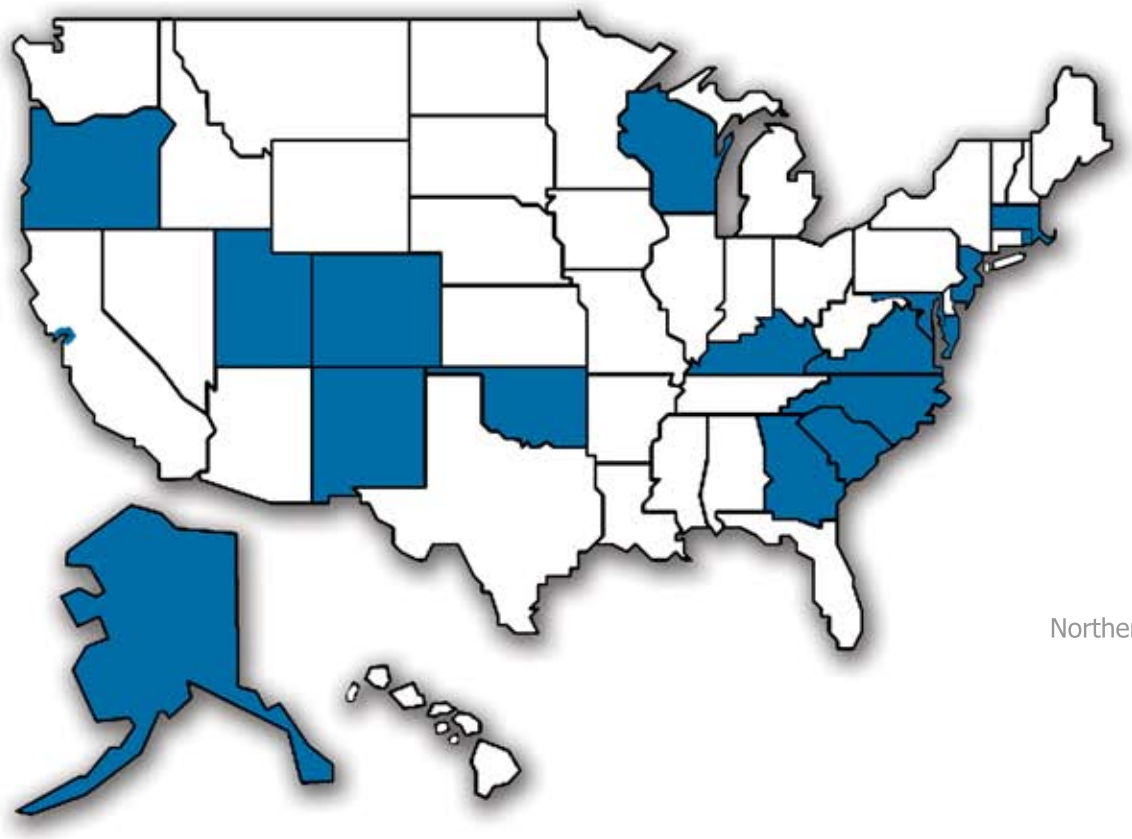
Deaths from Violence:
A Look at 17 States

Data from the National Violent Death Reporting System 2004-2005



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Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Guam
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
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New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Northern Mariana Islands
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Oregon
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Tennessee
Texas
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Vermont
Virginia
Washington
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Wisconsin
Wyoming

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Data from the National Violent Death Reporting System 2004-2005

The State Violent Death Reporting System Workgroup
December 2008

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For copies, contact the Violent Death Reporting System (VDRS) program in any of the participating states (see Appendix 5) or visit the website of the State and Territorial Injury Prevention Directors Association at www.stipda.org.

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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. Many of these deaths are preventable. However, to design effective violence prevention strategies, an essential first step is to ensure the availability of complete, accurate and timely information, particularly with regard to the populations at risk and the circumstances and predisposing factors that contribute to deaths from violence.

In 2002, the Centers for Disease Control and Prevention (CDC) began implementing 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. In contrast to other national surveillance systems that collect 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.

Currently, CDC funds 17 states to participate in the NVDRS. These states include Alaska, California (selected sites), Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia and Wisconsin. Through annual meetings and monthly conference calls, the states share their ideas and findings. Recent discussions have addressed the significant state-level heterogeneity that is often masked when aggregate data are analyzed at the national level. This report, the first product of the State Violent Death Reporting System (VDRS) Workgroup, 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 except Maryland and the selected sites in California, suicides outnumbered homicides. In Oregon and Utah, the annual number of suicides was more than five times that of homicides.
- The occurrent ratio for suicides varied by state. The occurrent suicide ratio for Alaska (22 suicides per 100,000 residents) was three times that of New Jersey (7 suicides per 100,000 residents).
- In all states the occurrent suicide ratio was higher for males than for females, however the age group most affected varied by state. In Alaska and New Jersey, the occurrent suicide ratio was highest among 20 to 24 year old males. In Utah and Rhode Island, the ratio was highest among 45 to 64 year old males. In California (selected sites), Colorado, Georgia, Maryland, Oklahoma, Oregon and Virginia, the occurrent suicide ratios were highest among males ages 65 and older. Clearly these differences have important implications at the state level for selecting prevention strategies that target specific age groups.

Executive Summary, *continued*

- Firearms were used in more than 60% of the suicides in Alaska, Georgia, Kentucky, North Carolina and South Carolina, but in fewer than 25% of the suicides in California (selected sites), Massachusetts, New Jersey and Rhode Island. In general, men were more likely to use a firearm, while women were more likely to die from a drug overdose (poisoning).
- On average for all NVDRS states combined, 39% of suicide victims were identified as having a diagnosed mental health problem. The percent of this circumstance varied by state from a low of 25% of suicides in Alaska to 55% of suicides in Wisconsin and 63% of suicides in Rhode Island.
- 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 15% of the suicides in California (selected sites) to more than 40% of the suicides in New Mexico 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 noted more frequently among elderly suicide victims. On average 21% of suicide victims were identified as having physical health problems. The percent by state ranged from less than 10% of the suicides in Georgia to 30% or more of the suicides in Colorado and Oregon.
- 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 10% of the suicides. The percent by state ranged from a low of 4% of the suicides in Georgia to a high of 22% of the suicides in Colorado.
- Often suicide victims expressed suicidal feelings or disclosed to others their intent to die by suicide. On average for all NVDRS states, this circumstances was noted in 27% of the suicides, ranging from less than 15% of the suicides in New Jersey to 40% or more of the suicides in New Mexico, Utah and Wisconsin.
- As with suicides, the occurrent ratio for homicides also varied by state. The occurrent homicide ratio for Maryland, the state with the highest ratio (9 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).
- Although the occurrent homicide ratio was higher for males than for females in all states, the age group with the highest ratio varied. In most states, 15-24 year old males had the highest ratio. However, in Oklahoma, North Carolina and South Carolina, the highest ratios were seen among 25-44 year old males.
- 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 New Jersey to 15% of the homicide incidents in Kentucky.
- In California (selected sites), Kentucky and Virginia, more than 70% of the homicides were firearm-related. In contrast, less than 50% of the homicides in Alaska, New Mexico, Rhode Island, and Utah 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 NVDRS states, an argument or other interpersonal conflict was identified in 37% of

Recommendations from the State Violent Death Reporting System Workgroup

Recommendation 1: The Centers for Disease Control and Prevention (CDC), its NVDRS partners and the funded states should:

- Increase awareness of the NVDRS as the best source of information on the prevalence, circumstances and means/methods of deaths from violence, through focused national and state-level media campaigns and the publication of additional reports and peer-reviewed journal/research articles on NVDRS findings.
- Facilitate access to aggregate and state-level NVDRS data by all organizations and institutions dedicated to reducing deaths from violence.

Recommendation 2: The CDC, its NVDRS partners and the funded states should promote the use of aggregate and state-level NVDRS data, in conjunction with local data, to create and evaluate national, state and local violence prevention programs and policies.

Recommendation 3: The NVDRS should be fully implemented in all states, the District of Columbia and the U.S. territories by 2012.

Recommendation 4: The CDC, its NVDRS partners and the funded states should promote the development and use of national standards for death investigation and documentation across disciplines. To improve the usefulness of death investigation information for public health purposes, the CDC should assist the developers of the standards by providing technical expertise on the development of uniform definitions and the principles of public health surveillance.

Recommendation 5: The CDC should continue to provide dedicated staff and funding to facilitate the networking of VDRS states, prevention partners and others who are working to reduce the burden of violence in the U.S.

homicides. The percent varied from 18% of the homicides in New Jersey to 53% of the homicides in Utah.

- On average, 19% of the homicides were identified as being associated with another serious crime, such as drug trafficking, robbery, sexual assault, motor vehicle theft, or arson. The percent of homicides associated with another serious crime varied by state, ranging from 9% of the homicides reported by California (selected sites) to 38% of the homicides reported by Kentucky. The most frequently cited associated crime was robbery.
- On average among the NVDRS states, intimate partner violence was reported as a precipitating factor in about 15% of the homicides. The percent by state varied from less than 10% of the homicides in California (selected sites) and New Jersey to more than 20% of the homicides in 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, but capturing detailed information on the circumstances of violent deaths is much more 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 by 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. The recommendations from the State VDRS Workgroup provide a state perspective on the next steps needed to realize a fully comprehensive national reporting system on deaths from violence.

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] 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[2] (NVDRS). 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 17 states to participate in the NVDRS (Figure I-1).[4] Additional support is needed so that the remaining 33 states, the 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 17 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.

The report also emphasizes how state-level data are essential for supporting state and community violence prevention initiatives. 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.

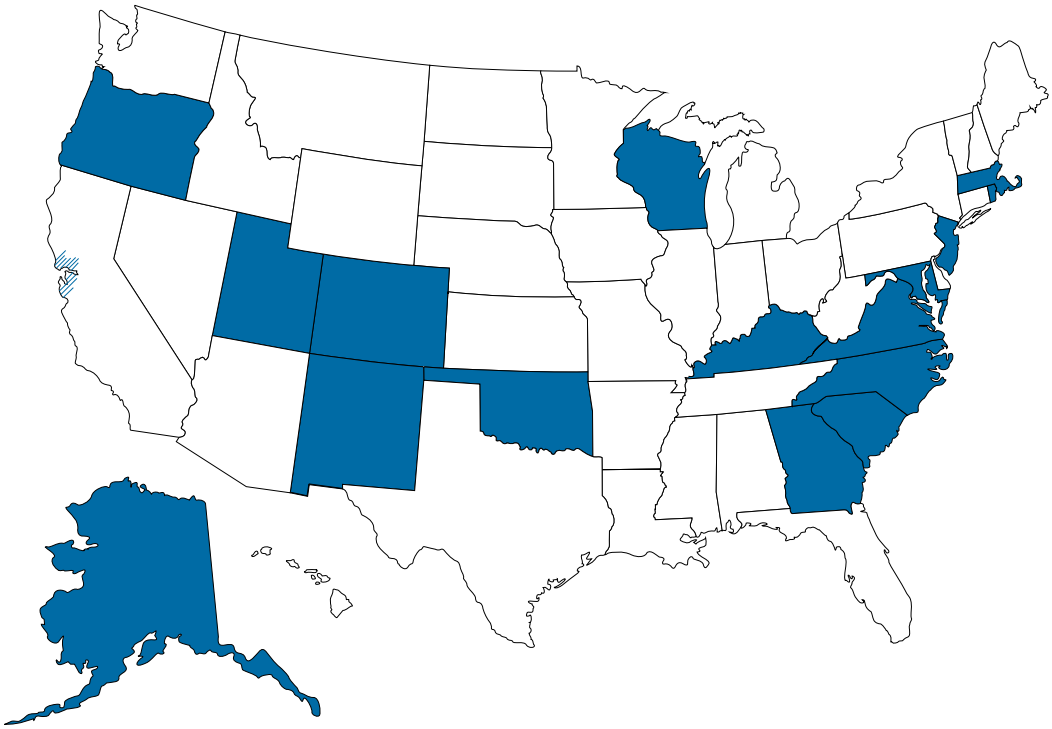
ORGANIZATION OF THIS REPORT: Following this introduction is a brief description of several factors to consider when analyzing NVDRS data, and reasons why the results presented in this report might differ from those derived from other data sources or analysis methodologies. This description will help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

Table 1 on pages 6-7 provides a quick look at the magnitude of deaths from violence among the 17 states currently participating 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.[5]

1. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS). Atlanta, GA: US Department of Health and Human Services, CDC; 2007. Retrieved July 12, 2008, 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, 2005. Surveillance Summaries, April 11, 2008. MMWR 2008; 57 (No. SS-3).
3. For a description of these types of violent deaths, see Appendix 1: Definition of Terms.
4. Alaska, selected sites in California (the City of Oakland, the city and county of San Francisco, and Santa Clara County), Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, 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.

Introduction, *continued*

Figure I-1. CDC-Funded States Participating in the National Violent Death Reporting System



The report continues with a brief summary of results for each state. These summaries begin with background 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 or state-level use of the data are also provided. The state summaries provide a brief overview for comparison purposes within this report. Website information to contact state programs or to access detailed state-generated reports are provided at the end of each state summary and in Appendix 5.

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 unique.

The report ends with a list of recommendations to further the goals of the National Violent Death Reporting System. These recommendations provide a state perspective on the next steps needed to realize a fully comprehensive national surveillance system on deaths due to violence.

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.[1] 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."[2] 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 Massachusetts, Maryland, Rhode Island and Utah, have a relatively high percent of deaths from violence classified as "undetermined manner of death", whereas other states, such as Kentucky, New Jersey, North Carolina and South Carolina, have a low percent of deaths classified as "undetermined manner of death" (Table 1 on pages 6-7).

Because of the broad case definition used by the NVDRS, the numbers and rates 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.[3] 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.

Resident vs. 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 in 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.

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 the 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

1. Centers for Disease Control and Prevention. National Violent Death Reporting System Coding Manual. Retrieved July 12, 2008 from http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/.
2. Ibid.
3. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System. Retrieved July 12, 2008 from http://www.cdc.gov/ncipc/wisqars/.

Analysis Considerations, *continued*

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 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).

State VDRS Workgroup Analysis Decisions: In preparing this report, the State VDRS Workgroup made several decisions 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. The State VDRS Workgroup decided that the occurrent ratio provided a more comprehensive description of a state's burden of deaths from violence.
- Using the abstractor-defined manner of death to classify deaths due to violence.

Table 1 on pages 6-7 compares the magnitude of deaths from violence among the 17 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. Three measures are shown for each category: (1) the annual number of violent deaths that occurred in the state, regardless of the person's state of residence; (2) the number of occurrent violent deaths per 100,000 resident population; and (3) the percent of occurrent violent deaths that involved state residents.

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 of 2.5% of all violent deaths in North Carolina to a high of 55% of all violent deaths in Rhode Island.

Table 1. Deaths from Violence, by Violent Death Reporting System State

	Total Deaths from Violence			Suicides			Homicides		
State †	Number of occurrent deaths†	Occurrent deaths per 100,000 population‡	Percent of occurrent deaths involving residents	Number of occurrent suicides†	Occurrent suicides per 100,000 population‡	Percent of occurrent suicides involving residents	Number of occurrent homicides†	Occurrent homicides per 100,000 population‡	Percent of occurrent homicides involving residents
Alaska	204	30.9	97.3	146	22.1	97.9	37	5.6	97.3
California#	510	17.9	88.4	226	7.9	91.6	234	8.2	84.6
Colorado	1,124	24.3	96.7	811	17.5	97.7	203	4.4	97.5
Georgia	1,821	20.2	96.9	951	10.5	97.9	657	7.3	96.5
Kentucky	799	19.1	95.5	548	13.1	95.6	192	4.6	95.8
Maryland	1,618	29.0	95.7	478	8.6	96.8	515	9.2	93.9
Massachusetts	1,110	17.2	96.7	482	7.5	96.9	181	2.8	95.6
New Jersey	1,075	12.4	96.4	601	6.9	96.1	411	4.7	97.2
New Mexico	586	30.4	93.9	343	17.8	94.8	160	8.3	95.0
North Carolina	1,749	20.3	97.5	1,033	12.0	98.1	636	7.4	96.8
Oklahoma	925	26.2	97.2	525	14.9	97.6	221	6.3	95.7
Oregon	801	22.2	95.2	579	16.0	95.1	110	3.0	95.0
Rhode Island	255	23.7	93.9	80	7.4	94.3	34	3.2	92.6
South Carolina	892	21.1	95.9	508	12.0	96.5	330	7.8	95.4
Utah	785	31.5	97.7	349	14.0	98.0	60	2.4	98.3
Virginia	1,402	18.6	96.4	857	11.4	97.0	438	5.8	95.8
Wisconsin	925	16.8	97.0	653	11.8	97.6	194	3.5	95.6

Footnotes:

Definitions of terms are found in Appendix 1.

Methodology is described in Appendix 2.

VDRS (Violent Death Reporting System) refers to the 17 states that are currently funded by and contribute data to the National Violent Death Reporting System (NVDRS).

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.

† For California (selected sites), Kentucky, New Mexico and Utah, the results are based on deaths occurring in 2005 only. For all other states, the results are **an annualized average** for deaths occurring in 2004 and 2005.

Data for California are from selected sites only (not statewide). The results shown are from 2005 for the City of Oakland, the City and County of San Francisco, and Santa Clara County.

* Indicates a cell size of 1-4 deaths.

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

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Table 1. Deaths from Violence, by Violent Death Reporting System State, *continued*

Unintentional Firearm Deaths			Deaths due to Legal Intervention			Deaths with Undetermined Manner			
Number of occurrent unintentional firearm deaths†	Occurrent unintentional firearm deaths per 100,000 population‡	Percent of occurrent unintentional firearm deaths involving residents	Number of occurrent legal intervention deaths†	Occurrent legal intervention deaths per 100,000 population‡	Percent of occurrent legal intervention deaths involving residents	Number of occurrent undetermined deaths†	Occurrent undetermined deaths per 100,000 population‡	Percent of occurrent undetermined deaths involving residents	State †
6	‡	81.8	*	‡	*	14	‡	96.3	AK
*	‡	*	7	‡	85.7	42	1.5	92.9	CA#
7	‡	85.7	16	‡	87.5	87	1.9	87.9	CO
22	0.2	100.0	33	0.4	89.4	159	1.8	93.1	GA
12	‡	100.0	10	‡	90.0	37	0.9	91.9	KY
*	‡	*	14	‡	89.3	608	10.9	96.6	MD
*	‡	*	*	‡	*	443	6.9	96.9	MA
0	0.0	0.0	15	‡	96.6	49	0.6	93.8	NJ
5	‡	100.0	7	‡	57.1	71	3.7	90.1	NM
20	0.2	92.3	19	‡	97.4	43	0.5	97.6	NC
8	‡	100.0	15	‡	96.6	156	4.4	97.8	OK
5	‡	90.0	15	‡	90.0	93	2.6	97.3	OR
*	‡	*	*	‡	*	140	13.0	94.3	RI
13	‡	96.0	*	‡	*	40	0.9	93.7	SC
0	0.0	0.0	*	‡	*	373	15.0	97.3	UT
15	‡	100.0	12	‡	91.7	81	1.1	93.8	VA
5	‡	100.0	5	‡	90.0	68	1.2	94.8	WI

Footnotes (repeated):

Definitions of terms are found in Appendix 1.

Methodology is described in Appendix 2.

VDRS (Violent Death Reporting System) refers to the 17 states that are currently funded by and contribute data to the National Violent Death Reporting System (NVDRS).

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.

† For California (selected sites), Kentucky, New Mexico and Utah, the results are based on deaths occurring in 2005 only. For all other states, the results are **an annualized average** for deaths occurring in 2004 and 2005.

Data for California are from selected sites only (not statewide). The results shown are from 2005 for the City of Oakland, the City and County of San Francisco, and Santa Clara County.

* Indicates a cell size of 1-4 deaths.

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

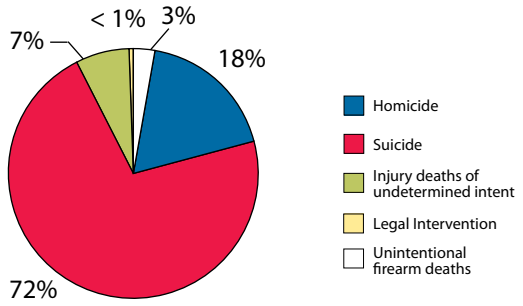
This is a two-page table. If reading this document electronically, please use a two-page format under the view menu.

Alaska, 2004-2005

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 (AK VDRS), established in 2003, provides a comprehensive picture of deaths due to violence in America's last frontier.

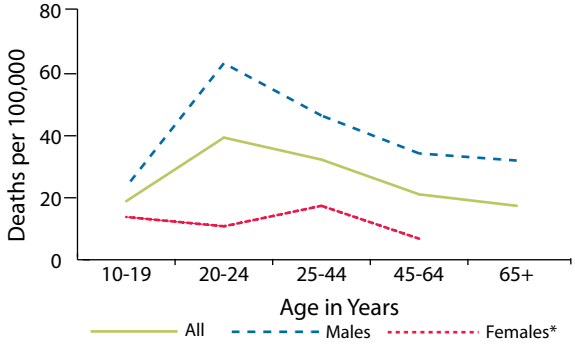
While Alaska has a relatively small population (670,000 residents), the rates of death due to violence are among the highest nationally. In 2004-2005, there were 408 deaths due to violence in Alaska for an average of 204 deaths per year.[1,2] Almost three quarters of these deaths (72%) were suicides; less than a quarter of the deaths (18%) were homicides (Figure 1).

Figure 1. Frequency of deaths from violence, by type: Alaska, 2004-2005 (1,2)



SUICIDES: In Alaska, there were 292 suicides in 2004-2005 for an average of 146 deaths per year. Alaska's occurrent suicide ratio[3] (22 per 100,000 population) was more than three times that for New Jersey, the VDRS state with the lowest ratio (Table 1). The majority of suicides in Alaska involved men (78%). The suicide ratio[3] for males (39 per 100,000) was three times higher than for females (12 per 100,000) and was highest for males ages 20 to 24 (63 per 100,000) (Figure 2).

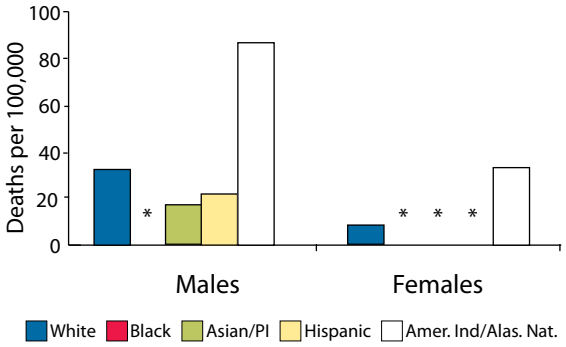
Figure 2. Occurrent suicides, by sex and age: Alaska, 2004-2005 (1-3)



*Some ratios were not calculated due to small numbers

Suicide ratios were highest among Alaska Native males (87 per 100,000) and females (33 per 100,000) (Figure 3). Suicide is the fourth leading cause of death among Alaska Natives. A higher proportion of suicide occurred in communities in the Northern and Southwest regions of the State (data not shown).

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Alaska, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: The method of suicide was identified in 98% of the deaths. The most common method was firearms (63%), followed by hanging/suffocation (21%) and poisoning (13%). Use of a firearm was reported more often in males (70%) than females (40%), whereas poisoning was reported more often in females (26%) than males (9%).

Circumstances[5]: Circumstance information was available in 96% of suicides.

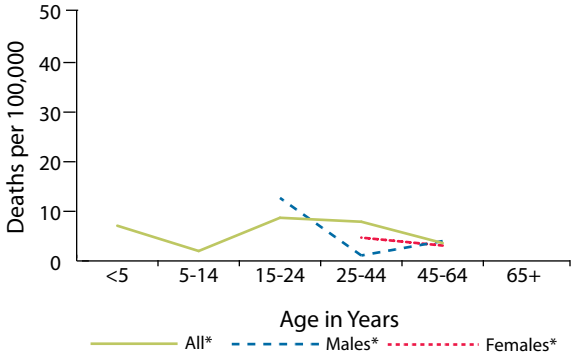
- Alcohol use and/or drug abuse were reported in half of all suicides in Alaska.
- Other common circumstances included a recent crisis prior to the death (45%) or recent depressed mood (40%).
- A physical health problem was reported in 60% of seniors (65 years and older) who died by suicide.
- One-third of suicide victims disclosed their intent to die by suicide (34%). Nearly 30% left a suicide note.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Alaska, 2004-2005, *continued*

HOMICIDES: In 2004-2005, there were 74 homicides in Alaska for an average of 37 homicides per year. Homicide ratios[3] for males (7 per 100,000) were higher than for females (4 per 100,000) (Figure 4). The highest homicide ratios were seen for males ages 15 to 24 (13 per 100,000) and for females under age five (13 per 100,000). Although homicides occurred more frequently in the Anchorage/Mat-Su area, the homicide ratio is highest in the Northern region of the state (data not shown).

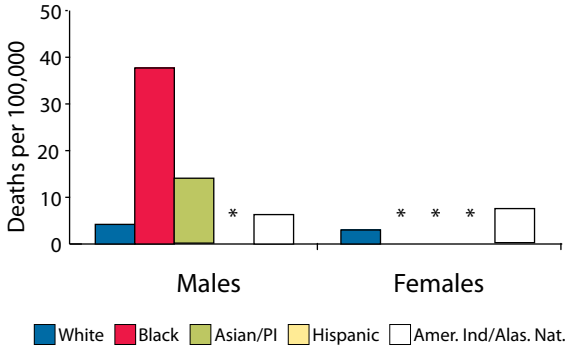
Figure 4. Occurrent homicides, by sex and age: Alaska, 2004-2005 [1-3]



*Some ratios were not calculated due to small numbers

The highest homicide ratios occurred in Black males (38 per 100,000), followed by Asian/Pacific Islander males (14 per 100,000) (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Alaska, 2004-2005 [1-4]



*Some ratios were not calculated due to small numbers

Methods/Means: The method used in the homicide was identified in 95% of the deaths. The most common method was a firearm (46%), followed by a blunt instrument or personal weapon, such as fists or feet (15%), and sharp instruments (11%). Of the homicides resulting from the use of a firearm, the majority involved a handgun (82%).

Circumstances[5]: Circumstance information was available in 92% of the homicides.

- The majority of homicides involved a single victim (93%).
- Argument, abuse, or conflict not involving an intimate partner was identified as a contributing circumstance in 32% of the homicides.
- 22% of the homicides involved intimate partner violence. This circumstance was seen more frequently for female victims (37% of all female homicides) than for male victims (13% of all male homicides).
- 21% of the homicides occurred while another crime was in progress.

Suspects[6]: Information about the suspect was available in 92% of the homicides. Approximately one quarter of the homicides resulted from intimate partner violence (22%) or jealousy due to a lover's triangle (5%). In 7% of the homicides, the suspect was reported as mentally ill. Less than 10% of the homicides were reported to be gang-related.

Collaboration And Uses Of AK VDRS Data

Epidemiologic information from the AK VDRS has helped to target improvements in in-state forensic toxicological capabilities and to strengthen public health and law enforcement communications and infrastructure. Activities supported by AK VDRS include:

- Alaska Substance Abuse Epidemiologic Outcomes Workgroup
- Alaska Suicide Prevention Council
- Alaska's Child Fatality Review

The AK VDRS will expand the scope of information available to its allied public health partners by collaborating with the Alaska Native Tribal Health Consortiums, the Alaska Native Epidemiology Center, the University of Alaska - Justice Center, and other partners for strategic planning, evaluation of current intervention programs, and expansion of prevention activities. Future plans are to expand surveillance in areas of need and concern including domestic and family violence.

For more information about the AK VDRS, please visit the AK VDRS website at www.hss.state.ak.us/dph/ipems/AKVDRS/

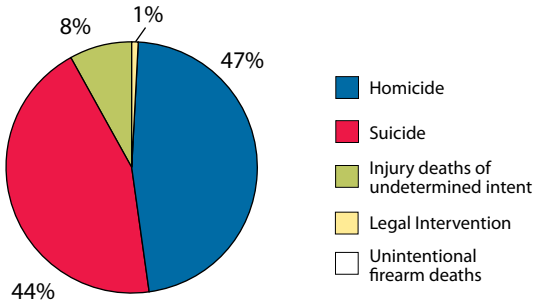
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

California, Selected Sites, 2005

California is the most populous state in the U.S. with 36.5 million people (approximately one in 8 American residents). Due to its large population, geographical size, decentralized nature of government, and number of deaths from violence, California is the only participating NVDRS state not collecting data statewide. In 2005, the California Violent Death Reporting System (CalVDRS) began collecting data on deaths due to violence in three sites – the City of Oakland, the City and County of San Francisco, and Santa Clara County.

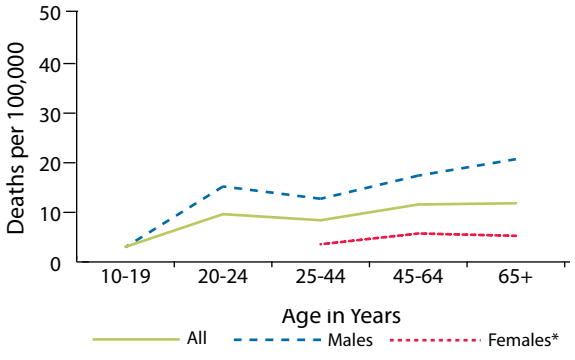
In 2005, there were 510 deaths from violence in the participating cities and counties in California.[1,2] Homicides accounted for 47% of these deaths and suicides accounted for 44% (Figure 1).

Figure 1. Frequency of deaths from violence, by type: California Selected Sites, 2005 (1,2)



SUICIDES: There were 226 suicides in the three participating sites in 2005. Numbers are not high enough in the younger female age groups to show a reliable occurrent suicide ratio.[3] In general, the suicide ratios increased with age (Figure 2).

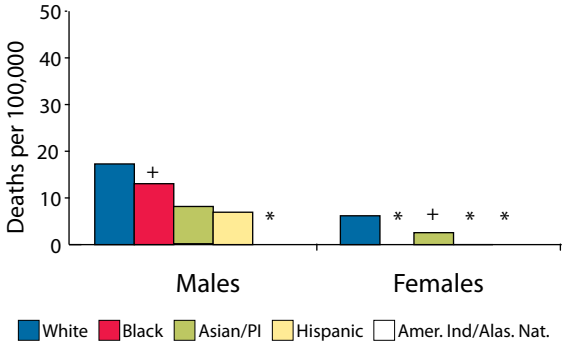
Figure 2. Occurrent suicides, by sex and age: California Selected Sites, 2005 (1-3)



*Some ratios were not calculated due to small numbers

Race and sex specific suicide ratios were calculated for groups with enough suicides to provide a stable occurrent suicide ratio. Of these groups, White males had the highest ratio, at 17 per 100,000 population (Figure 3).

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: California Selected Sites, 2005 (1-4)



*Some ratios were not calculated due to small numbers
+Ratios were based on less than 20 deaths and may be unstable

Methods/Means: Hanging/suffocation was the most common method of suicide (28%), followed by poisoning (26%), firearms (25%), and jumping (13%). Males were more likely to use a firearm (30%) than females (9%) and females (44%) were more likely to use poison than males (20%).

Circumstances[5]: At least one circumstance was identified in 80% of the suicides. Key findings include:

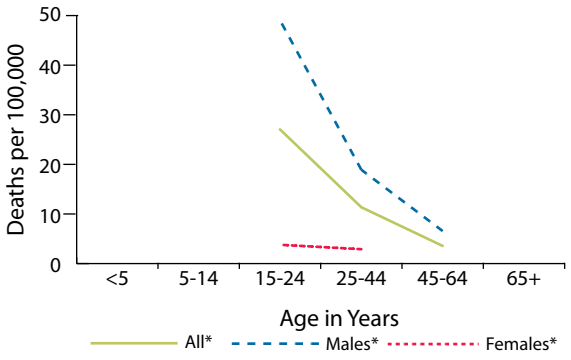
- The most frequently noted circumstances were associated with mental health problems, especially for females and young people.
- Females (22%) more often had an alcohol or drug problem than males (14%).
- Males were much more likely to have a job problem (10%) than were females (0%).
- Male suicides were twice as likely to be precipitated by intimate partner relationship problems (18%) than female suicides (9%).
- Suicide victims ages 45 and older were more likely to have a physical health problem that contributed to the suicide (38%) than victims under age 45 (6%).

[1]Data are from the CalVDRS Database. [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

California, Selected Sites, 2005, *continued*

HOMICIDES: In 2005, there were 234 homicide victims in 219 incidents in the three participating sites. This represents a ratio[3] of 8 homicides per 100,000 residents. The breakdown by age and sex yields too few numbers to display stable ratios in most groups (Figure 4). Male homicides drive the overall ratio, peaking in the 15 to 24 year age group with a ratio of slightly more than 49 per 100,000.

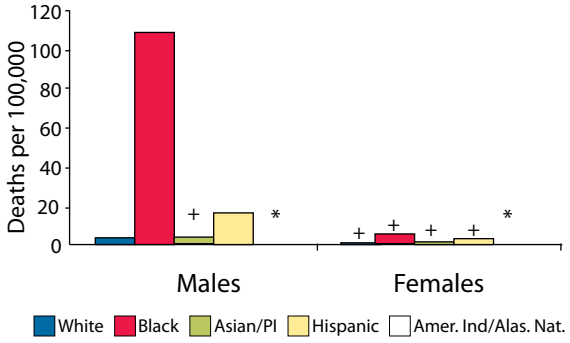
Figure 4. Occurrent homicides, by sex and age: California Selected Sites, 2005 (1-3)



*Some ratios were not calculated due to small numbers
Ratios were based on less than 20 deaths and may be unstable

Due to small numbers, Figure 5 does not show homicide ratios for all race and sex groups. The homicide ratio for Black males was more than 7 times greater than that for Hispanics and more than 31 times the ratio for Whites.

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: California Selected Sites, 2005 (1-4)



*Some ratios were not calculated due to small numbers
+Ratios were based on less than 20 deaths and may be unstable

Methods/Means: The method was known in 97% of homicides in the three participating sites. Firearms were used in 77% of homicides and a sharp instrument was used in 13%. A greater percent of male homicide victims (80%) than female homicide victims (54%) were killed with a firearm. Homicides by firearms were also twice as common in the 15 to 44 age group (84%) than in the younger and older age groups (42%).

Circumstances[5]: At least one circumstance was identified in 55% of the homicides. Key findings include:

- Almost 25% of the homicides stemmed from an argument, conflict or abuse other than intimate partner violence.
- Homicides involving female victims were 13 times more likely to be associated with intimate partner violence than male homicides.
- Homicides involving victims ages 15 to 24 were four times more likely to be gang related than those in other age groups.
- Homicides involving victims ages 15 to 44 were nearly four times more likely to be drug related than those in other age groups.

Suspects: For 121 of the 234 homicide victims (52%), information on suspects was available from either police records, coroner records, or Supplemental Homicide Reports (SHR).

For cases where the victim/suspect relationship was known, the suspect was a stranger to the victim in 47% of cases, an acquaintance in 19% and "Other – known to victim" in 15%.

Expansion of CalVDRS

California is the only NVDRS state not funded to collect data statewide. In 2006, the CalVDRS expanded from the three sites mentioned in this report to include all of Alameda County (not just the city of Oakland), Los Angeles, Riverside, and Shasta Counties. This will increase the database by several thousand records each year, and enable the CalVDRS to present more detailed information.

With funding from The California Wellness Foundation (TCWF), the CalVDRS is also collecting data electronically through California's Electronic Death Registration System (CA-EDRS).

For more information about the CalVDRS, please visit the CalVDRS website at cdph.ca.gov/CalVDRS.

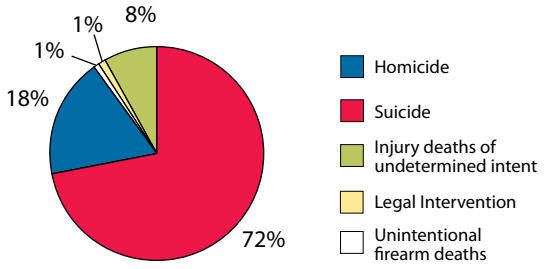
[1]Data are from the CalVDRS Database. [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Colorado, 2004-2005

Colorado, a Rocky Mountain state with a population of 4.8 million, has the sixth highest suicide rate in the nation. The majority of the 64 counties are rural; 68% of the state's population resides in the 8-county metro Denver area. Colorado's population is 72% White, 19% Hispanic, 4% Black, 2% Asian, 1% Native American, and 2% other/mixed race. The Colorado Violent Death Reporting System (COVDRS) began in 2003, with the first year of data collection in 2004.

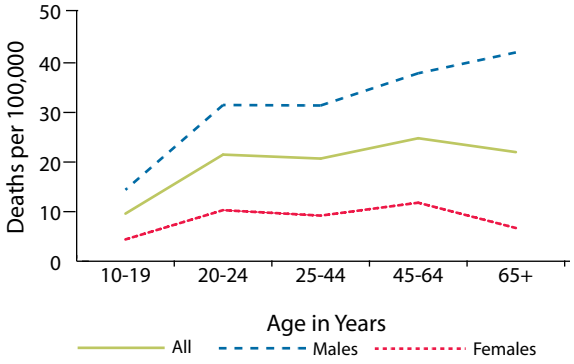
In 2004-2005, there were 2,248 deaths due to violence in Colorado for an average of 1,124 deaths per year.[1,2] More than two-thirds of these deaths (72%) were suicides.

Figure 1. Frequency of deaths from violence, by type: Colorado, 2004-2005 (1,2)



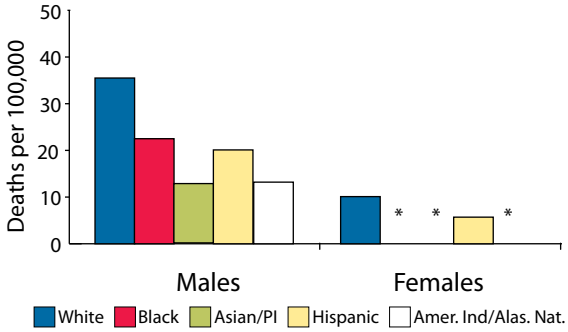
SUICIDES: On average, approximately 800 people die by suicide in Colorado each year. The majority of these suicides (78%) involve men. Occurrent suicides per 100,000 population[3] are highest for males ages 65 and older (Figure 2), however, in terms of numbers, more than half of the suicides in Colorado (55%) involve men ages 25 to 64.

Figure 2. Occurrent suicides, by sex and age: Colorado, 2004-2005 (1-3)



The occurrent suicide ratios[3] were highest for White males (36 per 100,000) (Figure 3).

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Colorado, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: Suicides among men most frequently involved firearms (56%), hanging/suffocation (23%) and poisoning (16%) while suicides among women most frequently involved poisoning (43%), firearms (28%) and hanging/suffocation (23%). For young people ages 10 to 19, nearly half of the suicides resulted from hanging/suffocation (49%) while the most frequent method for adults ages 65 and older was firearms (71%).

Circumstances[5]: Circumstance information was available for 94% of the suicides.

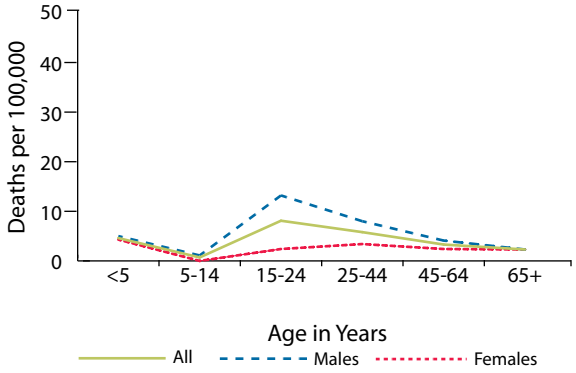
- A higher percent of women than men had been previously diagnosed with a mental health problem (47% vs. 29%, respectively). The most frequent diagnosis was depression.
- The percent of suicides for which a problem with an intimate partner was a contributing factor was similar for men and women (35%), but was higher among victims ages 20 to 44 (47%) than among victims ages 10 to19 or 45 to 64 (31% for each group).
- More than one-quarter of the suicide victims ages 20 to 24 had a recent criminal legal problem (26%). This was noted more frequently for Hispanic and Black victims (27% and 22%, respectively) than for Whites (14%).
- A crisis in the past two weeks was noted more frequently for victims ages 10 to 19 (48%) than for other age groups.
- Men and women were equally likely to disclose to others their intent to die by suicide (34%).

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Colorado, 2004-2005, *continued*

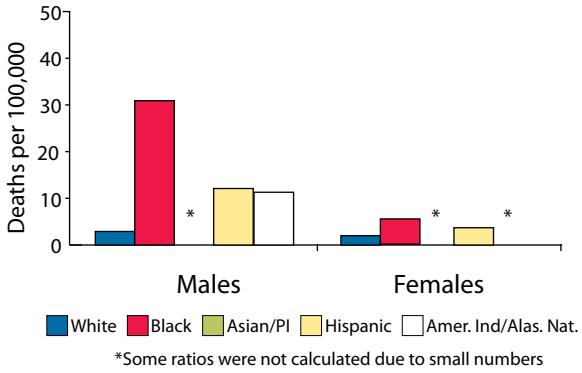
HOMICIDES: On average, approximately 200 people died by homicide in Colorado each year. The majority of these homicides (71%) involved men. The occurrent homicide ratio[3] was highest for males ages 15 to 24.

Figure 4. Occurrent homicides, by sex and age: Colorado, 2004-2005 (1-3)



By race/Hispanic origin, the occurrent homicide ratio was highest for Black males (31 homicides per 100,000) (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Colorado, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: Slightly more than half of the homicides involved the use of a firearm (57%). Use of a firearm was higher among Blacks (74%) than among Whites (50%) and Hispanics (56%). A higher percent of women than men died by strangulation/suffocation (11% vs. 2%, respectively).

Circumstances[5]: Circumstance information was available for 83% of the homicides.

- The leading circumstances associated with homicide in men were argument or abuse not involving an intimate partner (55%), drugs (19%) and gang-related violence (19%). The leading circumstances associated with homicide in women were domestic violence/jealousy (50%) and argument or abuse not involving an intimate partner (29%).
- Nearly half of the homicides involving young people ages 15 to 19 (42%) were gang-related. For all ages, the percent of homicides that were gang-related was higher for Black victims (30%) than for Hispanic or White victims (18% and 2%, respectively).
- The percent of homicides that were drug-related was higher for Blacks (24%) than for Hispanics (14%) or Whites (11%).

Collaboration and Uses of COVDRS Data

COVDRS data have been used to look at differences in suicide among Hispanic and non-Hispanic White (NHW) populations. Compared to NHW victims, Hispanic suicide victims were younger and more frequently single and foreign-born. There were no significant differences between the two groups with respect to alcohol- or drug-related problems, history of suicide attempt, or financial, job or school problems. After adjusting for the differences in age distribution between the two groups, suicides among Hispanics were more often preceded by intimate partner relationship problems, recent criminal legal problems and involvement as a perpetrator of interpersonal violence. Hispanic suicide victims were more likely to die by hanging/suffocation and to die in jail. Compared to NHW victims, Hispanics less often had a diagnosed mental illness or physical health problem as a contributing circumstance. Although there are limitations to the COVDRS data, these results suggest that stronger partnerships are needed among public health, mental health and law enforcement. Suicide prevention strategies could include screening for suicidal behavior during criminal justice and domestic violence proceedings, improved access to mental health services and culturally appropriate outreach and education in Hispanic communities.

For more information about the COVDRS, please visit the COVDRS website at www.cdphe.state.co.us/pp/injepi/cvdrs/index.html

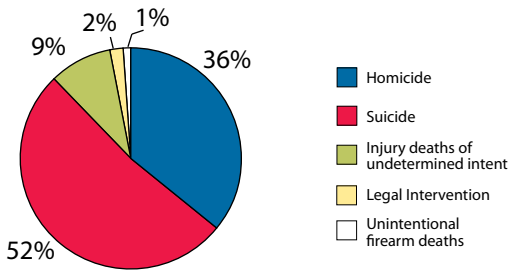
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Georgia, 2004-2005

With a population of 9.4 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 2004-2005.

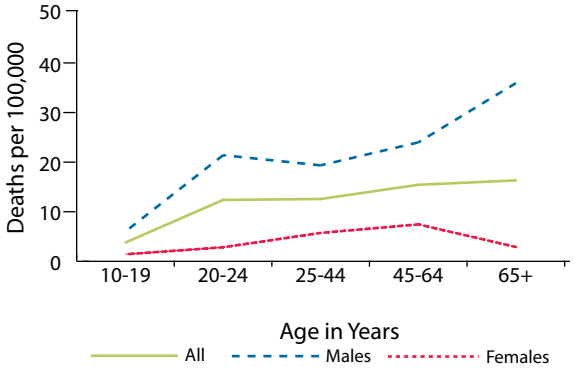
Georgia reported 3,642 deaths due to violence for years 2004-2005, for an average of 1,821 deaths per year.[1,2] More than half (52%) of these deaths were suicides, followed by homicides (36%) and deaths of undetermined intent (9%). Less than 5% of the deaths were due to unintentional firearm-related injuries or legal intervention (Figure 1).

Figure 1. Frequency of deaths from violence, by type: Georgia, 2004-2005 (1,2)



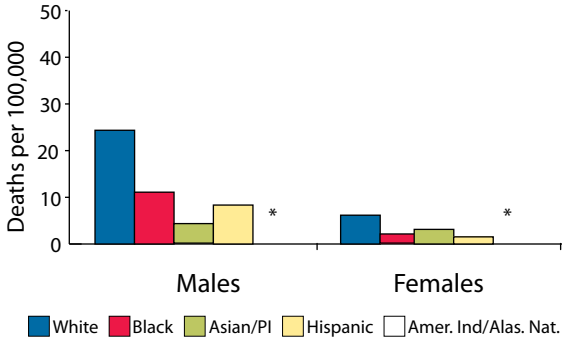
SUICIDES: In 2004-2005, there were almost 1.5 times as many suicides in Georgia as homicides. Occurrent suicide ratios[3] varied by gender and age. The suicide ratio for males (20 per 100,000 population) was four times that for females (5 per 100,000). Suicide ratios in males rose sharply after the teenage years to a ratio of 21 per 100,000 for ages 20 to 24, stabilized, and then continued to increase after age 45 (Figure 2). The suicide ratio in females was highest for ages 45 to 64 (7.5 per 100,000).

Figure 2. Occurrent suicides, by sex and age: Georgia, 2004-2005 (1-3)



The suicide ratios shown in Figure 3 indicate that White males (24 per 100,000) and females (6 per 100,000) were more likely to die by suicide than Asian/Pacific Islander, Black, and Hispanic males and females.

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Georgia, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: The method of suicide was known for 96% of the deaths. Among adult and adolescent suicides, use of a firearm alone (62%) was the most common method, followed by poisoning for females (27%) and hanging/suffocation for males (19%). Hanging/suffocation was the most common method for children ages 10 to 14 (73%).

Circumstances[5]: At least one circumstance was identified for 78% of the reported suicides. The most common circumstance for all ages combined was having a current mental health problem (30%). The most frequent circumstances by age group and sex are shown below:

By age group:

- Ages 10 to 19 years (39%) and 20 to 24 years (38%) – Crisis in the two weeks prior to death
- Ages 25 to 44 years (32%) – Intimate partner problem
- Ages 45 to 64 years (36%) – Current mental health problem
- Ages 65 years and older (26%) – Physical health problem

By sex:

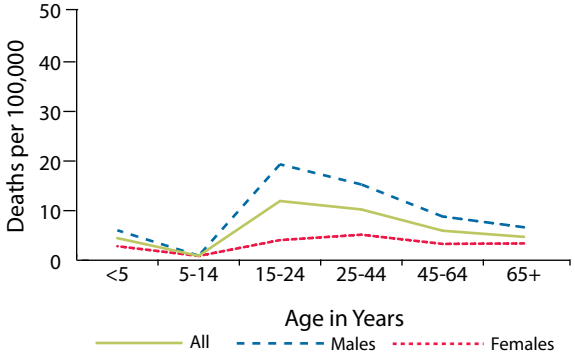
- Males (27%) – Crisis in the two weeks prior to death
- Females (43%) – Current mental health problem

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Georgia, 2004-2005, *continued*

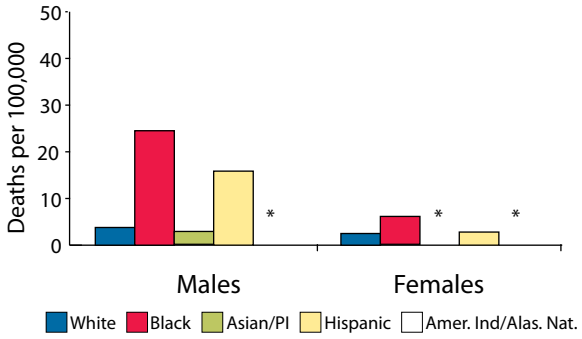
HOMICIDES: Homicide was the second leading cause of deaths due to violence in Georgia in 2004-2005. The occurrent homicide ratio[3] for males (11 per 100,000) was approximately 3 times higher than the ratio for females (4 per 100,000). Homicide ratios peaked between the ages of 15 to 24 for males (19 per 100,000) and between the ages of 25 to 44 for females (5 per 100,000) (Figure 4).

Figure 4. Occurrent homicides, by sex and age: Georgia, 2004-2005 (1-3)



Proportionally, more Black males (25 per 100,000) and females (6 per 100,000) were victims of homicide than were males and females of the other race/Hispanic origin groups (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Georgia, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: The method of homicide was known for 93% of the deaths. For all ages combined, a firearm alone (63%) was the most frequent method. Handguns (31%) were the most commonly used type of firearm. A sharp instrument (13%) was the next most common weapon. A combination of weapon types (59%) was used most often for homicides occurring in children under the age of five.

Circumstances[5]: At least one circumstance was identified for 61% of the homicides. For all ages combined, the most common circumstance leading to homicide was an argument, abuse or conflict other than intimate partner violence (27%).

The most frequent circumstances by sex and race/Hispanic origin of the victim are shown below.

By sex:

- Males (30%) – Argument, abuse, or conflict
- Females (37%) – Intimate partner violence

By race/Hispanic Origin:

- Whites (24%), Hispanics (29%), and Blacks (28%) – Argument, abuse, or conflict not involving an intimate partner
- American Indians (17% each) – Precipitated by another crime; drug involvement; intimate partner violence
- Asian-Pacific Islanders (25%) – Precipitated by another crime

Suspects[6]: Georgia collects information on homicide suspects from police reports, coroner/medical examiner reports, and Supplementary Homicide Reports. In 2004-2005, the victim knew the suspect in 56% of homicides. Among female victims, 78% knew the suspect, while only 46% of male victims knew the suspect. The known suspect was usually a spouse (32%) or boyfriend/girlfriend (26%) for female victims or an acquaintance (44%) for male victims.

Collaboration and Uses of GVDRS Data

GVDRS has provided data for annual data summary sheets, presentations to data providers and partners, responses to data requests, three masters-level research theses, and indicators tracked by the Division of Public Health (DPH). The most frequent data requests have been for suicide prevention activities, both internal and external to DPH, followed by homicide data for coalitions and programs to prevent violence. In 2007 and 2008, GVDRS data have contributed to DPH's series of local and statewide Suicide Prevention Stakeholder Meetings that have been convened for coalition building and to increase communication, collaboration, and coordinated activities among people and organizations in Georgia that work to prevent suicide.

For more information about the GVDRS, please visit the GVDRS website at health.state.ga.us/epi/cdiee/gvdrs.asp.

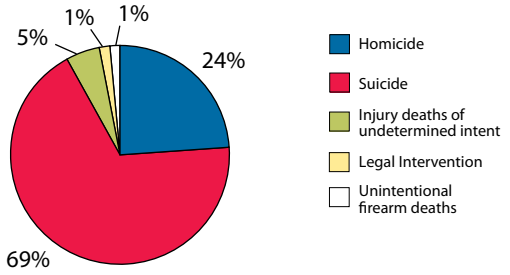
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

Kentucky, 2005

The U.S. Census Bureau estimates Kentucky's 2005 population at 4.2 million residents: 90% of the population self-reported as White, 8% Black, 1% Asian and 2% Hispanic. The Commonwealth of Kentucky (KY) 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 its two largest cities, representing 12.5% of the population. The Kentucky Violent Death Reporting System (KVDRS) joined the NVDRS in 2004 and began data collection in 2005.

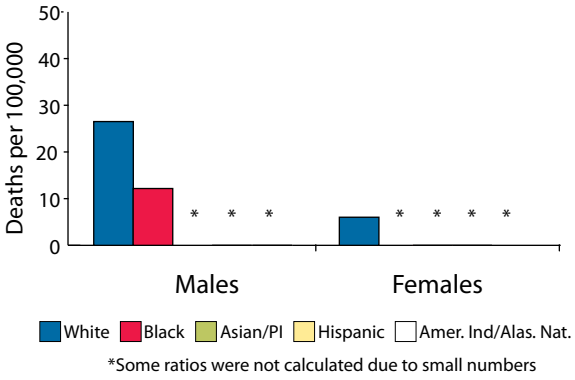
Nearly all (93%) of the 799 deaths due to violence that occurred in 2005 in Kentucky were classified as suicide or homicide.[1,2] Suicides were most common, occurring almost three times as often as homicides (Figure1).

Figure 1. Frequency of deaths from violence, by type: Kentucky, 2005 (1,2)



Suicides occurred predominantly in Whites (95%). Most suicide victims were males (81%). The majority of male suicide victims (84%) were age 25 and older (Figure 3).

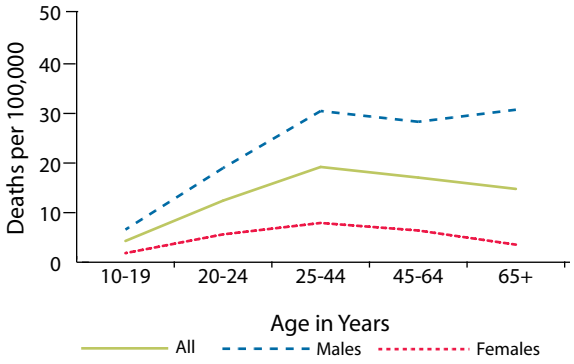
Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Kentucky, 2005 (1-4)



*Some ratios were not calculated due to small numbers

SUICIDES: Suicide is the second leading cause of death for Kentuckians ages 15 to 34 and the fourth leading cause of death for Kentuckians ages 35 to 54. In 2005, occurrent suicide ratios[3] were highest for males, and increased with age (Figure 2). In contrast, occurrent suicide ratios for women increased with age until mid-life and then decreased after age 44.

Figure 2. Occurrent suicides per by sex and age: Kentucky, 2005 (1-3)



Methods/Means: While the majority of suicides involved a firearm (70%), poisoning was a more common method of suicide in women than in men (26% vs. 8%, respectively). Hanging/suffocation occurred more frequently in minors ages 15 to 19 (33%) compared to adults ages 20 and older (16%), and was more commonly seen in non-Whites (27%) than Whites (17%).

Circumstances[5]: The circumstances associated with the suicide were recorded by the coroner and made available to the KVDRS in 78% of suicides.

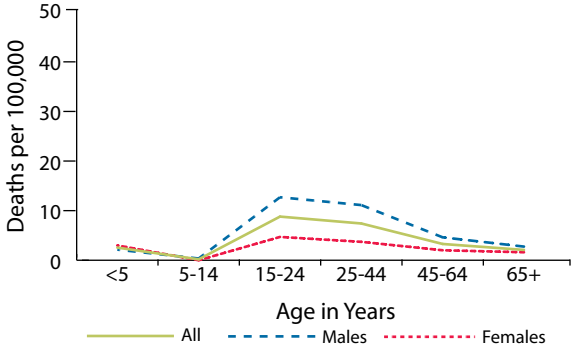
- Current depressed mood (55%), current mental health problem (52%), and current treatment for a mental health problem (52%) comprised the top three circumstances associated with suicide.
- A problem with an intimate partner was identified as a contributing factor in 29% of suicides.
- Women more often than men left suicide notes (28% vs. 19%, respectively), while men more often than women disclosed their intent to commit suicide (28% vs. 25%, respectively).

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Kentucky, 2005, *continued*

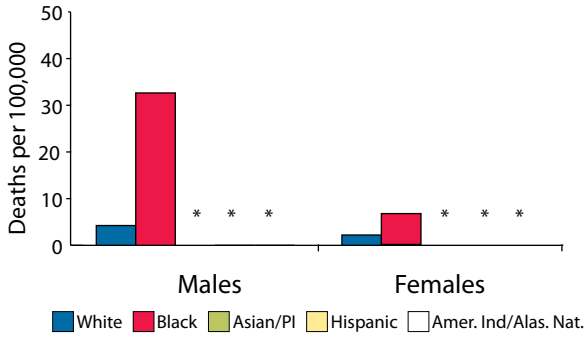
HOMICIDES: There were 192 homicides in Kentucky in 2005. Homicide ratios varied by age and sex (Figure 4). Male homicides peaked during the adolescent/young adult years of 15 to 24 and 25 to 44 and declined steadily with age. Female homicides showed a similar, though less dramatic, pattern.

Figure 4. Occurrent homicides, by sex and age: Kentucky, 2005 [1-3]



In contrast to suicides, where the occurrent ratio was highest for Whites (Figure 3), the occurrent homicide ratio was highest for Black males (Figure 5). When intimate partner violence or jealousy/lovers triangle were identified (19% of all homicides), more deaths occurred in Whites (27%) than Blacks (6%). When drug trade was noted (28% of all homicides), more deaths involved Blacks (16%) than Hispanics (7%).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Kentucky, 2005 [1-4]



*Some ratios were not calculated due to small numbers

Methods/Means: Most homicides resulted from use of a firearm (74%). Females died more often by strangulation/ suffocation than males (11% vs. 1%, respectively). Compared to homicide victims with higher levels of education, homicide victims with less than a high school education were more likely to be killed with a sharp instrument (3% vs. 13%, respectively).

Circumstances[5]: The circumstances associated with the homicide were recorded by the coroner or law enforcement and made available to the KVDRS in 76% of homicides.

- Most homicides in males (83%) were precipitated by another crime or involved an argument, abuse or conflict other than intimate partner violence.
- Female homicides were more likely than male homicides to result from intimate partner violence (36% vs. 6%, respectively).

Suspects[6]: There were 231 different victim-suspect relationships that characterized the 192 homicide victims. In more than half of the incidents, the suspect was known to the victim (61%); only 10% involved a stranger.

Special Areas Of Interest and Uses of KVDRS Data

Toxicology: In 74% of the suicides and 84% of the homicides, decedents were tested for alcohol, prescription medications, over-the-counter medications and illicit drugs.

- One third of homicide victims had measurable levels of alcohol present.
- Opiates were found in 16% of all suicide victims regardless of the method used (25% of all female victims and 14% of all male victims) and 15% of all homicide victims (16% of all male victims and 13% of all female victims).
- Marijuana was detected in more than 17% of homicide victims, but in less than 6% of suicide victims.
- Amphetamines were detected in 3% of suicide victims and slightly less than 3% of homicide victims.

For all types of deaths from violence, more males had alcohol present, while more females had antidepressants or opioids present.

The KVDRS provides data for statewide prevention and advocacy activities to Kentucky's Suicide Prevention Group, Association of Sexual Assault Programs, Domestic Violence Association and Maternal and Child Health Division.

For more information about the KVDRS, please visit the KVDRS website at www.kvdrs.uky.edu.

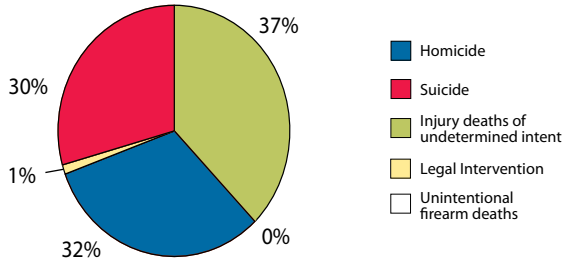
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

Maryland, 2004-2005

Maryland is a diverse east coast state with an estimated 5.6 million residents in 2005. The population is 64% White, 30% Black, 5% Asian, 6% Hispanic and 1% of other races and ethnicities. 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 2004 and 2005 data are presented in this report.

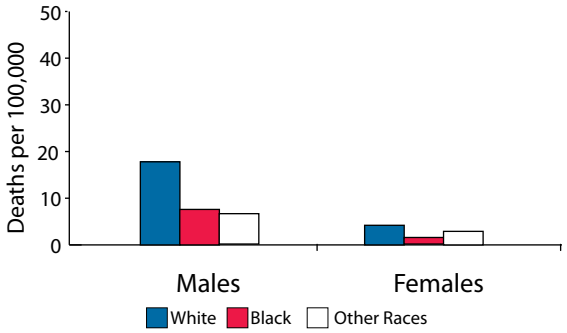
MVDRS documented 3,235 deaths from violence in 2004 and 2005, averaging 1,618 deaths per year. [1,2] Approximately two thirds of these deaths resulted from homicide (32%) and suicide (30%). The intent of the violence could not be determined in 37% of the cases. Less than 1% of the deaths (28 deaths) resulted from legal intervention (Figure 1).

Figure 1. Frequency of deaths from violence, by type: Maryland, 2004-2005 [1,2]



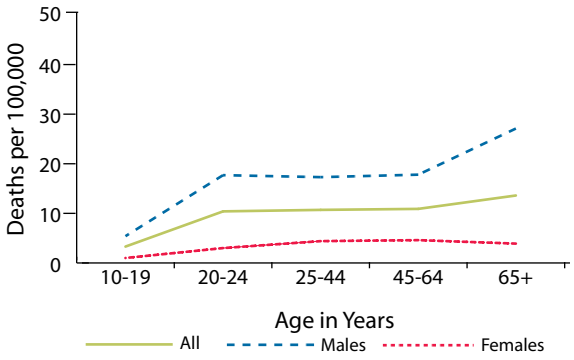
Suicide occurred most often in Whites (82% of all suicides) and their suicide ratio[3] was higher (11 per 100,000 population) than in the other racial groups (4.6 per 100,000). Suicide ratios in Blacks (4 per 100,000) and Other Races (5 per 100,000) were similar. Within each of these racial groups, males had higher suicide ratios than females (Figure 3).

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Maryland, 2004-2005 [1-4]



SUICIDES: MVDRS reported 956 suicides in 2004 and 2005 for an average of 478 suicides per year. The suicide ratios[3] for males ranged from 4 to 7 times the ratios for females, with the maximum difference seen among victims ages 65 and older (Figure 2). The suicide ratios for males increased abruptly in the 20 to 24 and 65+ age groups. The female suicide ratios increased gradually after the teen years (ages 10 to 19), peaking before age 64 and declining thereafter.

Figure 2. Occurrent suicides, by sex and age: Maryland, 2004-2005 [1-3]



Methods/Means: The suicide method was identified in all but one case. Almost half of the suicides resulted from firearms (47%), followed by hanging/suffocation (26%), poisonings (16%) and all other methods (11%). Poisoning was the most frequent method used by females (34%), followed by hanging/suffocation (29%) and firearms (21%). More than half (54%) of males used a firearm, with hanging/suffocation (25%) and poisoning (12%) as the two next most common methods.

Circumstances[5]: Information on circumstances was available on 91% of the deaths.

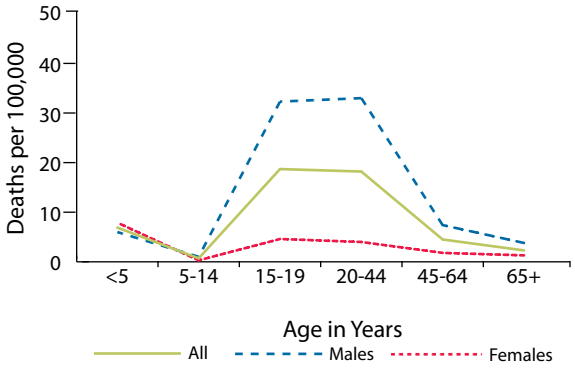
- 37% of all victims (44% of females and 35% of males) left suicide notes.
- Prior to the suicide, 23% of all victims expressed to someone their intent to kill themselves.
- 20% of all victims (37% of females and 16% of males) had a history of prior suicide attempts.

[1]Data are from the Maryland Violent Death Reporting System (MVDRS). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]Populations are categorized based on race and Hispanic origin. The categories include White (non-Hispanic), Black (non-Hispanic), and Other races (Asian/Pacific Islander, American Indian/Alaska Native and Hispanic (all races)). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Maryland, 2004-2005, *continued*

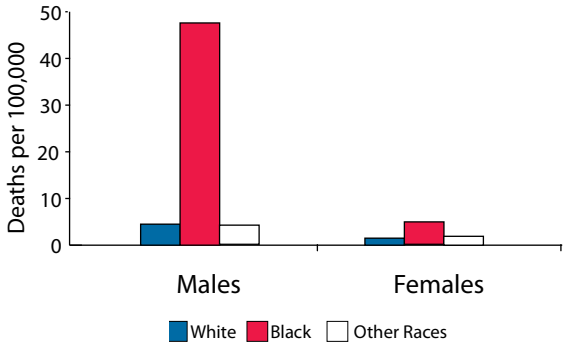
HOMICIDES: For 2004-2005, the MVDRS recorded 1,058 occurrent homicides, for an average of 529 homicides per year. The homicide ratio[3] for Maryland was 9 per 100,000 (for males, the ratio was 17 per 100,000 and for females, the ratio was 3 per 100,000). Except for homicides involving females under age 5, the homicide ratio was consistently higher in men than women, and highest for men ages 15 to 44 (Figure 4).

Figure 4. Occurrent homicides, by sex and age: Maryland, 2004-2005 (1-4)



The overall homicide ratio for Blacks was at least 8 times that of all other races, with Black males having the highest homicide ratio (48 per 100,000) (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Maryland, 2004-2005 (1-4)



Methods/Means: The method was identified in more than 99% of the homicides. Firearms (74%) were reported most frequently (males, 78%; females, 50%). Sharp instruments were reported in 11% of homicides (males,10%; females, 17%). More than one quarter (27%) of female homicide victims died from either strangulation or injury from a blunt instrument; the percent of male homicide victims who died from these types of weapons was lower (7%).

Circumstances[5]: Information about the circumstances of the homicide was obtained for 45% of the incidents.

For occurrent homicides with circumstance information available:

- More than 25% of the homicides were associated with criminal activity other than the deadly assault.
- Robbery or burglary was reported in 19% of the homicides.
- Drug trade was suspected in 23% of homicides involving male victims and 11% of homicides involving female victims.

Collaboration and Uses of MVDRS Data

MVDRS data are used in Maryland for a variety of research initiatives. Currently, MVDRS staff are assisting researchers at Johns Hopkins Hospital and the University of Maryland College Park Department of Criminology with data related to homicides. In addition, MVDRS staff serve as mentors to students at the University of Maryland, Baltimore, Department of Epidemiology. As part of the Research Practicum class, the students are provided MVDRS data and mentor assistance to complete a research project and paper by the end of the two-semester class. Current topics include homicide in the home and suicide rates in women.

For more information about the MVDRS, please visit the MVDRS website at: www.fha.state.md.us/cphs/

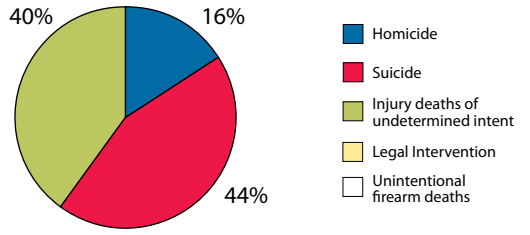
[1]Data are from the Maryland Violent Death Reporting System (MVDRS). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]Populations are categorized based on race and Hispanic origin. The categories include White (non-Hispanic), Black (non-Hispanic), and Other races (Asian/Pacific Islander, American Indian/Alaska Native and Hispanic (all races)). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Massachusetts, 2004-2005

Massachusetts is located in the New England region of the northeastern United States. The population of approximately 6.4 million is concentrated in the urban and suburban areas of the eastern side of the state. In 2006, the population of Massachusetts was 86% White, 7% Black, 5% Asian, 8% HIspanic and < 1% Native American. The Massachusetts Violent Death Reporting System (MAVDRS) began in 2002 as one of the original six NVDRS states, with the first year of data collection in 2003. This report presents data for 2004 and 2005.

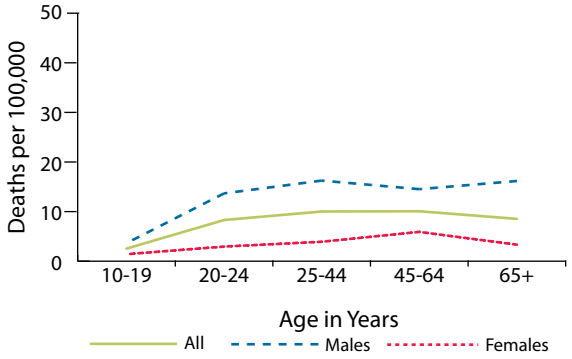
In 2004-2005, there were 2,220 deaths due to violence in Massachusetts, for an average of 1,110 deaths per year.[1,2] As illustrated in Figure 1, more than half of these deaths (60%) were classified as either a suicide (44%) or a homicide (16%). The intent of the victim or the perpetrator was undetermined in the remaining 40% of deaths.[5]

Figure 1. Frequency of deaths from violence, by type: Massachusetts, 2004-2005 (1,2,5)



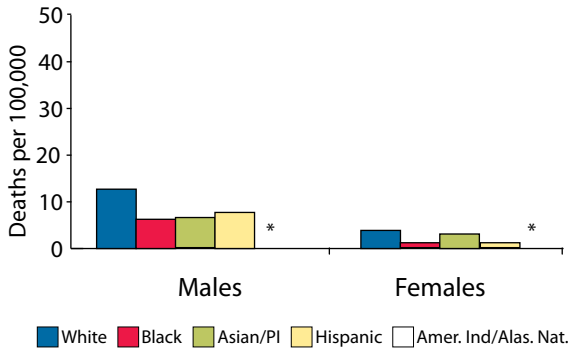
SUICIDES: In 2004-2005, there were 963 suicides in Massachusetts, for an annual average of 482 deaths per year. The occurrent suicide ratio[3] for males was consistently higher than that for females, regardless of age. The occurrent suicide ratio for males was four times greater than that for females (12 per 100,000 population vs. 3 per 100,000, respectively).

Figure 2. Occurrent suicides, by sex and age: Massachusetts, 2004-2005 (1-3)



White males had the highest occurrent suicide ratio of any sex/race/Hispanic origin group (13 per 100,000). White females had the highest ratio for females (4 per 100,000), however the ratio for Asian females was almost as high (3 per 100,000).

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Massachusetts, 2004-2005(1-4)



*Some ratios were not calculated due to small numbers

Methods/Means[6]: For 2004, the method of suicide was reported for all suicides in Massachusetts. The most common method of suicide was hanging/suffocation (42%), accounting for 43% of male suicides (n=148) and 36% of female suicides (n=32). The most common method for females was poisoning/drug overdose (47%, n=41).

Circumstances[7]: In 2004-2005, at least one circumstance believed to be related to the suicide was noted for 84% of the victims.

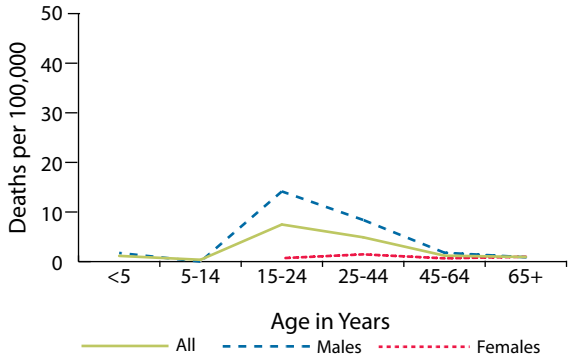
- Almost one third (29%) of suicide victims left a suicide note.
- Approximately 39% of victims had a current mental health problem. These include disorders and syndromes listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) with the exception of alcohol or other substance dependence.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]An important change occurred in 2005 affecting the number of undetermined deaths in Massachusetts. Most injury deaths are referred to the Massachusetts Office of the Chief Medical Examiner OCME) for determination of cause and intent. In May 2005, a change in the OCME policy affected the assignment of manner/intent of many poisoning deaths. Up to that point, poisoning deaths where there was no explicit evidence that the case was a suicide or homicide were assigned a manner of undetermined. With the new policy, these deaths are assigned a manner of accident/unintentional. This change caused the number of undetermined deaths in 2005 to be substantially less than in 2004. [6]Data are from the Violent Deaths in Massachusetts: Surveillance Update 2004. [7]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Massachusetts, 2004-2005, *continued*

HOMICIDES: There were 362 homicides in Massachusetts in 2004-2005, for an annual average of 181 deaths per year. The occurrent homicide ratio[3] for males was highest during the adolescent/young adult years (ages 15 to 24). For females, the occurrent homicide ratio was slightly higher for women ages 25 to 44.

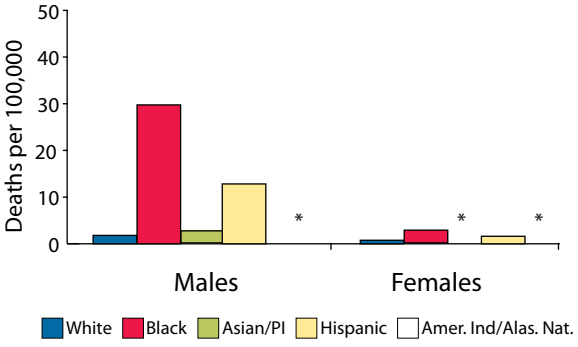
Figure 4. Occurrent homicides, by sex and age: Massachusetts, 2004-2005 (1-6)



*Some ratios were not calculated due to small numbers

Black males accounted for 37% of all homicide victims for 2004-2005, but accounted for only 3% of the total Massachusetts population, illustrating a disproportionate risk of homicide for this group (30 per 100,000). Twenty six percent of all homicide victims were White males. For females, the highest occurrent homicide ratio[3] was seen among Black females (3 per 100,000 population).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Massachusetts, 2004-2005 (1-6)



*Some ratios were not calculated due to small numbers

Methods/Means[6]: For 2004, firearms were the leading method of homicide, accounting for about 60% (n=112). Firearms were the most commonly used weapon in male homicides (66%, n=101). In contrast, sharp instruments were the most commonly used weapon in female homicides (39%, n=12).

Circumstances[7]: At least one circumstance associated with the death was noted in slightly more than half (52%) of the homicides.

- One quarter (25%) of the homicides resulted from a conflict, argument or abuse, excluding intimate partner violence. Seventy nine males (26%) died under these circumstances.
- Forty one percent of female homicide victims died in an incident related to intimate partner violence, compared to 5% of male homicide victims.

Suspects[6]: In 69% of the homicides, there were one or more suspects associated with the death (n=127). Males constituted about 93% of the suspects (n=152). For suspects whose age was known (n=139), 78% were between the ages of 15 and 34.

Collaboration and Uses of MAVDRS Data

MAVDRS is expected to play a vital role in the understanding of all violent death incidents. This system has provided a level of detail about these deaths that had not previously been possible. With greater detail and improved understanding, it is anticipated that MAVDRS will continue to improve interventions and prevention programs. Achievements to date include:

- Developing new collaborative relationships outside of the traditional public health sphere.
- Providing detailed data, upon request, to external and internal data users.
- Detailed data on suicides and deaths of undetermined intent, particularly drug overdoses, can contribute to increased prevention activities.

For more information about the MAVDRS, please visit the MAVDRS website at www.mass.gov/dph/isp.

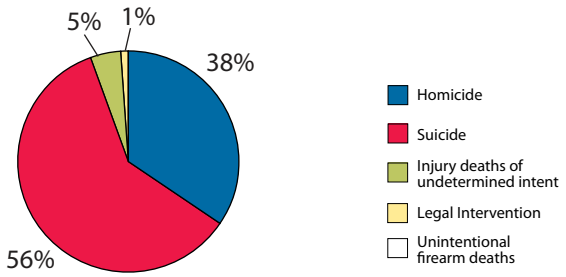
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]An important change occurred in 2005 affecting the number of undetermined deaths in Massachusetts. Most injury deaths are referred to the Massachusetts Office of the Chief Medical Examiner OCME) for determination of cause and intent. In May 2005, a change in the OCME policy affected the assignment of manner/intent of many poisoning deaths. Up to that point, poisoning deaths where there was no explicit evidence that the case was a suicide or homicide were assigned a manner of undetermined. With the new policy, these deaths are assigned a manner of accident/unintentional. This change caused the number of undetermined deaths in 2005 to be substantially less than in 2004. [6]Data are from the Violent Deaths in Massachusetts: Surveillance Update 2004. [7]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

New Jersey, 2004-2005

New Jersey is one of the most economically, racially, and geographically diverse states in the country. With more than 8.7 million people (2005), it has the highest population density in the nation. Despite a recent rise in homicides, the number of homicides and suicides per population remained lower than the national average (2004-2005). The New Jersey Violent Death Reporting System (NJVDRS) was established as a way to gain insight into these deaths. Data collection began in 2003.

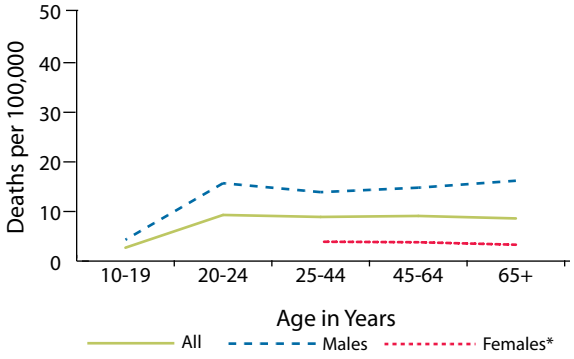
In 2004 and 2005, suicide accounted for more than half of the deaths from violence in New Jersey (56%).[1,2] Homicide accounted for nearly 40% (Figure 1).

Figure 1. Frequency of deaths from violence, by type: New Jersey, 2004-2005 (1,2)



SUICIDES: There were 1,202 suicides in New Jersey in 2004-2005, for an average of 601 deaths per year. Males had a higher suicide ratio[3] than females for all age groups, and showed much more variation by age group than females (Figure. 2).

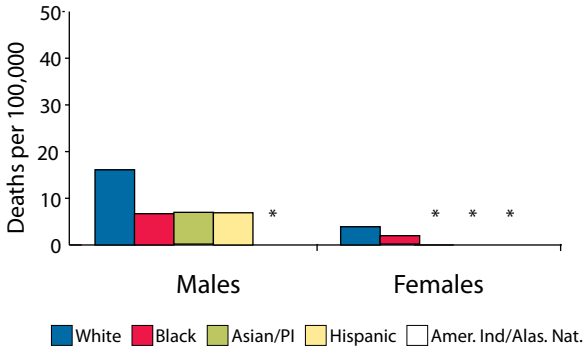
Figure 2. Occurrent suicides, by sex and age: New Jersey, 2004-2005 (1-3)



*Some ratios were not calculated due to small numbers

Whites had much higher suicide ratios than other race/Hispanic origin groups, and males had higher suicide ratios than females for each race/Hispanic origin group (Figure 3).

Figure 3. Occurrent suicides, by sex and race/Hispanic origin: New Jersey, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: The leading method of suicide in New Jersey for both males and females was hanging/suffocation, accounting for more than one third of suicides, followed by firearms and poisoning. Males were much more likely to use a firearm to complete suicide, whereas females were more likely to use poisoning.

Circumstances[5]: Circumstance information was known in more than 70% of suicides in 2004-2005. Key findings include:

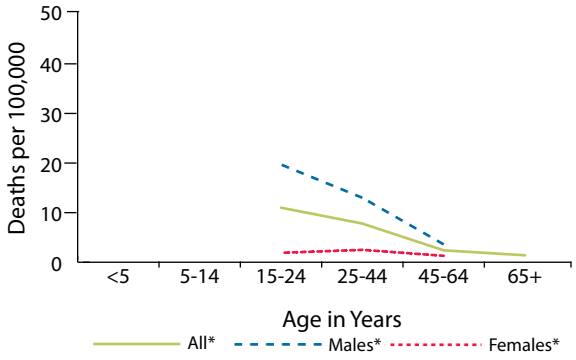
- The most frequently noted circumstances were associated with mental health problems.
- Physical health problems were a major suicide circumstance for the elderly.
- Among adolescents, recent crises and relationship problems were important suicide circumstances.
- Substance abuse, as a circumstance prior to suicide, decreased with the age of the victim.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

New Jersey, 2004-2005, *continued*

HOMICIDES: There were 821 homicides in New Jersey in 2004-2005, for an annual average of 411 deaths each year. Victims ages 25 to 44 accounted for nearly half of all homicides (Figure 4).

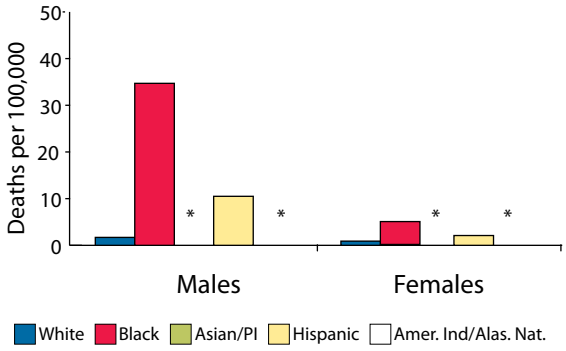
Figure 4. Occurrent homicides per population by age: New Jersey, 2004-2005 [1-3]



*Some ratios were not calculated due to small numbers

Blacks had much higher homicide ratios[3] than other race/Hispanic origin groups (Figure 5). Almost 65% of male and 45% of female homicide victims were Black.

Figure 5. Occurrent homicides, by sex and race/Hispanic origin: New Jersey, 2004-2005 [1-4]



*Some ratios were not calculated due to small numbers

Methods/Means: Firearms were used in more than 60% of homicides in New Jersey. Males were far more likely to have been killed by a firearm than females, while females were more likely to have been suffocated. More than 75% of Black victims and more than 50% of Hispanic victims were shot compared to slightly less than 30% of Whites.

Circumstances[5]: Circumstance information was known in 50% of the homicides. Key findings include:

- Nearly 20% of homicides followed an argument or other conflict, not involving an intimate partner.
- Almost one third of female homicide victims were killed in intimate partner violence-related incidents, even if they themselves were not the intimate partner of the suspect.
- Black victims were more likely to have been involved in a drug-related homicide than Hispanics or Whites.

Suspects[6]: Information on the suspect was known for nearly 70% of homicides (79% of female victims, 66% of male victims). Among these incidents, 42% of females were killed by a current or former intimate partner, while male victims were more likely to have been killed by an acquaintance or stranger.

Collaboration and Uses of NJVDRS Data

The NJVDRS, established in 2003, is housed in the Office of Injury Surveillance and Prevention in the New Jersey Department of Health and Senior Services. NJVDRS collaborates with stakeholders in several areas, including:

- Working with law enforcement to analyze gang-related and "gang-like" homicides as a way to measure the impact of overall violence in New Jersey's communities.
- Providing technical assistance to the state's Child Fatality Review Board.
- Co-authoring a report with the state's Domestic Violence Fatality Review Board about murder-suicide among intimate partners.
- Providing surveillance data on adolescent suicide for the state's Traumatic Loss Coalition.

For more information about the NJVDRS, please visit the NJVDRS website at nj.gov/health/chs/oisp/njvdrs.shtml

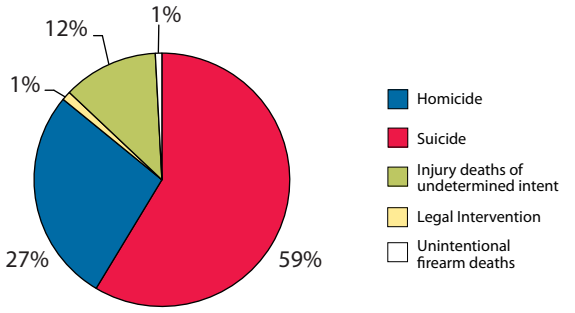
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

New Mexico, 2005

New Mexico is the fifth largest state by land area in the U.S. and is considered a "frontier state", meaning most of the state is undeveloped and rural. In 2005, the population estimate was approximately 2 million; 49% were male. About one third (35%) lived in rural areas and 65% in urban areas, specifically Albuquerque, Las Cruces, Santa Fe, Rio Rancho and Roswell. In 2004, New Mexico ranked second highest in the nation for deaths from violence (28 deaths per 100,000 population). As a result, the New Mexico Violent Death Reporting System (NM-VDRS) began in 2004 with the first year of data collection in 2005.

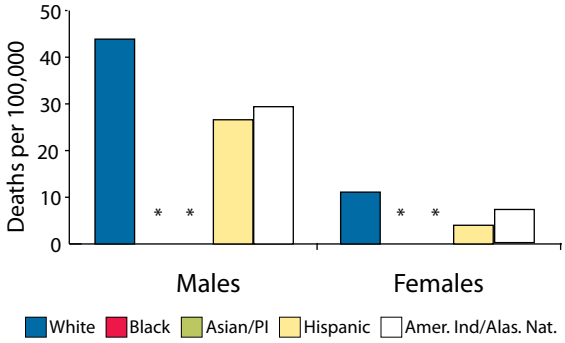
In 2005, 586 deaths from violence occurred in New Mexico.[1,2] The majority were suicides (59%), followed by homicides (27%) and deaths of undetermined intent (12%) (Figure 1).

Figure 1. Frequency of deaths from violence, by type: New Mexico, 2005 (1,2)



The race/Hispanic origin distribution in New Mexico is 43% White, 41% Hispanic, 11% Native American, 3% Black and 2% Asian/Pacific Islander. Whites of both sexes had higher suicide ratios than their Hispanic or Native American counterparts (Figure 3).

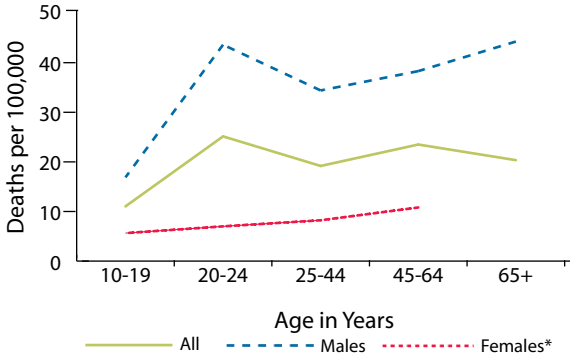
Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: New Mexico, 2005 (1-4)



*Some ratios were not calculated due to small numbers

SUICIDES: In 2005, 343 suicides were reported in New Mexico. Males in each age group had higher suicide ratios[3] than females; males ages 65 and older had the highest suicide ratio (44 per 100,000 population) (Figure 2). Female suicide ratios peaked for the 45 to 64 age group at 11 per 100,000.

Figure 2. Occurrent suicides, by sex and age: New Mexico, 2005 (1-3)



*Some ratios were not calculated due to small numbers

Methods/Means: Information on the method used was available for all suicides. Firearms were the most common method (50%), followed by hanging/suffocation (25%), poisoning (18%) and falls, sharp instruments, trains and other methods (7%). Males were much more likely to use firearms (54%) and hanging/suffocation (25%) compared to females who were more likely to die by poisoning (44%). Whereas persons ages 10 to 19 years were more likely to die by hanging/suffocation, adults ages 45 and older almost exclusively died by firearms. A much higher proportion of Whites (60%) used firearms compared to other race/Hispanic origin groups.

Circumstances[5]: Circumstances were known for 97% of the suicides.

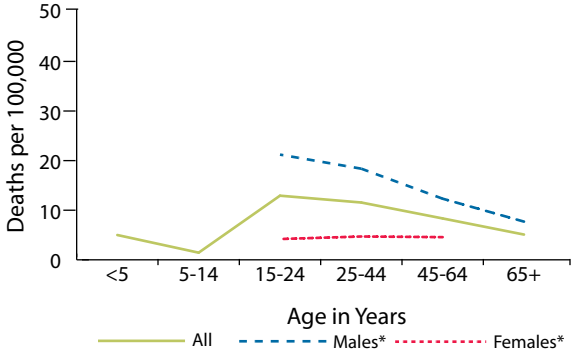
- The majority of both male (57%) and female (77%) suicide victims were noted to have a recent depressed mood at the time of the suicide.
- A history of treatment for mental illness was more common for females (64%) than for males (39%).
- Intent to die by suicide was disclosed more often by males (48%) than females (43%).
- Compared to 22% of males, 36% of females were reported as having a history of suicide attempts.
- Intimate partner problems were reported for 42% of male and 41% of female suicide victims.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

New Mexico, 2005, *continued*

HOMICIDES: In 2005 there were 160 homicides in New Mexico. The homicide ratio[3] for males was 3.5 times higher than the ratio for females and highest in males ages 15 to 24 (Figure 4). Female homicide ratios remained relatively stable for all age groups, but the small number of deaths makes the calculated ratios unreliable.

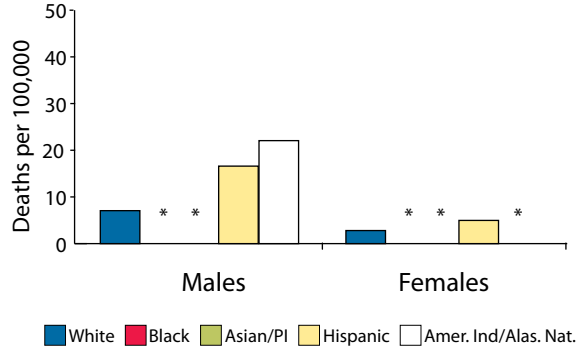
Figure 4. Occurrent homicides, by sex and age: New Mexico, 2005 (1-3)



*Some ratios were not calculated due to small numbers

Although Native Americans comprise 11% of the New Mexico population, they had a disproportionately higher homicide ratio (almost 3 times higher than non-Hispanic whites). Native Americans had the highest homicide ratio for males, whereas Hispanics had the highest homicide ratio for females (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: New Mexico, 2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: Many homicide incidents involved more than one weapon. Firearms accounted for 45% of the weapons used in homicides (males, 49%; females, 32%), followed by sharp instruments (21%) and blunt instruments, including personal weapons (14%). Blunt instruments were used in all homicides involving children under age five. Firearms were the most commonly used weapon for victims ages 15 to 44 and in Whites (46%) and Hispanics (51%). Sharp instruments were the most frequent weapon used in homicides involving a Native American victim (36%).

Circumstances[5]: At least one circumstance was known for 82% of the homicides. Most homicides involved a single victim (91%).

- Argument, abuse, or conflict other than intimate partner violence was reported in 48% of homicides.
- 42% of male and 32% of female homicides were precipitated by another crime.
- For homicides involving drug dealing or illegal drugs (19% of all homicides), 71% of the victims were between the ages of 15 and 34.
- 15% of homicides resulted from intimate partner violence.

Suspects[6]: Information on suspects collected from police reports was available in 94% of homicide incidents. There were often multiple suspects in a homicide. Of the identified suspects, 68% were the same sex as the victim; 83% of suspects were male. Of those suspects where age was known, 78% of the suspects were between the ages of 15 and 34.

Collaboration and Uses of NM-VDRS Data

The NM-VDRS is maintained by the Office of Injury Prevention in the New Mexico Department of Health (NMDOH) in close collaboration with the New Mexico Office of the Medical Investigator (OMI) where data collection is initiated and the data are housed. NM-VDRS works closely with the Child Fatality Review and the Suicide Prevention Coalition to provide surveillance and circumstance data. NM-VDRS data are also used to provide information on specific topics included in annual reports published by the OMI and the NMDOH. As additional years of data become available, the NM-VDRS will continue to collaborate with other violence prevention groups and organizations to identify effective policies and programs based on the NM-VDRS data findings to aid in violence awareness and prevention throughout the state.

For more information about the NM-VDRS, please visit nmhealth.org/injury.html.

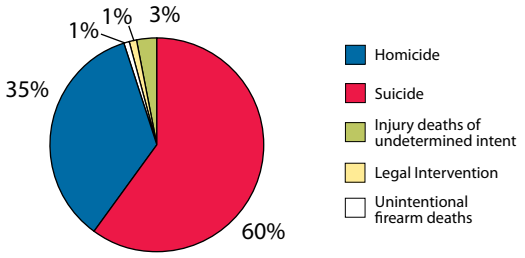
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.
[6]Data are from the state's VDRS database.

North Carolina, 2004-2005

North Carolina is the 28th largest of the 50 states, bordered by Virginia, Georgia, Tennessee and the Atlantic Ocean. With nearly 9 million residents dispersed throughout 100 counties, North Carolina is the tenth most populous state in the U.S. In 2006, approximately 74% of the population was White, 22% Black, 2% Asian and 1% American Indian. Seven percent were Hispanic. Although predominantly rural, North Carolina has five 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 2004 and 2005.

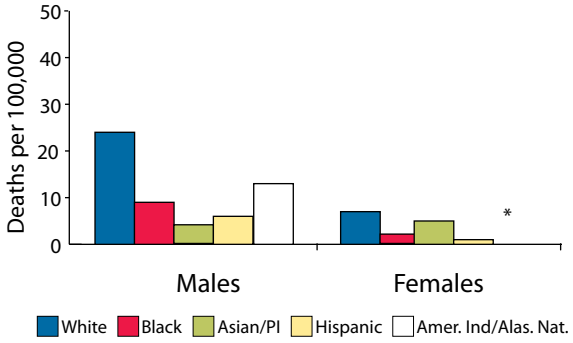
In 2004-2005, there were 3,498 deaths from violence in North Carolina, for an average of 1,749 deaths each year.[1,2] As illustrated in Figure 1, well over half of these deaths were suicides (60%), and approximately one third were homicides (35%).

Figure 1. Frequency of deaths from violence, by type: North Carolina, 2004-2005 (1,2)



Whites, particularly White males, had higher suicide ratios than members of other race/ethnic groups.

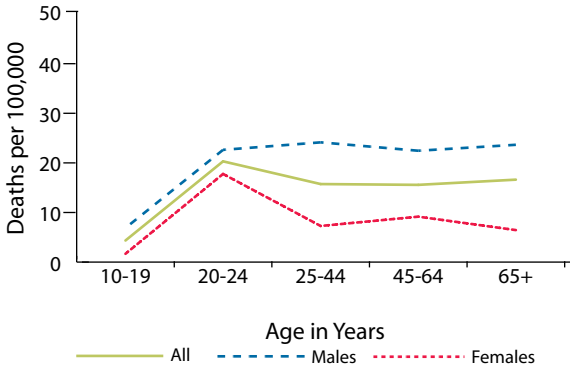
Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: North Carolina, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

SUICIDES: In 2004-2005, there were 2,065 suicides in North Carolina, for an annual average of 1,033 deaths per year. Males consistently had a higher suicide ratio[3] than females, regardless of age (Figure 2). The suicide ratio peaked for young adult males ages 20 to 24 and remained relatively stable thereafter. The suicide ratio for females peaked for young women ages 20 to 24. By ages 25 to 44, the suicide ratio for males was about four times higher than for females.

Figure 2. Occurrent suicides, by sex and age: North Carolina, 2004-2005 (1-3)



Methods/Means: Overall, 61% of suicides involved firearms. The type of method, however, differed by gender. Males used firearms in 68% of the suicides compared to 39% of suicides among females. The most frequent method for females was poisoning.

Circumstances[5]: At least one circumstance was identified for nearly all of the suicides (91%).

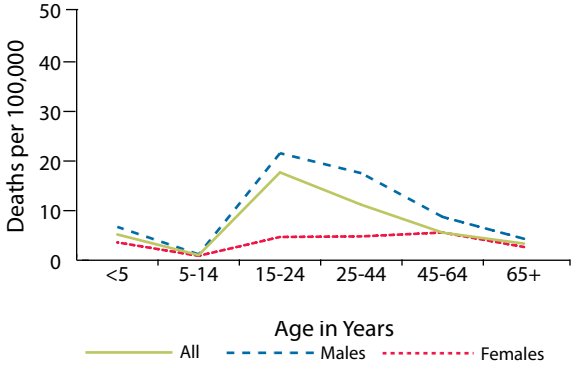
- Nearly half (49%) of the suicide victims were categorized as being recently depressed.
- 42% had been diagnosed with a mental health problem by a mental health professional.
- 35% were being treated for a mental health problem at the time of their death.
- 28% had experienced a crisis within two weeks of their death.
- A problem with an intimate partner was thought to have been a contributing factor in 25% of the suicides.
- 21% of suicide victims had disclosed to others their intent to die by suicide.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms are found in Appendix 1; description of methods is found in Appendix 2. [3]Occurrent ratios are calculated from the number of deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]Race/ethnicity in this report refers to White (non-Hispanic), Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic) and Hispanic origin populations. [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

North Carolina, 2004-2005, *continued*

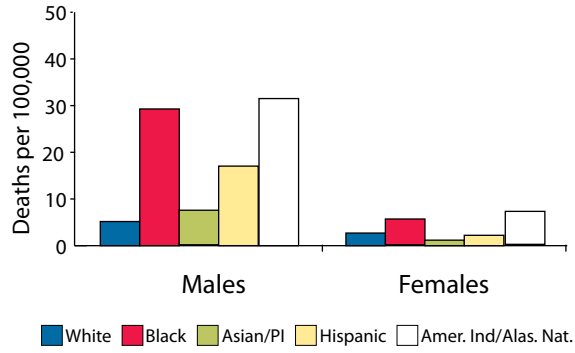
HOMICIDES: In 2004-2005, there were 1,271 homicides in North Carolina, for an average of 636 deaths per year. Figure 4 illustrates two important age spikes: a minor spike in infants and children (less than 5 years old) and a major spike among 15 to 24 year olds. For victims ages 15 to 24, the homicide ratio[3] for males was four times greater than that for females.

Figure 4. Occurrent homicides, by sex and age: North Carolina, 2004-2005 (1-3)



The homicide ratio was highest for Black or American Indian/Native Alaskan males (Figure 5). While the homicide ratios in these two races were very similar, the number of homicides was 15 times greater in Blacks than in American Indian/Native Alaska populations.

Figure 5. Occurrent homicides, by sex and race/Hispanic origin: North Carolina, 2004-2005 (1-4)



Methods/Means: Firearms were used in 66% of the homicides, while sharp instruments were used in 14%. Males generally were killed by firearms more often than females, 71% vs. 50%, respectively. A blunt object was used in approximately half the homicides in infants and children under age 5.

Circumstances[5]: At least one related circumstance was identified for approximately 75% of the homicides.

- Argument, abuse or conflict other than intimate partner violence was noted as a contributing factor in 35% of the homicides.
- 20% of the homicides were precipitated by another crime.
- More than 10% of the homicides were identified as being drug related.
- More than 40% of female homicides resulted from intimate partner violence.

Suspects[6]: For homicide incidents where one or more suspects were identified, the relationship of the victim to the suspect was known more frequently for female (92%) than male (79%) victims. When the suspect relationship was known, less than one percent of the females who died from homicide were killed by a stranger; that is, 99% of women were killed by someone they knew. In contrast, 12% of males who died from homicides were killed by a stranger.

Collaboration and Uses of NC-VDRS Data

The NC-VDRS promotes the use of this dataset to partners interested in investigating why and how violence leads to fatalities and what can and should be done in terms of prevention. For example, national data have identified a large number of violent deaths among pregnant and recently pregnant women. North Carolina researchers are now working with the NC-VDRS staff to understand if these women are particularly vulnerable to deaths from violence. Additionally, the NC-VDRS is partnering with communities to better understand the high number of homicides observed in Black males.

For more information on the NC-VDRS, please contact the North Carolina Division of Public Health Injury and Violence Prevention Branch or visit the website at www.injuryfreenc.ncdhhs.gov

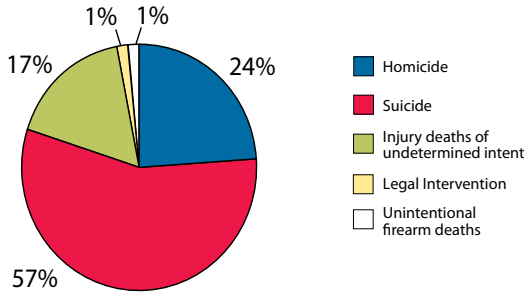
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms are found in Appendix 1; description of methods is found in Appendix 2. [3]Occurrent ratios are calculated from the number of deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]Race/ethnicity in this report refers to White (non-Hispanic), Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic) and Hispanic origin populations. [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

Oklahoma, 2004-2005

In 2005, Oklahoma's population was 3.5 million; in terms of age, 25% were less than age 18, 62% were between the ages of 18 and 64, and 13% were ages 65 and older. The population was 81% White, 9% Native American/Alaska Native, 8% Black and 2% Asian/Pacific Islander. From 2000 to 2006, the Hispanic population increased from 5% to 7%. In 2000, 65% of residents lived in urban areas and 35% in rural areas. The Oklahoma Violent Death Reporting System (OK-VDRS), maintained at the Oklahoma State Department of Health, Injury Prevention Service, was implemented in 2004.

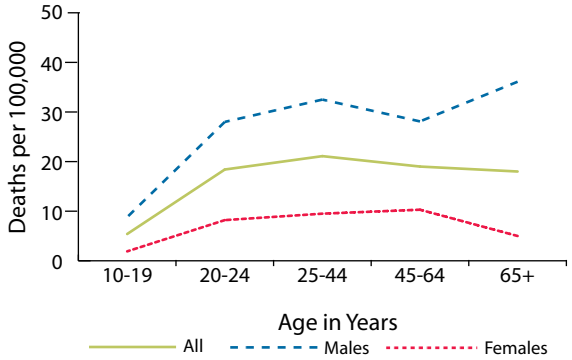
In 2004-2005, there were 1,850 deaths from violence in Oklahoma, for an annual average of 925 deaths per year.[1,2] More than half (57%) of these deaths were suicides and nearly a quarter (24%) were homicides (Figure 1).

Figure 1. Frequency of deaths from violence, by type: Oklahoma, 2004-2005 (1,2)



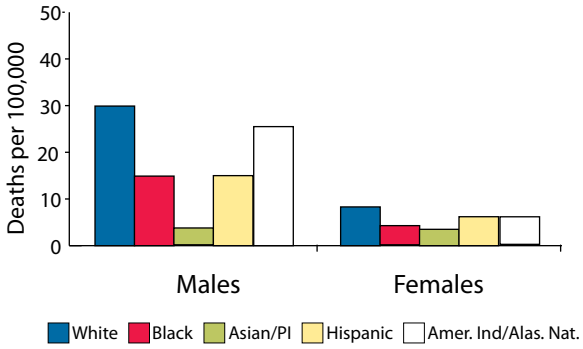
SUICIDES: Suicide, the most common manner of violent death in 2004-2005, accounted for 1,050 deaths (an annual average of 525 deaths per year). Males ages 65 and older had the highest occurrent suicide ratio[3] and females ages 10 to 19 had the lowest (Figure 2).

Figure 2. Occurrent suicides, by sex and age: Oklahoma, 2004-2005 (1-3)



Males had higher suicide ratios[3] than females. The suicide ratio among Whites was five times higher than among Asians, two times higher than among Blacks, 41% higher than among Hispanics, and 18% higher than among Native Americans. White males had the highest occurrent suicide ratio (Figure 3).

Figure 3. Occurrent suicides, by sex and race/Hispanic origin: Oklahoma, 2004-2005 (1-4)



Methods/Means: Firearms were the most common method of suicide (59%), followed by hanging/strangulation (18%), poisoning (17%), and other/unknown methods (5%). Firearms were used in more male (66%) than female suicides (39%). Poisoning was used in more female (37%) than male suicides (11%).

Circumstances[5]: Circumstances were known in 93% of the suicides. The leading circumstances for suicide were current depressed mood (44%), crisis in the past two weeks (35%), intimate partner problem (33%), current mental health problem (30%), physical health problem (27%), history of a suicide attempt (19%), and substance abuse problem (16%).

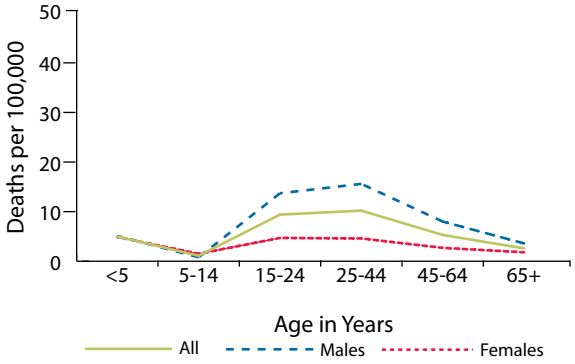
- Physical health problems were associated with almost five times as many suicides among people ages 65 and older (79%) than in younger people (17%).
- Two thirds of the people who had been diagnosed with a current mental health problem were receiving mental health treatment at the time of their death.
- Nearly a third of the suicide victims had told someone of their intent or had expressed suicidal feelings (29%), or had left a suicide note (28%).

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Oklahoma, 2004-2005, *continued*

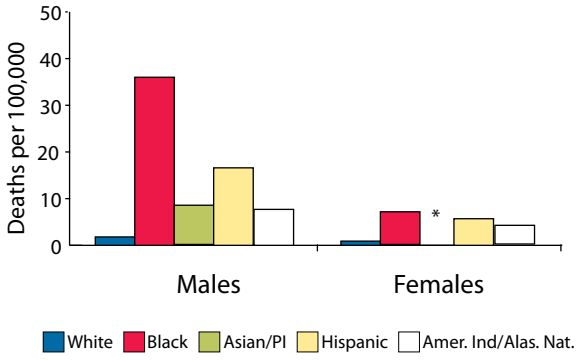
HOMICIDES: In 2004-2005, there were 442 homicides in Oklahoma for an average of 221 deaths per year. The homicide ratio[3] among males was three times higher than the ratio among females. Homicide ratios[3] were higher for males across all age groups, except for victims ages 5-14 (Figure 4).

Figure 4. Occurrent homicides, by sex and age: Oklahoma, 2004-2005 (1-3)



The homicide ratio among Blacks was five times higher than Whites, four times higher than Native Americans, and almost two times higher than Hispanics. The homicide ratio among Black males was five times higher than the ratio among Native American males, and 6 times higher than the ratio among White males. Among females, the homicide ratio among Black females was three times higher than the ratio among White females and two times higher than the ratio among Native American females. (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Oklahoma, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: A firearm was the most common weapon in homicides (59%) followed by sharp or blunt instruments (26%), strangulation/suffocation (4%) and other/unknown weapons (12%). Use of firearms was more common among males (63%) than females (47%), while strangulation/suffocation were more common in females (11%) than males (1%).

Circumstances[5]: Circumstances were known in 79% of the homicides. An argument or interpersonal conflict was a precipitating factor in 44% of homicides (33% of these arguments involved money or property). Robbery (8%), drug trade (4%), burglary (3%), assaults (2%), rape (1%), and other crimes (2%) were also reported.

- Drug dealing or illegal drug use was suspected in 18% of the homicides; 9% were gang-related.
- Conflicts between intimate partners occurred in 17% of homicides and were cited in more homicides involving female victims (38%) than male victims (10%).

Collaboration and Uses of OK-VDRS Data

The OK-VDRS collaborates with the Oklahoma Child Death Review Board and the Domestic Violence Fatality Review Board to share data and support family violence prevention efforts. OK-VDRS data have also been used in suicide prevention programs, university classroom lectures, law enforcement trainings, and national conference presentations.

A summary data report is produced annually in addition to periodic special topic reports (Injury Updates) that are distributed to legislators, law enforcement agencies and injury prevention stakeholders statewide.

For more information about the OK-VDRS, please visit the OK-VDRS website at www.ok.gov/health/Disease,_Prevention,_Preparedness/Injury_Prevention_Service/Oklahoma_Violent_Death_Reporting_System/index.html

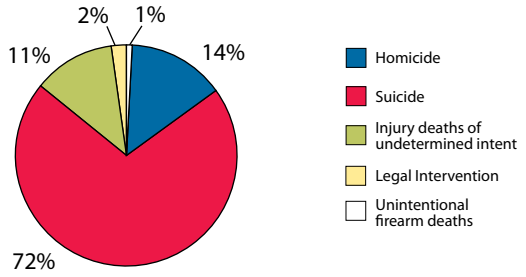
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Oregon, 2004-2005

In 2006, Oregon had an estimated population of 3.7 million, of which 91% were White, 4% Asian/ Pacific Islander, 2% Black, 1% American Indian/Alaska Native, and 2% of multiple races. One in ten Oregon residents are of Hispanic ethnicity. The Oregon Violent Death Reporting System (ORVDRS) began collecting data in 2003. **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.**

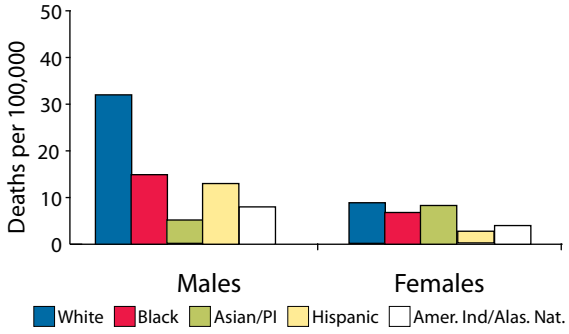
In 2004 and 2005, 1,602 individuals died by violence in Oregon, an average of 801 deaths per year[1,2] (occurrent ratio[3] of 22 per 100,000 population). More than 70% of the deaths were by suicide and 14% by homicide (Figure 1).

Figure 1 Frequency of deaths from violence, by type: Oregon, 2004-2005 [1,2]



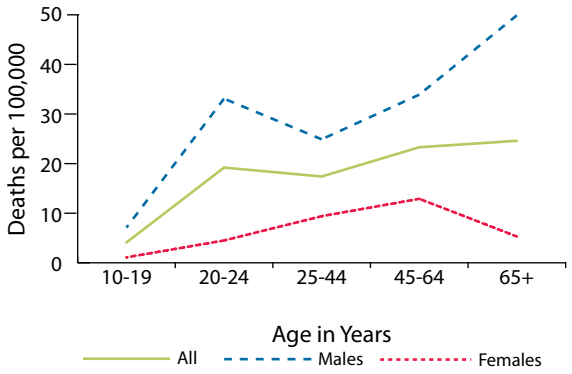
White males had the highest occurrent suicide ratio by race/ Hispanic origin (Figure 3).

Figure 3. Occurrent Suicides, by sex and race/ Hispanic origin: Oregon, 2004-2005 [1-4]



SUICIDES: An annual average of 579 people died by suicide in Oregon (16 per 100,000 population). More Oregonians died by suicide than by motor-vehicle crash each year. Males were almost four times more likely than females to die by suicide. The highest ratios[3] by age group were observed among males ages 65 and older and among males ages 20 to 24 (Figure 2).

Figure 2. Occurrent Suicides, by sex and age: Oregon, 2004-2005 [1-3]



Methods/Means: Firearm injury was the most common mechanism of suicide among males (63%), especially among males ages 65 and older (83%). Poisoning was a common mechanism of suicide among females (50%). Hanging/suffocation accounted for 17% of male suicides and 15% of female suicides.

Circumstances[5]: Nearly 60% of the people who died by suicide had experienced a recent depressed mood.

- 34% of the people who died by suicide had a mental illness. Compared to females, males were much less likely to be diagnosed with a mental health problem (28% vs. 56%) and to have received treatment for mental health problems (20% vs. 40%) prior to death.
- Approximately 25% of people ages 25 to 64 had an alcohol problem and 20% of people age less than 45 had substance problems.

The other common factors associated with suicide included:

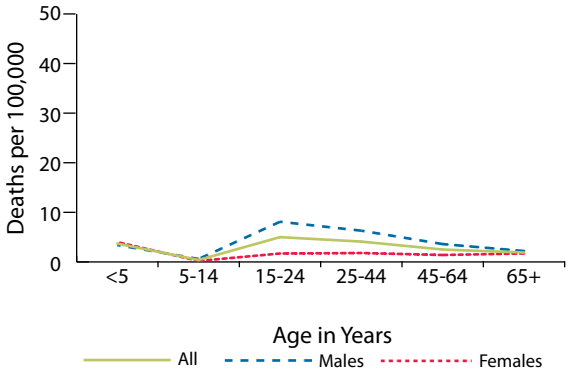
- An interpersonal relationship problem and a recent criminal problem for young people (age less than 25).
- Problems with an intimate partner, loss of a job or financial difficulty, physical health problems and recent criminal or legal issue for adults ages 25 to 64.
- Physical health problems, such as declining health status, chronic pain, cancer and other illness for adults ages 65 and older.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms are found in Appendix 1; description of methods is found in Appendix 2. [3]Occurrent ratios are calculated from the number of deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]Race/Hispanic origin in this report refers to mutually exclusive White (non-Hispanic), Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic) and Hispanic origin populations. [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Oregon, 2004-2005, *continued*

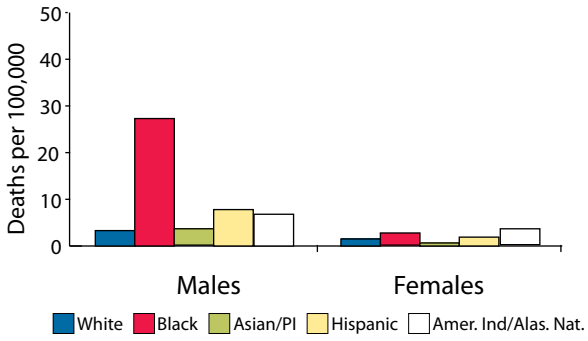
HOMICIDES: More than 100 homicides occurred each year in 2004 and 2005. Males were 3 times more likely to die by homicide than females. Young males ages 15 to 24 were at highest risk to be victims of homicide (Figure 4).

Figure 4. Occurrent homicides, by sex and age: Oregon, 2004-2005 [1-3]



The homicide ratio[3] among Black males was nearly eight times the ratio for White males (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Oregon, 2004-2005 [1-4]



Methods/Means: Firearms were the mechanism of death in 58% of male homicides and 47% of female homicides. Sharp instruments were the mechanism of death in 18% of male and 10% of female homicides. Blunt instruments and personal weapons (fist, feet and hand) accounted for nearly 13% of male and female homicides. Strangulation was the mechanism of death among 10% of female victims, but only 3% of male victims.

Circumstances[5]: Frequently reported circumstances were:

- Argument and personal conflict (40%)
- Intimate partner violence (25%)
- Drug trade or illegal drug use (19%)
- Gang-related violence (6%)

Suspects[6]:

- Young males ages 20 to 44 were most likely to be involved in homicide incidents.
- Most suspects knew their victims.
- Half of female victims ages 15 and older were killed by a current or former intimate partner.
- Two thirds of children less than 15 years were killed by a parent, a foster parent, a parent's intimate partner or a babysitter.

Collaboration and Uses of ORVDRS Data

Used data to develop the first state older adult suicide prevention plan.

Reported intimate partner related homicides to the Governor's Council on Domestic Violence.

Provided surveillance data to the state Youth Suicide Prevention program.

Collaborating with the Portland Veterans Administration Hospital to study veteran suicide.

Used data to promote intervention skills training for Oregon National Guard.

Testified before the state Veterans Affairs Committee on veterans and suicide.

For more information about the ORVDRS, please visit the ORVDRS website at www.oregon.gov/DHS/ph/ipe/nvdrs/index.shtml

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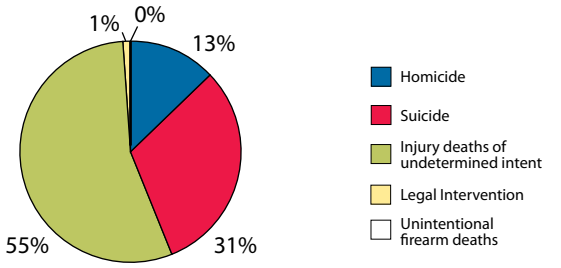
Rhode Island, 2004-2005

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. 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 2004 and 2005.

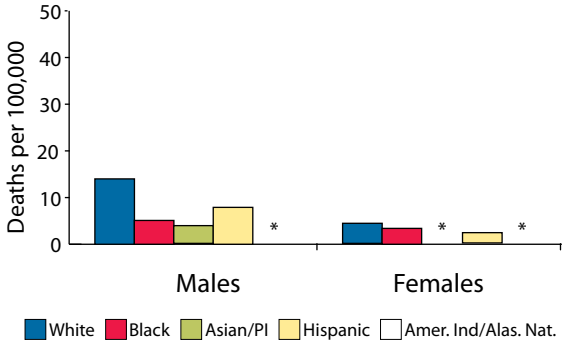
In 2004-2005, there were 510 deaths from violence in Rhode Island, for an average of 255 deaths per year (Figure 1).[1,2] The largest category was that of deaths classified with undetermined manner, most often associated with drug overdose.

Figure 1. Frequency of deaths from violence, by type: Rhode Island, 2004-2005 (1,2)



Suicides occurred more often in White males than in other groups (Figure 3). In 2004-2005, 44% of suicide deaths occurred in White males, a share higher than their proportion in the general population.

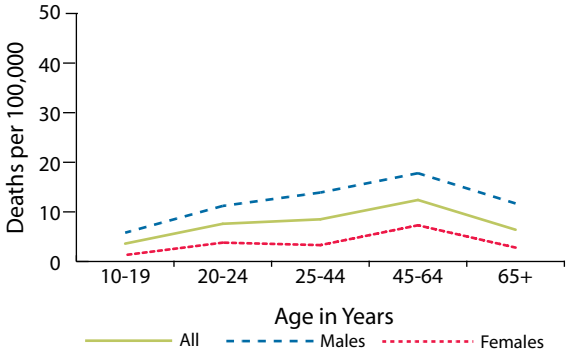
Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Rhode Island, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

SUICIDES: One hundred fifty-nine occurrent suicides were reported in Rhode Island in 2004-2005. The number of suicide deaths among males was nearly three times that among females (Figure 2). The highest ratios[3] in both sexes were in the 45 to 64 age group.

Figure 2. Occurrent suicides, by sex and age: Rhode Island, 2004-2005 (1-3)



Methods/Means: The most common methods of suicide were hanging and other forms of asphyxia. More than 50% of female suicides resulted from exposure to various poisons. In contrast to national results, where more than half of all suicides result from use of a firearm, in Rhode Island, only a quarter of the suicides were firearm-related.

Circumstances[5]: Information was reported on the circumstances associated with suicides in 98% of the deaths.

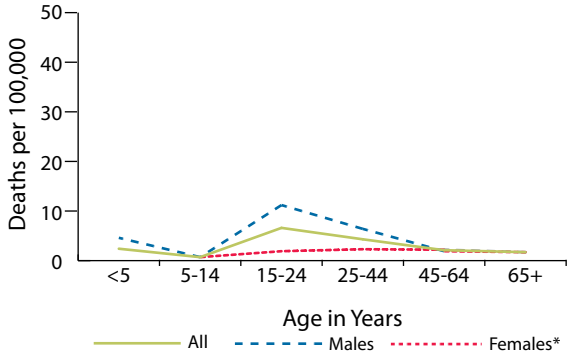
- A majority of individuals who died by suicide were reported to have a current mental health problem (63%), with a majority in both sexes and most age groups currently receiving mental health treatment. A history of treatment and current treatment were higher in females.
- Reported alcohol and drug problems were higher in males (34%) than females (20%) but these problems were not reported for any individuals ages 65 and older.
- A higher proportion of females (32%) than males (19%) had a history of previous suicide attempts.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the population in the selected sites for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Rhode Island, 2004-2005, *continued*

HOMICIDES: The ratio[3] of homicide deaths in Rhode Island was among the lowest of the NVDRS states. The 68 occurrent homicides reported in this two-year period were historically typical. More than 70% of the victims were males, with young men age 15 to 24 suffering the highest ratios of homicide victimization (11 per 100,000) (Figure 4).

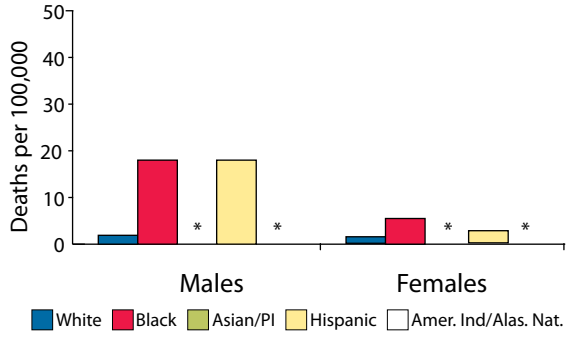
Figure 4. Occurrent homicides, by sex and age: Rhode Island, 2004-2005 [1-3]



*Some ratios were not calculated due to small numbers

Black and Hispanic males experienced much higher ratios of homicide (18 per 100,000 in each group) than did White males (2 per 100,000) (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Rhode Island, 2004-2005 [1-4]



*Some ratios were not calculated due to small numbers

Methods/Means: Firearms, alone or in combination with other weapons, were the lethal weapon in just over half of homicides (54%) in Rhode Island. Only 20% of female homicide victims were killed by a firearm alone as compared with 60% of male victims

Circumstances[5]: Information on circumstances was reported for 78% of homicides.

- For both males and females, nearly half of the homicides were the outcome of an argument.
- Female victims were much more likely than male victims to be killed in an intimate partner related homicide. Such homicides accounted for 10% of the total reported.
- Slightly more than 10% of homicides were reported to be drug-related.

Suspects[6]: Police records were the usual source of information about suspects. Suspects were not identified for more than half of the homicide victims. Of identified suspects, almost all were known to the victim. In cases with multiple suspects, it was difficult to distinguish which suspect was actually the killer of a particular victim.

Undetermined Deaths: In 2004-2005, 261 drug overdose deaths were classified as injury deaths of undetermined intent (Figure 1). There were also 19 other deaths classified as deaths from violence of undetermined intent which were not associated with drug overdose.

- The number of deaths in this group was greater than that for suicide and homicide combined.
- Ratios were highest in persons ages 35 to 54.
- Deaths of twice as many males as females were reported as undetermined drug deaths.

Collaboration and Uses of RIVDRS Data

RIVDRS suicide data have informed implementation of the state's strategic plan for suicide prevention, RIVDRS drug death data were used to raise awareness at a state substance abuse treatment media event, and RIVDRS homicide data are being used to study factors contributing to the dramatic decrease in homicides in Providence from 2005-2006.

For more information about the RIVDRS, please visit the RIVDRS website at www.health.ri.gov/chic/statistics/violentdeath04final.pdf

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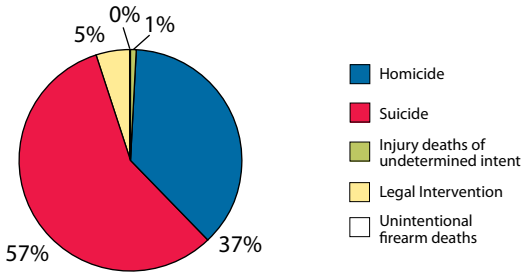
South Carolina, 2004-2005

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 4.3 million people. According to the 2006 U.S. Census estimates, 64% of the population is White, 29% Black, 3.5% Hispanic, 1% Asian/Pacific Islander, and 0.4% American Indian. The South Carolina Violent Death Reporting System (SCVDRS) began collecting data in 2003. This summary includes data from 2004 and 2005.

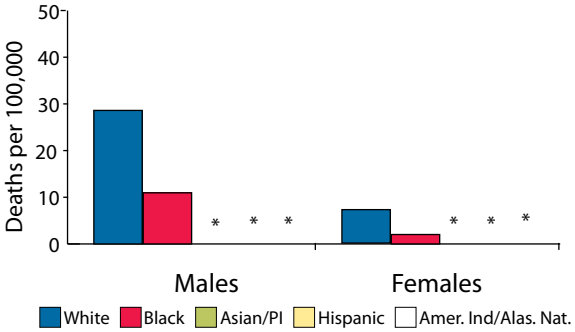
In 2004-2005, 1,784 deaths due to violence occurred in South Carolina, an average of 892 deaths per year.[1,2] More than half of these deaths were suicides (57%); approximately one-third were homicides (Figure 1).

Figure 1. Frequency of deaths from violence, by type: South Carolina, 2004-2005 (1,2)



In terms of race/Hispanic origin, suicide ratios were highest among White males.

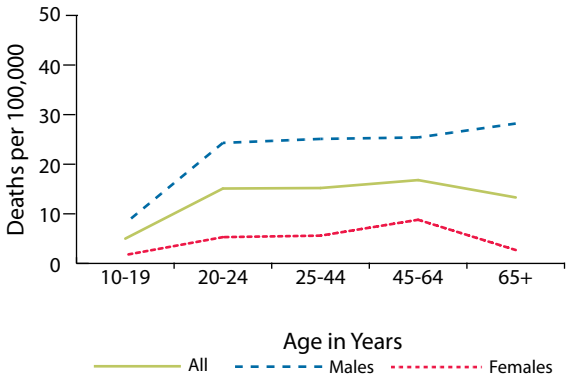
Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: South Carolina, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

SUICIDES: There were 1,106 suicides in South Carolina in 2004 and 2005 for an average of 508 deaths per year. Males had a higher suicide ratio[3] than females, regardless of age (Figure 2). The suicide ratio for males begins to increase at ages 20 to 24. The suicide ratio for females was highest in the 45 to 64 age group. For the 20 to 24 age group, the suicide ratio for males was nearly four times higher than for females.

Figure 2. Occurrent suicides, by sex and age: South Carolina, 2004-2005 (1-3)



Methods/Means: Although the majority of suicides in South Carolina (64%) were by firearm, the frequency of different methods varied by gender. Males were more likely to use firearms than females (68% vs. 32%, respectively). Hanging/ suffocation was the second most frequent method identified for females.

Circumstances[5]: At least one contributing circumstance was identified in 86% of the suicides.

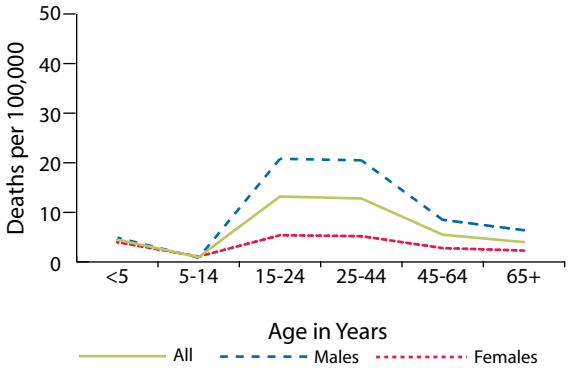
- Nearly 32% of the people who died by suicide had been noted by others as being in a depressed mood near the time of their death.
- 31% had been diagnosed with a mental health problem.
- 25% left a suicide note.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

South Carolina, 2004-2005, *continued*

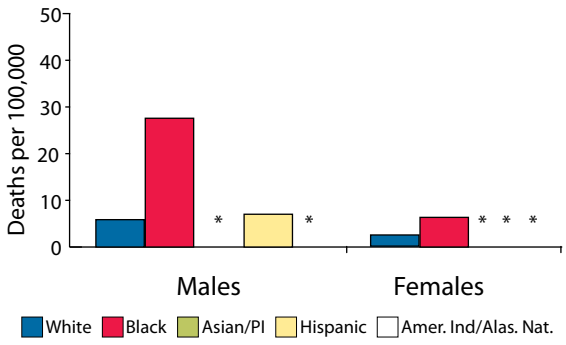
HOMICIDES: In 2004-2005, there were 660 homicides in South Carolina for an average of 330 deaths per year. Figure 4 shows that the highest homicide ratios[3] occurred in the 15 to 24 and 25 to 44 age groups for both males and females. In these age groups, the homicide ratio for males was four times greater than that for females.

Figure 4. Occurrent homicides, by sex and age: South Carolina, 2004-2005 (1-3)



The homicide ratios were highest in males, especially for Blacks and other non-Whites (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: South Carolina, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: Firearms were used in 66% of all homicides, while sharp instruments were used in 12%. The method of violence was more likely to be a firearm for male homicide victims (54%) than for female homicide victims (12%). A blunt object or personal weapons such as fists or feet was the method used in approximately 65% of the homicides involving adults ages 25 to 64.

Circumstances[5]: At least one contributing circumstance was identified in approximately three quarters of the homicides.

- 37% of homicides were characterized as having been precipitated by an argument, abuse, or conflict.
- 25% of homicides were identified as being associated with another crime, such as robbery, rape, or assault.
- More than 10% of homicides were identified as being drug-related.
- Nearly 20% of the homicides were associated with intimate partner violence.

Collaboration and Uses of the SCVDRS Data

The SCVDRS, established in 2002, 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 their death. Identifying and intervening with at-risk individuals at the time of service delivery might help prevent violent deaths from occurring.

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

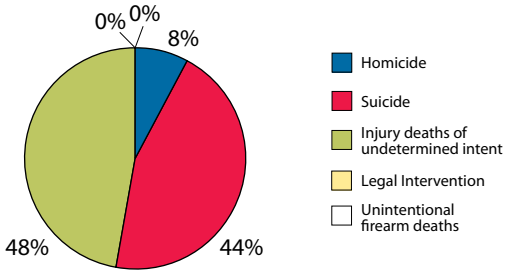
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Utah, 2005

Utah has the youngest population and is one of the most religiously homogenous states in the U.S. Although it is the 13th largest state geographically, its four urban counties comprise only 4% of the state's 84,899 square miles. The majority of Utah's 2.5 million residents (90%) live in an urban concentration with Salt Lake City as the center. Utah also has eight rural counties and 17 frontier counties; however its frontier counties have 20 or fewer people per square mile, making Utah's population the sixth most urbanized in the U.S. Utah began data collection in 2005 for the Utah Violent Death Reporting System (UTVDRS).

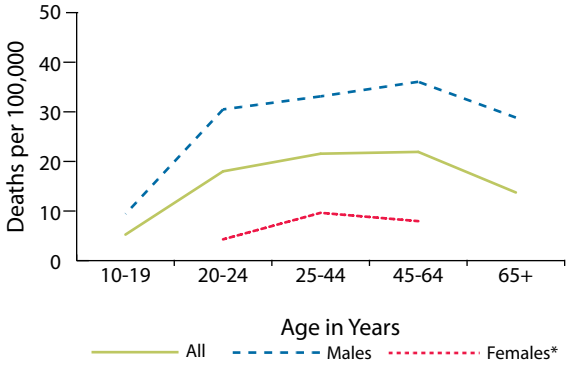
In Utah, there were 765 deaths due to violence in 2005 (Figure 1).[1,2] Of the 17 NVDRS states, Utah had the highest overall violent death ratio (32 deaths per 100,000 residents) (Table 1). However, the policy of the state medical examiner is to classify poisoning deaths of unclear intent as 'Injury Deaths of Undetermined Intent'. It is unclear what proportion of these deaths are truly intentional vs. unintentional.

Figure 1. Frequency of deaths from violence, by type: Utah, 2005 (1,2)



SUICIDES: There were 349 occurrent suicides in Utah in 2005 (an occurrent suicide ratio[3] of 14 per 100,000 population). Males were six times more likely to die by suicide than females. Males ages 45 to 64 had the highest suicide ratio. The highest ratio for females was for ages 25 to 44 (Figure 2).

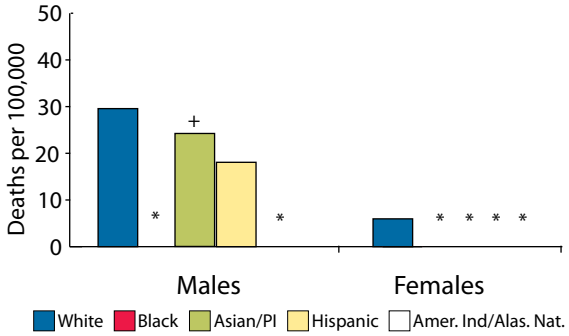
Figure 2. Occurrent suicides, by sex and age: Utah, 2005 (1-3)



*Some ratios were not calculated due to small numbers

White persons accounted for 87% of suicides. There were no statistical differences in suicide ratios by race/Hispanic origin for males or for females (Figure 3).

Figure 3. Occurrent suicides, by sex and race/Hispanic origin: Utah, 2005 (1-4)



*Some ratios were not calculated due to small numbers
+Ratios were based on less than 20 deaths and may be unstable

Methods/Means: The most common method of injury in suicides was firearms (53%). For males, firearms were the most frequent method used (60%). For females, the most frequent method was poisoning (53%). Hanging/suffocation (57%) was the most frequent method for younger persons (ages 10 to 19) compared to firearms (55%) for persons ages 20 and older.

Circumstances[5]: Contributing circumstances were identified in 98% of the suicides.

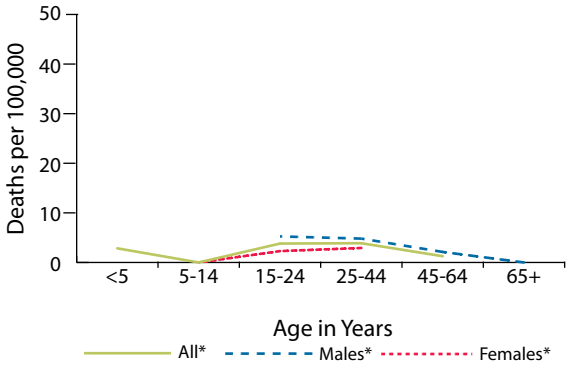
- 57% of the suicide victims experienced a crisis or an impending crisis within two weeks of their death.
- Females were twice as likely to have been reported to have a current mental illness (80%), have been treated for mental illness (75%), or have had a history of suicide attempts (44%) compared to males (42%, 39%, and 18%, respectively).
- Males were twice as likely to have had an intimate partner problem (45%) and five times more likely to have had a criminal legal problem (16%) compared to females (20% and 3%, respectively).

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms are found in Appendix 1; description of methods is found in Appendix 2. [3]Occurrent ratios are calculated from the number of deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]Race/Hispanic origin in this report refers to mutually exclusive White (non-Hispanic), Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic) and Hispanic origin populations. [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Utah, 2005, *continued*

HOMICIDES: There were 60 occurrent homicides in Utah in 2005. Utah had the lowest homicide ratio[3] (2 per 100,000) among the 17 NVDRS states (Table 1). Males in Utah had a higher homicide ratio compared to females (3 and 2 per 100,000, respectively). Almost all male homicide victims were ages 15 to 44 (Figure 4).

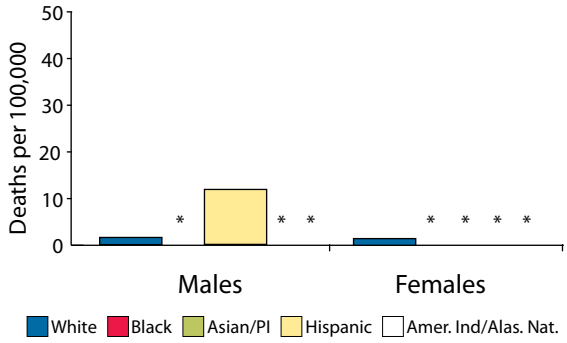
Figure 4. Occurrent homicides, by sex and age: Utah, 2005 [1-3]



*Some ratios were not calculated due to small numbers

Among males, Hispanic persons had a significantly higher homicide ratio compared to White persons (12 and 2 per 100,000, respectively). There were no significant difference by race/Hispanic origin among females (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Utah, 2005 [1-4]



*Some ratios were not calculated due to small numbers

Methods/Means: Firearms were used in 45% of all Utah homicides and were the primary method used for both males and females (50% and 36%, respectively). Handguns were the most commonly used firearms (33%). A sharp instrument was the next most common method used at 18%.

Circumstances[5]: Contributing circumstances were identified in 82% of Utah homicides.

- Argument, abuse, or conflict not involving money or property was the most common circumstance (42% of homicides). This circumstance was seen more frequently for males (50%) than for females (27%).
- Females were more likely to have been victims of intimate partner violence compared to males (46% and 11%, respectively).
- Gang relatedness and brawl circumstances were found in 30% of homicides, all with male victims.

Suspects[6]: Utah collects information on suspects from medical examiner records, police reports, and Supplemental Homicide Reports. There were 79 suspects for the 60 homicide decedents. Ninety percent of the suspects were male and the majority were between ages 15 to 24 (44%). Seven of the suspects committed suicide after committing a homicide.

Collaboration and Uses of UTVDRS Data

The UTVDRS is housed in the Violence and Injury Prevention Program in the Utah Department of Health. UTVDRS works closely with the Domestic Violence Fatality Review Committee (DVFRC) to provide the following:

- case identification for domestic violence related homicides and suicides
- enhanced case surveillance through a special NVDRS feature for state added variables
- circumstance data on domestic violence for reports and fact sheets.

The DVFRC uses UTVDRS data to make recommendations to policy makers, organizations, and agencies to inform appropriate interventions for the prevention of domestic violence fatalities in Utah.

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

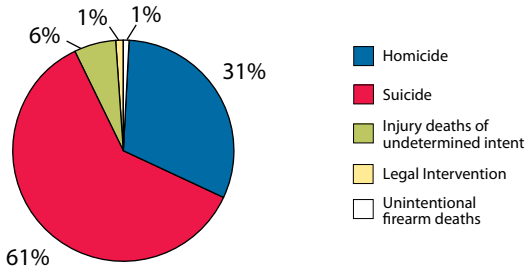
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms are found in Appendix 1; description of methods is found in Appendix 2. [3]Occurrent ratios are calculated from the number of deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]Race/Hispanic origin in this report refers to mutually exclusive White (non-Hispanic), Black (non-Hispanic), Asian/Pacific Islander (non-Hispanic), American Indian/Alaska Native (non-Hispanic) and Hispanic origin populations. [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

Virginia, 2004-2005

Virginia is a remarkably diverse state. Covering 39,594 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 communities in its eastern region, to more sparsely populated tobacco farms of its rural south side. The population of Virginia is growing, particularly in the northern counties of the state. The U.S. Census Bureau estimated the 2005 population at 7.6 million, a number which reflects a growth rate of 7% since the 2000 Census. The following summary provides information from the Virginia Violent Death Reporting System (VVDRS) for 2004-2005.

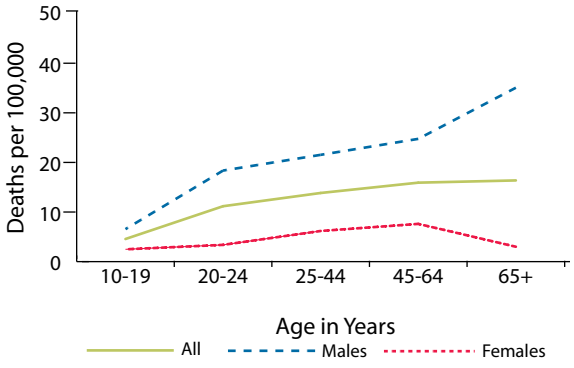
In 2004-2005, there were 2,804 deaths due to violence in Virginia, for a yearly average of 1,402 deaths.[1,2] The majority of these deaths were suicides (61%) or homicides (31%) (Figure 1).

Figure 1. Frequency of deaths from violence, by type: Virginia, 2004-2005 (1,2)



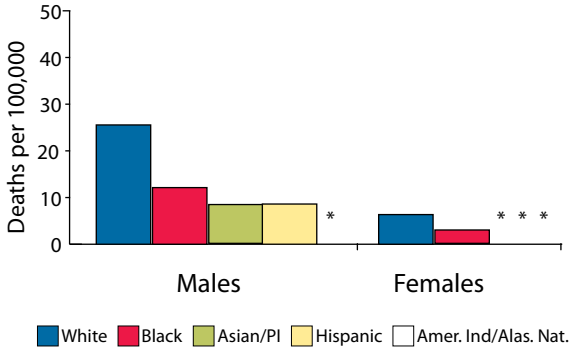
SUICIDES: In 2004-2005, a total of 1,714 persons in Virginia took their own life. When looking at suicide over the life course and by gender, suicide ratios[3] were consistently higher among males than females for all age groups. While women's suicide ratios peaked between the ages of 25 to 44 and 45 to 64, suicide ratios among men continued to climb with age. Males who were 65 years or older had the highest suicide ratio (35 per 100,000 population) (Figure 2).

Figure 2. Occurrent suicides, by sex and age: Virginia, 2004-2005 (1-5)



For both males and females, Whites were more likely to have committed suicide than Blacks, Asian/Pacific Islanders, or Hispanics. White males had the highest suicide ratio (25 per 100,000) and Black females the lowest (3 per 100,000) (Figure 3).

Figure 3. Occurrent suicides, by sex and race/ Hispanic origin: Virginia, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: The three most common methods for suicide were firearms (59%), hanging/suffocation (19%), and poisoning (16%). Hanging/suffocation was the most common method among the young; use of this method decreased among older victims. Using a firearm increased with the suicide victim's age.

Most fatal injuries among male suicide victims were from a firearm (64%) or hanging/ suffocation (19%), while among females, the percent of suicides by firearm (38%) or poisoning (35%) was similar.

Circumstances[5]: Circumstances were known in 97% of the suicides.

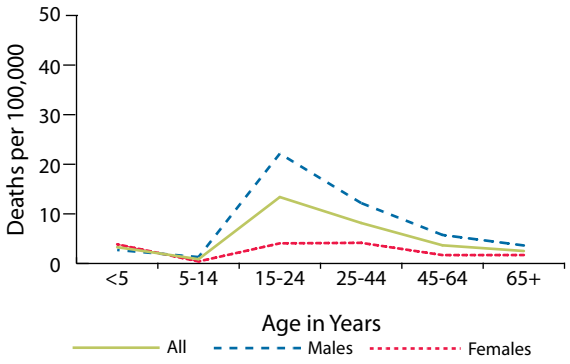
- Approximately half of suicide victims (48%) were reported to have had a mental health problem, such as depression or bipolar disorder.
- Four in 10 suicide victims had been treated for a mental health problem before their death.
- Suicides were also related to problems among intimate partners (31%) or to a recent crisis, such as a legal or financial problem (37%).
- One in five suicide victims told someone of their intent prior to their death and 18% had attempted suicide in the past.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Virginia, 2004-2005, *continued*

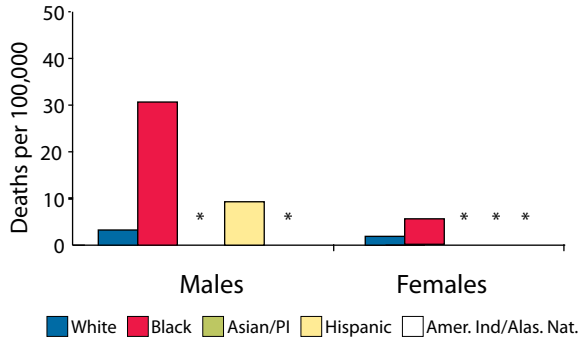
HOMICIDES: In 2004-2005, a total of 875 people died by homicide in Virginia, for an annual average of 437 deaths. Homicide was more common among males than females for nearly every age group (Figure 4). Males ages 15 to 24 were at the highest risk for homicide.

Figure 4. Occurrent homicides, by sex and age: Virginia, 2004-2005 [1-3]



Race and Hispanic origin disparities identified among suicide victims were reversed among homicide victims, where the homicide ratio[3] for Black males (31 per 100,000) was three times the ratio for Hispanic males (9 per 100,000) and ten times the ratio for White males (3 per 100,000) (Figure 5). The homicide ratio for Black females (5 per 100,000) was twice that of White females (2 per 100,000).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Virginia, 2004-2005 [1-4]



*Some ratios were not calculated due to small numbers

Methods/Means: In Virginia, firearms were the most common method of homicide (71%). Sharp instruments (11%) and blunt instruments and personal weapons, such as hands and feet (8%), were also common methods of homicide. There were significant differences by sex. While firearms were the most frequently used weapon among both males (76%) and females (53%), females were commonly killed by sharp or blunt instruments or personal weapons (26%).

Circumstances[5]: Information on circumstances associated with homicides was provided in about 69% of the deaths.

- Approximately one-third of homicides were the result of arguments, abuse or conflict (30%).
- Other common characteristics of homicide included persons killed in the context of another crime, such as robbery or assault (18%); intimate partner violence (17%); and drug involvement (12%).

Suspects[6]: In 2004-2005, a single suspect was identified in 62% of homicides and multiple suspects were noted in 16%. Race/Hispanic origin and sex of the victim shaped whether the suspect was known by the victim. White and Black females (77% and 55%, respectively) knew the suspects, while White and Black males (37% and 16%, respectively) were less likely to have known the suspect.

Collaboration and Uses of VVDRS Data

Information provided through the VVDRS is being used to support injury and violence prevention.

- VVDRS has published three annual reports, which have been distributed to varied audiences: legislators; policymakers in social services, mental health, and injury and violence prevention partners; and child advocates. Virginia localities with more than 20 annual incidents of homicide or suicide are sent a specially prepared report for their community.
- In Virginia, a significant number of homicides and suicides, and the majority of homicide-suicide events, result from intimate partner conflict. Through a partnership involving several statewide agencies and organizations, VVDRS is assisting in the understanding of domestic violence as both a homicide and suicide problem.

For more information about the VVDRS, please visit the VVDRS website at www.vdh.virginia.gov/medExam/NVDRS.htm

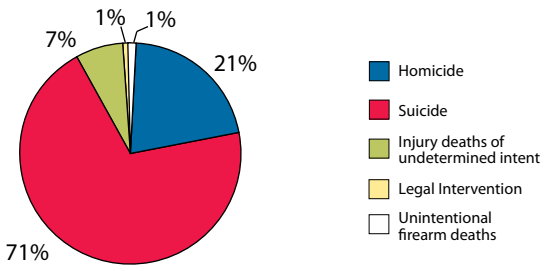
[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]Occurrent ratios are calculated from the total number of occurrent deaths, divided by the state's population for the applicable time period and multiplied by 100,000. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details. [6]Data are from the state's VDRS database.

Wisconsin, 2004-2005

Wisconsin is the 18th most populated state with 5.3 million residents. The state is divided into 72 counties covering 54,000 square miles. Whites constitute 89% of the population followed by Blacks (6%), Asians (2%), American Indians (1%), and Hispanics (4%). The workforce includes just over 2.7 million. While Wisconsin has a strong tradition in family farming, with a significant percent of the state's land devoted to the agricultural industry, more of the workforce is found in manufacturing (28%) than in agriculture (6%). Wisconsin joined the National Violent Death Reporting System in 2003, with the first year of data collection in 2004.

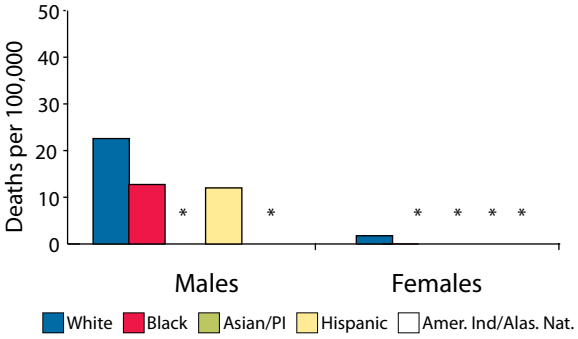
In 2004-2005, suicides accounted for 71% of Wisconsin's deaths from violence; homicides accounted for 21% (Figure 1).[1,2] Additional deaths due to violence included injury deaths of undetermined intent (7%), deaths due to legal intervention (1%) and unintentional firearm deaths (1%).

Figure 1. Frequency of deaths from violence, by type: Wisconsin, 2004-2005 (1,2)



Whites, particularly White males, had higher suicide ratios than members of the state's other race/Hispanic origin groups (Figure 3).

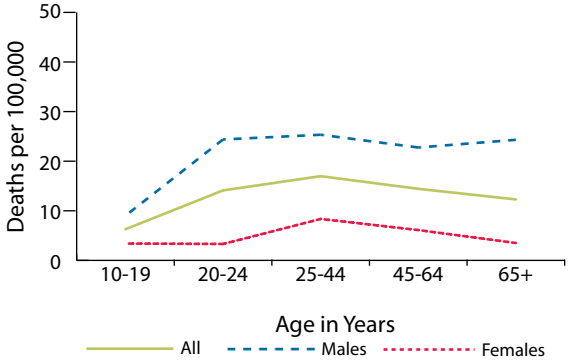
Figure 3. Occurrent suicides, by sex and race/Hispanic origin: Wisconsin, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

SUICIDES: In 2004-2005 there were 1,306 suicides in Wisconsin for an average of 653 deaths per year. Suicides accounted for the largest percent of deaths due to violence, with an average of approximately three suicides for every homicide. Almost all suicides reported in Wisconsin involved state residents (98%). Males consistently had a higher ratio[3] of suicides than females, regardless of age (Figure 2). The highest number of suicides was seen in the 25 to 44 age group (392 males and 125 females).

Figure 2. Occurrent suicides, by sex and age: Wisconsin, 2004-2005 (1-3)



Methods/Means: The most common methods of suicide were firearms (46%), hanging/strangulation (24%) and poisoning (23%). Firearms were used by males (53%) more often than by females (21%). Hanging/strangulation was used by approximately the same percent of males (24%) and females (23%). More females (45%) than males (16%) died by poisoning.

Circumstances[5]: Circumstances were known for 95% of the suicides.

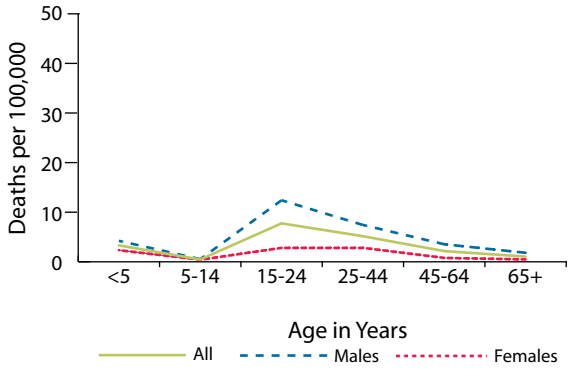
- Mental health issues were the most common circumstances identified. A current mental health problem was identified in 55% of the suicides. Current depressed mood (58%) was seen more frequently than depression without bipolar disease (39%).
- Intimate partner violence was identified as a circumstance 33% of the time and was the second most common circumstance identified.
- A physical health problem was a circumstance in 26% of the deaths.

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Wisconsin, 2004-2005, *continued*

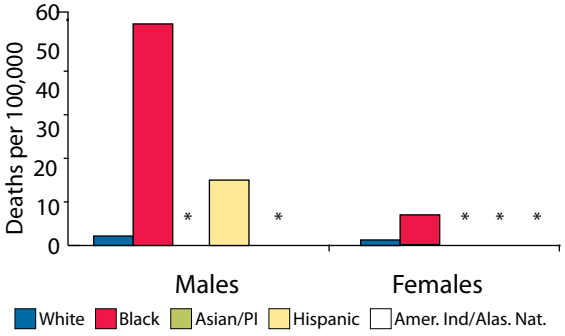
HOMICIDES: In 2004-2005, there were 388 homicides in Wisconsin for an average of 194 deaths per year. Males ages 15 to 19 had the highest homicide ratio[3] (Figure 4). Homicide ratios in children under age 5 were higher than the ratios for children ages 5 to 14. After the peak between ages 15 to 24, homicide ratios declined steadily as age increased.

Figure 4. Occurrent homicides, by sex and age: Wisconsin, 2004-2005 (1-3)



The homicide ratio for Black males was approximately three times higher than for Hispanic males. The homicide ratio for Hispanic males was approximately 8 times higher than in White males (Figure 5).

Figure 5. Occurrent homicides, by sex and race/ Hispanic origin: Wisconsin, 2004-2005 (1-4)



*Some ratios were not calculated due to small numbers

Methods/Means: Firearms were the most common method of homicide. Firearms alone were identified as the method in 259 (67%) of the homicides, followed by sharp instruments (11%). These methods were consistent for both male and female victims.

Circumstances[5]: Circumstances were known for 78% of the homicides.

- A quarter of the homicides (26%) were precipitated by another crime.
- Argument, abuse or conflict was identified as a circumstance in 43% of the deaths.
- The most common circumstance for female homicide victims was intimate partner violence (40%).
- The most common circumstance for male homicide victims was an argument, abuse or conflict (47%).

Collaboration and Uses of WVDRS Data

WVDRS data are critical for identifying strategies to prevent suicides and homicides. To do this, the data are disseminated to key partners in a format that works for multiple audiences, such as coroners/medical examiners, law enforcement, state and local public health officials, mental health practitioners, and advocacy organizations.

This is being done in the following ways:

- Creation of brief reports on a quarterly basis to highlight key findings from the WVDRS data
- Partnership with academic institutions to conduct and assist in the analysis of the WVDRS data and write articles
- Production of The Burden of Suicide in Wisconsin Report
- Addition of the Wisconsin Violent Death module to the Wisconsin Interactive Statistics on Health data query system (http://dhs.wisconsin.gov/wish/)

For more information about the WVDRS, please visit the WVDRS website at dhs.wisconsin.gov/wish/main/violent-death

[1]Data are from the NVDRS Restricted Access Database (RAD). [2]Definitions of terms can be found in Appendix 1; analysis methods are described in Appendix 2. [3]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. [4]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). [5]The percent of cases with a given circumstance is based on the total number of suicides or homicides, not just those for which circumstance information is known. See Appendix 2 for more details.

Similarities and Differences:
"When you've seen one state . . . you've seen one state!"[1]

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 populations, 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 2004-2005, there was a substantial difference in the occurrent ratios of total deaths from violence among the 17 funded VDRS states (Table 1 on pages 6-7). The total occurrent violent death ratios for Alaska and Utah[2] (both at approximately 31 total violent deaths per 100,000 resident population) were more than twice that for New Jersey, the state with the lowest total occurrent violent death ratio (12 total violent deaths per 100,000 resident population).

In every state except Maryland and the selected sites in California, suicides outnumbered homicides. In Oregon and Utah, the annual number of suicides was more than five 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 occurrent ratio for suicides also varied by state (Table 1, pages 6-7). The occurrent suicide ratio for Alaska (22 suicides per 100,000 resident population) was three times that of New Jersey (7 suicides per 100,000 resident population).

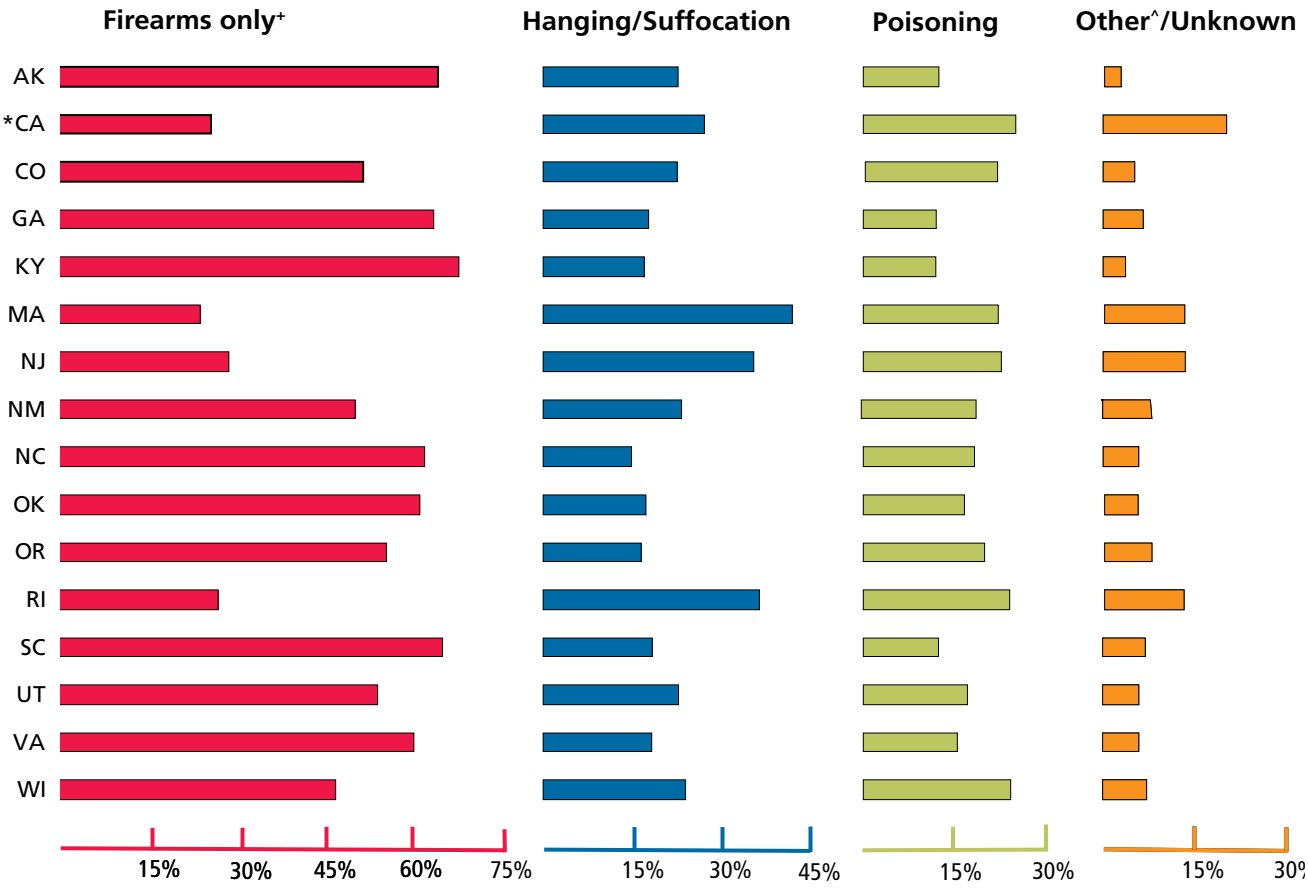
Although in all states the occurrent ratio for suicides was higher for males than for females, the age group of males with the highest ratio varied by state. In Alaska and New Jersey, the occurrent suicide ratio was highest among 20 to 24 year old males. In Utah and Rhode Island, the ratio was highest among 45 to 64 year old males. In California (selected sites), Colorado, Georgia, Maryland, Oklahoma, and Virginia, the occurrent suicide ratios were higher among males ages 65 and older. Oregon and New Mexico had a bimodal distribution with high rates occurring in the 20-24 and 65+ age categories. Clearly, these differences have important implications for selecting and evaluating appropriate prevention strategies that target specific age groups.

States also varied in the most common method used in suicide. For 13 of the 17 states, use of a firearm was identified most frequently, while in California (selected sites), Massachusetts, New Jersey and Rhode Island, hanging/suffocation was the most common method. Figure SD-1 demonstrates the wide variability among the states with regard to the method of suicide. Firearms were used in more than 60% of the suicides in Alaska, Georgia, Kentucky, North Carolina and South Carolina, but

1. "When you've seen one state . . . you've seen one state." Alex Kelter, MD, past president of the State and Territorial Injury Prevention Directors Association (STIPDA).
2. Nearly 48% of the total deaths from violence in Utah were classified as deaths of undetermined manner. See discussion in the Analysis Considerations section on pages 8-9.

Similarities and Differences, *continued*

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



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.
\+ Firearms used in conjunction with other weapon types are included in the category of "Other/unknown".
^ "Other" includes such methods as use of a sharp instrument, jump from a height, drowning, fire/burns, and motor vehicle.

in less than 25% of the suicides in California (selected sites), Massachusetts, New Jersey and Rhode Island. In general, male suicide victims were more likely to use a firearm, while females were more likely to die from drug overdose (poisoning).

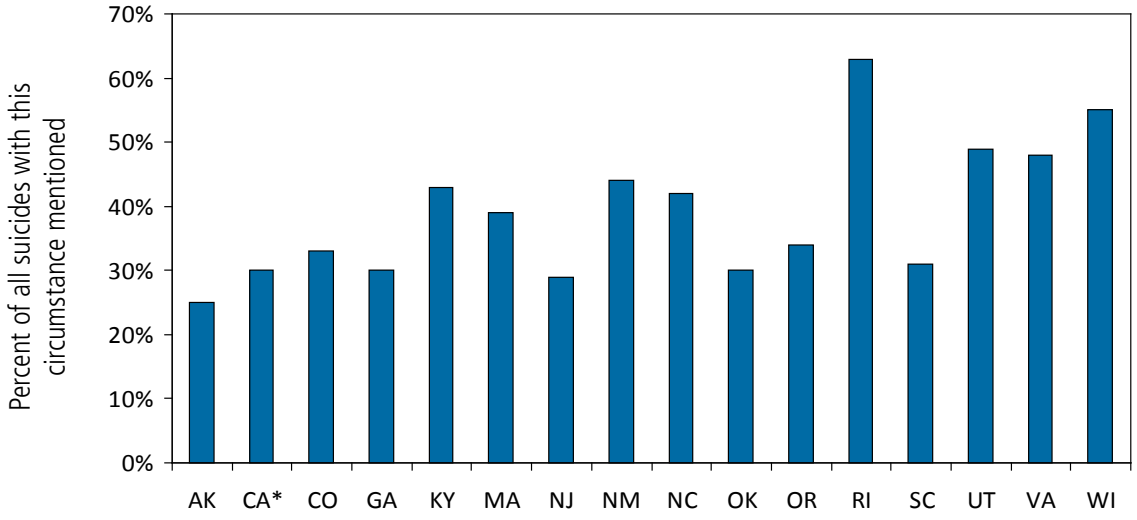
One of the strengths of the NVDRS is the ability to capture information on circumstances or precipitating factors associated with deaths from violence. This information most frequently comes from coroner/medical examiner reports and from law enforcement investigations. Understanding the circumstances 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 next several pages.[3]

3. On average for all states combined, information on at least one circumstance associated with the suicide was identified in 89% of the deaths. For individual states, the percent of suicides for which at least one circumstance was identified varied from 73% to 98%. Results for Maryland are not included in the comparison of suicide circumstances. For additional detail, see Appendix 2: Methods.

Similarities and Differences, *continued*

On average for all NVDRS states combined, 39% 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 25% of the suicides in Alaska to a high of 63% of the suicides in Rhode Island (Figure SD-2).

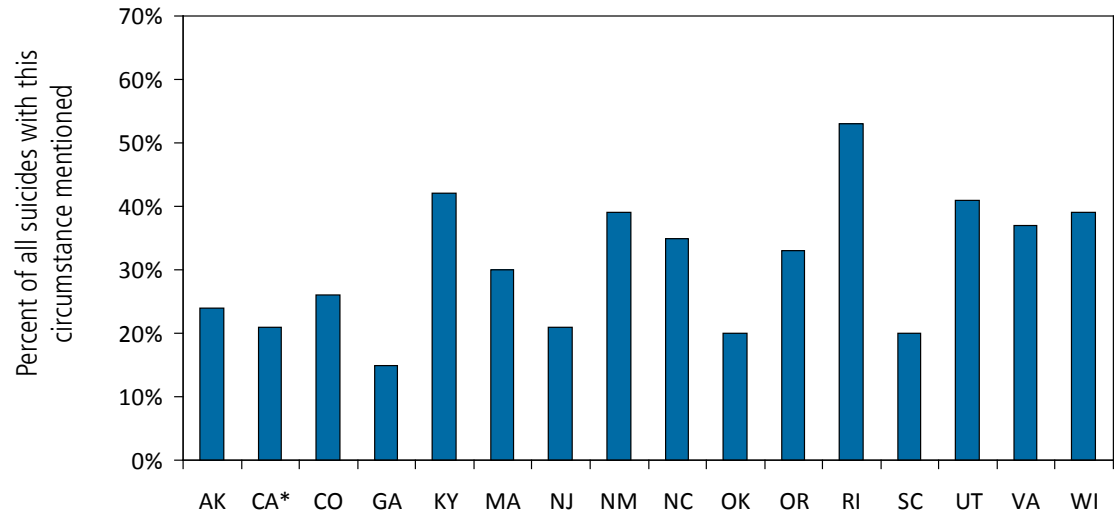
Figure SD-2. Suicide Circumstance: Current Mental Health Diagnosis



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

On average, 31% 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 California (selected sites), Georgia, Oklahoma, and South Carolina to more than 50% of the suicides in Rhode Island (Figure SD-3).

Figure SD-3. Suicide Circumstance: Current Mental Health Treatment

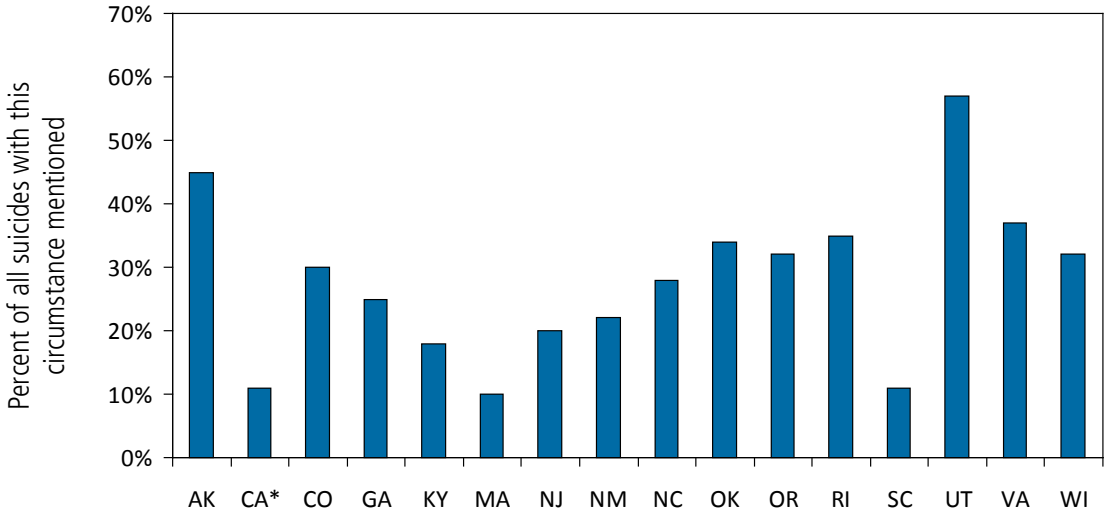


* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

Similarities and Differences, *continued*

On average, 28% of suicide victims were identified as having experienced a personal crisis within the two weeks prior to his/her death. The percent by state ranged from less than 15% of the suicides in California (selected sites), Massachusetts and South Carolina to 67% of the suicides in Utah and 45% of the suicides in Alaska (Figure SD-4).

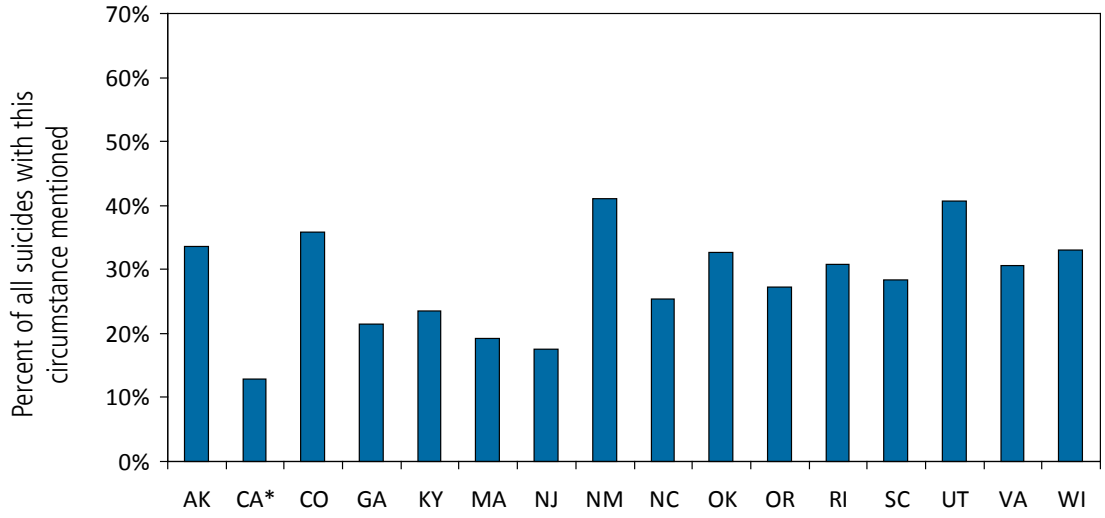
Figure SD-4. Suicide Circumstance: Crisis in the 2 Weeks Prior to Death



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

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 state ranged from less than 15% of the suicides in California (selected sites) to 41% of the suicides in New Mexico and Utah. (Figure SD-5).

Figure SD-5. Suicide Circumstance: Problem with an Intimate Partner

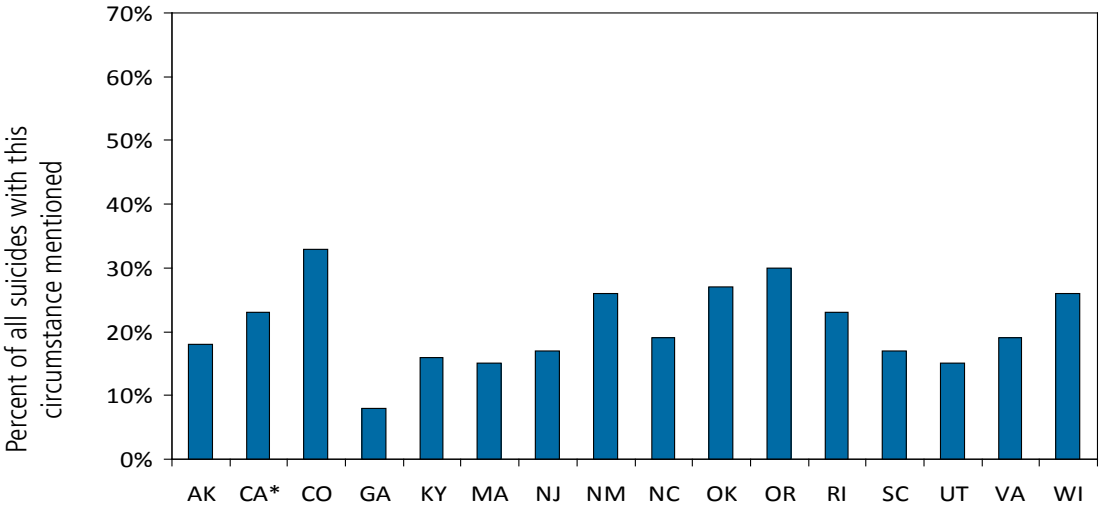


* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

Similarities and Differences, *continued*

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 noted more frequently among elderly suicide victims. On average, 21% of suicide victims were identified as having physical health problems. The percent by state ranged from less than 10% of the suicides in Georgia to 30% or more of the suicides in Colorado and Oregon (Figure SD-6).

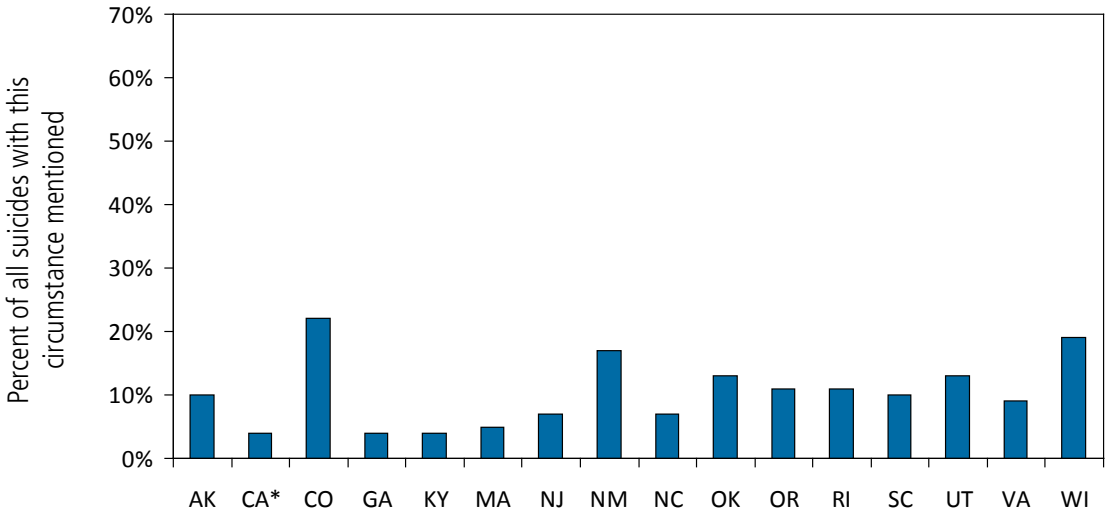
Figure SD-6. Suicide Circumstance: Physical Health Problem



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

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 10% of the suicides. The percent by state ranged from a low of 4% of the suicides in Georgia to a high of 22% of the suicides in Colorado (Figure SD-7).

Figure SD-7. Suicide Circumstance: Financial Problem

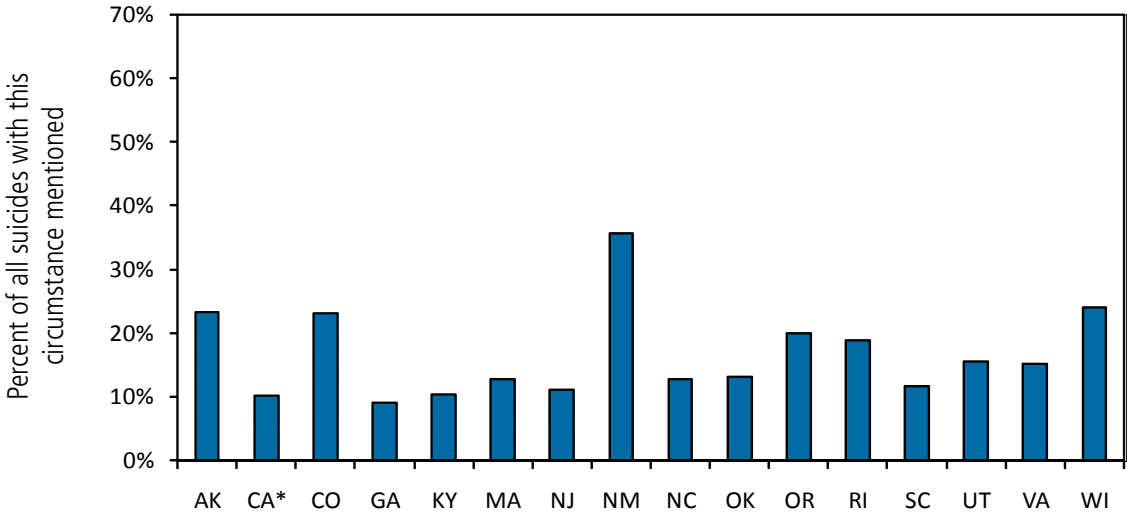


* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

Similarities and Differences, *continued*

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, 17% of suicide victims were identified as having an alcohol problem. The percent by state ranged from less than 10% of the suicides in Georgia to more than 35% of the suicides in New Mexico (Figure SD-8).

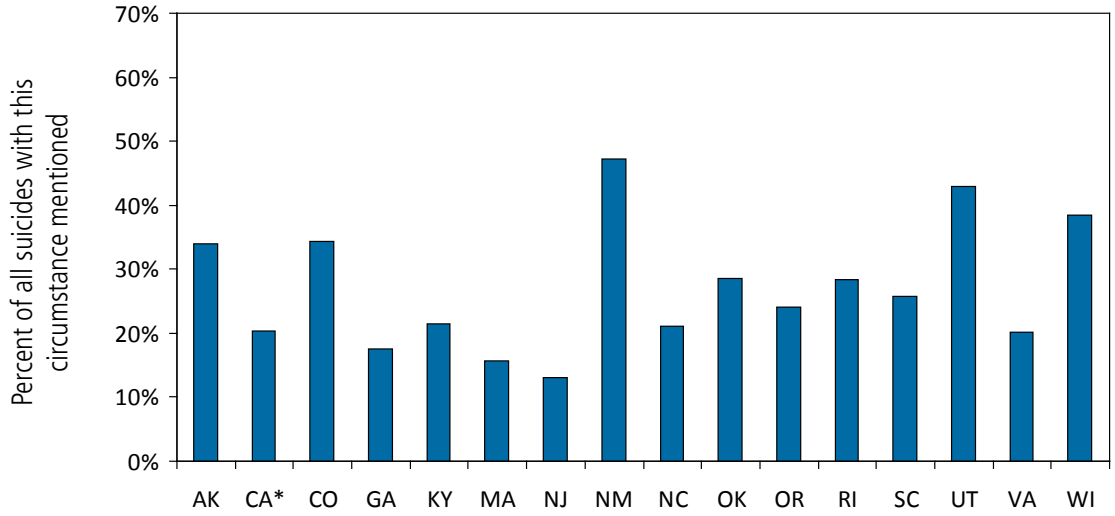
Figure SD-8. Suicide Circumstance: Alcohol Problem



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

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 of without me"). This circumstance was noted in less than 15% of the suicides in New Jersey but in more than 40% of the suicides in New Mexico and Utah (Figure SD-9).

Figure SD-9. Suicide Circumstance: Disclosed Intent



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

Similarities and Differences, *continued*

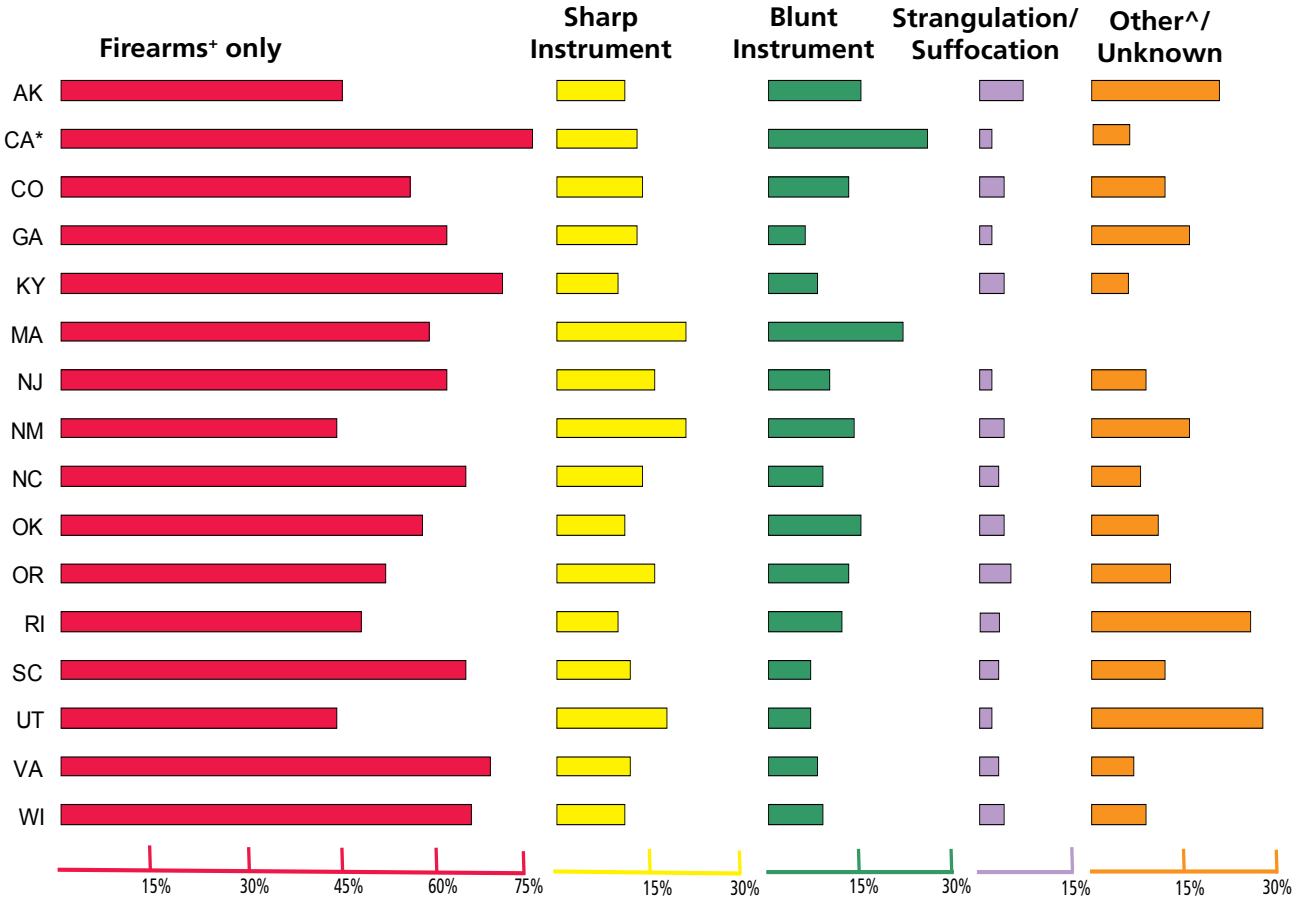
HOMICIDES: As with suicides, the occurrent ratio for homicides also varied by state (Table 1, pages 6-7). The occurrent homicide ratio for Maryland, the state with the highest ratio (9 homicides per 100,000 resident population) was more than four times that of Utah, the state with the lowest ratio (2 homicides per 100,000 resident population).

Although the occurrent homicide ratio was higher for males than for females in all states, the age group with the highest ratio varied. In most states, 15-24 year old males had the highest ratio. However, in Oklahoma, North Carolina and South Carolina, the highest ratios were seen among 25-44 year old males.

In terms of race/Hispanic origin, for most states, the occurrent homicide ratios were highest for Black/non-Hispanic males. Four states varied from this finding: New Mexico, where American Indian/Alaska Native males had the highest ratio; North Carolina, where both American Indian/Alaska Native and Black/non-Hispanic males had high ratios; Rhode Island, where both Hispanic and Black/non-Hispanic males had high ratios; and Utah, where Hispanic males had the highest ratio (see state summaries).

Because the NVDRS is designed to capture all the information about an incident, it is possible

Figure SD-10. Frequency of Homicide Methods, by State
Percent of Homicides by Method Used



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.
\+ Firearms used in conjunction with other weapon types are included in the category of "Other/unknown".
^ "Other" includes such methods as poisoning, pushed from a height, drowning, fire/burns, and motor vehicle.

Similarities and Differences, *continued*

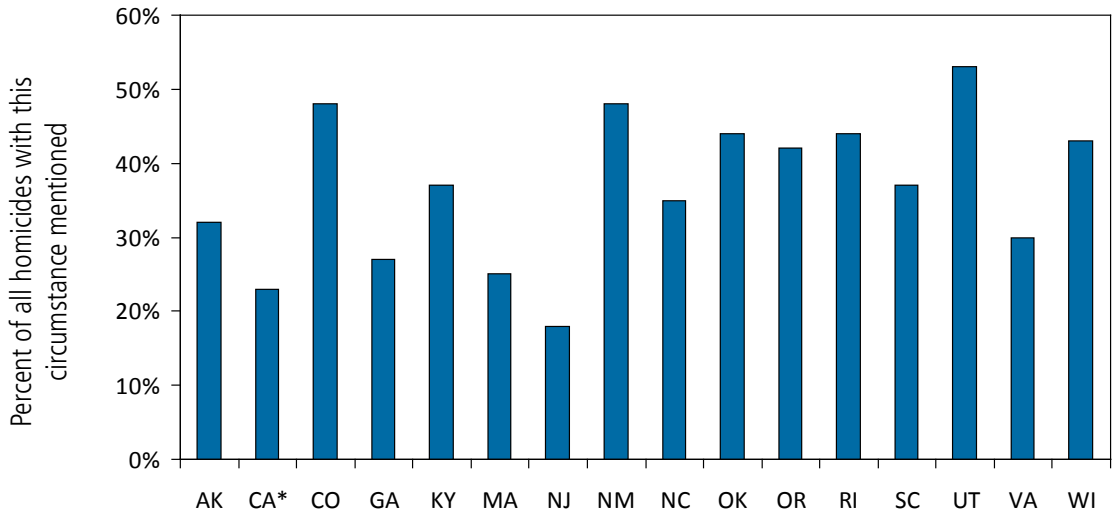
to distinguish homicide incidents in which only one person died from incidents in which multiple people died. For all states, most homicide incidents involved a single victim. The percent of homicide incidents with multiple victims varied by state, from 5% of the homicide incidents in New Jersey to 15% of the homicide incidents in Kentucky.

As with suicides, the most common method of injury was use of a firearm (Figure SD-10). For most states, more than 50% of the homicides resulted from use of a firearm. However, in some states, the percent was even higher. In California (selected sites), Kentucky and Virginia, more than 70% of the homicides were firearm-related. In contrast, less than 50% of the homicides in Alaska, New Mexico, Rhode Island and Utah involved a firearm. In these states, although firearms were still the most common homicide method, a higher percent of homicides resulted from the use of sharp or blunt instruments.

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 different circumstances associated with homicide are provided in the following figures.[4]

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 37% of homicides. The percent of homicides for which this circumstance was identified varied from 18% of the homicides in New Jersey to 53% of the homicides in Utah (Figure SD-11).

Figure SD-11. Homicide Circumstance: Argument, Abuse or Interpersonal Conflict



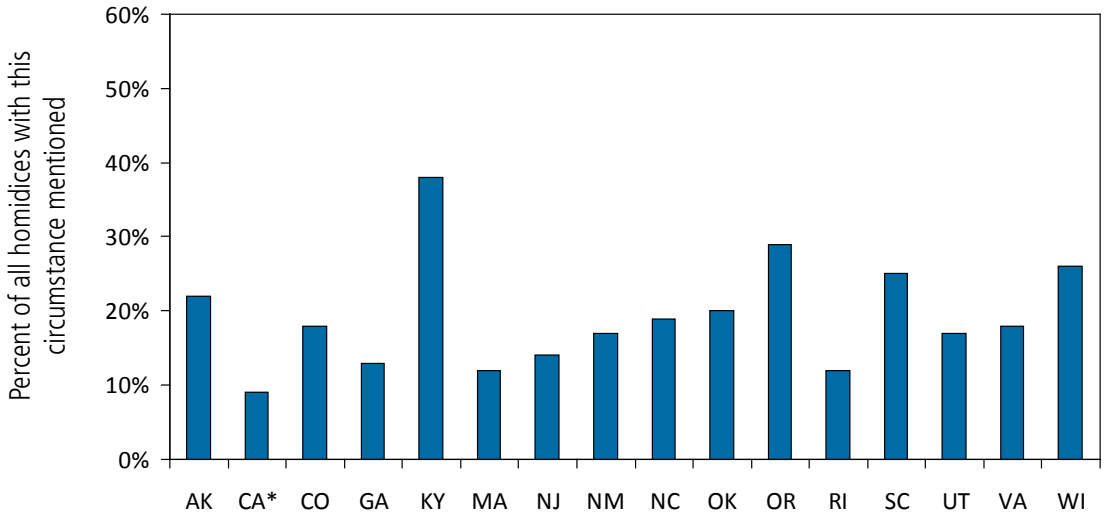
* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

4. On average for all states combined, information on at least one circumstance associated with the homicide was identified in 74% of the deaths. For individual states, the percent of homicides for which at least one circumstance was identified varied from 50% to 92%. Results for Maryland are not included in the comparison of homicide circumstances. For additional detail, see Appendix 2: Methods.

Similarities and Differences, *continued*

On average, 19% of the homicides were identified as being associated with another serious crime, such as drug trafficking, robbery, sexual assault, motor vehicle theft, or arson. The percent of homicides associated with another serious crime varied by state, ranging from 9% of the homicides reported by California (selected sites) to 38% of the homicides reported by Kentucky (Figure SD-12). The most frequently cited associated crime was robbery.

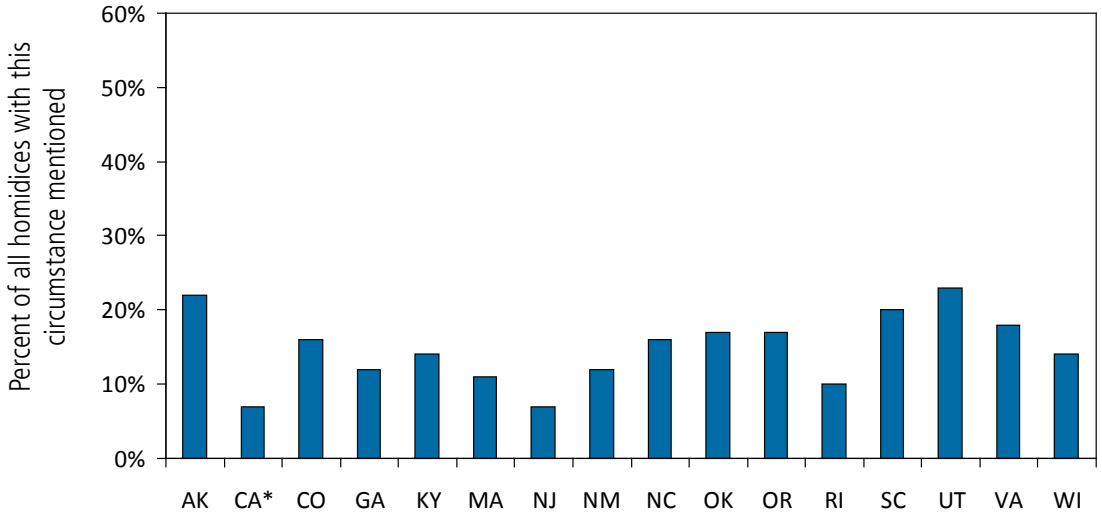
Figure SD-12. Homicide Circumstance: Associated with Another Crime



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

Intimate partner violence was reported as a precipitating factor in about 15% of the homicides in the NVDRS states. The percent by state varied from less than 10% of the homicides in California (selected sites) and New Jersey to more than 20% of the homicides in Alaska and Utah (Figure SD-13). For all states, however, females were more likely than males to be the victim in homicides involving intimate partner violence.

Figure SD-13. Homicide Circumstance: Intimate Partner Violence



* Selected sites only: the City of Oakland, the City and County of San Francisco, and Santa Clara County.

Similarities and Differences, *continued*

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 greatly.

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 89% of the suicides (the percent among states varied from 73% to 98%). On average, information on at least one circumstance associated with the homicide was identified in 74% of the homicides (with the percent among states varying from 50% to 92%).

Because of the differences in the completeness of information (due to possible variation in the quality of the death investigation as well as the state's ability to access information from all data sources), it is likely that the circumstance results presented in this report are underestimates of the true percent of deaths with a given circumstance. The state-level differences in suicide and homicide circumstances described in this section should be considered as examples of possible state-level heterogeneity. The interpretation of these differences will require additional information and further consideration.

Recommendations from the State VDRS Workgroup

Creating and evaluating policies and programs designed to curb the violence that results in the deaths of more than 50,000 Americans every year requires the availability of timely, accurate, and unbiased data on the prevalence, causes, and consequences of violence. Such data are now available from the National Violent Death Reporting System (NVDRS).

Based on the findings in this report, the members of the State Violent Death Reporting System (VDRS) Workgroup are unanimous in their support of the aggregate-level data published by the NVDRS. At the same time, use of aggregate data alone often masks important state-level differences that could be essential for designing effective state and local violence prevention programs.

The following recommendations provide a state perspective on the next steps needed to realize a fully comprehensive national reporting system on deaths due to violence. Those interested in formulating more detailed action plans are invited to contact the NVDRS program office, any state VDRS Workgroup member or their local state injury prevention program (see Appendix 5 for contact information).

PROMOTION OF THE NATIONAL VIOLENT DEATH REPORTING SYSTEM: The NVDRS is designed to collect, link and analyze data from multiple, complementary state-level sources. As such, it is the only epidemiologic database in the U.S. that can provide the nation and each participating NVDRS state with a balanced and comprehensive assessment of the magnitude and complexity of deaths from violence. NVDRS data also identify the populations at risk, the circumstances that precipitated the violence, risk and protective factors, and the means or methods that led to each fatality.

Recommendation 1: The Centers for Disease Control and Prevention (CDC), its NVDRS partners and the funded states should:

- **Increase awareness of the NVDRS as the best source of information on the prevalence, circumstances and means/methods of deaths from violence, through focused national and state-level media campaigns and the publication of additional reports and peer-reviewed journal/research articles on NVDRS findings.**
- **Facilitate access to aggregate and state-level NVDRS data by organizations and institutions dedicated to reducing deaths from violence.**

USE OF THE NVDRS FOR PUBLIC HEALTH: Historically, the most successful violence prevention initiatives are those whose design and evaluation are informed by data that describe the population for whom the intervention is planned. State-level data on the circumstances and means/mechanisms of deaths from violence demonstrate that there are often substantial intra- and inter-state differences in risk and protective factors for different demographic groups. These differences highlight the importance of and need for local information to design effective interventions that target the populations and risk factors unique to each state.

Recommendation 2: The CDC, its NVDRS partners and the funded states should promote the use of aggregate and state-level NVDRS data, in conjunction with local data, to create and evaluate national, state and local violence prevention programs and policies.

Recommendations, *continued*

FULL IMPLEMENTATION OF THE NVDRS: CDC currently funds 17 states to participate in the NVDRS. Findings in this report indicate that there are important differences in the level, type, circumstances and means/methods of violence among the currently funded states. For a fully comprehensive national picture, additional support is needed so that the remaining 33 states, the District of Columbia and the U.S. territories can also contribute to the national understanding of deaths due to violence and, at the same time, have data to inform their local prevention efforts. Participating states also differ in the ways they collect information required for the NVDRS. To facilitate the expansion of the NVDRS, states need flexibility to adapt their data collection process to local conditions while maintaining fidelity to the NVDRS data standards.

Recommendation 3: The NVDRS should be fully implemented in all states, the District of Columbia and the U.S. territories by 2012.

ENHANCED DEATH INVESTIGATIONS: One of the novel design features of the NVDRS is its ability to combine state-level data from multiple sources. These sources include death certificate data from locally generated and state-stored vital records; forensic data from medical examiners and coroners, some of whom function within centralized systems, while others do not; and criminal justice data that are collected by many different state and local law enforcement agencies. The challenge is not only accessing these data, but also interpreting the findings from each source.

Each of these sources follows individual death investigation protocols, policies and procedures to create databases that meet their own needs. Analysis of this heterogeneous collection of death investigation data, even with the sophisticated NVDRS protocols of primacy for handling missing or conflicting data, is complex, challenging and not universally satisfying. A common language and understanding across disciplines is needed; consistent, standardized collection of demographic, circumstance and method of violence information is essential for the development of public health interventions.

Recommendation 4: The CDC, its NVDRS partners and the funded states should promote the development and use of national standards for death investigation and documentation across disciplines. To improve the usefulness of death investigation information for public health purposes, the CDC should assist the developers of the standards by providing technical expertise on the development of uniform definitions and the principles of public health surveillance.

ENHANCED COLLABORATION: Cross jurisdictional access to and data sharing among NVDRS states and their data sources are essential components of the NVDRS. Continued promotion and support of these activities will enhance the development and evaluation of national and state-level programs and policies to reduce deaths from suicides, homicides and other intentional and unintentional acts of violence.

Recommendation 5: The CDC should continue to provide dedicated staff and funding to facilitate the networking of VDRS states, prevention partners and others who are working to reduce the burden of violence in the U.S.

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.

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.

Appendix 1: Definition of Terms, *continued*

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.

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.

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 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.

Appendix 1: Definition of Terms, *continued*

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: Inury 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 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.

Appendix 1: Definition of Terms, *continued*

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 16 states and selected sites from California (the City of Oakland, the city and county of San Francisco, and Santa Clara County) that have been incrementally 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 (2005) include Kentucky, New Mexico, Utah and selected sites from California. States with two years of data (2004-2005) include Alaska, Colorado, Georgia, Maryland, Massachusetts, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, 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 June 2008, the seventeen states of Alaska, California, Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Mexico, New Jersey, North Carolina, 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 April 2008.[1] An excerpt of this description is provided on page 65. Additional information on data collection and definitions is available in the NVDRS Coding Manual.[2]

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 VDRS Workgroup submitted a proposal to CDC in August 2007. 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 generated on 11/09/2007.

RAD data were analyzed for all funded NVDRS states, with the following exceptions:

1. Data from the Maryland VDRS are not included in the RAD. The Maryland VDRS program analyzed data from their state database for 2004 and 2005 to generate all results reported for Maryland.
2. At this time, California's VDRS is not statewide; current participation involves selected counties and cities. The California VDRS program analyzed data from their database for 2005 to generate all results reported for the selected sites in California, which include the City of Oakland, the City and County of San Francisco, and Santa Clara County. All of these sites are urban communities in the San Francisco Bay area.
3. The Massachusetts VDRS restricted the inclusion of their weapons information in the RAD. The Massachusetts VDRS program analyzed data from their state database for 2004 and 2005 for the weapons-related information provided in their state summary and in the interstate comparisons.
4. All information on homicide suspects was determined by the state's VDRS program by analysis of the data from their state database.

1. Centers for Disease Control and Prevention. Surveillance for Violent Deaths – National Violent Death Reporting System, 16 States, 2005. Surveillance Summaries, April 11, 2008. MMWR 2008; 57 (No. SS-3)
2. Centers for Disease Control and Prevention. National Violent Death Reporting System Coding Manual. Retrieved 8/28/08 at http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/VS2/default.htm.

Appendix 2: Methods, *continued*

Data for Alaska, Colorado, Georgia, Maryland, Massachusetts, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Virginia and Wisconsin were from 2004 and 2005. Data for California (selected sites), Kentucky, New Mexico and Utah were from 2005 only.

Population estimates for calculating the number of occurrent deaths per population were obtained from the National Center for Health Statistics (NCHS) Bridged-Race Vintage 2006 Postcensal Population estimates (see http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm). For the analysis of California data, NCHS Bridged Race population estimates were used to calculate the number of occurrent deaths per population for San Francisco and Santa Clara counties. For the City of Oakland, population estimates were derived from a model generated by the Alameda County Health Department based on Claritas and California Department of Finance data.

Case selection: Cases were selected based on a date of death in 2004 or 2005, 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, non-residents were also included 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 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 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 NCHS Bridge-Race Vintage 2006 Postcensal Population 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 pages 6-7. 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 8-41.

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

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 identified 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.

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) (8). 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);

Appendix 2: Methods, *continued*

- 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.

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.
- **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 gas-powered 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-

Appendix 2: Methods, *continued*

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 hover-over feature containing 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 re-abstraction 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"

	Total Deaths from Violence	
	WISQARS	NVDRS
State	Violent Death Rate† per 100,000 population	Occurrent Violent Death Ratio‡ per 100,000 population
Alaska	27.6	30.9
Colorado	21.8	24.3
Georgia	17.9	20.2
Kentucky	19.0	19.1
Maryland	18.9	29.0
Massachusetts	9.8	17.2
New Jersey	11.4	12.4
New Mexico	26.0	30.4
North Carolina	19.3	20.3
Oklahoma	21.1	26.2
Oregon	18.8	22.2
Rhode Island	10.1	23.7
South Carolina	19.8	21.1
Utah	16.5	31.5
Virginia	17.4	18.6
Wisconsin	15.4	16.8

†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.

1. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and ReportingSystem. Retrieved July 12, 2008 from http://www.cdc.gov/ncipc/wisqars/.

Appendix 4: Recent NVDRS Publications

Several recent articles about the NVDRS published in peer-reviewed journals are listed below. For information on state-published reports or other documents, contact the CDC NVDRS Project Office or each state's NVDRS program office (Appendix 5).

Bennet Jr M D, J Hall, L Frazier Jr, N Patel, L Barker, and K Shaw. Homicide of children aged 0–4 years, 2003–04: results from the National Violent Death Reporting System. Inj Prev 2006 12: ii39-ii43.

Bossarte R M, T R Simon, and L Barker. Characteristics of homicide followed by suicide incidents in multiple states, 2003–04. Inj Prev 2006 12: ii33-ii38.

Breiding M J and B Wiersema. Variability of undetermined manner of death classification in the US. Inj Prev 2006 12: ii49-ii54.

Butchart A. The National Violent Death Reporting System: a new gold standard for the surveillance of violence related deaths? Inj Prev 2006 12: ii63-ii64.

Campbell R, M A Weis, L Millet, V Powell, D Hull-Jilly, and H Hackman. From surveillance to action: early gains from the National Violent Death Reporting System. Inj Prev 2006 12: ii6-ii9.

Centers for Disease Control and Prevention. Homicide and Suicide Rates -- National Violent Death Reporting System, Six States, 2003. MMWR 2005; 54: 377-380.

Centers for Disease Control and Prevention. Homicides and Suicides -- National Violent Death Reporting System, United States, 2003-2004. MMWR 2006; 55: 721-724.

Centers for Disease Control and Prevention. Toxicology Testing and Results for Suicide Victims -- 13 States, 2004. MMWR 2006; 55: 1245-1248.

Friday J C. Law enforcement and the National Violent Death Reporting System: a partnership in the making. Inj Prev 2006 12: ii55-ii57.

Hempstead K. Manner of death and circumstances in fatal poisonings: evidence from New Jersey. Inj Prev 2006 12: ii44-ii48.

Karch D L, L Barker, and T W Strine. Race/ethnicity, substance abuse, and mental illness among suicide victims in 13 US states: 2004 data from the National Violent Death Reporting System. Inj Prev 2006 12: ii22-ii27.

Karch D L, K M Lubell, J Friday, N Patel, D D Williams. Surveillance for violent deaths – the National Violent Death Reporting System, 16 States, 2005. MMWR. Apr 11, 2008/57(SS03)1-43,45.

Mercy J A, L Barker, and L Frazier. The secrets of the National Violent Death Reporting System. Inj Prev 2006 12: ii1-ii2.

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

Appendix 4: Recent Publications, *continued*

Powell V, C W Barber, H Hedegaard, K Hempstead, D Hull-Jilly, X Shen, G E Thorpe, and M A Weis. Using NVDRS data for suicide prevention: promising practices in seven states. Inj Prev 2006 12: ii28-ii32.

Sanford C, S W Marshall, S L Martin, T Coyne-Beasley, A E Waller, P J Cook, T Norwood, and Z Demissie. Deaths from violence in North Carolina, 2004: how deaths differ in females and males. Inj Prev 2006 12: ii10-ii16.

Steenkamp M, L Frazier, N Lipskiy, M DeBerry, S Thomas, L Barker, and D Karch. The National Violent Death Reporting System: an exciting new tool for public health surveillance Inj Prev 2006 12: ii3-ii5.

Weis M A, C Bradberry, L P Carter, J Ferguson, and D Kozareva. An exploration of human services system contacts prior to suicide in South Carolina: an expansion of the South Carolina Violent Death Reporting System. Inj Prev 2006 12: ii17-ii21.

Weiss H B, M I Gutierrez, J Harrison, and R Matzopoulos. The US National Violent Death Reporting System: domestic and international lessons for violence injury surveillance. Inj Prev 2006 12: ii58-ii62.

Appendix 5: Relevant Websites

National Violent Death Reporting System

Primary NVDRS website: cdc.gov/ncipc/profiles/nvdrs/default.htm

Violent Death Reporting System States

Alaska: www.hss.state.ak.us/dph/ipems/AKVDRS/

California: www.cdph.ca.gov/CalVDRS

Colorado: www.cdphe.state.co.us/pp/injepi/cvdrs/index.html

Georgia: www.health.state.ga.us/epi/cdiee/gvdrs.asp .

Kentucky: www.kvdrs.uky.edu

Maryland: www.fha.state.md.us/ohpetup/mvdrs.cfm

Massachusetts: www.mass.gov/dph/isp

New Jersey: www.nj.gov/health/chs/oisp/njvdrs.shtml

New Mexico: www.nmhealth.org/injury.html

North Carolina: www.injuryfreenc.ncdhhs.gov

Oklahoma: ok.gov/health/Disease,_Prevention,_Preparedness/Injury_Prevention_Service/Oklahoma_Violent_Death_Reporting_System/index.html

Oregon: www.oregon.gov/DHS/ph/ipe/nvdrs/index.shtml

Rhode Island: www.health.ri.gov/chic/statistics/violentdeath04final.pdf

South Carolina: www.scdhec.net/health/chcdp/injury/violent_death_reporting.htm

Utah: www.health.utah.gov/vipp/NVDRS/OVERVIEW.html

Virginia: www.vdh.virginia.gov/medExam/NVDRS.htm

Wisconsin: www.dhs.wisconsin.gov/wish/main/violentdeath

Appendix 5: Relevant Websites, *continued*

Other Relevant Websites

American Association of Suicidology: www.suicidology.org

American Public Health Association: www.apha.org

Family Violence Prevention Fund: www.endabuse.org

National Association of Chiefs of Police: www.aphf.org/nacop.html

National Association for Public Health Statistics and Information Systems: www.naphsis.org

National Center for Child Death Review Policy and Practice: www.childdeathreview.org

National Center for Forensic Science: www.ncfs.org

National Sheriff's Association: www.sheriffs.org

National Strategy for Suicide Prevention: mentalhealth.samhsa.gov/suicideprevention/world.asp

National Violent Prevention Network: www.preventviolence.net

National Youth Violence Prevention Resource Center: www.safeyouth.org/scripts/index.asp

Prevent Child Abuse America: www.preventchildabuse.org/index.shtml

Project Safe Neighborhoods: www.psn.gov

Suicide Prevention Action Network: www.span.org

Suicide Prevention Resource Center: www.sprc.org

The National Association of Medical Examiners: www.thename.org

Voices for America's Children: www.voicesforamericaschildren.org