.08 g/dL			151	(34.6)
≥0.08 g/dL			276	(63.3)
Alcohol positive, level unknown			9	(2.1)
Amphetamines	1,509	(76.5)	52	(3.4)
Antidepressants	1,386	(70.2)	414	(29.9)
Cocaine	1,528	(77.4)	212	(13.9)
Marijuana	741	(37.6)	74	(10.0)
Opiates	1,565	(79.3)	879	(56.2)
Other drug(s)	1,552	(78.7)	873	(56.3)

Abbreviation: BAC = blood alcohol concentration.

 * N = 1,973.

 [†] 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, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.

 [¶] Percentage is of those tested.

** 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.

TABLE 20. Number* and percentage[†] of deaths of undetermined intent,[§] by decedent's sex and precipitating circumstances — National Violent Death Reporting System, 16 states,[¶] 2010

Characteristic	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Mental health/Substance abuse						
Current depressed mood	128	(13.7)	113	(17.8)	**241**	**(15.4)**
Current diagnosed mental health problem	300	(32.2)	323	(50.9)	**623**	**(39.7)**
Current mental health treatment	213	(22.8)	265	(41.7)	**478**	**(30.5)**
Alcohol problem	316	(33.9)	120	(18.9)	**436**	**(27.8)**
Other substance abuse problem	489	(52.4)	316	(49.8)	**805**	**(51.3)**
Interpersonal						
Intimate partner problem	112	(12.0)	77	(12.1)	**189**	**(12.1)**
Other relationship problem (non-intimate)	45	(4.8)	30	(4.7)	**75**	**(4.8)**
Suicide of family member or friend within past 5 years	6	(0.6)	7	(1.1)	**13**	**(0.8)**
Other death of family member or friend within past 5 years	35	(3.8)	30	(4.7)	**65**	**(4.1)**
Perpetrator of interpersonal violence within past month	10	(1.1)	**	**	**	**
Victim of interpersonal violence within past month	9	(1.0)	9	(1.4)	**18**	**(1.1)**
Life stressor						
Crisis in past or impending 2 weeks	104	(11.1)	85	(13.4)	**189**	**(12.1)**
Physical health problem	211	(22.6)	218	(34.3)	**429**	**(27.4)**
Job problem	53	(5.7)	24	(3.8)	**77**	**(4.9)**
Recent criminal legal problem	58	(6.2)	14	(2.2)	**72**	**(4.6)**
Noncriminal legal problem	14	(1.5)	11	(1.7)	**25**	**(1.6)**
Financial problem	43	(4.6)	30	(4.7)	**73**	**(4.7)**
School problem	5	(0.5)	**	**	**	**
Suicide event						
Left a suicide note	10	(1.1)	13	(2.0)	**23**	**(1.5)**
Disclosed intent to commit suicide	98	(10.5)	82	(12.9)	**180**	**(11.5)**
History of suicide attempt(s)	82	(8.8)	116	(18.3)	**198**	**(12.6)**

* N = 1,568 (933 males and 635 females). Circumstances were unknown for 405 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, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
** Number and percentage not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.

TABLE 21. Number* and percentage† of decedents of undetermined intent§ who had received a diagnosis of a current mental health problem, by diagnosis — National Violent Death Reporting System, 16 states,¶ 2010

Mental health problem	Male		Female		Total	
	No.	(%)	No.	(%)	No.	(%)
Depression/Dysthymia	177	(59.0)	203	(62.8)	**380**	**(61.0)**
Bipolar disorder	71	(23.7)	72	(22.3)	**143**	**(23.0)**
Schizophrenia	25	(8.3)	15	(4.6)	**40**	**(6.4)**
Anxiety disorder	48	(16.0)	65	(20.1)	**113**	**(18.1)**
Post-traumatic stress disorder	8	(2.7)	7	(2.2)	**15**	**(2.4)**
Attention deficit disorder/ Attention deficit and hyperactivity disorder	9	(3.0)	**	**	**	**
Eating disorder	**	**	5	(1.5)	**	**
Obsessive compulsive disorder§§	**	**	**	**	**	**
Other	18	(6.0)	10	(3.1)	**28**	**(4.5)**
Unknown	38	(12.7)	45	(13.9)	**83**	
Total	**300**		**323**		**623**	

* N = 623 (300 males and 323 females).
† Percentages might 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, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
** Number and percentage are not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.

TABLE 22. Number* and percentage† of unintentional firearm deaths, by decedent's sex, race/ethnicity, age group, month in which the death occurred, and location of injury — National Violent Death Reporting System, 16 states,§ 2010

Characteristic	No.	(%)
Sex		
Male	82	(84.5)
Female	15	(15.5)
Total	**97**	**(100)**
Race/Ethnicity		
White, non-Hispanic	74	(73.9)
Black, non-Hispanic	12	(13.6)
American Indian/Alaska Native	6	(6.8)
Asian/Pacific Islander	0	(0.0)
Hispanic¶	5	(5.7)
Total	**97**	**(100)**
Age		
<1	0	(0.0)
1–4	7	(7.2)
5–9	7	(7.2)
10–14	11	(11.3)
15–19	16	(16.5)
20–24	12	(12.4)
25–29	8	(8.2)
30–34	††	††
35–44	9	(9.3)
45–54	13	(13.4)
≥55	8	(8.2)
Unknown	††	††
Total	**97**	**(100)**
Month		
January	10	(10.3)
February	7	(7.2)
March	††	††
April	9	(9.3)
May	5	(5.2)
June	8	(8.2)
July	11	(11.3)
August	9	(9.3)
September	9	(9.3)
October	7	(7.2)
November	10	(10.3)
December	9	(9.3)
Unknown	††	††
Total	**97**	**(100)**
Location		
House or apartment	65	(67.0)
Street/Highway	5	(5.2)
Natural area	14	(14.4)
Other or Unknown**	13	(13.4)
Total	**97**	**(100)**
Firearm type		
Handgun	40	(41.2)
Shotgun	11	(11.3)
Rifle	19	(19.6)
Other firearm	0	(0.0)
Unknown	27	(27.8)
Total	**97**	**(100)**

* N = 97.
† Percentages might not total 100% because of rounding.
§ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
¶ Includes persons of any race.
** Includes military training exercise, private land campsites, and private hunting land attached to homes.
†† Number and percentage are not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.

TABLE 23. Number* and percentage† of unintentional firearm deaths, by context and circumstances of injury — National Violent Death Reporting System, 16 states,§ 2010

Circumstances	No.	(%)
Context of injury		
Hunting	11	(13.6)
Target shooting	¶	¶
Loading/Unloading gun	¶	¶
Cleaning gun	7	(8.6)
Showing gun to others	11	(13.6)
Playing with gun	26	(32.1)
Other context of injury	24	(29.6)
Circumstances of injury		
Thought gun was unloaded, magazine disengaged, or other	11	(13.6)
Unintentionally pulled trigger	31	(38.3)
Other mechanism of injury	36	(44.4)

* N = 81. Circumstances were unknown for 16 deaths.
† Percentages might exceed 100% because multiple circumstances might have been coded.
§ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
¶ Number and percentage are not reported when number of decedents is <5 or category had to be suppressed to prevent calculation of cells with <5.