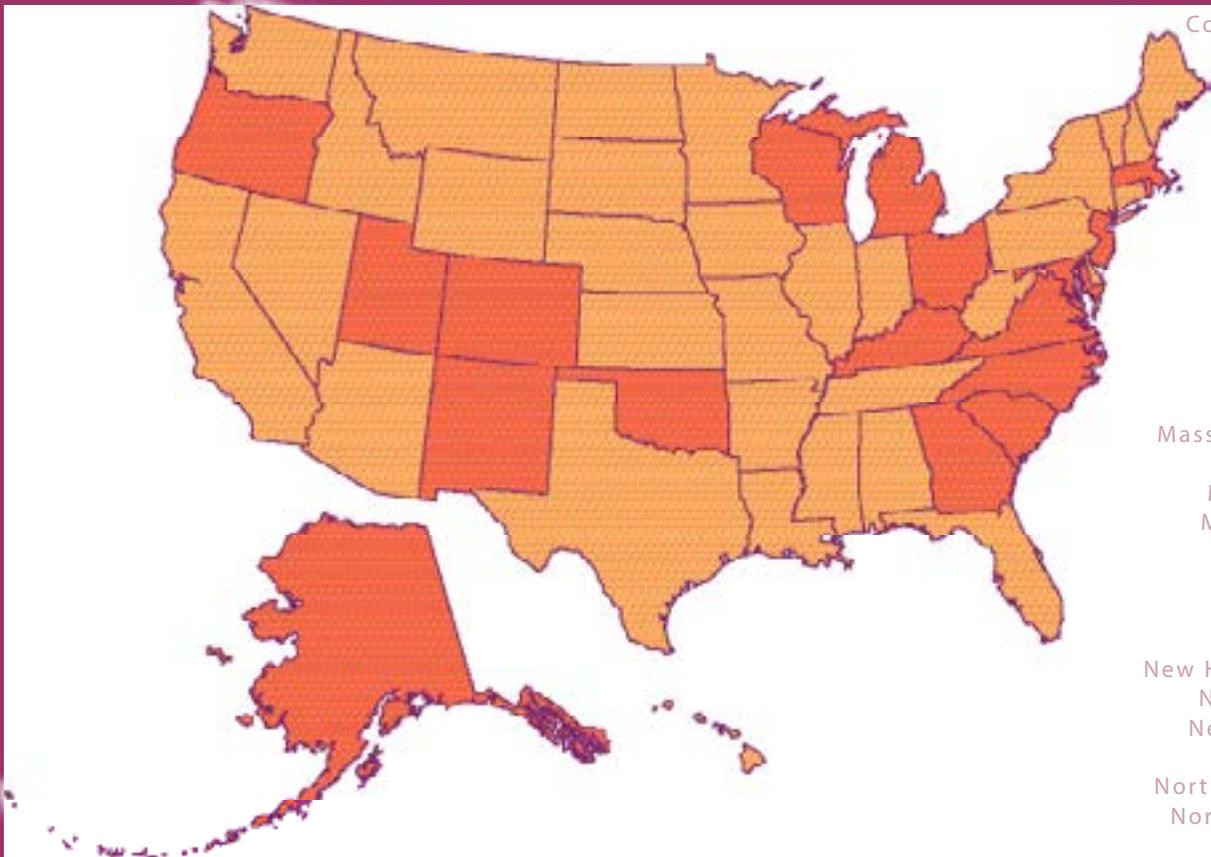


Deaths from Violence

A Look at 18 States



- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming

July 2013

Data from the National Violent Death Reporting System 2009 - 2010

Deaths from Violence: A Look at 18 States

Data from the National Violent Death Reporting System
2009 and 2010

This publication was supported by The National Violence Prevention Network

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Sanford C and Hedegaard H (editors). Deaths from Violence: A Look at 17 States—Data from the National Violent Death Reporting System. December 2008.

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Executive Summary

Each year in the United States, more than 50,000 people die from acts of violence, including more than 32,000 deaths from suicide and 18,000 deaths from homicide. In 2002, the Centers for Disease Control and Prevention (CDC) implemented the National Violent Death Reporting System (NVDRS). The NVDRS is a state-based, epidemiologic reporting system that collects risk factor data on all deaths from violence, specifically homicides, suicides, unintentional deaths due to firearms, deaths due to legal intervention, deaths of undetermined intent and deaths due to acts of terrorism.

Currently, CDC funds 18 states participation in the NVDRS. These states include Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin. Significant state-level heterogeneity is often masked when aggregate data are analyzed at the national level. This report highlights the state-level similarities and differences in the numbers, characteristics and circumstances of deaths from violence.

Two-page summaries from each VDRS state describe the frequency, at-risk populations, circumstances and means or methods associated with deaths from violence. Each state summary also provides examples of how VDRS data are used to support state and local violence prevention efforts. Compared to national aggregate information state-level data provide a more detailed picture that can better inform the choice of violence prevention measures most likely to be effective locally.

Key findings:

- In every state, suicides outnumbered homicides. In Alaska, Oregon and Utah, the annual number of suicides was more than five times that of homicides (5.1, 6.1 and 9.6, respectively).
- The occurrent ratio for suicides varied by state. The occurrent suicide ratio for Alaska (22 suicides per 100,000 residents) was almost three times that of New Jersey (8 suicides per 100,000 residents).
- In all states, except Maryland, the occurrent suicide ratio was higher for males than for females.

- New Mexico and Alaska had the highest occurrent suicide ratio among those 17 years of age and younger, as well as the highest occurrent suicide ratio for those 18 and older.
- Firearms were used in more than 60% of the suicides in Alaska, Kentucky, and Oklahoma, but in fewer than 25% of the suicides in Massachusetts.
- There were 3 states that did not have firearm as the most common method for men to commit suicide (Massachusetts, New Jersey, and Rhode Island).
- In general in the past, male suicide victims were more likely to use a firearm, while females were more likely to die from drug overdose (poisoning). In 2009 and 2010 this was the case in nine of the NVDRS states. In two states there was the same proportion of females dying by poisoning and dying by hanging/suffocation. In the remaining seven states females were more likely to die from the more lethal means generally used by males (firearms and hanging/suffocation).
- On average for all NVDRS states, 34% of suicide victims were identified as having a diagnosed mental health problem. The percent of this circumstance varied by state from a low of 13% of suicides in Georgia to 53% of suicides in Utah.
- On average, 28% of suicide victims were identified as having problems with a current or former intimate partner that appeared to have contributed to the suicide. The percent by state ranged from less than 20% of the suicides in Georgia, New Jersey and Kentucky to more than 40% of the suicides in Alaska and Utah.
- Some suicide victims were noted to have physical health problems, such as terminal or debilitating illnesses, that appeared to have contributed to the decision to die by suicide. This circumstance was found to occur more frequently elderly suicide victims. On average, 19% of suicide victims were identified as having physical health problems. The percent by state ranged from less than 10% of the suicides in Massachusetts to 30% or more of the suicides in Colorado.
- Although reported less frequently than other circumstances, financial problems were identified, on average, in 12% of the suicides. The percent by state ranged from a low 6% of all suicides in Georgia to a high of 24% of the suicides in Colorado.

Executive Summary, continued

- Often suicide victims expressed suicidal feelings or disclosed to others their intent to die by suicide. On average for all NVDRS states, this circumstance was noted in 28% of the suicides ranging from 10% of the suicides in Kentucky to 40% or more of the suicides in Alaska, Oregon, and Utah.
- As with suicides, the occurrence ratio for homicides also varied by state. The occurrence homicide ratio for New Mexico, the state with the highest ratio (8 homicides per 100,000 residents), was more than four times that of Utah, the state with the lowest ratio (2 homicides per 100,000 residents).
- Males had higher occurrence homicide ratios than females in every state, except Maryland. Maryland was the only state to have a higher occurrence homicide ratio for females than for males (2.2 per 100,000 versus 1.4 per 100,000).
- In all states, adults (18 years and older) had higher occurrence homicide ratios than minors (17 years and younger). The highest occurrence adult homicide ratios were seen in Maryland and New Mexico. The two highest occurrence minor homicide ratios were seen in South Carolina and Oklahoma.
- Because the NVDRS is incident-based, it is possible to distinguish homicide incidents in which only one person died from incidents in which multiple people died. For all states, most homicide incidents involved a single victim. The percent of homicide incidents with multiple victims varied by state, from 5% of the homicide incidents in Rhode Island to 25% of the homicide incidents in Alaska.
- On average for all NVDRS states, 64% of homicides were firearm-related. In North Carolina and Maryland, 70% or more of the homicides were firearm-related. In contrast, 50% or less of the homicides in Utah and New Mexico involved a firearm.
- By far, the leading homicide circumstance was an argument or other interpersonal conflict, not including arguments over money or property or intimate partner violence or jealousy. On average among all the NVDRS states, an argument or other interpersonal conflict was identified in 26% of homicides. The percent varied from 5% of the homicides in Rhode Island to 42% of the homicides in Colorado, North Carolina, and Utah.
- Of all the NVDRS states, 43% of homicides were identified as being associated with robbery and the second most common was assault/homicide at 17% of the states. The

percent of homicides associated with robbery varied by state, ranging from 29% of the homicides reported by Colorado to 70% of the homicides reported by Wisconsin.

- On average among the NVDRS states, intimate partner violence was reported as a precipitating factor in about 12% of homicides. The percent by state varied from less than 5% of the homicides in New Jersey to more than 20% of all homicides in Oregon, Alaska, and Utah. For all states, however, females were more likely than males to be the victim in homicides involving intimate partner violence.

Also discussed in this report are differences in the quality and availability of information gathered in death investigations. Although all NVDRS states are required to collect data from multiple sources, the completeness of the data varies from state to state. Most NVDRS states are able to collect complete information on the demographics of the victim and on the means or methods involved in the death. However, capturing detailed information on the circumstances of violent deaths can be challenging. Additionally, definitions and investigation standards for coroners, medical examiners, law enforcement officers and others who are responsible for investigating unexpected deaths are not standardized and uniform from state to state.

The state-level heterogeneity described in this report emphasizes the need for a truly national database that includes participation of all states. Without full participation, not only is the national picture incomplete, but states lack access to the essential data they need to design, implement and evaluate state and community level violence prevention programs and policies to address their unique needs.

Introduction

Each year in the United States, more than 50,000 people die as a result of violence-related injuries, including more than 32,000 deaths from suicide and 18,000 deaths from homicide.¹ In 2010, suicide was the 2nd leading cause of death in 25-35 year olds and 3rd in ages 10-24. Homicide was the second leading cause of death among 15-24 year olds and 3rd leading cause of death among 1-4 year olds and 25-34 year olds.¹ Many of these violent deaths can be prevented. An essential first step in designing effective prevention strategies is ensuring the availability of complete, accurate and timely information, particularly with regard to the populations at risk and the circumstances and factors that contribute to deaths from violence.

In 2002, the Centers for Disease Control and Prevention (CDC) began implementation of the National Violent Death Reporting System (NVDRS).² The NVDRS collects detailed information at the state-level on all deaths due to violence, including homicides, suicides, unintentional deaths due to firearms, deaths due to legal intervention, deaths of undetermined intent and deaths resulting from acts of terrorism.³ In contrast to other national surveillance systems that gather data from a single source, NVDRS data are collected from multiple sources including death certificates, coroner/medical examiner reports, law enforcement investigations, crime labs, and Supplemental Homicide Reports. Analyses of NVDRS data are used to assist in the development, implementation and evaluation of programs and policies designed to reduce and prevent deaths from violence at the local, state and national levels.

Although recent reports from analysis of the NVDRS data are beginning to improve our understanding of deaths from violence, the picture is far from complete. CDC currently funds 18 states to participate in the NVDRS. Additional support is needed so that the remaining 32 states, District of Columbia and the U.S. Territories can also contribute to our national understanding of deaths

due to violence.

PURPOSE OF THIS REPORT: By providing state-level results, this report highlights the similarities and differences in the numbers, characteristics and circumstances of deaths from violence in each of the 18 funded NVDRS states. Additionally, examples of the differences in the sources, quality and completeness of data in each state are also described. The considerable state-level heterogeneity demonstrated throughout this report emphasizes the need to support all states to participate in and contribute to the national database in understanding violent death.

With detailed information collected at the state level, local prevention efforts can be targeted to specific populations and circumstances, as needed in the state, something that is not possible when only national estimates or aggregate values are available.

ORGANIZATION OF THIS REPORT: Following this introduction is a brief description of several factors to consider when analyzing NVDRS data, and reasons why the results presented in this report might differ from those derived from other data sources or analysis methodologies. This description will help orient the reader to some of the subtleties and complexities of working with the NVDRS data.

Table 1 on page 9 provides a quick look at the magnitude of deaths from violence among the 18 states participating in 2009-2010 in the NVDRS. Table 1 summarizes several measures for all deaths from violence as well as for five subgroups: suicides, homicides, unintentional deaths resulting from use of a firearm, deaths due to legal intervention and deaths for which the manner of death is undetermined.

The report continues with a brief summary of results for each state. These summaries begin with background

Introduction, continued

information about the state, followed by a short narrative on the populations and circumstances associated with deaths from violence. When possible, similar scales and colors are used in the figures to encourage within-and across-state comparisons. Additionally, examples of special studies, state-level use of the data, partnerships and collaborations are also provided. The state summaries provide a brief overview for comparison purposes within this report.

Following the state summaries is a section that highlights some of the similarities and differences among the states. The examples provided in this section clearly demonstrate that the populations and patterns for each state are both universally similar or quite unique.

The NVDRS is an invaluable tool for informing prevention strategies and policies that will ultimately reduce the burden of deaths from violence in the U.S. That tool will be even more powerful when all states have the resources to participate.

Analysis Considerations

As mentioned in the Introduction, the National Violent Death Reporting System (NVDRS) is a complex surveillance system designed to capture detailed information on all violent deaths from multiple sources. As such, there are several unique components of this surveillance system that should be considered when reviewing the results provided in this report.

Violent Death Case Definition: The NVDRS definition of a death from violence is rather broad and includes such categories as intentional deaths (suicide and homicide), unintentional deaths resulting from use of a firearm, deaths resulting from legal intervention, terrorism-related deaths and deaths for which the manner is undetermined.⁶ It is this last category (deaths with undetermined manner) that significantly influences the total number of deaths from violence presented in this report. According to the NVDRS Coding Manual, deaths with undetermined manner include those deaths “resulting 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 the evidence indicating another manner of death.”⁷ Frequently, these are deaths resulting from drug overdose for which the intent of the death (unintentional/accidental vs. intentional/ suicide vs. intentional/homicide) cannot be clearly determined. The policies and practices regarding the assignment of “undetermined manner of death” are not standardized throughout the U.S. Therefore, some states, such as Maryland, Utah and Alaska, have a relatively high percent of deaths from violence classified as “undetermined manner of death”, whereas other states, such as South Carolina, New Jersey, and Rhode Island, have a low percent of deaths classified as “undetermined manner of death” (Table 1 on pages 9).

Because of the broad case definition used by the NVDRS, the numbers and ratios of total violent deaths reported by this surveillance system will likely differ from those reported from other systems. For example, in the CDC’s Web-based Injury Statistics Query and Reporting System (WISQARS), violence-related deaths include homicides, suicides and deaths resulting from legal intervention.¹ They do not include unintentional deaths resulting from use of a firearm, terrorism-related deaths or deaths with

undetermined manner. Thus, depending on the subcategories included, the numbers and rates of total violent deaths determined from NVDRS data can differ substantially from those determined from WISQARS. This is discussed in greater detail in Appendix 3.

Occurrent Deaths: The structure of the NVDRS allows for capture of both resident and occurrent deaths. Resident deaths are those in which the decedent was a resident of the reporting state at the time of fatal injury, regardless of whether the injury occurred in the reporting state or some other state. Occurrent deaths are those in which the decedent was fatally injured in the reporting state, whether or not the decedent was a resident of the reporting state. In the following tables, only occurrent deaths are used due to the limited investigation data that was collected on resident deaths outside of the reporting state’s geographical boundaries.

State and federal agencies traditionally report vital statistics in terms of residence data. That is, mortality rates are typically derived from the number of violent deaths among residents divided by resident population. Occurrence statistics, however, are based on all violent deaths that occur in the geographic area of interest, not just the deaths of residents. Occurrence statistics can provide a different measure of a state’s burden of deaths from violence because all violent deaths are included in the numerator. The occurrent ratio, in contrast to the mortality rate, is derived from the total number of violent deaths in the specified geographic area divided by the resident population of the geographic area.

Identifying Subcategories of Violent Deaths: As previously mentioned, NVDRS data are captured from multiple sources, including death certificates, coroner/medical examiner reports and law enforcement investigations. Typically, each source assigns a manner (intent) of death, such as suicide, homicide, or unintentional/accidental. In most instances, the different sources agree on the manner of death; however, occasionally, there can be a discrepancy between sources (for example, one source might categorize the death as a suicide while another source might categorize the death as undetermined manner). In these instances, the NVDRS state abstractor

Analysis Considerations, continued

is instructed to assign a manner of death based on the preponderance of information available from all sources. The manner of death assigned by the abstractor must agree with the manner of death assigned by at least one of the primary sources (death certificates, coroner/medical examiner reports or law enforcement investigations). Use of the “abstractor-defined manner of death” to assign cases to subcategories of violent deaths can result in slight differences in counts compared to cases categorized using the ICD-10 underlying cause of death codes on death certificates (the method used by the National Center for Health Statistics and WISQARS).

Intimate Partner Conflict Coding Considerations: Prior to 2009 Intimate Partner Problems could only be selected as a precipitating circumstance for suicide deaths and Intimate Partner Violence for homicides. Beginning in 2009 and continuing in 2010, both Intimate Partner Problems and Intimate Partner Violence could be selected as a precipitating circumstance for both homicides and suicides. In other words, a person could have been in an intimate relationship where they were a victim of domestic violence and then die by suicide. The abstractor would code the circumstance of that example as Intimate Partner Violence with a manner of death coded as a suicide.

It is important to note that not all state coding practices changed in 2009 and 2010 and there were several states that had a zero cell count for IPV/suicide and IPP/homicide. This could be the real description of Intimate Partner Conflict in those states or it could be an undercounting of either IPV or IPP. Even with this possible coding discrepancy, Intimate Partner Conflict warrants focus in this report. To review this data from an epidemiological population-based standpoint, looking for answers to the tragedy of violent death, Intimate Partner Conflict emerges through time and across the country as one of the primary reasons for violent death. These coding options will continue to be evaluated to determine best recording and reporting practices from 2011 forward.

The following is a more thorough description of Intimate Partner Conflict, used in the NVDRS.

Intimate Partner Conflict Definitions

Intimate Partner Violence (IPV): IPV circumstance identifies cases in which there has been a history of violence within an intimate relationship and/or IPV can be considered a precipitating circumstance to a violent death. Typically IPV leads to homicide, but there are also cases where there was violence in the relationship, historically or immediately precipitating the death, where the person died by suicide. An intimate partner is defined as a current or former girlfriend/boyfriend, date, or spouse. If other people are also killed (child, friend, bystander), and even if the intimate partner is not (e.g., the child of the intimate partner is the victim) they will be considered victims of IPV in regard to violent death.

Examples:

A woman and her lawyer are getting into a car; the woman’s ex-boyfriend walks up to the woman and shoots her and the lawyer. The circumstance for these homicides would be IPV.

A man and his boyfriend are out at a party. The ex-boyfriend is outraged that he would be at the party with his new boyfriend. The ex-boyfriend pulls out a gun and shoots both.

A man and woman are out on their first date. They go back to her apartment after the date. The man tries to force the woman into bed and strangles her to death.

A man shoots the child of his ex-girlfriend to get back at her for leaving him. The woman is not killed.

A man is beating his ex-girlfriend. The son of the woman intervenes and stabs the boyfriend to death.

A man threatens to stab his wife and she calls the police. Police respond to the home and the man is shot by law enforcement officers as he lunges at them with the knife.

Analysis Considerations, continued

A woman hangs herself at her residence. She is arguing with her boyfriend prior to the incident and cuts herself and threatens to cut him also unless he leaves. She was bi-polar as well as depressed. She leaves a suicide note. This would be considered an IPV suicide because of her threatening violence.

A man shoots himself at his home. He severely abuses alcohol, has had suicidal ideations in the past, and a history of being a domestic abuser.

Intimate Partner Problems (IPP): IPP identifies suicide cases that are related to problems or conflict between intimate partners. As with IPV, an intimate partner is defined as a current or former girlfriend/boyfriend, date, or spouse.

The burden of caring for an ill spouse or partner should not be coded as an intimate partner problem unless there is evidence of relationship problems. Phrases such as “victim was having relationship problems” can be assumed to indicate intimate partner problems.

Examples:

The victim goes to his old house, shoots his estranged wife, and then shoots himself. This is also coded as homicide followed by suicide.

The victim was engaged in a bitter custody dispute with her ex-husband.

Police arrested the victim a week ago for violating a restraining order that his girlfriend had filed.

A wife reports that she and the victim had been arguing and she spent the night at her mother’s.

Victim was having relationship problems.

Victim was lonely and felt isolated.

A man hangs himself at his residence. He has a history of depression but does not take any medications. He is also upset over his girlfriend leaving him.

Statistical Measures:

Data are from the NVDRS Restricted Access Database (RAD). Definitions and terms can be found in Appendix 1. Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state’s population for the applicable time period and multiplied by 100,000. Populations are categorized based on race and Hispanic origin. The categories include White (non-Hispanic), Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic) and Hispanic (all races). For many states when distinguishing between races other than White and Black the numbers were too small to report. In those cases race was categorized into White and non-White groups. The non-White group includes Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic).

The percent of cases with a given circumstance (i.e. intimate partner violence) is based on the total number of suicides and homicides. Circumstantial information is not collected/available for all cases of violent death.

In this report, adults and minors are distinguished using the definition of adult as 18 and older and the definition of minor as 17 and under.

In preparing this report, several decisions were made that influence the results presented. These decisions should be considered when reviewing the report and when comparing the results presented here with those derived from other data sources or analysis methods. These decisions include:

- Using the full NVDRS case definition to determine the total number of deaths due to violence (that is, including deaths with undetermined manner and unintentional firearm-related deaths in the total number of violent deaths)
- Providing occurrent ratios rather than mortality rates that are based on residency status. Occurrent ratios provide a more comprehensive description of a state’s burden of deaths from violence.

Analysis Considerations, continued

Table 1 on page 9 compares the magnitude of the deaths from violence among the 18 states currently participating in the NVDRS. Several measures are used to characterize all deaths from violence as well as deaths in five subgroups: suicides, homicides, unintentional deaths resulting from use of a firearm, deaths due to legal intervention and deaths for which the manner of death is undetermined. Two measures are shown for each category: (1) the number of violent deaths that occurred in each state from 2009-2010, regardless of the person's state of residence; and (2) the number of occurrent violent deaths per 100,000 resident populations (occurrent ratio).

In comparing the occurrent ratios for all violent deaths, it is important to note the differences among states in the percent of cases that were categorized as deaths with undetermined manner. The percent of these types of cases varied from a low 0.5% of all violent deaths in South Carolina to a high of 11.3% of all violent deaths in Maryland.

There are two states that have incomplete information due to recently becoming part of the NVDRS.

Michigan: Data collection in Michigan began in 2009. Due to its large size, Michigan does not collect data statewide because data collection is being phased in by county. Consequently, users will need to decide when it is appropriate or inappropriate to use data that is not statewide. Limited information on circumstances is available in Michigan and users should evaluate the data before including in analyses.

Ohio: Data collection in Ohio began in 2009. Due to its large size, Ohio does not collect data statewide because data collection is being phased in by county. Consequently, users will need to decide when it is appropriate or inappropriate to use data that is not statewide.

State	Total Deaths from Violence		Suicides		Homicides		Unintentional Firearm Deaths		Deaths due to Legal Intervention		Deaths with Undetermined Manner	
	Number of occurrent deaths	Occurrent deaths per 100,000 population	Number of occurrent	Occurrent suicides per 100,000	Number of occurrent	Occurrent homicides per 100,000	Number of occurrent	Occurrent unintentional firearm deaths per 100,000	Number of deaths due to legal intervention	Occurrent legal intervention deaths per 100,000 population	Number of undetermined deaths	Occurrent undetermined deaths per 100,000 population
Alaska	506	35.1	311	21.6	61	4.2	9	‡	7	‡	118	8.2
Colorado	2461	24.4	1826	18.1	367	3.6	19	‡	29	0.3	220	2.2
Georgia	4134	21.2	2300	11.8	1299	6.7	29	0.1	24	0.1	481	2.5
Kentucky	1676	19.3	1083	12.4	365	4.2	19	‡	*	‡	207	2.4
Maryland	3283	28.4	1072	9.3	870	7.5	5	‡	33	0.3	1303	11.3
Massachusetts	1799	13.7	1144	8.7	397	3.0	0	‡	13	‡	245	1.9
New Jersey	2189	12.4	1351	7.7	689	3.9	6	‡	17	‡	126	0.7
New Mexico	1353	32.7	816	19.7	335	8.1	11	‡	30	0.7	161	3.9
North Carolina	3742	19.6	2407	12.6	1100	5.7	28	0.1	44	0.2	163	0.9
Oklahoma	1963	26.1	1230	16.3	463	6.1	13	‡	14	‡	243	3.2
Oregon	1842	23.9	1384	18.0	226	2.9	7	‡	24	0.3	201	2.6
Rhode Island	335	15.9	254	12.0	58	2.7	0	‡	0	‡	23	1.1
South Carolina	1979	21.3	1239	13.3	678	7.3	11	‡	5	‡	46	0.5
Utah	1580	28.5	939	16.9	98	1.8	*	‡	20	0.4	519	9.4
Virginia	3064	19.1	1973	12.3	749	4.7	25	0.2	32	0.2	285	1.8
Wisconsin	2015	17.7	1522	13.4	328	2.9	7	‡	6	‡	152	1.3

FOOTNOTES:

Definitions of terms are found in Appendix 1.

Methodology is described in Appendix 2.

VDRS (Violent Death Reporting System) refers to the 18 states that are currently funded by and contribute data to the National Violent Death Reporting System (NVDRS). Michigan and Ohio are not included in this table due to the lack of data during the two year time period (2009-2010).

Occurrent deaths are those in which either the state where the fatal injury occurred or the state where the person died (if the state of injury is unknown) is the reporting state, regardless of the person's state of residence.

* Indicates a cell size of 1-4 deaths

‡ Ratios are not calculated for cells containing fewer than 20 deaths

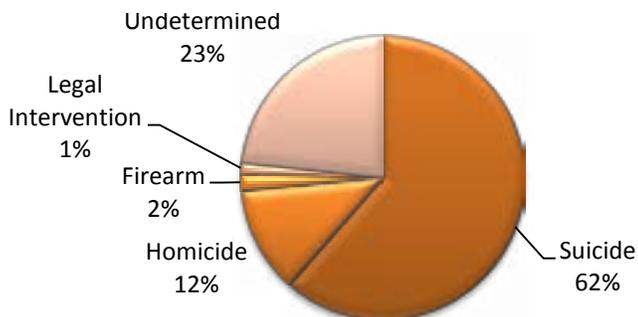


Alaska's expansive geography, combined with its sparse population, cultural diversity, and rural infrastructure limitations, creates unique physical and social environments. Although Alaska is approximately one-fifth the size of the contiguous United States, two-thirds of Alaskan communities have no road access. In fact, Alaska's limited highway infrastructure is composed of only 2,100 miles. While more than 70% of Alaskans reside in urban areas, there are 297 villages, towns, and cities with populations of less than 2,500 people. One city, Anchorage, houses 42% of the state's population. Another unique characteristic of the state is the high percent of the population who are American Indians/Alaska Natives (15% in Alaska compared to 1% nationally). The Alaska Violent Death Reporting System (AKVDRS), established in 2003, provides a comprehensive picture of deaths due to violence in America's last frontier.

AKVDRS Population

Nearly all (74%) violent deaths occurring in Alaska in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=311, 62%) of violent death in Alaska. Homicide ranked second (N=61, 12%) as the most common manner of violent death. The remaining death was attributed to undetermined manner (N=118, 23%) and unintentional firearm death (N=9, 2%).

Figure 1. Alaska Violent Death Composite: 2009-2010



AKVDRS Population Compared to State Population

The gender composition of the AKVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the AKVDRS, which indicates there were more male deaths than would be expected from the number of male persons residing in Alaska. The racial composition of the AKVDRS population varied from the state population. American Indians/Alaska Natives had a much higher percentage than those residing in the state, while Whites had a lower percentage in homicides than those residing in Alaska.

Manner and Method/Means of Death Suicide

American Indians/Alaska Natives had the highest occurrent suicide ratio of all races in every state (46 per 100,000 resident population). Asian/Pacific Islanders had an occurrent suicide ratio of 7.9 per 100,000 residents.

The majority (61%) of individuals dying by suicide, including all races (White, Black, American Indian/Alaska Native and Asian/P.I.), used a firearm. The second leading cause of suicide death was hanging, strangulation or suffocation (23%) and of those deaths, approximately 11% were American Indian/Alaska Native.

Alaskan males had the highest occurrent suicide ratio of all NVDRS states (33 per 100,000), which was more than 3 times the occurrent suicide ratio of females.

While 67% of adults died by suicide in 2009-2010, most violent death to minors (58%) were of undetermined intent and approximately 25% were suicide.

Homicide

There were a total of 61 homicides in Alaska in 2009-2010 and the majority of those homicides were adult (85%) males (75%). Of all the homicides, 41% were White and 39% were American Indian/Alaska Native.

More than half of the homicides were firearm-related (59%); 26% were White and 16% were American Indian/Alaska Native. American Indians/Alaska Natives had the highest occurrent homicide ratio of all races in every state (43 occurrent homicides per 100,000 resident population). Asian and Pacific Islanders had an occurrent homicide ratio of 6.1 per 100,000 residents.

Males had approximately 3 times the occurrent homicide ratio as females. Of all male suicides, 65% used a firearm, while of female suicide 49% used a firearm as the means of dying by suicide. Adults had two times the homicide ratio as minors (5 and 2.4 per 100,000).

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 128 (41%) of all suicide cases, and in 8 (13%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 14 (23%) of all homicide cases, and in 7 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=244	Females N=67	Males N=46	Females N=15
Intimate Partner Violence	6 (2.46%)	<5	<5	10 (66.67%)
Intimate Partner Problem	98 (40.16%)	30 (44.78%)	<5	5 (33.33%)

- Females in Alaska who died by suicide had a 21% higher odds (1.21 OR) of exposure to intimate partner problems than males (Table 1).
- Due to the small number of homicide cases in Alaska, odds of gender intimate partner violence comparisons and intimate partner problem experience could not be calculated (Table 1).

Alaska Violent Death Reporting System Partnerships and Collaborations:

The AKVDRS has expanded the scope of information and its collaboration with the following agencies, programs and projects:

- Alaska Department of Public Safety–Village Public Safety Officer Program
- Alaska Gatekeeper Program Suicide Prevention Training Program
- Alaska Maternal-Infant Mortality Review and Child Death Review
- Alaska Native Tribal Health Consortium
- Alaska Native Health Epidemiology Center
- Alaska Substance Abuse Epidemiologic Workgroup

• Alaska Suicide Prevention Council

• Alaska Veteran's Affairs Healthcare

• Informed Alaskans – Indicator-Based Information System and Geographic Mapping Using InstantAtlas™ Project

• University of Alaska–Justice Center, MPH Program, and Resilience and Adaptive Management Group

Through collaboration across sectors, the information collected and analyzed supports the many outreach activities throughout the state. Challenges in identifying and filling data gaps have demonstrated the success of the system to meet information short- and long-term surveillance needs.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

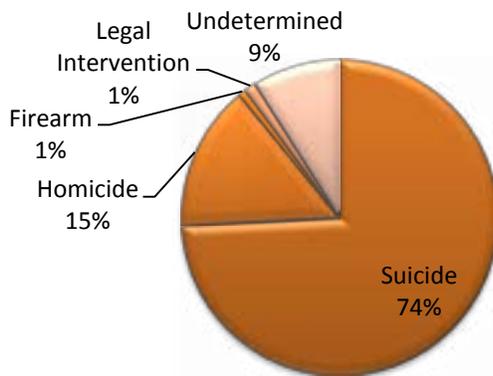


Colorado, a Rocky Mountain state with a population of 5.1 million, has the sixth highest suicide rate in the nation. The majority of the 64 counties are rural, and 68% of the state's population resides in the eight-county Denver metropolitan area. Colorado's population is 88% White, 4% Black, 3% Asian, 2% Native American, and 3% other/mixed race; 21% of the population is of Hispanic origin. The Colorado Violent Death Reporting System (COVDRS) began in 2003, with the first year of data collection in 2004. The current summary includes data from 2009-2010.

COVDRS Population

Nearly all (89%) violent deaths occurring in Colorado in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1826, 74%) of violent death in Colorado. Homicide ranked second (N=367, 15%) as the most common manner of violent death. The remaining death was attributable to undetermined manner (N=220, 9%), unintentional firearm death (N=19, 1%), and legal intervention (N=29, 1%).

Figure 1. Colorado Violent Death Composite: 2009 - 2010



COVDRS Population Compared to State Population

The gender composition of the COVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the COVDRS population, which indicates there were more male deaths than would be expected from the number of male persons residing in Colorado. The violent death racial distribution had a higher percentage of Black individuals than those residing in Colorado.

Manner and Method/Means of Death

Suicide

Of all suicides in Colorado, 47% were attributed to White individuals using a firearm and only 5% of suicide death were by individuals of a non-White race (Black, American Indian/Alaska Native or Asian/P.I.).

Over 1,500 adult males died by suicide in 2009-2010 in Colorado, which led to an occurrent suicide ratio of 28 per 100,000 residents. The males had just over 3 times the occurrent suicide ratio of females (9 suicides per 100,000).

Suicides among men most frequently involved firearms (55%), while suicides among women most frequently involved poisoning (39%), although 27% of women also used a firearm as the method.

Fewer minors died by suicide during these years (45%), but of the 45%, over half (59%) were attributed to hanging, strangulation or suffocation.

Homicide

There were a total of 367 homicides in Colorado in 2009-2010 and the majority were White (78%) males (74%), 18 years and older (87%).

The occurrent homicide ratio in males was 5.4 per 100,000 residents, while in females it was 1.9 per 100,000.

More than half of the homicides were firearm-related (55%). Of those firearm homicides, 73% killed were White and 25% were Black.

The highest homicide ratio were seen in Black individuals (17 per 100,000). Adults had two times the homicide ratio as minors (4.2 and 1.9 per 100,000).

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 673 (37%) of all suicide cases, and in 55 (15%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 52 (14%) of all homicide cases, and in 30 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=1,401	Females N=425	Males N=272	Females N=95
Intimate Partner Violence	29 (2.07%)	<5	17 (6.25%)	35 (36.84%)
Intimate Partner Problem	517 (36.9%)	156 (36.71%)	21 (7.72%)	34 (35.79%)

- Female homicide cases had almost 6 times the prevalence of intimate partner violence (PRR=5.9) and 4.5 times the prevalence of intimate partner problems (PRR=4.5) when compared to male homicide cases (Table 1).
- In examining just suicide cases, there was no association between gender and intimate partner problems (Table 1).

Colorado Violent Death Reporting System Partnerships and Collaborations:

Approximately eighty percent of the violent deaths that occur in Colorado are suicides, and Colorado has one of the highest suicide rates in the country.

A natural partnership has developed between the Colorado Violent Death Reporting System (COVDRS) and the Injury, Suicide, and Violence Prevention (ISVP) Program at the Colorado Department of Public Health and Environment. The Department's responsibility for the coordination of suicide prevention activities in the state was written into statute in 2000. Initially, the vital statistics death data were a primary source of information for the ISVP program to use in describing the scope of the problem.

However, since the COVDRS was implemented in Colorado, a more complete picture of the circumstances has given the ISVP program the ability to more effectively direct and target the suicide prevention efforts in Colorado.

Additionally, the COVDRS and the Denver Veteran's Health Administration collaborated on a project to link the COVDRS data to veteran records in order to identify those veterans who have or have not accessed health services through the VA and who later committed suicide.

Data from the COVDRS have also been provided to a national VA research project, to various researchers, to state and local public health agencies, and in response to media requests.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

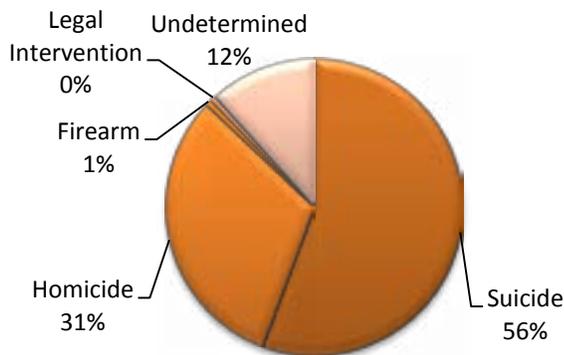


With a population of 9.9 million, Georgia is the fifth fastest growing state in the U.S. Georgia's diversity is demonstrated by its combination of rural, suburban, and urban areas, a large African-American and a growing Hispanic population, and both poor and affluent counties. Data from the Georgia Violent Death Reporting System (GVDRS) describe the deaths due to violence that occurred in the state in 2009-2010.

GVDRS Population

Nearly all (87%) violent deaths occurring in Georgia in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=2300, 56%) of violent death in Georgia. Homicide ranked second (N=1299, 31%) as the most common manner of violent death. The remaining death was attributable to undetermined manner (N=481, 12%) and unintentional firearm death (N=29, 1%).

Figure 1. Georgia Violent Death Composite: 2009 - 2010



GVDRS Population Compared to State Population

The gender composition of the GVDRS population had a different distribution than the state population. There was a much larger proportion of male fatalities in the GVDRS than the state, which indicates there were more male deaths than would be expected from the number of male persons residing in Georgia. The racial composition of violent deaths had a different distribution. The violent death distribution had a higher percentage of Black individuals than those residing in Georgia.

Manner and Method/Means of Death

Suicide

Suicide death in Georgia varied by gender, age and race. Of all suicide deaths, 49% were White individuals who used a firearm and 9% were non-White.

The majority of adults died by suicide through the use of firearms (58%) and of minors, 49% were firearm-related suicides; 35% of suicide deaths were by hanging, strangulation or suffocation.

Males had a much higher suicide ratio when compared to females (almost 4 times the ratio of females). The ratio for males was 19 suicides per 100,000 residents, while females was 5 per 100,000.

Of all male suicides, 62% of them were attributed to firearms. There were nearly 500 females who died by suicide in 2009 and 2010 and of those deaths, 44% used a firearm; 21% were due to poisoning.

Homicide

The majority of deaths in adults were suicides (61%); in contrast, 56% of minor deaths were of undetermined intent and 28% were homicides. There were a total of 1,299 homicides in Georgia in 2009-2010 and the majority of them were Black (63%) males (76%), 18 years and older (90%).

Males had a much higher occurrent homicide ratio than the females in Georgia. Males had a ratio of 10.5 per 100,000 residents while females were 3.1 per 100,000. The highest homicide ratio was seen in Black individuals (14 per 100,000). Adults had two times the homicide ratio as minors (4.2 and 1.9 per 100,000).

More than half the homicides in the state involved a firearm (66%). Of those firearm homicides, 69% killed were Black and 25% were White. The second most common weapon type was a sharp instrument which accounted for 8% of all the homicides in the state.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 443 (19%) of all suicide cases, and in 126 (10%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 102 (8%) of all homicide cases, and in 52 (2%) of all suicide cases, in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide		Total
	Males N=1,821	Females N=478	Males N=996	Females N=303	
Intimate Partner Violence	47 (2.58%)	5 (1.05%)	46 (4.62%)	56 (18.48%)	154
Intimate Partner Problem	359 (19.71%)	84 (17.57%)	47 (4.72%)	79 (26.07%)	569
Total	454	65	93	135	723

- Male suicide cases had 3 times the prevalence of intimate partner violence when compared to female suicide cases (Table 1).
- Male homicide cases had 2.5 times the prevalence of intimate partner violence than females, but female homicide cases had 5.6 times the prevalence of intimate partner problems when compared to the male cases.

Georgia Violent Death Reporting System Partnerships and Collaborations:

- Georgia Violent Death Reporting System (GA-VDRS) collaborates with the Georgia Coalition of Domestic Violence, Georgia Violence Prevention Partnership, Georgia Association of Black Elected Officials, Georgia Department of Behavioral Health and Developmental Disabilities, Georgia Bureau of Investigation Forensic Sciences Division, Georgia Coroners' Association, Georgia Suicide Prevention Coalition and the Governors of Office of the Child Advocate Child Fatality Review Board.

- GA-VDRS increases public awareness and data use of violent deaths in Georgia through partnership with the Emory Center for Injury Control (ECIC), ECIC is a collaborative, multi-institution research center aimed at reducing the burden of violence and unintentional injuries. Although housed in Emory University's School of Medicine, the center is comprised of diverse professionals and disciplines from Emory University, 9 other state universities, public agencies, private organizations, and community stakeholders.

- Conducted data workshops on the usefulness of GA-VDRS and NVDRS data to a broad spectrum of stakeholders, podcasts are available on ECIC website (www.emorycenterforinjurycontrol.org).

- Georgia homicide and suicide data summary, Georgia Violent Death Surveillance Report are published on the Georgia Public Health website <http://health.state.ga.us/epi/cdiee/gvdrs.asp> to provide a synopsis of the burden of violent deaths in Georgia.

- Other publication includes a joint study between the Georgia Coalition of Domestic Violence and GA-VDRS data to further understand violent deaths among African American women 18 to 25 years of age.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

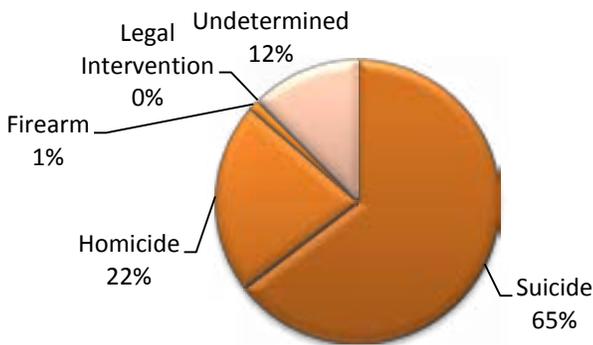


The U.S. Census Bureau estimates Kentucky's 2012 population to be nearly 4.4 million, a growth of nearly 200,000 in six years. Kentucky's racial distribution is self-reported as 89% White, 8% Black, 1% Asian, and 3% Hispanic or Latino. The Commonwealth of Kentucky is one of 12 states home to the Appalachian Mountain Range. Of the 120 Kentucky counties, 51 are Appalachian, making up an estimated 28% of the state's population. Louisville and Lexington are Kentucky's two largest cities, representing 12.5% of the population. The Kentucky Violent Death Reporting System (KVDRS) was initially funded through Kentucky's Department for Public Health and expanded data collection to become part of the NVDRS in 2004. The KVDRS is a unique part of the NVDRS, being the only state system not located at the state health department, but acting as a bona fide agent of the DPH at the University of Kentucky. The KVDRS addresses the need for accurate surveillance and data analysis by combining data from death certificates, coroner/medical examiner reports, police reports, crime laboratory reports and toxicology reports, to identify those populations at risk for violent death.

KVDRS Population

Nearly all (86%) violent deaths occurring in Kentucky in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1083, 65%) of violent death in Kentucky, occurring almost three times as often as homicides (N=365, 22%) (Figure 1). The remaining death was attributed to undetermined manner (N=207, 12%) and unintentional firearm death (N=19, 1%).

Figure 1. Kentucky Violent Death Composite: 2009 - 2010



KVDRS Population Compared to State Population

The gender composition of the KVDRS population had a different distribution than the state population. There was a much higher proportion of male fatalities in the KVDRS population, which indicates there were more male deaths than would be expected from the number of male persons residing in Kentucky. The racial composition of KVDRS had a different distribution. There was a higher percentage of White individuals than those residing in the state. The homicide racial distribution had higher percentage of Black individuals than those residing in Kentucky.

Manner and Method/Means of Death

Suicide death in Kentucky varied by gender, age and race. Of violent death in adults the majority (66%) were suicides and of violent deaths in minors 45% were homicide.

Suicide

The majority of adults and minors died by suicide through the use of a firearm (66% of adult suicides and 52% of minor suicides).

Most suicides involving a firearm were White males (63% White, 57% male). The second most common method for suicide in Kentucky was hanging, strangulation or suffocation (17% of all suicides).

The occurrent suicide ratio of males in Kentucky was 21 per 100,000 residents and females it was 5 per 100,000.

Poisoning was the third most common cause of death of all suicides in Kentucky (13%) and the second most common in females (34% of all female suicides versus 8% in males).

Homicide

There were a total of 365 homicides in Kentucky in 2009-2010 and the majority of them were White (71%) males (73%), 18 years and older (88%).

Males had an occurrent homicide ratio of 6.3 per 100,000 and females had a ratio of 2.2 homicides per 100,000 residents.

More than half of homicides in the state were attributed to a firearm (65%) or a sharp instrument (11%).

The highest homicide ratios were seen in Black individuals (14.5 per 100,000); Whites had a ratio of 3.4 per 100,000 and Asian/Pacific Islanders 1.0 per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 171 (16%) of all suicide cases, and in 53 (15%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 46 (13%) of all homicide cases, and in 19 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=880	Females N=203	Males N=267	Females N=97
Intimate Partner Violence	17 (1.93%)	<5	16 (5.99%)	30 (30.93%)
Intimate Partner Problem	147 (16.70%)	24 (11.82%)	16 (5.99%)	37 (38.14%)

• Males who died by suicide had a 40% higher prevalence of intimate partner problems when compared to females who died by suicide.

• Females who died by homicide had 5.2 times the prevalence of intimate partner violence and 6.3 times the prevalence of intimate partner problems when compared to male homicide victims (Table 1).

Kentucky Violent Death Reporting System Partnerships and Collaborations:

The KVDRS, is part of both the Kentucky Injury Prevention and Research Center and the College of Public Health, Department of Epidemiology at the University of Kentucky. The KVDRS program has initiated, maintained and continually developed partnerships and collaborations with data sources, stakeholders, workgroups, government agencies and researchers.

Together with Kentucky coroners, KVDRS staff developed a statewide Coroner Investigation Report form and, from that, a Coroner Investigation Reporting Web-based System, which is used by over half of Kentucky's 120 county coroners. This past year the CIRS Web-based System was developed for use on smart phones and hand held devices such as the iPad. This has improved death investigations, timeliness, record keeping and reporting practices.

The KVDRS has partnered with Kentucky's Suicide Prevention Group, Association of Sexual Assault Programs, Louisville Veterans Medical Center, Death Registration Stakeholders Planning Group (for conversion to the electronic death certificate reporting system) and the State Core Injury Prevention and Control Program. More specifically, the KVDRS has partnered with the Attorney General's Domestic Violence Task Force to develop policy to establish a state DV team, local teams and provided data for the final report to the A.G. and Governor. The KVDRS has provided epidemiological data and oversight for the state's Children Justice Act Task Force.

The KVDRS has assisted researchers in preparing grants and contracts and assisted in deliverables. Some grant activity includes participation in the State and Tribal Youth Suicide Prevention Grant Program; National Institutes of Health, Suicide Bereavement in Military and their Families and the Elder Maltreatment Surveillance Pilot project.

The KVDRS, alone or in collaboration, has published peer-reviewed manuscripts, local, state and national reports and presented findings at local, state and national conferences. Titles of the most recent activities include: Exposure to Suicide in Veterans and Community Members: A Random Digit Dial Study; Elder Maltreatment Surveillance Project: Kentucky and North Carolina; Homicide-Followed-By-Suicide Incidents Involving Child Victims; An Ecological Approach to Preventing Suicide Using the National Violent Death Reporting System and County Level Health Status Data; Does place of residence affect risk of suicide? A spatial epidemiological investigation; Divergence in Causative Factors for Suicide in Men and Women: National Recommendations to Raise Public Awareness; The PAPM, Diffusion Theory, and Violent Death Surveillance. All activities can be found in their entirety on our project web-site: www.kvdrs.ky.gov.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Appendix X for a description of IPP and IPV and examples of both.

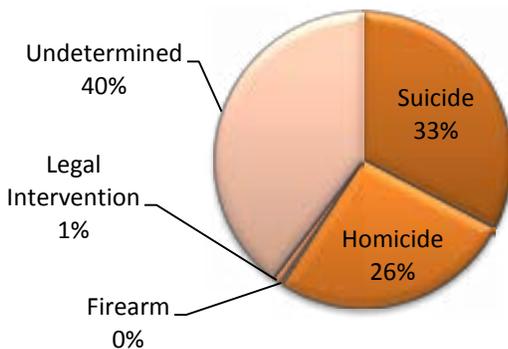


Maryland is a diverse east coast state with an estimated 5.8 million residents in 2012. The population is 61% White, 30% Black, 6% Asian, and 9% Hispanic. Approximately 86% of the state is considered urban and 14% rural. The Maryland Violent Death Reporting System (MVDRS) has collected data since 2003; however, only 2009 and 2010 data are presented in this report.

MVDRS Population

Over half (59%) violent deaths occurring in Maryland in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1072, 33%) of violent death in Maryland. Homicide was the second (N=870, 27%) leading manner of violent death. The remaining death was attributable to undetermined manner (N=1303, 40%) and unintentional firearm death (N=5, <1%).

Figure 1. Maryland Violent Death Composite: 2009 - 2010



MVDRS Population Compared to State Population

The gender composition of the MVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the MVDRS population, which indicates there were more male deaths than would be expected from the number of male persons residing in Maryland. The racial composition of violent death had a slightly different distribution than the state. There was a slightly higher percentage of White individuals and a much higher percentage of Black individuals.

Manner and Method/Means of Death

In contrast to other states, except selected counties in Michigan, Maryland had a high proportion of adult violent deaths where the intent of the violence could not be determined (40%). The occurrent ratio of undetermined manner of death was 11 per 100,000 residents.

Suicide

The suicide ratios of White individuals in Maryland was 13 per 100,000 and of non-White individuals was 5.4 per 100,000 residents.

Maryland was the only state in the NVDRS that had a higher suicide ratio in females than in males (4 per 100,000 versus 2 per 100,000).

Of all suicides, 36% were White individuals who used a firearm, 8% were non-White individuals who used a firearm and 39% were males who used a firearm.

The most common method of suicide death in females was hanging, strangulation or suffocation (31%) and the second most common was poisoning (28%).

Of the total adult suicide deaths in 2009-2010, 45% used a firearm, while two thirds of all minors who died by suicide died by hanging, strangulation or suffocation (67%).

Homicide

There were a total of 870 homicides in Maryland in 2009-2010 and the majority were attributed to the use of a firearm (71%). Of all homicides, 85% were males, 18 years and older (92%).

In firearm-related homicides (615 decedents), 85% were Black individuals and 13% were White. Firearms were the primary weapon used when both males and females were killed. Maryland was one of the few states where females (2.2 per 100,000) had a higher homicide ratio than males (1.4 per 100,000).

The highest homicide ratio was seen in Black individuals (19.7 per 100,000), Whites had a ratio of 2.8 per 100,000 and Asian/Pacific Islanders 1.0 per 100,000 residents.

Maryland had the second highest adult homicide ratio of all NVDRS (9.0 per 100,000). Minors had a ratio of 2.5 per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 288 (27%) of all suicide cases, and in 49 (6%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 60 (7%) of all homicide cases, and in 12 (1%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=863	Females N=209	Males N=737	Females N=133
Intimate Partner Violence	12 (1.39%)	<5	22 (2.99%)	38 (28.57%)
Intimate Partner Problem	235 (27.23%)	53 (25.36%)	16 (2.17%)	33 (24.81%)

- Women who died by homicide had 11 times the prevalence of intimate partner problems when compared to male homicide cases and over 9 times the prevalence of intimate partner violence when compared to males (Table 1.)
- Males and females who died by suicide had similar prevalence of intimate partner problems.

Maryland Violent Death Reporting System Partnerships and Collaborations:

The MVDRS formed an Advisory Committee consisting of representatives from the Chief Medical Examiner's Office, Vital Statistics Administration, State Police, the Governor's Commission on Suicide Prevention, and the State Child Fatality Review Team. This Committee assists with data dissemination and formulating ways in which MVDRS data can be used to improve state and local violence prevention efforts.

The University of Maryland Shock Trauma Center used MVDRS data as part of a long term evaluation of their violence prevention program, and looks forward to collaborating with MVDRS on violence prevention efforts in the future.

Dr. Alan Berman of the American Association of Suicidology proposed developing a targeted suicide prevention model specific to Maryland based on MVDRS data. We are currently in search of grant-funding to move the concept forward.

A research paper written by MVDRS staff was published in the peer-reviewed, open-access journal *Suicidology Online*, 2012. The paper analyzed Maryland suicides by victim age and supported the idea of developing age-targeted suicide prevention models for the state. The paper was also presented at the American Association of Suicidology's 45th Annual Conference.

The MVDRS has released annual violent death reports, a seven-year cumulative violent death report, a data brochure, and several county-specific fact sheets to state and local health departments and violence prevention organizations.

Recent data dissemination and public outreach efforts include a 1-hour violence prevention webinar and a 90-minute workshop entitled "Using Data to Tell Victims' Stories" at the 24th Annual Maryland Suicide Prevention Conference.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

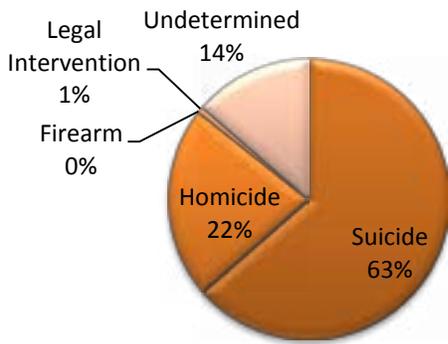


Massachusetts (MA) is located in the New England region of the northeastern United States. The population of approximately 6.6 million is concentrated in the urban and suburban areas of the eastern side of the state. In 2010, the population of Massachusetts was 76% non-Hispanic White, 8% Black, 6% Asian, < 1% Native American, and 10% Hispanic. The MA Violent Death Reporting System (MAVDRS) began in 2002 as one of the original 6 NVDRS states, with the first year of data collection in 2003. This report presents data for 2009-2010.

MAVDRS Population

Nearly all (86%) violent deaths occurring in Massachusetts in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1144, 64%) of violent death in Massachusetts. Homicide was the second (N=397, 22%) most common manner of violent death. The remaining death was attributable to undetermined manner (N=235, 14%) and legal intervention (N=13, 1%).

Figure 1. Massachusetts Violent Death Composite: 2009 - 2010



MAVDRS Population Compared to State Population

The gender composition of the MAVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the MAVDRS, which indicates there were more male deaths than would be expected from the number of male persons residing in Massachusetts. The racial composition of violent deaths had a different distribution. The violent death racial distribution had a much higher percentage of White individuals than those residing in the state.

Manner and Method/Means of Death

Suicide

Unlike other NVDRS states (with the exception of New Jersey and Rhode Island), the leading cause of suicide death in Massachusetts was hanging, strangulation or suffocation (47% of all suicide deaths; 38% were males; 8% were females; 43% were White; 4% were non-White).

Firearms were the second leading cause of death by suicide (19% White). White individuals had a suicide ratio of 10 per 100,000.

The male suicide ratio for Massachusetts was 14 per 100,000 residents, which was over 3 times that of females (4 suicides per 100,000).

Of all female suicides, the two most common methods of suicide were poisoning and hanging, strangulation or suffocation (40% for both).

In both adults and minors, the most common cause of death by suicide was hanging, strangulation or suffocation (47% and 67%).

Homicide

There were a total of 397 homicides in Massachusetts in 2009-2010 with the majority firearm-related (60%). The second most common weapon type was a sharp instrument (22%).

Of all homicides, 76% were male, 89% were adults (18 years and older) and 46% White. When only firearm-related homicides were considered (238), 55% of them occurred in Black individuals and 33% in White individuals.

The highest homicide ratios were seen in Blacks (19.4 per 100,000); Whites had a ratio of 1.7 per 100,000.

Homicide occurrent ratios for males (4.8 per 100,000) were higher than for females (1.4 per 100,000). Adults had a homicide ratio of 3.5 per 100,000 and minors 1.5 per 100,000.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 298 (26%) of all suicide cases, and in 31 (8%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 56 (14%) of all homicide cases, and in 28 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=906	Females N=238	Males N=303	Females N=94
Intimate Partner Violence	27 (2.98%)	<5	9 (2.97%)	47 (50.00%)
Intimate Partner Problem	246 (27.15%)	52 (21.85%)	5 (1.65%)	26 (27.66%)

- Female homicide victims had almost 17 times the prevalence of intimate partner violence when compared to male homicide victims (Table 1).
- Males who died by suicide had 20% times the prevalence of intimate partner problems when compared to females who died by suicide (Table 1).

Massachusetts Violent Death Reporting System Partnerships and Collaborations:

- MAVDRS continues to maintain and develop strong relationships with injury prevention professionals and collaborates with them in numerous areas. MAVDRS also analyzes and disseminates timely data in a variety of ways to both prevention professionals and to the public:
- MAVDRS has had an ongoing relationship with the Massachusetts Suicide Prevention Program. Data are routinely analyzed for the Program as they develop initiatives, disseminate MAVDRS data to their prevention partners, and for grant proposals. Funding in the amount of \$4.5 million has been awarded to the Prevention Program from proposals that included data analyzed from MAVDRS.
- MAVDRS has begun working with the Massachusetts Executive Office of Health and Human Services to provide data for the Governor's Council on Youth Violence Prevention.

- Veterans' suicides are an important state and national topic for which MAVDRS routinely provides data to prevention partners.
- MAVDRS has created a number of publications on specific violent death topics which have been disseminated to the public including: Homicides and Assault-related Injuries in Massachusetts: 2009 Data Summary, A Closer Look: Youth Suicide Incidents, A Closer Look: Homicide-Suicide Incidents. Data from MAVDRS is included in the annual Suicides and Self-Inflicted injuries in Massachusetts: Data Summary, with 2010 being the first data year that MAVDRS was used exclusively for the suicide analysis.
- Data dissemination also occurs through the MAVDRS Fast Track which is a monthly report emailed to prevention professionals and other interested parties throughout the Commonwealth. The Fast Track is comprised of the most current monthly numbers by intent.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.



Michigan, the 8th largest state in the country, has an estimated population of 9.9 million. Michigan's population is largely White (80%), 14% Black, 0.6% Native American, and 6% Other Races or Multiracial; 4.4% of the population is Hispanic/Latino. Forty-one percent of the state's population lives in just three of its 83 counties, which are located in the southeast quadrant of the state. The northern half of the Lower Peninsula and the Upper Peninsula of Michigan are largely rural. Michigan has the 16th highest overall homicide rate in the country and also, according to the FBI, has the two most violent cities in the US. There are almost twice as many suicides in Michigan as homicides. The Michigan Violent Death Reporting System (MIVDRS) was first funded in 2009 and began data collection in 2010.

MIVDRS Population

Nearly all (87%) violent deaths occurring in Michigan in 2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=889, 54%) of violent death in Michigan. Homicide was the second (N=544, 33%) most common manner of violent death. The remaining death was attributable to undetermined manner (N=202, 12%), legal intervention (N=3, <1%) and unintentional firearm death (N=1, <1%).

Figure 1. Michigan Violent Death: 2010

MIVDRS Population Compared to State Population

The gender composition of the MIVDRS selected counties had a different distribution than the state population. There was a much higher percentage of male fatalities in the MIVDRS, which indicates there were more male deaths than would be expected from the number of male persons residing in Michigan. The racial composition of violent deaths had a different distribution. There was a much lower percentage of White individuals than those residing in the state and a higher percentage of Black individuals than those residing in the state.

Manner and Method/Mean of Death

As with the case in Maryland, undetermined deaths represented almost half (42%) of the violent deaths in the selected counties in Michigan, 78% of those undetermined deaths were male and 22% were females in 2010. The majority of adult deaths (58%) were suicides in 2010 and 48% of minor deaths were homicides in 2010.

Suicide (2010 Only)

Of all suicides in the participating areas, 24% were White individuals who used a firearm and 3% were Black individuals who used a firearm.

Of suicides involving a firearm, 86% were White and 11% were Black.

Males had over 4 times the ratio of occurrent homicides, in the participating areas, when compared to females (4.6 and 1.0 per 100,000 residents).

The most common method for suicide in males was use of a firearm (32% of all male suicides) and poisoning for females (26% of all female suicides).

Of adult suicides, 28% were committed through the use of a firearm. Of suicide deaths in minors, 40% were attributed to hanging, strangulation or suffocation.

Homicide (2010 Only)

There were a total of 544 homicides in participating regions in Michigan in 2010; the majority were Black (72%) males (82%), 18 years and older (89%).

Of all homicides, in the selected counties, 55% were attributed to the use of a firearm and another 29% had an unknown weapon type.

Males had over 4 times the homicide ratio when compared to females (4.6 and 1.0 per 100,000). The highest ratio by race was Black at 14 homicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 71 (8%) of all suicide cases and in 13 (2%) of all homicide cases in 2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 7 (1%) of all homicide cases in 2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2010

	Suicide		Homicide	
	Males N=694	Females N=195	Males N=447	Females N=96
Intimate Partner Violence	5 (0.7%)	<5	<5	<5
Intimate Partner Problem	58 (8.4%)	13 (6.7%)	<5	9 (9.4%)

- Males and females who died by suicide had similar prevalences of intimate partner problems (Table 1).
- Due to low prevalences, prevalence rate ratios could not be calculated for homicide cases.

Michigan Violent Death Reporting System Partnerships and Collaborations:

With over 1,200 suicides a year and over 600 homicides a year in the state, violent deaths are a major health issue in Michigan. While the MIVDRS is still a fairly young program, staff members have been able to partner with the Michigan Association for Suicide Prevention, the state health department's suicide prevention program, and local suicide prevention efforts to provide data to support the need for suicide prevention efforts, as well as more clearly focused messaging and programming. MIVDRS staff have also participated in the annual statewide Community Technical Assistance Meeting sponsored by the state

health department's suicide prevention program. Staff have also joined with the Wayne County Medical Examiner's Office and the Detroit Police Department to present a compelling picture to the state's public health community of homicide trends in Detroit.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

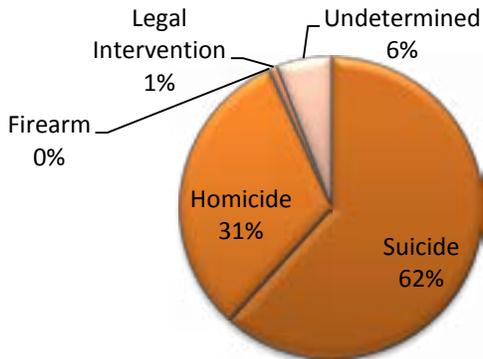


New Jersey is one of the most economically, racially and geographically diverse states in the country. With more than 8.8 million people (2010), it has the highest population density in the nation. The New Jersey Violent Death Reporting System (NJVDRS) was established as a way to gain insight on homicides and suicides throughout the state. Data collection began in 2003 and this summary includes data from 2009-2010.

NJVDRS Population

Nearly all (93%) violent deaths occurring in New Jersey in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1351, 62%) of violent death in New Jersey. Homicide was the second (N=689, 31%) most common manner of violent death. The remaining death is attributable to undetermined manner (N=126, 6%) and unintentional firearm death (N=6, <1%).

Figure 1. New Jersey Violent Death Composite: 2009-2010



NJVDRS Population Compared to State Population

The gender composition of the NJVDRS population has a different distribution than the state population. There is a much higher proportion of male fatalities in the NJVDRS population than would be expected from the number of male persons residing in New Jersey. The racial composition of violent deaths had different distributions. There was a higher percentage of Black individuals in the NJVDRS population than those residing in the state.

Manner and Method/Means of Death

Suicide

As with Massachusetts and Rhode Island, the leading cause of suicide death in New Jersey was hanging, strangulation or suffocation. Of all suicides, 34% were White individuals who died by hanging, strangulation or suffocation, while 6% were non-White.

Of all minors dying by suicide, 59% of them died through hanging, strangulation or suffocation.

Of all suicides, 27% could be attributed to firearms and 90% of those firearm-related suicides were White individuals.

The occurrent suicide ratio of males in New Jersey was 13 per 100,000 and females had a ratio of 3 suicides per 100,000 residents.

Of the total male suicides, 41% died by hanging, strangulation or suffocation. There were two most common methods of suicide in female decedents: poisoning and hanging, strangulation or suffocation (37%).

Homicide

There were a total of 689 homicides in New Jersey in 2009-2010 and the majority of them were Black (64%) males (82%), 18 years or older (91%).

As in most NVDRS states, males had a much higher occurrent homicide ratio (6.6 homicides per 100,000), than females (1.4 per 100,000 residents).

Of all homicides, 66% of them were firearm-related and in 13% a sharp instrument was involved. There was a higher percentage of Black victims dying by firearms (76%) and a higher percentage of White decedents from sharp instruments (48%).

Black individuals had the highest ratio of occurrent homicides (18.3 per 100,000) and Whites had a ratio of 1.8 per 100,000 residents. Adults in New Jersey had a homicide ratio of 4.6 per 100,000 residents and those 17 and younger had a ratio of 1.5 occurrent homicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 230 (17%) of all suicide cases, and in 14 (2%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 30 (4%) of all homicide cases, and in 13 (1%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=1088	Females N=263	Males N=563	Females N=126
Intimate Partner Violence	12 (1.10%)	<5	6 (1.07%)	24 (19.05%)
Intimate Partner Problem	197 (18.11%)	33 (12.55%)	<5	10 (7.94%)

- Female cases of homicide had over 17 times the prevalence of intimate partner violence when compared to male cases (Table 1).
- Males who committed suicide had 1.5 times the prevalence of intimate partner problems than women who committed suicide (Table 1).

New Jersey Violent Death Reporting System Partnerships and Collaborations:

The Violence Institute has partnered with the Office of Injury Surveillance and Prevention (OISP) in the Center for Health Statistics of the New Jersey Department of Health and Senior Services (NJDHSS), to maintain a violent death information collection system for New Jersey, the New Jersey Violent Death Reporting System (NJVDRS).

NJVDRS is supported by a cooperative agreement with the Centers for Disease Control and Prevention (CDC) awarded to NJDHSS. NJVDRS includes suicides, homicides, unintentional firearm deaths, injury deaths of undetermined intent and deaths by legal intervention occurring in New Jersey, or to New Jersey residents regardless of location, from January 1, 2003 to present.

The most unique feature of this surveillance system is that it is an incident-based system, grouping related victims and suspects into one incident. If multiple deaths are considered related, they are grouped together if the injuries precipitating the deaths occur within 24 hours of each other.

New Jersey VDRS (NJVDRS) is working with the state's Office of Child Advocate to increase knowledge about child fatalities.

NJVDRS is collaborating with the Domestic Fatality Review Board to better understand murder-suicides among intimate partners.

NJVDRS is also participating in the development of a statewide suicide prevention plan, and has convened experts to discuss gang violence in New Jersey.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

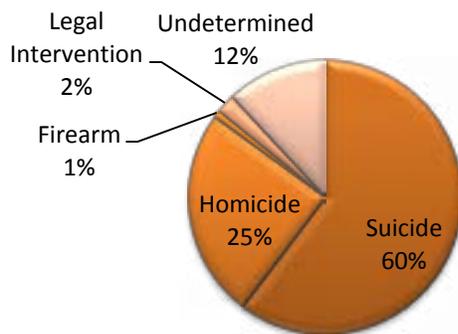


New Mexico, a Southwestern state with a population of 2,085,538, has the fifth highest suicide rate in the nation. The state is the nation's fifth largest geographically. The majority of the 33 counties are rural and 43% of the state's population resides in the four-county Albuquerque metropolitan area. New Mexico's population is 47% Hispanic, 40% White, 10% American Indian, 2% Black, and 2% Asian. The New Mexico Violent Death Reporting System (NMVDRS) began in 2004 with the first year of data collection in 2005. This summary includes data from 2009-2010.

NMVDRS Population

Nearly all (85%) violent deaths occurring in New Mexico in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=816, 60%) of violent death in New Mexico. Homicide was the second (N=335, 25%) most common manner of violent death. The remaining death is attributable to undetermined manner (N=161, 12%) and unintentional firearm death (N=11, 1%).

Figure 1. New Mexico Violent Death Composite: 2009-2010



NMVDRS Population Compared to State Population

The gender composition of the NMVDRS population has a different distribution than the state population. There is a much higher percentage of male fatalities in the NMVDRS, which indicates there are more male deaths than would be expected from the number of male persons residing in New Mexico. The racial composition of the NMVDRS population varied in the distribution when compared to the population of the state. There was a higher percentage of White individuals and American Indian/Alaska Native individuals in the NMVDRS than those residing in the state.

Manner and Method/Means of Death

The majority of adult deaths (63%) were suicides, while one third (33%) of minor deaths were homicides.

Suicide

Eighty-nine percent of all suicides were White individuals, 96% were adults, and 44% were male. In 49% of suicides, a firearm was used and 25% were attributed to hanging, strangulation or suffocation.

American Indian/Alaska Native decedents accounted for 9% (74 of 816 suicides) of all suicides in New Mexico. The primary method (65%) of that 9% was hanging, strangulation or suffocation.

Males in New Mexico had an occurrent suicide ratio of 31 per 100,000 residents (the second highest ratio of all NVDRS states) and females had a ratio of 9 occurrent suicides per 100,000 residents. Of the total male suicides, 58% were firearm-related while the most common method of suicide in females was poisoning (47%).

Of the minors dying by suicide, 67% of them died by hanging, strangulation or suffocation.

Homicide

The highest male homicide ratio was found to occur in New Mexico (12.7 occurrent homicides per 100,000 residents), as well as the highest female ratio (3.7 per 100,000).

There were a total of 159 homicides in New Mexico in 2009-2010 and the majority were White (75%) males (77%), 18 years and older (90%). Examining the racial distribution of homicides, American Indians/Alaska Natives represented 20% of homicides in New Mexico. Of all homicides, 47% were attributed to firearms and 16% due to sharp instruments.

The highest ratios of slightly over 17 occurrent homicides per 100,000 residents was found in American Indian/Alaska Native and Black races, while White individuals had a ratio of 9 homicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 246 (30%) of all suicide cases, and in 22 (7%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 31 (9%) of all homicide cases, and in 14 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=624	Females N=192	Males N=258	Females N=77
Intimate Partner Violence	12 (1.92%)	<5	12 (4.65%)	19 (24.68%)
Intimate Partner Problem	202 (32.37%)	44 (22.92%)	8 (3.10%)	14 (18.18%)

- Female homicide cases had over 5 times the prevalence of intimate partner violence and 6 times the prevalence of intimate partner problems when compared to male homicide cases (Table 1).
- Males who committed suicide had slightly higher prevalence rate ratio of intimate partner problems than females (PRR = 1.4) (Table 1).

New Mexico Violent Death Reporting System Partnerships and Collaborations:

New Mexico has one of the highest suicide rates in the country, with approximately seventy one percent of the violent deaths being suicides. A natural partnership has developed between the NMVDRS and the NM Suicide Prevention Coalition as well as other sections of the Office of Injury Prevention, including epidemiology and prevention staff.

Due to its placement in the Office of Injury of the Injury and Behavioral Epidemiology Bureau, the NVDRS is ideally located to partner with child injury epidemiology, child injury prevention, adult suicide prevention, and New Mexico's Youth Risk and Resiliency Survey and its Behavioral Risk Factors Surveillance System. Data from the NMVDRS are provided to state and local public health agencies and in response to media requests.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

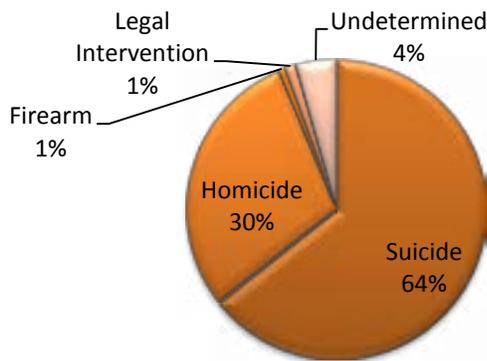


North Carolina is the 28th largest of the 50 states, bordered by Virginia, Georgia, Tennessee and the Atlantic Ocean. With 9.7 million residents dispersed throughout 100 counties, North Carolina is the tenth most populous state in the U.S. In 2012, approximately 72% of the population was White, 22% Black, 3% Asian and 2% American Indian. Eight percent were Hispanic. Although predominantly rural, North Carolina has six cities with populations over 200,000. The North Carolina Violent Death Reporting System (NC-VDRS) began collecting data in 2004. This report presents data for 2009 and 2010.

NCVDRS Population

Nearly all (94%) violent deaths occurring in North Carolina in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=2407, 64%) of violent death in North Carolina, occurring just over two times as often as homicides (N=1100, 29%). The remaining death was attributed to undetermined manner (N=163, 4%) and unintentional firearm death (N=28, 1%).

Figure 1. North Carolina Violent Death Composite: 2009 - 2010



NCVDRS Population Compared to State Population

The gender composition of the NCVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the NCVDRS population, which indicates there were more male deaths than would be expected from the number of male persons residing in North Carolina. The racial composition of violent deaths had a similar distribution to the state. There was only one race that was slightly different. White individuals in the NCVDRS had a slightly higher percentage than those residing in North Carolina.

Manner and Method/Means of Death

The majority of adult deaths (66%) were suicides, while 49% of minor deaths were homicides and 35% were suicides.

Suicide

Of the over 2,400 individuals dying by suicide in 2009-2010 in North Carolina, 53% were White, 98% were adults and 78% male. Most suicides involved a firearm and 20% were attributed to hanging, strangulation or suffocation.

The most common method of suicide in males and females was use of a firearm (63% of all male suicides and 41% of all female suicides). The male occurrent suicide ratio in North Carolina was 20 per 100,000. This is 4 times higher than the female occurrent ratio (5 occurrent suicides per 100,000).

Of adults dying by suicide in North Carolina in 2009-2010, 59% used a firearm, while minors used a firearm in 47% of the suicide deaths and 43% were attributed to hanging, strangulation or suffocation.

Homicide

There were a total of 1,100 homicides in North Carolina in 2009-2010 with the majority being Black (51%) males (75%), 18 years of age and older (93%). Of all homicides, 70% were attributed to firearms and 12% to sharp instruments.

As in most NVDRS states, males had a much higher occurrent homicide ratio (8.8 homicides per 100,000), than females (2.9 per 100,000 residents). American Indians/Alaska Natives had the highest homicide ratio (14.3 per 100,000) and Blacks had the second highest ratio (13.7 per 100,000).

Adults had a much higher homicide ratio when compared to minors in North Carolina. The adult occurrent homicide ratio was 7 per 100,000 residents, while minors (17 years and younger) had a ratio of 1.8 per 100,000.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 633 (26%) of all suicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 183 (17%) of all homicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=1,883	Females N=524	Males N=821	Females N=279
Intimate Partner Violence	<5	<5	55 (6.70%)	128 (45.88%)
Intimate Partner Problem	528 (28.04%)	105 (20.04%)	<5	<5

- Female homicide victims had 6.9 times the prevalence of intimate partner violence compared to male cases (Table 1).
- However, males who died by suicide had 40% the prevalence of intimate partner problems than females dying by suicide (PRR=1.4) (Table 1).

North Carolina Violent Death Reporting System Partnerships and Collaborations:

North Carolina Violent Death Reporting System (NCVDRS) has partnered with a wide array of community organizations working to reduce violent deaths. Some recent examples include a project on elder maltreatment surveillance working in partnership with the N.C. Division of Aging linking Adult Protective Services data with NCVDRS data to identify violent deaths within that population. Another project partnered a researcher at the UNC School of Social Work, N.C. Department of Corrections and NCVDRS to assess the risk of violent death among recently released prisoners.

In addition, we have worked with the N.C. Coalition Against Domestic Violence on a wide range of projects regarding special populations at risk for intimate partner violence, same sex homicides and to better quantify intimate partner homicides across the state. Projects with the University of North Carolina have included examina-

tion of pregnant and post-partum women and their risk of violent death and co-authorship of articles on violence for the NC Medical Journal. Data from NCVDRS has been used by the NC Institute of Medicine for their Task Force on Suicide report.

From the start, NCVDRS has worked extensively with the community of Durham, N.C. to support various community prevention groups and efforts. In part this was driven by NC-VDRS Advisory Board members who had strong working relationships with key Durham partners such as Durham Police Department, Durham County Health Department, researchers from Duke, UNC and RTI and a several community prevention groups such as the Religious Coalition for a Nonviolent Durham, Durham's Gun Safety Team, and the Healthy Partnership for Durham. NCVDRS has actively provided Durham specific data and information and supported community events.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.



Ohio is the 34th largest state in the United States and the 7th most populated, with a total population of 11,544,225. Ohio consists of 88 counties that range from urban to rural, with 31 of Ohio's Counties designated as part of the Appalachian Region. Caucasians make up 83.6% of Ohio's population, whereas 12.4% of the state is African-American/Black, 1.7% Asian, and 3.2% of Hispanic/Latino origin. The Ohio Violent Death Reporting System was established in 2009, with funding from a cooperative agreement with the Centers for Disease Control and Prevention, and began collecting data on violent deaths that occurred in 2010. In Ohio, unlike other NVDRS states, detailed information on the circumstances surrounding the death, obtained through coroner/medical examiner records and law enforcement reports, was structured as a three year phase-in process due to the large number of data reporting agencies. In the first year, circumstance data from 12 counties, accounting for 66% of all violent deaths, were captured and entered into the OHVDRS database.

OHVDRS Population

Nearly all (90%) violent deaths occurring in selected counties in Ohio (2010) were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1,451, 65%) of violent death in Ohio, occurring over two times as often as homicides (N=565, 25%). The remaining death was attributed to undetermined manner (N=204, 9%), legal intervention (N=18, 1%) and unintentional firearm death (N=9, <1%).

Figure 1. Ohio Violent Death: 2010

OhVDRS Population Compared to State Population

The gender composition of the OHVDRS selected county population had a different distribution than the state population. There was a much higher percentage of male fatalities in the OHVDRS, which indicates there were more male deaths in the selected areas than would be expected from the number of male persons residing in Ohio. The racial composition of violent deaths had a different distribution than the state. The percentage of White individuals was lower than what was expected by those residing in the state. There was a higher percentage of Black individuals in the OHVDRS population than compared to the state.

Manner and Method/Means of Death

Suicide (2010 Only)

There were a total of 1,451 individuals who died by suicide in 2010 in the participating areas: 93% were White, 98% were adults and 80% male.

Of all suicides in the areas participating, 51% were attributed to the use of a firearm. The majority of firearm-related suicides were White individuals (92%).

Approximately 27% of all suicides in the selected counties were attributed to hanging, strangulation or suffocation.

The occurrent suicide ratio for males in Ohio was 20.5 per 100,000, which was 4 times the female ratio (5 per 100,000).

The most common method of suicide for males, in the participating areas, were firearms (56% of male suicides) and for females, poisoning (36% of female suicides). The second most common method for males and females was hanging, strangulation or suffocation (27% and 26%, respectively).

While over half of adult suicides were firearm-related suicides (51%), more than half of minor suicides were hanging, strangulation or suffocation (53%).

Homicide (2010 Only)

There were a total of 565 homicides in participating areas in 2010 with the majority being adult (89%), Black (60%) males (78%).

Of all homicides in the selected counties, 68% were firearm-related and 9% were due to sharp instruments.

Homicide occurrent ratios for males (3.9 per 100,000) were higher than for females (1 per 100,000). Adults had double the homicide ratio when compared to minors (5.7 and 2.2 per 100,000).

Black individuals had the highest ratio in the participating areas (12 occurrent homicides per 100,000 residents) and American Indians/Alaska Natives had a ratio of 2.0 homicides per 100,000. Asians/Pacific Islanders had the lowest ratio in the selected counties in the state (0.5 per 100,000).

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 261 (18%) of all suicide cases and in 45 (8%) of all homicide cases in 2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 48 (8%) of all homicide cases in 2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2010

	Suicide		Homicide	
	Males N=1,154	Females N=297	Males N=443	Females N=122
Intimate Partner Violence	24 (2.1%)	<5	14 (3.2%)	34 (27.9%)
Intimate Partner Problem	212 (18.4%)	49 (16.5%)	12 (2.7%)	33 (27.1%)

- Male suicide cases had 1.2 times the prevalence of intimate partner problems when compared to females (Table 1).
- Of the homicide cases, females had 10 times the prevalence of intimate partner problems and almost 9 times the prevalence of intimate partner violence when compared to males (Table 1).

Ohio Violent Death Reporting System Partnerships and Collaborations:

In 2009, The Ohio Department of Health, Violence and Injury Prevention Program received funding from the CDC to join the network of 17 other states participating in NVDRS to establish the Ohio Violent Death Reporting System (OHVDRS). In the first year of funding, data collection began for violent deaths that occurred in 2010. As a result of our CDC funding, the OHVDRS program has developed multiple new partnerships with stakeholders who are vested in the prevention of violent deaths. The partnerships are reflected by the membership of the OHVDRS Advisory Board and include the Ohio State Coroners Association; Ohio Association of Chiefs of Police; Ohio Public Health Association; Association of Ohio Health Commissioners; Ohio Family Violence Prevention Project; Ohio Domestic Violence Network; Office of Criminal Justice Services, Ohio Department of Public Safety; Ohio Division of Emergency Medical Services; Office of the Ohio Attorney General, Bureau of Criminal Identification and Investigation; Ohio Family Violence Prevention Project; Ohio Domestic Violence Network; Ohio Child Fatality Review; universities; and multiple county coroners' offices.

Early successes of the OHVDRS include:

- Passage of Ohio Revised Code Sec. 3701.93– 3701.9314 which establishes the OHVDRS and the OHVDRS Advisory Board, requires agencies to provide information, and protects the confidentiality of all information that is reported to OH-VDRS.
- Participation in the development of the Ohio Suicide Prevention Foundation Strategic Plan which specifically supports the development of OH-VDRS and analysis and dissemination of the information collected regarding the circumstances of suicides that occur in Ohio.
- Passage of a resolution by the Northern Ohio Violent Crime Consortium in support of active participation of local law enforcement agencies, and the sharing and use of the data about the circumstances and factors surrounding violent death between OHVDRS and local law enforcement agencies, violence prevention groups and local and state policy makers as a means to develop strategies to reduce violence in Ohio.
- Facilitating development of a state coroner reporting system by increasing access to electronic coroner reporting software for county coroners previously without it. A state reporting system has been identified as a priority for the Ohio State Coroners Association and a need by those stakeholders who would use the data.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

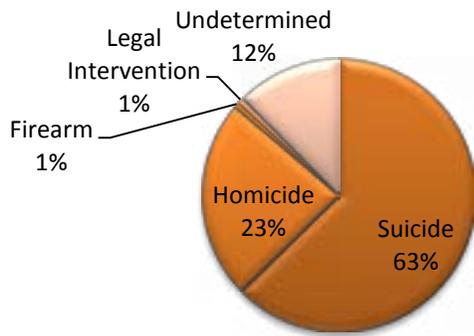


In 2012, Oklahoma's population was 3.8 million; in terms of age, 25% were less than age 18, 61% were between the ages of 18 and 64, and 14% were ages 65 and older. The population was 76% White, 9% Native American/Alaska Native, 8% Black and 2% Asian/Pacific Islander. From 2006 to 2012, the Hispanic population increased from 7% to 9%. The Oklahoma Violent Death Reporting System (OK-VDRS), maintained at the Oklahoma State Department of Health, Injury Prevention Service, was implemented in 2004. This summary includes data from 2009-2010.

OKVDRS Population

Nearly all (86%) violent deaths occurring in Oklahoma in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1230, 63%) of violent death in Oklahoma, occurring over two and a half times more than homicide (N=463, 24%). The remaining death was attributed to undetermined manner (N=243, 12%) and unintentional firearm death (N=13, 1%).

Figure 1. Oklahoma Violent Death Composite: 2009 - 2010



OKVDRS Population Compared to State Population

The gender composition of the OKVDRS population had a different distribution than the state population. There was a much higher proportion of male fatalities in the OKVDRS population than would be expected from the number of male persons residing in Oklahoma. The racial composition of the OKVDRS varied only slightly in the distribution when compared to the population of the state. In the OKVDRS, there was a higher percentage of Black individuals than those residing in the state.

Manner and Method/Means of Death

Suicide

There were differences in Oklahoma in regard to gender, age and race. Of suicide deaths in 2009-2010, 87% were White individuals, 96% were adults and 80% male. Of these suicides 62% were firearm-related and 20% attributed to hanging, strangulation or suffocation.

The occurrent suicide ratio of males in Oklahoma was 26 per 100,000, which was 4 times the female ratio (6.5 occurrent suicides per 100,000). The most common method of suicide in males and females was the use of a firearm (65% of all male suicides and 48% of all female suicides).

There were a substantially smaller number of minors compared to adults dying by suicide but the use of a firearm was the most common method among both groups (66% of minor suicides).

Homicide

There were a total of 463 homicides in Oklahoma in 2009-2010 and majority were males (78%) and 18 years of age and older (86%). Of all homicides, 58% were firearm-related and half of those firearm homicides occurred in American Indians/Alaska Natives.

Males had one of the highest occurrent homicide ratios of NVDRS states (9.7 per 100,000) and females 3 per 100,000 residents.

Blacks in Oklahoma had the highest occurrent homicide ratio of all NVDRS states (31.5 per 100,000). Whites also had one of the highest occurrent homicide ratios of all the states (4.0 per 100,000). American Indians/Alaska Natives had a ratio of 7 homicides per 100,000 residents.

Adults in Oklahoma had a homicide ratio of 7 per 100,000 and minors had a ratio of 3.5 per 100,000 residents, which was the highest ratio for minors of all NVDRS states.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 425 (35%) of all suicide cases, and in 56 (12%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 69 (15%) of all homicide cases, and in 23 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=982	Females N=248	Males N=360	Females N=103
Intimate Partner Violence	21 (2.14%)	<5	26 (7.22%)	43 (41.75%)
Intimate Partner Problem	355 (36.15%)	70 (28.23%)	22 (6.11%)	34 (33.01%)

- Of the homicide cases, females had over 5 times the prevalence of intimate partner violence and intimate partner problems (PRR= 5.8 and 5.4, respectively) when compared to males (Table 1).
- In regard to suicide cases, males had 1.3 times the prevalence of intimate partner problems when compared to females (Table 1).

Oklahoma Violent Death Reporting System Partnerships and Collaborations:

- NVDRS facilitates data sharing in Oklahoma between public health, law enforcement, the medical examiner, and the Child Death Review Board. The Oklahoma State Department of Health (OSDH) provides funding to the Oklahoma State Bureau of Investigation and the Office of the Chief Medical Examiner to support the data collection.
- The Oklahoma Association of Chiefs of Police assisted OSDH with implementing the system and continues to support the program through facilitating an advisory committee and disseminating reports and information to law enforcement agencies.
- The program helps raise awareness of the prominence and magnitude of suicide in Oklahoma, where suicides are 2.4 times more common than homicides. The program works with the state suicide prevention program to identify target populations for prevention efforts and evaluate suicide trends.
- A manuscript on elder suicide was published in the state medical journal to inform physicians and promote recognition, screening, and referral for depression and other psychiatric disorders among elders (Kabore H, Brown S, Archer P. Suicide among Persons 65 Years of Age and Older, Oklahoma, 2004. J Okla State Med Assoc, 2008, 101:11; 267-270).
- Summary data reports and special topic reports produced on intimate partner violence, undetermined manner infant deaths, gang-related homicides, violent deaths among Native Americans, and firearm deaths, are used to support prevention programs. Reports are also distributed to media, legislators, and researchers (<http://okvdrs.health.ok.gov>).
- Staff collaborate with the Oklahoma Domestic Violence Fatality Review Board to share data and support family violence prevention.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

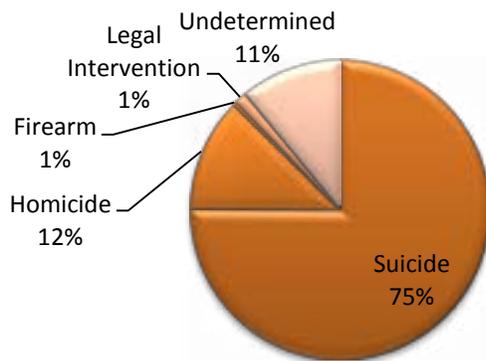


In 2012, Oregon had an estimated population of 3.9 million, of which 88% were White, 4% Asian/Pacific Islanders, 2% Black, 2% American Indian/Alaska Native, and 4% of multiple races. Approximately 12% of Oregon residents are of Hispanic ethnicity. The Oregon Violent Death Reporting System (ORVDRS) began collecting data in 2003. The current summary includes data from 2009-2010. *Deaths relating to the Death with Dignity Act (physician assisted suicides) are not classified as suicides by Oregon law and therefore are excluded from data collection and this report.*

ORVDRS Population

Nearly all (87%) violent deaths occurring in Oregon in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1384, 75%) of violent death in Oregon, occurring over six times more than homicides (N=226, 12%). The remaining death was attributable to undetermined manner (N=201, 11%) and unintentional firearm death (N=7, <1%).

Figure 1. Oregon Violent Death Composite: 2009-2010



ORVDRS Population Compared to State Population

The gender composition of the ORVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the ORVDRS population, which indicates there were more male deaths than would be expected from the number of male persons residing in Oregon. The racial composition of the ORVDRS varied slightly from the state population. The percentage of White individuals in the ORVDRS was higher than those residing in the state and the percentage of Asians/Pacific Islanders was lower than expected from the state percentage.

Manner and Method/Means of Death

Suicide

The racial distribution of firearm-related suicide death was 97% White, and 3% non-White. The occurrent suicide ratio of White individuals in Oregon was 21 per 100,000, which was three times the ratio of non-White individuals (7 per 100,000).

The suicide ratio for males in Oregon was 28 per 100,000, which was three and half times that of females (8 suicides per 100,000 residents).

The most common method of suicide in males was use of a firearm (60%) and for females it was poisoning (40%). The second most common method in males and females was hanging, strangulation or suffocation (20% and 21%, respectively).

More than half of adult suicides were firearm-related (54%) and the majority of suicide death in minors was hanging, strangulation or suffocation (60%).

Homicide

There were 225 homicides in Oregon in 2009-2010; the majority were White (82%) males (60%), 18 years of age and older (87%). Of all homicides, 52% were attributed to the use of firearms and 18% were due to sharp instruments.

Homicide ratios for males (4 per 100,000) were higher than for females (2 per 100,000). Adults in Oregon had a ratio of 3 occurrent homicides per 100,000 residents and minors had a ratio of 2 per 100,000.

Black individuals had the highest homicide ratio in Oregon (12 per 100,000) and American Indians/Alaska Natives had the second highest ratio (9 per 100,000). Whites and Asians had similar homicide ratios, which were close to 3 suicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 396 (29%) of all suicide cases, and in 26 (12%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 47 (21%) of all homicide cases, and in 31 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=1063	Females N=321	Males N=136	Females N=90
Intimate Partner Violence	27 (2.54%)	<5	8 (5.88%)	39 (43.33%)
Intimate Partner Problem	322 (30.29%)	74 (23.05%)	7 (5.15%)	19 (21.11%)

Females who died by homicide had over 7 times the prevalence of intimate partner violence when compared to male homicide victims (Table 1).

Males who died by suicide had 30% higher prevalence rates of intimate partner problems than females who died by suicide.

Oregon Violent Death Reporting System Partnerships and Collaborations:

Oregon passed an amendment to the vital statistics statutes that adds information about veteran's status on death certificates. This change was made to address the questions that invariably come up when we present data on veteran status and suicide.

In 2013 we will have a full year of data that includes information on combat deployment. This will further enhance our state's information on veterans and suicide. ORVDRS data were used to testify supporting a bill to make it illegal to sell suicide kits in Oregon. The bill passed. Oregon VDRS partnered with the VA at Portland, Oregon to look at VA service access with relation to suicide. Articles were published.

Oregon VDRS data were used to inform the state level development and implementation of a Domestic Violence Fatality Review process. Data are being used to inform case selection and to provide aggregate information on deaths each year. The older adult suicide data were used five years ago to develop a plan to address suicide. Funding from SAMHSA was used to support local meetings throughout the state. The local communities completed

two rounds of community wide meetings, selected actionable activities, and worked on them independently of our office. There has been no funding to support a coordinated effort on the local level. Our office has been able to publish CD Summaries on the need for universal screening for depression among seniors. Our continued efforts with regard to seniors are folded into a comprehensive approach to "Healthy Aging" - they coordinate with the Health Promotion and Chronic Disease Prevention on aging issues of falls, depression and suicide.

We are currently in discussions with VA staff to implement Tai Chi Moving for Better Balance and QPR (for suicide prevention) simultaneously through vets in the community. The target population is vets who are seniors. ORVDRS data are used in planning. We provide data to our state injury prevention planning effort. We just completed a new 5 year plan that highlights suicide as one of the four top injury problems. Oregon public health division has set suicide prevention as one of its top priorities in the state's strategic plan for the next 5 years. We provide data to our youth suicide prevention network for use in local community planning and grant writing.

<https://cco.health.oregon.gov/pages/aboutus.aspx>

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

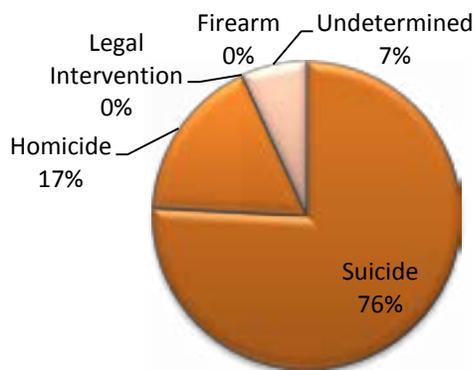


Rhode Island is a small, urban, New England state with a population of just over 1 million. Historically it was an arrival place for European immigrants, but has become more diverse with recent growth in Latin American, Asian and African communities. In 2012, approximately 86% of the population was White, 7% Black, 3% Asian and 1% American Indian. Thirteen percent were Hispanic. The Rhode Island Violent Death Reporting System (RIVDRS) began reporting data to the national system in January 2004. This report presents data from the RIVDRS for 2009 and 2010.

RIVDRS Population

Nearly all (93%) violent deaths occurring in Rhode Island in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=254, 76%) of violent death in Rhode Island, occurring four times as often as homicides (N=58, 17%). The remaining death was attributed to undetermined manner (N=23, 7%). There were not any unintentional firearm fatalities in Rhode Island in 2009-2010.

Figure 1. Rhode Island Violent Death Composite: 2009 - 2010



RIVDRS Population Compared to State Population

The gender composition of the RIVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the RIVDRS, which indicates there were more male deaths than would be expected from the number of male persons residing in Rhode Island. The racial composition of violent deaths was similar to the state population. There is a slightly higher percentage of White individuals in the RIVDRS population than the state.

Manner and Method/Means of Death

Suicide

Massachusetts, New Jersey and Rhode Island are the only states where hanging, strangulation or suffocation was the leading cause of suicide death in the NVDRS states. Rhode Island also had a higher proportion of Black individuals dying by suicide than White individuals, which is unique to this state (50% Black; 36% White).

The occurrent suicide ratio for males was 21 per 100,000, which was over four times that of females (4 per 100,000 residents).

The most common method of suicide in males was hanging, strangulation or suffocation (37%) and for females it was poisoning (43%).

Of the adult suicides, 36% were by hanging, strangulation or suffocation and two thirds (67%) of minors died by suicide using hanging, strangulation or suffocation as the method.

Homicide

There were 58 homicides in Rhode Island in 2009-2010 with the majority being White (72%) males (67%), 18 years of age and older (90%). Of all homicides, 55% were firearm-related and 17% were due to sharp instruments.

Homicide ratios for males (4 per 100,000) were higher than for females (2 per 100,000). Adults in Rhode Island had a homicide ratio of 3 per 100,000 residents, and minors had a ratio of 1.3 per 100,000.

American Indians/Alaska Natives in Rhode Island had one of the higher occurrent homicide ratios of all races in the NVDRS (25 occurrent homicides per 100,000 residents). Black individuals had a relatively high ratio as well: 11 homicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 65 (26%) of all suicide cases, and in 10 (17%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 11 (19%) of all homicide cases, and in 2 (1%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=214	Females N=40	Males N=39	Females N=19
Intimate Partner Violence	<5	<5	<5	9 (47.37%)
Intimate Partner Problem	53 (24.77%)	12 (30.00%)	<5	8 (42.11%)

- There were too few of homicide cases to calculate any prevalence rate ratios or odds ratios (Table 1).
- Of suicide cases, females had a slightly higher prevalence rate ratio (1.2) than males, signifying a 20% higher prevalence rate of intimate partner problems when compared to males (Table 1).

Rhode Island Violent Death Reporting System Partnerships and Collaborations:

- In partnership with its Advisory Committee, RIVDRS reviews and utilizes data collected by the system to identify intervention and prevention strategies. The Advisory Committee includes the Chief Medical Examiner, Vital Records Registrar, Suicide Prevention Program Manager, Executive Director of the RI Coalition Against Domestic Violence, Executive Director of the Institute for the Study and Practice of Nonviolence, and representatives from the RI Child Death Review Team, other state agencies, State Police, State Crime Lab, hospitals (emergency medicine, injury prevention, etc.), and others.
- In collaboration with the Injury Prevention Program, RIVDRS data are used for strategic planning that will lead to updating the 2005 state injury prevention plan, which will be finalized in 2013.
- RIVDRS data were presented during two Women's Health conferences held in 2011 and 2012. The US Surgeon General participated in the 2011 conference.

- Data have also been used to identify strategic priorities for the Suicide Prevention Program. Specifically, RIVDRS data were used in partnership with organizations to increase awareness of suicides among working aged adults and develop prevention strategies.
- RIVDRS works closely with the Rhode Island Child Death Review Team to improve surveillance, awareness and prevention via data sharing and collaboration. Publications, such as the Child Death Review Team's Youth Suicide Issue Brief (2005-2010), are examples of the partnership's benefits.
- Reports and articles based on RIVDRS data have been issued to inform healthcare providers, policy makers, health programs, community organizations, media and others about violent deaths to help increase awareness, drive decision making, develop policies and enhance programs. Most recently, an article on Suicides Among Veterans was submitted for publication in *Medicine and Health/Rhode Island*, Rhode Island's medical journal.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

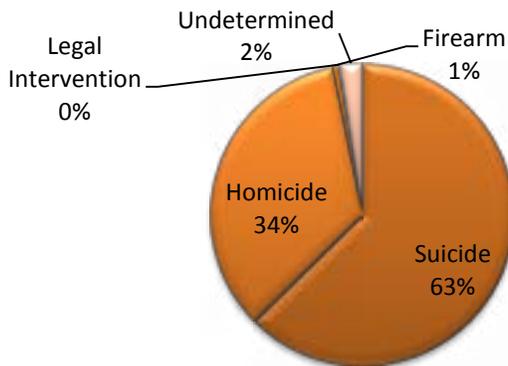


South Carolina is located in the southeastern region of the country, bordered by North Carolina, Georgia, and the Atlantic Ocean. From the Blue Ridge Mountains in the west to the coastal shores of the Atlantic Ocean, South Carolina offers uniqueness and diversity. South Carolina is home to approximately 4.7 million people. According to the 2010 U.S. Census Bureau, 68% of the population is White, 28% Black, 5% Hispanic, 1.5% Asian/Pacific Islander, and 0.5% American Indian. The South Carolina Violent Death Reporting System (SCVDRS) began collecting data in 2003. This summary includes data from 2009-2010.

SCVDRS Population

Nearly all (97%) violent deaths occurring in South Carolina in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1239, 63%) of violent death in South Carolina occurring nearly two times as often as homicides (N=678, 34%). The remaining death was attributed to undetermined manner (N=46, 2%) and unintentional firearm death (N=11, 1%).

Figure 1. South Carolina Violent Death Composite: 2009-2010



SCVDRS Population Compared to State Population

The gender composition of the SCVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the SCVDRS population, which indicates there were more male deaths than would be expected from the number of male persons residing in South Carolina. The racial composition of violent deaths had a similar distribution. There was a slightly higher percentage of White individuals than those residing in the state.

Manner and Method/Means of Death

Suicide

The current suicide ratio of White individuals in South Carolina in 2009-2010 was 18 per 100,000. Of all White individuals dying by suicide, 60% of them used a firearm.

The non-White (Black, American Indian/Alaska Natives, Asian/P.I. and unknown) suicide ratio was 5 per 100,000. Firearms were used by 57% of Black individuals dying by suicide in 2009-2010.

The current suicide ratio for males was 21 per 100,000 and females had a ratio of 6 suicides per 100,000 residents.

The most common method of suicide in males and females was the use of a firearm (64% and 43%, respectively). The second most common method was poisoning in females (33%).

Of the total adult suicides, 60% died by firearm-related suicide and half of the minor suicides (52%) were attributed to hanging, strangulation or suffocation.

Homicide

There were 678 homicides in South Carolina in 2009-2010 and the majority were Black (56%) males (73%), 18 years of age and older (85%).

Of all homicides, 63% were firearm-related and 9% attributed to sharp instruments.

South Carolina had the second highest current homicide ratio for males in the NVDRS (11 per 100,000). Female homicide ratio of 3 per 100,000 residents was also the second highest for females in the NVDRS.

Black individuals had the highest homicide ratio in South Carolina (14.8 per 100,000), followed by American Indians/Alaska Natives (7.5 per 100,000) and then White individuals (4 per 100,000).

The homicide ratio for minors in South Carolina was one of the highest in the NVDRS population (3.2 per 100,000) and adults had a ratio of 8 homicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 275 (22%) of all suicide cases, and in 39 (6%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 72 (11%) of all homicide cases, and in 28 (2%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=962	Females N=277	Males N=523	Females N=155
Intimate Partner Violence	26 (2.70%)	<5	25 (4.78%)	47 (30.32%)
Intimate Partner Problem	205 (21.31%)	42 (15.16%)	15 (2.87%)	24 (15.48%)

- Male suicide cases had 1.4 times the prevalence of intimate partner problems when compared to females (Table 1).
- Of the homicide cases, females had 6.3 times the prevalence of intimate partner violence and 5.4 times the prevalence of intimate partner problems when compared to males (Table 1).

South Carolina Violent Death Reporting System Partnerships and Collaborations:

The South Carolina VDRS (SCVDRS) is housed in the Division of Injury and Violence Prevention in the South Carolina Department of Health and Environmental Control. To gain a better understanding of how and why violence occurs, the SCVDRS shares its information with stakeholders who have an interest in preventing deaths due to violence.

The SCVDRS also partners with the South Carolina Office of Research and Statistics to create a de-identified database that can be used by the state's human services agencies to identify whether or not individuals who died by violence had received services prior to death. Identifying and intervening with at-risk individuals at the time of service delivery might help prevent violent deaths from occurring.

The SCVDRS has partnerships between the Department of Health and Environmental Control, the South Carolina Law Enforcement Division (SLED), South Carolina's Coroner's Association, South Carolina Child Fatality Advisory Committee, and the South Carolina Budget and Control Board's Office of Research and Statistics. With these partnerships, the SCVDRS may continue to strengthen surrounding data collection, linkage and evaluation of violent death information.

A strong partnership has developed between the 46 County Coroner Offices, 46 County Sheriff Offices and over 200 Police Chief's Offices due to their provision of time, expertise and data.

For more information about the SCVDRS, please visit the SCVDRS website at www.scdhec.net/health/chcdp/injury/violent_death_reporting.htm.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

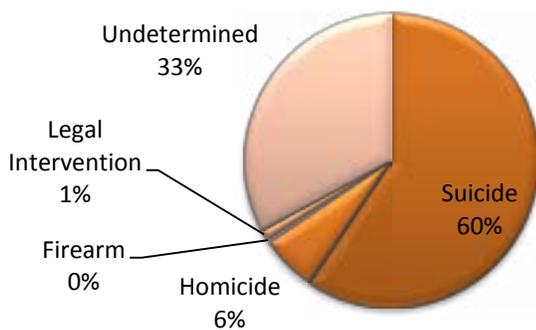


In 2012, Utah was the fifth fastest-growing state in the U.S. and was also found to be the “best state to live in.” Known for its natural diversity, the name “Utah” originates from the Native American “Ute” tribe which means people of the mountains. Utah is one of the most religiously homogenous states in the U.S. which greatly influences Utah culture and daily life. It is the 13th largest state geographically, the 34th most populous, and the 10th least densely populated. The majority of Utah’s 2.8 million residents (80%) live in an urban concentration along the Wasatch Front. Its four urban counties comprise only 4% of the state’s 84,900 square miles. Utah began data collection (UTVDRS) in 2005 as part of the National Violent Death Reporting System (NVDRS).

UVDRS Population

Nearly all (93%) violent deaths occurring in Utah in 2009-2010 were classified as suicide or undetermined deaths (Figure 1). Suicide was the most common manner (N=939, 60%) of violent death in Utah. Undetermined deaths were the second (N=519, 33%) most common manner of violent death. The remaining death was attributed to homicides (N=98, 6%) and unintentional firearm death/legal intervention (N=24, 1%).

Figure 1. Utah Violent Death Composite: 2009-2010



UVDRS Population Compared to State Population

The gender composition of the suicide ratios in Utah had a different distribution than the state population. There was a much higher percentage of male suicides in the UVDRS than would be expected in Utah. The gender composition of homicides was similar to the state distribution, which was only seen in Utah. The racial composition of violent deaths in UVDRS had a higher percentage of White individuals than those residing in Utah.

Manner and Method/Means of Death

Suicide

The current suicide ratio for males in Utah was 27 per 100,000 and females had a ratio of 7 per 100,000.

The most common method of suicide in males was the use of a firearm (59%) and for females, poisoning (39%).

The majority of adult deaths (61%) were suicides in 2009-2010. As with Colorado, Oklahoma, Alaska and Rhode Island, the most common manner of death in minors was of an unknown undetermined intent (43%) and 40% were suicide.

More than half of adult suicides were due to the use of a firearm (54%), while hanging, strangulation or suffocation was the most common method in minors (53%).

Homicide

There were 98 homicides in Utah in 2009-2010 and the majority were White (87%) males (56%), 18 years of age and older (82%).

Of all homicides, 50% were attributed to the use of firearms and 13% were due to sharp instruments.

Males and females had similar homicide ratios in Utah. Males had a ratio of 2.0 per 100,000 and females 1.6 per 100,000.

The homicide ratio for adults in Utah was 2.1 per 100,000 residents and minors had a ratio of 1.0 per 100,000.

Blacks and American Indians/Alaska Natives had similar homicide ratios in Utah (8.6 and 9.1 per 100,000). Whites and Asian/Pacific Islanders were also similar with ratios of 1.8 and 1.3 homicides per 100,000 residents.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 398 (42%) of all suicide cases, and in 25 (26%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 24 (25%) of all homicide cases, and in 34 (4%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide		Total
	Males N=738	Females N=201	Males N=55	Females N=43	
Intimate Partner Violence	27 (3.66%)	7 (3.48%)	7 (12.73%)	17 (39.53%)	58
Intimate Partner Problem	320 (43.36%)	78 (38.81%)	7 (12.73%)	18 (41.86%)	423
Total	347	85	14	35	481

- Of homicide cases, females had slightly over 3 times the prevalence of intimate partner violence and intimate partner problems when compared to males (PRR: 3.1 and 3.4, respectively) (Table 1).
- Male and female suicide cases had prevalence rate ratios close to 1.0 which signify gender is not showing any association (Table 1).

Utah Violent Death Reporting System Partnerships and Collaborations:

The UTVDRS is housed in the Violence and Injury Prevention Program in the Utah Department of Health. UTVDRS works closely with the Prescription Drug Education Program, the Domestic Violence Fatality Review Committee (DVFRC), and the Suicide Prevention Coalition to provide data which is used to inform prevention efforts. Utah data findings include the following:

- One out of three adult homicides and one out of eight adult suicides are domestic violence-related.
- An average of 23 Utahns dies as a result of prescription opioids each month.
- The top five circumstances observed in prescription opioid deaths were substance abuse problem, physical health problem, diagnosed mental illness, alcohol abuse and intimate partner problem.
- Circumstance data from UTVDRS point to age-specific differences surrounding risk for suicide deaths in Utah.

For example, youth who completed suicide were more likely to have school and other relationship problems, while young adults were more likely to have intimate partner problems. Among adults, the data show many suffered from a diagnosed mental illness. Adult men in particular face a myriad of other risk factors, including alcohol and substance abuse and job or financial problems. Older adults were more likely to suffer from physical health problems that may have prompted the suicide.

Utah was honored with the Innovative Initiative of the Year Award from the Safe States Alliance for integrating accidental drug overdose deaths into UTVDRS. This integration eliminated duplication of data collection, leveraged limited funding and staff resources, streamlined communication with the media and policy makers, and provided richer data allowing Utah to look at the complete picture of drug overdose deaths.

For more information about the UTVDRS, please visit the UTVDRS website at <http://www.health.utah.gov/vipp/NVDRS/Overview.html>.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

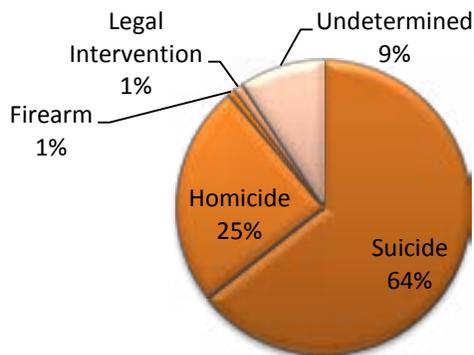


Covering 39,490 square miles, Virginia's communities range from its affluent suburbs of Washington, D.C. in the north, to economically stressed coal mining communities in its southwestern region, to densely populated tourist and military communities in its eastern region, to more sparsely populated tobacco farms of its rural south side. Virginia is growing, particularly in the northern counties of the state. The U.S. Census Bureau estimated the 2012 population at 8,185,867, which reflected a 15.6% growth since the 2000 Census. In 2011, white persons comprised 71% of the population, blacks 20%, and Asians 6%. Approximately 8% of the population was Hispanic and 11% were foreign born persons. Median household income was \$63,302.

VVDRS Population

Nearly all (89%) violent deaths occurring in Virginia in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1973, 64%) of violent death in Virginia, occurring over two and half times as often as homicide (N=749, 25%). The remaining death was attributable to undetermined manner (N=285, 9%) and unintentional firearm death (N=25, 1%).

Figure 1. Virginia Violent Death Composite: 2009 - 2010



VVDRS Population Compared to State Population

The gender composition of the VVDRS population had a different distribution than the state population. There was a much higher percentage of male fatalities in the VVDRS, which indicates there were more male deaths than would be expected from the number of male persons residing in Virginia. The racial composition of violent deaths had a different distribution. There was a higher percentage of White and Black individuals than those residing in the state, and a lower percentage of Asians/Pacific Islanders than expected from the state.

MANNER AND METHOD/MEANS OF DEATH

The majority of adult deaths (69%) were suicides in 2009-2010. As with Colorado, Oklahoma, Alaska, Rhode Island and Utah, the majority of minor deaths was of undetermined intent (54%). The second leading cause of death in minors was homicide (26%).

Suicide

The male occurrent suicide ratio in Virginia was 20 per 100,000, which is 4 times the female ratio of 5 suicides per 100,000.

The most common method of suicide in males was the use of a firearm (63%) and for females was poisoning (37%). The second most common method in females was the use of a firearm (30%).

Over half (56%) of adult suicides used a firearm and about half of suicides among minors were attributed to hanging, strangulation or suffocation (49%).

Homicide

There were 749 homicides in Virginia in 2009-2010 with the majority being adult (90%), Black (57%) males (74%).

Of all homicides, 69% were firearm-related and 11% were with sharp instruments.

Males had a homicide ratio more than double than that of females (7 vs. 2 per 100,000). Adults in Virginia had a ratio of 6 homicides per 100,000, while minors had a ratio of 2 per 100,000 residents.

Black individuals had a ratio of 13.8 occurrent homicides per 100,000 residents. Whites had the next highest ratio (3 per 100,000). Asians/Pacific Islanders had a homicide ratio of 2.0 per 100,000.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 688 (35%) of all suicide cases, and in 38 (5%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 152 (20%) of all homicide cases and in 17 (1%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=1,535	Females N=438	Males N=551	Females N=198
Intimate Partner Violence	17 (1.11%)	<5	43 (7.80%)	109 (55.05%)
Intimate Partner Problem	563 (36.68%)	125 (28.54%)	8 (1.45%)	30 (15.15%)

- Female homicide cases had 7.1 times higher prevalence of intimate partner violence and 10.5 times higher prevalence of intimate partner problems when compared to male homicide cases (Table 1).
- Of suicide cases, males had a 30% times higher prevalence ratio of intimate partner problems than female cases (Table 1).

Virginia Violent Death Reporting System Partnerships and Collaborations:

Suicide Summits

- In 2011, Staff from the Virginia Violent Death Reporting System supported seven regional Suicide Summits around the state.
- Funded by the Virginia Department of Behavioral Health and Developmental Services (DBHDS), the summits also included partners from the Virginia Department of Health, the Partnership for People with Disabilities, and the Virginia Wounded Warrior Program.
- The structure of each summit was the same, and included a presentation of data trends using VVDRS data tailored to each region; a personal story; and resources available from the Wounded Warrior Program, the state, and the community. The emphasis was to have attendees use this information to conduct a needs assessment and develop a plan of action for the next 12 months. Participants were asked to use the data to identify critical unmet needs, challenges, and resources as they worked on their plans.
- In general, 80-100 people participated in each summit and came from a variety of agencies and professions, among them community service boards, schools, law enforcement, corrections, community groups, faith communities, and veterans groups.
- The immediate impact of the summits included plans to re-establish coalitions to address suicide, create distribution lists for networking, identify and catalog existing resources, and conduct public awareness campaigns.

• VVDRS data trends were critical in helping communities identify their at-risk populations, and the circumstances surrounding those deaths. As a result of this specificity, communities were able to develop plans of action and target scarce resources that focused on those populations and their specific challenges. Strategic Plan for Virginia: Suicide Prevention Across the Lifespan.

• Starting in 2012, VVDRS staff have been supporting the work of a Suicide Across the Lifespan Interagency Workgroup, which is tasked with developing a 10 year strategic plan for suicide prevention in the Commonwealth.

• More specifically, VVDRS data were used to look at the age-specific characteristics of suicide decedents, and the circumstances surrounding their deaths. While mental health problems are common across the life span, intimate partner problems are more common among those who are middle aged and physical health problems are most common among our elderly. Virginia's suicide prevention plan and the resulting prevention programs will be more targeted to these age-related needs and services as a result of this data.

Special Reports using VVDRS Information

• Virginia's VVDRS staff regularly produce special reports that focus on unique populations or situations related to the prevention of violent death in Virginia. A few examples of these include: violent death in the workplace; military-related suicide; suicide among college students; elder suicide; suicide and physical health problems; substance use and violence; and suicide and criminal legal problems. All reports are available at the VVDRS website:

<http://www.vdh.virginia.gov/medExam/NVDRS.htm#reports>

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

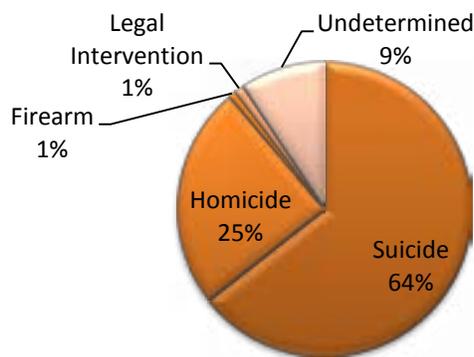


Wisconsin is the 20th most populated state with 5.7 million residents. The state is divided into 72 counties covering 54,000 square miles. Wisconsin's population is 88% White, 7% Black, 6% Hispanic, 3% Asian and 1% American Indian. Seventy percent of Wisconsin's population lives in an urban area with 30% living in rural areas. Wisconsin joined the National Violent Death Reporting System in 2003, with the first year of data collection in 2004. This summary includes data from 2009-2010.

WVDRS Population

Nearly all (92%) violent deaths occurring in Wisconsin in 2009-2010 were classified as suicide or homicide (Figure 1). Suicide was the most common manner (N=1522, 76%) of violent death in Wisconsin, occurring over four and half times as often as homicide (N=328, 16%). The remaining death is attributable to undetermined manner (N=152, 8%) and unintentional firearm death (N=7, <1%).

Figure 1. Wisconsin Violent Death Composite: 2009 - 2010



WVDRS Population Compared to State Population

The gender composition of the WVDRS population had a different distribution than the state population. There was a much larger percentage of male fatalities in the WVDRS, which indicates there were more male deaths than would be expected from the number of male persons residing in Wisconsin. The racial composition of violent deaths had a similar distribution. There was a slightly higher percentage of Black individuals than those residing in the state.

Manner and Method/Mean of Death

Suicide

The most common method of suicide in males was the use of a firearm (54%) and for females, poisoning (43%).

The occurrent suicide ratio for males in Wisconsin was 21 per 100,000 and females had a ratio of 6 suicides per 100,000 residents.

The majority of adult deaths (76%) were suicides and 59% of minor deaths were also suicides in 2009-2010.

Of the total adult suicides, 48% were firearm-related while half of suicides that occurred in minors involved hanging, strangulation or suffocation.

Homicide

There were 328 homicides in Wisconsin in 2009-2010 and the majority were adult (89%) males (76%).

Of all homicides, 66% were firearm-related and 11% due to sharp instruments. Looking at firearm-related homicides and race, 53% of individuals killed were Black and 44% White.

Males had more than double the homicide ratio than that of females. Males had a ratio of 4.4 homicides per 100,000 while females 1.4 per 100,000.

Blacks had the highest homicide ratio for years 2009-2010 in Wisconsin (22 per 100,000). American Indians/Alaska Natives and Asians/Pacific Islanders had the second highest ratio (3 per 100,000).

Adults in Wisconsin had an occurrent homicide ratio of 3.4 per 100,000, while minors had a ratio of 1.3 per 100,000.

Intimate Partner Conflicts and Violence:

Intimate partner problem was documented as a contributing factor on the coroners' investigation report in 473 (31%) of all suicide cases, and in 15 (5%) of all homicide cases in 2009-2010.

Intimate partner violence was documented as a contributing factor on the coroners' investigation report in 54 (17%) of all homicide cases, and in 11(1%) of all suicide cases in 2009-2010.

Table 1. *Manner of Death and Intimate Partner Conflicts: 2009-2010

	Suicide		Homicide	
	Males N=1,202	Females N=320	Males N=248	Females N=80
Intimate Partner Violence	10 (0.83%)	<5	18 (7.26%)	36 (45.00%)
Intimate Partner Problem	388 (32.28%)	85 (26.56%)	<5	12 (15.00%)

- Female homicide cases had 6.2 times the prevalence of intimate partner violence when compared to male homicide cases (Table 1).
- Males who committed suicide had a slightly higher prevalence of intimate partner problems (PRR=1.2) when compared to female suicide cases (Table 1).

Wisconsin Violent Death Reporting System Partnerships and Collaborations:

Utilization of WVDRS data has strengthened partnership between the Department of Health Services and the Injury Research Center (IRC) at the Medical College of Wisconsin (MCW). Partnership with the IRC helps DHS assure broader use of WVDRS data for prevention. WVDRS data has been used for joint projects such as:

- The development of the Burden of Suicide Report
- Analysis of military suicides

- Priority setting and evaluation of the Violence Prevention Initiative
- Access for medical students to conduct analysis while developing skills in injury prevention research.

WVDRS has also implemented the web-based Wisconsin Interactive Statistics on Health (WISH) which has an NVDRS module and allows our local partners to query their data for community planning purposes. The website can be accessed at <http://www.dhs.wisconsin.gov/wish/main/violent-death/>.

*If there were less than five cases in any group in Table 1, then the number of cases for that group is reported as "<5".

In general, the data show that intimate partner problems are more often associated with suicide death and intimate partner violence with homicide death. Prior to 2009, IPV was not a coding option for suicide and IPP for homicide. In 2009 and 2010 state abstractors were given the option of recording IPP and IPV in either suicide or homicide cases. Table 1 is the breakdown of IPP and IPV, in males and females, by manner of suicide or homicide death. Please see Analysis Considerations for a description of IPP and IPV and examples of both.

Similarities and Differences:

From even a cursory glance at the individual state summaries, it is evident that there are many similarities as well as differences among the states, with regard to the frequency, the at-risk population, and the circumstances associated with deaths from violence. This section highlights a few of those similarities and differences, and provides a brief discussion of state-level variation in the availability of key information.

The results presented in this section and throughout this report demonstrate how the picture of violence is unique for each state, and indeed, might differ from the picture for the nation as a whole. While national (aggregate) data are essential for developing national policies and programs, the patterns of deaths from violence seen nationally might not describe the issues or subtleties for a given state. State-level data can provide a more detailed view of the state's picture of violence and inform the selection of violence prevention measures most likely to be effective locally.

TOTAL DEATHS FROM VIOLENCE: In 2009-2010, there was a substantial difference in the occurrence ratios of total deaths from violence among the 18 funded NVDRS states (Table 1, page 9). The total occurrence death ratios for Alaska and New Mexico (both over 32 total violent deaths per 100,000 resident population) were more than twice that for New Jersey, the state with the lowest total occurrence violent death ratio (12 total violent deaths per 100,000 resident population).

In every one of the funded VDRS states, suicides outnumbered homicides. There were 20% more suicides than homicides in Maryland, which had the lowest ratio of suicides to homicides. In Utah, Oregon, Alaska and Colorado the annual number of suicides was at least five times that of homicides. Utah had the highest ratio of suicide to homicide and the number of suicides was almost 10 times that of homicides.

Although rarely publicized, violence against oneself (suicide) results in more deaths in the U.S. than lethal violence initiated against another person (homicide).

SUICIDES: As with total violent deaths, the occurrence ratio for suicides also varied by state. The occurrence suicide ratio for Alaska (22 suicides per 100,000 resident population) was close to three times that of New Jersey (8 suicides per 100,000 resident population).

States also varied in the most common method used in suicide. For 15 of the 18 states, use of a firearm was identified most frequently, while in Massachusetts, New Jersey, and Rhode Island, hanging/suffocation was the most common method. Firearms were used in more than 60% of the suicides in Alaska, Kentucky, and Oklahoma but in less than 25% of the suicides in Massachusetts. In general in the past, male suicide victims were more likely to use a firearm, while females were more likely to die from drug overdose (poisoning). In 2009 and 2010 this was the case in nine of the NVDRS states. In two states there was the same proportion of females dying by poisoning and dying by hanging/suffocation. In the remaining seven states females were more likely to die from the more lethal means generally used by males (firearms and hanging/suffocation).

One of the strengths of the NVDRS is the ability to capture information on circumstances or precipitating factors associated with deaths from violence. This information most frequently comes from coroner/medical examiner reports and from law enforcement investigations. Understanding the circumstances associated with suicide is critical for tailoring suicide prevention programs and policies, both nationally as well as at the state-level. A few examples of the variability among states for different circumstances associated with suicide are presented on the upcoming pages.⁹

On average for all NVDRS states combined, 34% of suicide victims were identified as having a current mental health condition that had been diagnosed by a professional. The percent of this circumstance varied by state from a low of 13% of the suicides in Georgia to 53% of the suicides in Utah.

Similarities and Differences, continued

On average, 33.5% of suicide victims were identified as being under treatment for a mental health condition at the time of his/her death. The percent of this circumstance by state ranged from a low of 20% or less of the suicides in Georgia, Kentucky, and South Carolina to more than 50% of the suicides in Utah.

On average, 23.7% of suicide victims were identified as having experienced a personal crisis within two weeks prior to his/her death. The percent by state ranged from less than 10% of the suicides in Kentucky, Georgia and Maryland to 35.8% of the suicides in Virginia and 54.4% of the suicides in Utah.

On average 28% of suicide victims were identified as having problems with a current or former intimate partner that appeared to have contributed to the suicide. Examples of such problems include a divorce, break-up, argument, jealousy, or conflict. The percent by stage ranged from less than 20% of the suicides in Georgia, New Jersey and Kentucky to more than 40% of suicides in Alaska and Utah.

Some suicide victims were noted to have physical health problems, such as a terminal or debilitating illnesses, that appeared to have contributed to the decision to die by suicide. This circumstance was noted more frequently among elderly suicide victims. On average, 19% of suicide victims were identified as having physical health problems. The percent by state ranged from less than 10% of the suicides in Massachusetts to 30% or more of the suicides in Colorado.

Although reported less frequently than other circumstances, financial problems were also identified as a contributing factor in some suicides. On average, this circumstance was identified in 12% of the suicides. The percent by state ranged from a low of 6% of the suicides in Georgia to a high of 24% of the suicides in Colorado.

Some suicide victims were perceived by themselves or by others as having an on-going problem with or addiction to alcohol, resulting in a disruption in their relationships, work, health or other facets of their lives. On average, 15.7% of suicide victims were identified as having an alcohol problem. The percent by state ranged from less than 10% of the suicides in Georgia, Kentucky and New Jersey to 26.5% of the suicides in Colorado.

Often suicide victims expressed suicidal feelings or disclosed to others their intent to die by suicide, either explicitly (e.g., "I'm considering killing myself") or indirectly (e.g., "I think everyone would be better off without me"). This circumstance was noted in 28% of the suicides in Kentucky to 40% or more of the suicides in Alaska, Oregon, and Utah.

HOMICIDES: As with suicides, the occurrent ratio for homicides also varied by state (Table 1, p 9). The occurrent homicide ratio for New Mexico, the state with the highest ratio (8 homicides per 100,000 resident population) was four times that of Utah, the state with the lowest ratio (2 homicides per 100,000 resident population).

In terms of race, for most states, the occurrent homicide ratios were highest for Black individuals. Four states varied from this finding: Alaska, North Carolina, Rhode Island and Utah, which all had American Indian/Alaska Native with the highest occurrent homicide ratio.

Because the NVDRS is designed to capture all the information about an incident, it is possible to distinguish homicide incidents in which one person died from incidents in which multiple people died. The percent of homicide incidents with multiple victims varied by state from 5% of the homicide incidents in Rhode Island to 25% of the homicide incidents in Alaska.

As with suicides, the most common method of injury was use of a firearm. For most states, more than 50% of the homicides resulted from the use of a firearm. However, in some states, the percent was even higher. In North Carolina and Maryland, 70% or more of the homicides were firearm-related. In contrast, less than 50% of the homicides in Utah and New Mexico involved a firearm.

Similarities and Differences, continued

As mentioned previously, one of the strengths of the NVDRS is the ability to capture information on circumstances or precipitating factors associated with death from violence. A few examples of the variability among states for difference circumstances associated with homicide are provided in the following figures.¹⁰

By far, the leading circumstance identified with homicide was an argument or other interpersonal conflict, not including arguments over money or property or intimate partner violence or jealousy. On average, an argument or other interpersonal conflict was identified in 26% of homicides. The percent of homicides for which this circumstance was identified varied from 5% of the homicides in Rhode Island to 42% of the homicides in Colorado, North Carolina, and Utah.

Of all the NVDRS states, 43% of homicides were identified as being associated with robbery and the second most common was assault/homicide at 17% of the states. The percent of homicides associated with robbery varied by state, ranging from 29% of the homicides reported by Colorado to 70% of the homicides reported by Wisconsin.

Intimate partner violence was reported as a precipitating factor in about 12% of homicides. The percent by state varied from less than 5% of the homicides in New Jersey to more than 20% of all homicides in Oregon, Alaska, and Utah. For all states, however, females were more likely than males to be the victim in homicides involving intimate partner violence.

COMPLETENESS OF INFORMATION: Although all NVDRS states are required to gather information from death certificates, coroner/medical examiner reports and law enforcement investigations, the completeness of the information obtained from each source can vary.

In general, most NVDRS states are able to collect complete information on the demographics of the victim and on the type of method(s) or weapon(s) involved in the death. But capturing detailed information on the circumstances of deaths due to violence is much more difficult. For one, states vary in the structure of their coroner/medical examiner systems. Some states, such as New Mexico and North Carolina, have a single state medical examiner office that investigates all deaths while other states, such as Colorado and Georgia, have individual county coroners. The training required by medical examiners differs from that of county coroners and is not standardized throughout the U.S. Additionally, for both coroners/medical examiners and law enforcement, the types of questions asked and the information gathered in investigations of homicides, suicides and other deaths from violence are not standardized throughout the U.S. Thus, the quality and comparability of the investigation can vary from jurisdiction to jurisdiction.

These issues, in addition to differences among states in access to information from all reporting sources, make it difficult to interpret or fully understand the state-level differences in suicide or homicide circumstances. As mentioned previously, on average, information on at least one circumstance associated with the suicide was identified in XX% of the suicides (the percent among states varied from (XX% to XX%). On average, information on at least one circumstance associated with the homicide was identified in XX% of the homicides (with the percent among states varying from XX% to XX%).

Figure SD-1. Frequency of Suicide Method, by State
Percent of Suicides by Method Used

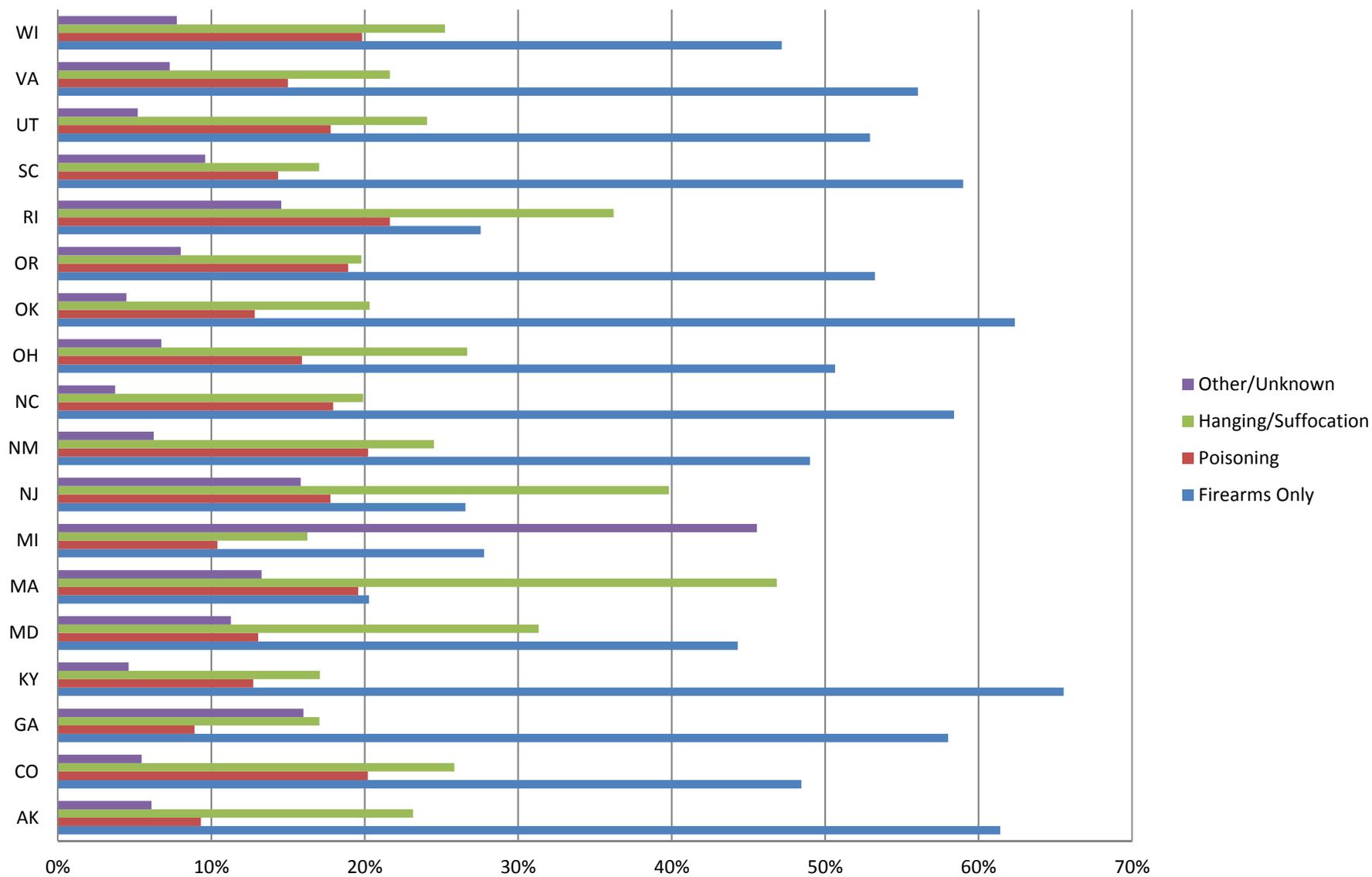
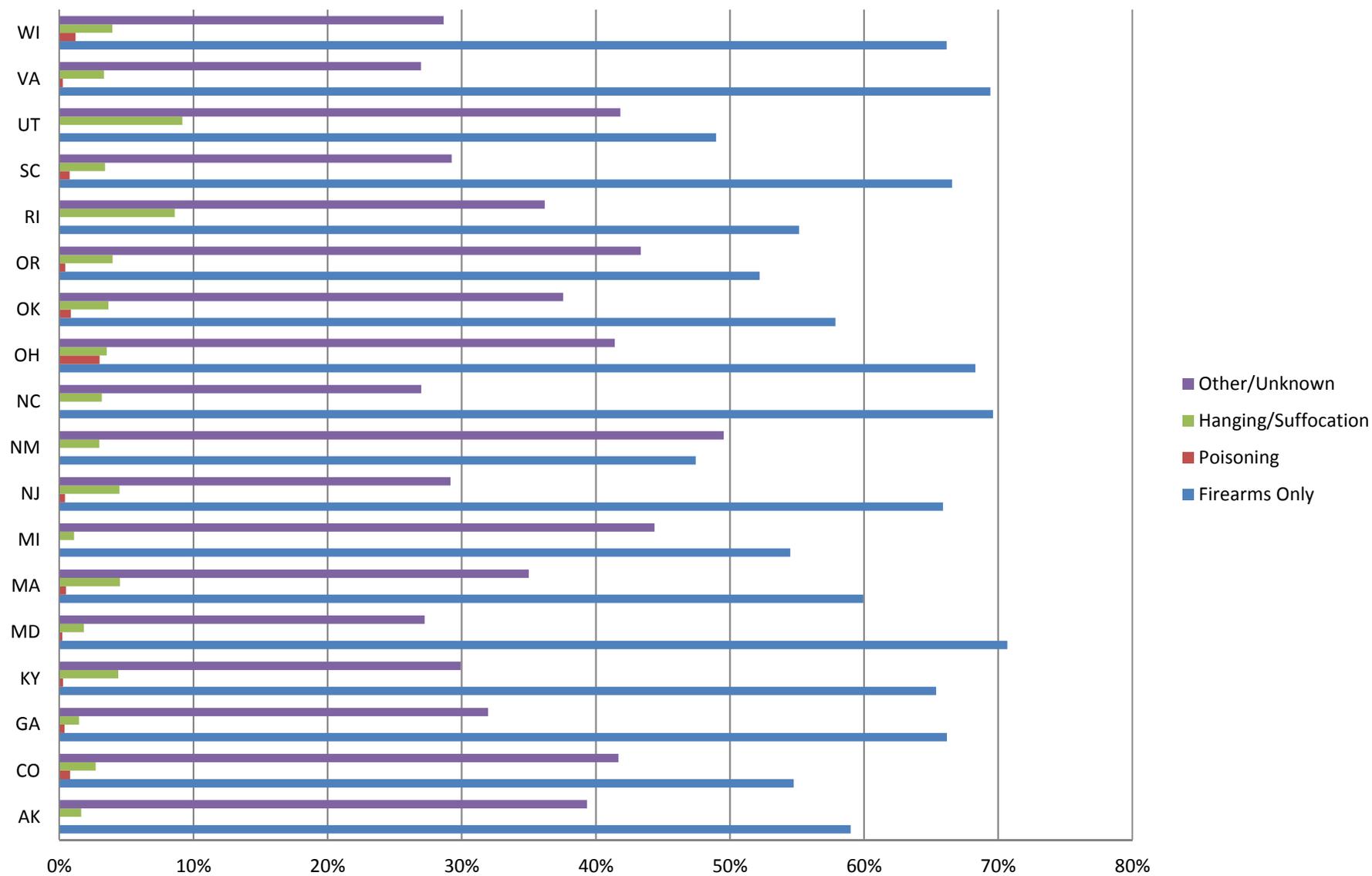


Figure SD-2. Frequency of Homicide Methods, by State
Percent of Homicides by Method Used



Appendix 1: Definition of Terms

The following definitions refer to terms identified in this report and are adapted from the NVDRS coding manual. The complete NVDRS coding manual is accessible on line at www.cdc.gov/ncipc/pub-res/nvdrs-coding/default.htm

Acquaintance: Someone with or about whom the victim had prior interaction or knowledge.

Alcohol problem: A suicide circumstance in which the victim is perceived by self or others as having a problem with or being addicted to alcohol. A victim who is participating in an alcohol rehabilitation program or treatment, including self-help groups and 12-step programs, and has been clean and sober for less than five years is also considered as having this circumstance.

Argument/Abuse: An interpersonal conflict, such as an insult, grudge, or personal revenge, including conflicts over money or property, child abuse, elder abuse or abuse by a caretaker. This homicide circumstance does not include intimate partner violence or jealousy.

Asphyxia: A lack of oxygen or excess of carbon dioxide in the body that results in unconsciousness or death, usually caused by interruption of breathing or inadequate oxygen supply.

Blunt instrument: Clubs, bats, boards, or other objects that can be used to inflict an injury.

Brawl: A homicide circumstance in which persons were involved in a mutual physical fight, which may or may not escalate to involve the use of weapons.

Circumstances known: Indicates that information

about the events or predisposing factors associated with the incident was available from either medical examiner/coroner records or law enforcement reports.

Crime: A homicide circumstance in which the incident occurred as the result of another serious offense such as drug trafficking, robbery, burglary, motor vehicle theft, arson, and witness intimidation/ elimination. A serious offense is one that carries a sentence of one or more years in prison.

Criminal legal problem: A suicide circumstance in which the victim was facing a recent or impending arrest, police pursuit, or an impending criminal court date, and the consequence was relevant to the suicide event.

Crisis: A suicide circumstance in which an acute precipitating event appears to have contributed to the suicide (e.g., the victim was just arrested; divorce papers were served that day; the victim was about to be laid off; the person had a major argument with a spouse the night before).

Depressed mood: A suicide circumstance in which the person was noted by others to be sad, despondent, down, blue, unhappy, etc. This circumstance can apply whether or not the person has a diagnosed mental health problem.

Drug involvement: A homicide circumstance in which drug dealing, illegally trafficking a controlled substance, or illegal drug use is suspected to have played a role.

Appendix 1: Definition of Terms, continued

Drug problem: A suicide circumstance in which the victim is perceived by self or others as having a problem with or being addicted to medications or other drugs, whether prescribed or illegally obtained. See Substance Abuse.

Financial problem: A suicide circumstance in which the victim was experiencing monetary issues such as bankruptcy, overwhelming debts, a gambling problem, or foreclosure of a home or business.

Firearm: Any weapon (including a starter gun) which is designed to or may readily be converted to expel a projectile by the action of an explosive (e.g., gun powder).

Gang-related: A homicide circumstance in which the victim or suspect is a member of an association or organization that has the commission of crime as one of its reasons for existence, and the homicide resulted from gang rivalry or gang activity.

Gun: A broader category than firearms, that includes any weapon that shoots something under pressure (not necessarily via an explosive as used in a firearm). Includes firearms, BB guns, air guns, etc.

Hanging/suffocation/strangulation: Mechanisms of injury resulting in airway obstruction in which the victim died from lack of oxygen.

Homicide: A death resulting from the intentional use of force or power, threatened or actual, against another person, group, or community. A preponderance of evidence must indicate that the use of force was intentional.

Incident: All victims and suspects associated with a given incident are in one record. A violent death incident can be made up of any of the following: a) One

isolated violent death. b) Two or more homicides, including legal interventions, when the deaths involve at least one person who is a suspect or victim in the first death and a suspect or victim in the second death. c) Two or more suicides or undetermined manner deaths, when there is some evidence that the second or subsequent death was planned to coincide with or follow the preceding death. d) One or more homicides or unintentional firearm deaths combined with one or more suicides, when the suspect in the first death is the person who commits suicide. e) Two or more unintentional firearm deaths when the same firearm inflicts two or more fatal injuries and the fatal injuries are inflicted by one shot or burst of shots. For categories (b), (c) and (d), the fatal injuries must occur within 24 hours of each other.

Intent to commit suicide: The victim had previously expressed suicidal feelings to another person, whether explicitly (e.g., "I'm considering killing myself") or indirectly (e.g., "I know how to put a permanent end to this pain").

Intimate partner: A current or former girlfriend, boyfriend, date or spouse. The definition of intimate partner includes first dates. *Please see Analysis Considerations section for a further description.

Intimate partner problem/violence: A suicide or homicide circumstance in which the victim was experiencing problems with a current or former intimate partner, such as a divorce, break-up, argument, jealousy, conflict, or discord. *Please see Analysis Considerations section for a further description.

Jealousy: A homicide circumstance in which the incident involved sexual rivals.

Job: A suicide circumstance in which the victim was either experiencing a problem at work (such as tension with a co-worker, poor performance reviews, increased pressure, feared layoff) or was

Appendix 1: Definition of Terms, continued

feared layoff) or was having a problem with joblessness (e.g., recently laid off, having difficulty finding a job).

Justifiable self-defense: A homicide circumstance in which a civilian (someone who is not a law enforcement officer) acts to protect him/herself by killing another who by violence or surprise is attempting to commit a forcible felony. Essential elements are that the civilian does not provoke difficulty and that there must be impending peril without a convenient or reasonable mode of escape.

Legal intervention death: A death in which the decedent was killed by a police officer or other peace officer (persons with specified legal authority to use deadly force), including military police, acting in the line of duty.

Lover's triangle: See Jealousy.

Mental health problem: A suicide circumstance in which the victim was identified as having a mental health illness, such as depression, schizophrenia, obsessive-compulsive disorder, etc. The mental health problem must have been diagnosed by someone who is professionally trained.

Mental health treatment: A suicide circumstance in which the victim had a current prescription for a psychiatric medication or saw a mental health professional within the two months prior to death. Treatment includes seeing a psychiatrist, psychologist, medical doctor, therapist or other counselor for a mental health or substance abuse problem; receiving a prescription for an antidepressant or other psychiatric medication; or residing in an inpatient or halfway house facility for mental health problems.

Occurrent death: Those deaths in which the decedent

was injured in the reporting state, whether or not the decedent was a resident of the reporting state.

Other relationship problem: A suicide circumstance in which the person was experiencing problems or conflict with a family member, friend or associate (other than an intimate partner) that appeared to have contributed to the suicide.

Personal weapon: Injury inflicted on another person using fists, feet, hands, or other body parts.

Physical health problem: A suicide circumstance in which the victim was experiencing terminal disease, debilitating condition, or chronic pain, that was relevant to the suicide event.

Poisoning: A state of illness caused by the presence of any harmful or toxic substance that has been ingested, inhaled, applied to the skin or resulted from any other form of contact.

Restricted Access Database (RAD): A subset of the national NVDRS database prepared by the CDC for use by researchers and other investigators. To obtain the RAD, requestors must submit a proposal to CDC describing the intended use of the data.

Resident: The decedent was an official inhabitant of the state (or territory) including those portions of a Native American reservation within the state at the time of injury, according to the death certificate.

Sharp instruments: Objects that can be used to inflict a penetrating injury, such as knives, razors, machetes or pointed instruments such as a chisel or broken glass.

Stranger: Someone with whom the victim has had no

Appendix 1: Definition of Terms, continued

prior interaction before the event that culminated in the violent injury.

Substance abuse: A suicide circumstance in which the victim was noted as using illegal drugs (such as heroin or cocaine), abusing prescription medications (such as pain relievers or Valium), or regularly using inhalants (e.g., sniffing gas) even if the addiction or abuse is not specifically mentioned. The exception to this is marijuana use. For marijuana, the use must be noted as chronic, abusive, or problematic (e.g., “victim smoked marijuana regularly,” “victim’s family indicated he had been stoned much of the past months”).

Suicide: A death resulting from the intentional use of force against oneself. A preponderance of evidence should indicate that the use of force was intentional.

Suicide attempt history: A suicide circumstance in which the victim was known to have previously tried to end his/her own life, regardless of the severity of the injury inflicted.

Suicide note: A suicide circumstance in which the victim left a message, e-mail, video, or other communication that he or she intended to end his/her own life. A will or folder of financial papers near the victim does not constitute a suicide note.

Suspect: Person or persons suspected of having killed another person in an incident, whether intentionally (any method/weapon) or unintentionally (firearm only) or assisted in the homicide.

Undetermined death: A death resulting 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 the evidence indicating another manner of death.

Unintentional firearm death: A death resulting from a penetrating injury or gunshot wound from a weapon that uses a powder charge to fire a projectile when there was a preponderance of evidence that the shooting was not intentionally directed at the victim.

VDRS states: The 18 states that have been funded by the National Violent Death Reporting System and have contributed data to the Restricted Access Database for this report. States with one year of data (2010) include Michigan and Ohio. States with two years of data (2009-2010) include Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia and Wisconsin.

Victim: Person or persons who died in a suicide, violence-related homicide, legal intervention, as the result of a firearm injury, or from an undetermined manner.

Weapon/Method/Mechanism: The primary instrument used by a victim or suspect that contributed to someone’s death.

Appendix 2: Methods

This report contains descriptive information using public health surveillance data from the National Violent Death Reporting System (NVDRS). The NVDRS is a population-based, active surveillance system developed and supported by the Centers for Disease Control and Prevention (CDC) designed to obtain a complete census of all resident and occurrent deaths from violence. Each participating state collects information from death certificates, medical examiner/coroner files, law enforcement records, and crime labs. As of 2009, the eighteen states of Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Mexico, New Jersey, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Virginia, Utah and Wisconsin participate in the national data system. Cases consist of deaths from suicide, homicide, undetermined intent, legal intervention, and unintentional firearm injury. Related fatal injuries involving multiple victims that occur within 24 hours of each other are captured in one incident. Although each state maintains its own database, selected case-level variables are routinely submitted to CDC for inclusion in the national database. The data submitted to the national database do not contain personal identifiers such as a name and street address, but they do include information that could potentially be identifying, such as city of residence, county of injury, and a narrative of the incident.

A full description of the data collection processes of the National Violent Death Reporting System is provided in a Surveillance Summary published in the Morbidity and Mortality Weekly Report in September 2012.² Additional information on data collection and definitions is available in the NVDRS Coding Manual.⁶

Data sources: The NVDRS Restricted Access Dataset (RAD), a subset of the national database prepared by the CDC for use by researchers and other investigators, was the primary data source for this report. To obtain the RAD, requestors must submit a proposal to CDC describing the intended use of the data. The University of Kentucky submitted a proposal to CDC in September 2012. A scientific panel at the CDC reviewed and approved the use of the RAD data for this report. The RAD data file used in these analyses was available for analysis in March 2013.

Population estimates for calculating the number of occurrent deaths per population were obtained from the United States Census Bureau 2010 Data.⁸

Case selection: Cases were selected based on a date of death in 2009 or 2010, regardless of the date of injury. Cases were categorized to a type of violent death (e.g., suicide or homicide) using the abstractor-defined manner of death. Occurrent deaths were used in all analyses. State occurrent deaths are defined as those deaths in which the initial injury occurred within the state, regardless of the state of residence of the victim. In instances where the state of injury was unknown, a death was considered an occurrent death if the death occurred within the reporting state. Although most occurrent deaths involve state residents, nonresidents were also included in the total number of occurrent deaths.

Analysis methods: This report provides descriptive information using public health surveillance data. Because this is not a research study, no specific hypotheses were tested and no statistical tests were conducted. In general, three types of measurements are presented: (1) the number of occurrent deaths for a given violent

Appendix 2: Methods, continued

death category, (2) the percent of the total number of violent deaths for a given category, and (3) the number of occurrent deaths per 100,000 population (a ratio). Numbers and proportions/percents describe the frequency of occurrence; ratios are summary statistics that provide a standard unit of measurement that permits comparisons between groups and can reveal levels of risk. The ratio of occurrent deaths per 100,000 population was calculated from the number of occurrent deaths divided by the U.S. Census Bureau 2010 estimates for the appropriate state, year(s), age, gender, race and Hispanic origin groups. As mentioned above, occurrent deaths can include both in-state and out-of-state residents. Use of an occurrent ratio emphasizes the total burden of violent death in a state. The percent of occurrent deaths that involve state residents is shown in Table 1 on page 9. The occurrent deaths per population measurements are not age-adjusted.

State summaries also include information on the percent of homicides or suicides having a given circumstance. These percents are calculated based on the number of homicides or suicides with a given circumstance divided by the total number of homicides or suicides in the state. It should be noted that circumstance information was not available on all suicides or homicides for all states. This is briefly discussed in the interstate comparison section of the report on pages 10-45.

Cell size restrictions: Per the RAD users agreement with CDC, cells showing or derived from one to four deaths are suppressed – and are identified by an asterisk (*) in Table 1; cells with zero or five or more deaths are shown. In general occurrent ratios are not computed for cells containing fewer than 5 deaths; ratios based on fewer than 20 deaths have been identi-

fied and should be interpreted with caution. If the policy of a given state required more stringent restriction of cell size than that of the RAD data users agreement, those requirements are described in the footnotes to the tables and in the state's summary.

Excerpt from the Description of the National Violent Death Reporting System

Published in the *Morbidity and Mortality Weekly Report*, Volume 57, No. SS-3 April, 2008

NVDRS uses multiple, complementary data sources, including death certificates, CME records, and PRs. Secondary sources used by certain participating states include child fatality review team data, supplementary homicide reports, hospital data, crime lab data, and Bureau of Alcohol, Tobacco, Firearms, and Explosives trace information regarding firearms. NVDRS can link together multiple documents for each violent death and also link multiple deaths that are related to each other (e.g., multiple homicides, homicide followed by suicide, or multiple suicides) into a single incident. The ability to analyze data linked in this way allows for a comprehensive assessment of risk and protective factors for violent death.

Appendix 2: Methods, continued

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 mechanical forces (firearms)	W32-W34	Y86 determined to be attributable to firearms
Legal intervention, excluding executions	Y35.0-Y35.4, Y35.6-Y35.7	Y89.0
Terrorism	U01, U03	U02

NVDRS defines a violent death as a death resulting from either the intentional use of physical force or power against oneself, another person, or a group or community, or the unintentional use of a firearm. NVDRS case definitions are coded on the basis of the International Classification of Diseases, Tenth Revision (ICD-10).⁹ Cases with selected ICD-10 codes are included in NVDRS. ICD-10 case finding is completed by participating states. The ICD-10 codes used in the National Violent Death Reporting System are shown in the box above.

Variables analyzed in NVDRS include the following:

- manner of death (i.e., the intent of the person inflicting a fatal injury);
- method of injury (i.e., the weapon used to inflict a fatal injury);
- circumstances preceding injury (i.e., the precipitating events that led 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 who then fatally injured himself or herself);

- 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 incident-based, and all decedents (both victims and alleged perpetrators [suspects]) associated with a given incident are grouped in one record. Decisions about whether two or more deaths belong to the same incident are made on the basis of the timing of the injuries rather than on that 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 undetermined manner deaths 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.

Appendix 2: Methods, continued

Data are obtained from individual information sources and entered into source-specific computerized data entry screens (i.e., police report data are entered into police report screens and death certificate data into death certificate screens). In addition to allowing independent entry for each source, this approach permits later review of what each source contributed and identification of missing sources. This allows for 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. NVDRS resolves these inconsistencies by assigning a primacy, or hierarchical rule, for each variable. The primacy rules are applied to create a final analysis data set that uses data from all available sources. For each variable in NVDRS, primacy is established on the basis of a hierarchy of assumed reliability of all the possible sources for a given variable. For example, sex is collected from three source documents (death certificate, CME record, and police report). The primacy rule for sex is expressed as death certificate/CME record/police report, meaning the analysis file is constructed using the sex recorded in the death certificate; if this is left blank or is unknown, the sex recorded in the CME record is used; and, if the CME record does not provide the sex or lists the sex as unknown, the police 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 data using one of five abstractor assigned manners of death:

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

Appendix 2: Methods, continued

- **Unintentional firearm.** The term “unintentional firearm” is used when a death 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. This category includes celebratory firing that was not intended to frighten, control, or harm anyone; a soldier who was 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 nonpowder guns (e.g., BB, pellet, or other compressed air-- or gaspowered guns). Corresponding ICD-10 codes included in NVDRS are W32--W34 and Y86 with a method of firearm.

- **Undetermined intent.** The term “undetermined intent” is used when a death 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 CME rulings such as “accident or suicide,” “undetermined,” “jumped or fell,” and self-inflicted injuries 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.** The term “legal intervention” is used when a decedent is killed by a police 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.

Variables Analyzed: NVDRS can analyze approximately 250 unique variables (available at <http://www.cdc.gov/ncipc/profiles/nvdrs/default.htm>); 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 underlying cause-of-deaths codes and text, location and date/time of injury and death, toxicology results, bodily injuries, precipitating circumstances, decedent, suspect relationship, and method of injury.

Circumstances Preceding Death: The circumstances preceding death are defined as the precipitating events that led to the infliction of a fatal injury. The circumstances that preceded a fatal injury are reported on the basis of the content of CME and police 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 CME record or the police report indicates that the circumstance is reported to be true, then the abstractor enters data as confirmed (e.g., if the police 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: Coding training is held annually for all participating states. 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 hoverover feature con-

Appendix 2: Methods, continued

taining variable-specific information. Details regarding NVDRS procedures and coding are available at <http://www.cdc.gov/ncipc/profiles/nvdrs/publications.htm>. States are responsible for performing blind reabstraction of cases using multiple abstractors to identify inconsistencies. CDC also conducts a quality control analysis in which multiple variables are reviewed for the appropriateness with special focus on abstractor assigned variables such as weapon 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 previous 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 (i.e., 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 first year of data collection.

Appendix 3: A Comparison of Results from NVDRS and WISQARS

The NVDRS definition of a death from violence is rather broad and includes such categories as intentional deaths (suicide and homicide), unintentional deaths resulting from use of a firearm, deaths resulting from legal intervention, terrorism-related deaths and deaths for which the intent is undetermined. Because of the broad case definition used by the NVDRS, the numbers of total violent deaths presented in this report, in some instances, may differ substantially from those reported from other data systems. For example, in the CDC's Web-based Injury Statistics Query and Reporting System (WISQARS), violence-related deaths include homicides, suicides and deaths resulting from legal intervention.¹ They do not include unintentional deaths resulting from use of a firearm, terrorism related deaths or deaths with undetermined intent.

Table 2 compares the results for "total violent deaths" as reported by WISQARS to the results shown in Table 1 of this report. Several factors contribute to the differences in the results generated from the two sources:

- There are differences in the subcategories included in "total violent deaths". The subcategory contributing the most to the different results is "deaths of undetermined manner" which is included in the NVDRS case definition for total violent death but not included in the WISQARS definition of total violent death.
- "Abstractor-defined manner of death" was used to select cases in the NVDRS analysis; WISQARS uses ICD-10 codes to select cases.
- The WISQARS includes resident deaths only and calculates a mortality rate; the NVDRS includes occurrent deaths and calculates an occurrent violent death ratio.

- There could be slight differences in the state population estimates used by the two sources.

The purpose of this comparison is not to suggest that one source is better than another; the results obtained from WISQARS and the results presented in this report are both equally valid. Rather, this comparison demonstrates the importance of understanding the underlying criteria and analysis methods behind a given result.



Table 2: A Comparison of results for “total violent deaths”

State	Total Deaths from Violence	
	WISQARS	NVDRS
	Violent Death Rate+ per 100,000 population	Occurrent Death Ratio‡ per 100,000 population
Alaska	29.4	35.1
Colorado	21.0	24.4
Georgia	18.4	21.2
Kentucky	19.2	19.3
Maryland	16.4	28.4
Massachusetts	12.3	13.7
Michigan	19.1	
New Jersey	12.6	12.4
New Mexico	28.1	32.7
North Carolina	18.0	19.6
Ohio	17.6	
Oklahoma	22.4	26.1
Oregon	21.5	23.9
Rhode Island	14.8	15.9
South Carolina	20.9	21.3
Utah	19.2	28.5
Virginia	16.9	19.1
Wisconsin	16.9	17.7

+The Violent Death Rate is calculated from the number of resident deaths divided by the resident population.

‡The Occurrent Violent Death Ratio is calculated from the number of occurrent deaths divided by the resident population.

References

1. Centers for Disease Control and Prevention. Web-based Injury Statistics and Query and Reporting System 1. (WISQARS). Atlanta, GA: US Department of Health and Human Services, CDC; 2010. Retrieved June 30, 2013, from <http://www.cdc.gov/ncipc/WISQARS/>.
2. Centers for Disease Control and Prevention. Surveillance for Violent Deaths – National Violent Death Reporting System, 16 states, 2009. *Surveillance Summaries*, September 14, 2012. *MMWR* 2012; 61 (No. SS-06); 1-43.
3. For a description of these types of violent deaths, see Appendix 1: Definition of Terms.
4. Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia and Wisconsin.
5. Definitions of terms and methods of analysis are described in Appendices 1 and 2.
6. Centers for Disease Control and Prevention. National Violent Death Reporting System Coding Manual Version 3. Retrieved July 12, 2013 from http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/vs3/nvdrs_coding_manual_version_3-a.pdf.
7. Ibid
8. United States Census Bureau. 2010 Census Data. Retrieved June 30, 2013. <http://www.census.gov/2010census/data/>
9. Organization, W., (2004). *International Statistical Classification of Diseases and Health Related Problems*. Geneva: World Health Organization.