

Maryland Violent Death Reporting System 2010

Surveillance Report

Maryland Department of Health & Mental Hygiene

Maryland Resident Homicides, Suicides, and Deaths of Undetermined Manner

October 2012



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Introduction

Deaths attributed to violence in the United States are a major public health concern. As part of a public health campaign to address the burden of these potentially preventable deaths, a National Violent Death Reporting System (NVDRS) is creating opportunities to study and monitor the violent deaths occurring in our country. In 2000, Congress approved funding for the creation of NVDRS to be administered by the Centers for Disease Control and Prevention (CDC). The CDC is responsible for providing directives and guidance for states participating in the surveillance system.

Based on the World Health Organization's (WHO) definition, a violent death is "*a death resulting from the intentional use of physical force or power against oneself, another person, or against a group or community. The person using the force or power need only have intended to use force or power; they need not have intended to produce the consequence that actually occurred. "Physical force" should be interpreted broadly to include the use of poisons or drugs. The word "power" includes acts of neglect or omission by one person who has control over another*".¹ The NVDRS collects information on when, where, and how these violent deaths happen, and attempts to gather additional information that may provide population-level insight into "why" these deaths occur. These findings will aid in the design and implementation of prevention/intervention efforts as well as the promotion of comprehensive and effectual policy solutions.

Currently, the CDC is funding 18 states to implement the NVDRS. The Maryland Department of Health and Mental Hygiene, Center for Health Promotion, was awarded funding for the implementation of the Maryland Violent Death Reporting System (MVDRS) in 2002. The first year of data collected for the MVDRS was 2003.

This is a descriptive report on Maryland occurrent violent deaths during 2010, inclusive of only Maryland residents. The report presents the information in four categories: all violent deaths, homicides, suicides, and undetermined deaths.

Methods

The NVDRS implements uniform definitions and project-specific software to create state-level databases that can be used to monitor and track trends of violent deaths. The database is structured to create separate observations for each individual death, aggregated within violent death incidents. Each incident has data that has been collected from a variety of sources, including death certificates, autopsy and scene inspection reports, and police reports. Under this arrangement, a single violent death incident must describe at least one violent death, but may associate multiple violent death victims.

The types of violent death described in this report include three categories specified by the NVDRS: Homicide, Suicide, and deaths of Undetermined Manner. The functional definitions for the following categories have been taken directly from the NVDRS Coding Manual version 3 (<http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/Fullmanual.pdf>).

Homicide:

Homicide is defined as 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.

¹ Center for Disease Control and Prevention, National Violent Death Reporting System Coding Manual, (Atlanta, GA 2004)

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.

Undetermined Manner of 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.

Legal Intervention:

A death when 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.

The data for the MVDRS were obtained from the medical examiner's records, death certificates, police reports, and some supplemental homicide reports. Data collection began with the electronic import of death certificates from the Maryland Vital Statistics Administration whose International Classification of Disease, Tenth Revision (ICD-10) code cause of death was consistent with the definition of violent death set forth by the CDC. A similar query was provided by the Office of the Chief Medical Examiner (OCME), based on the OCME-determined manner of death. These lists were reconciled, employing the CDC-prescribed functional definition of violent death whenever necessary. The information was then gathered from the documents in accordance with the CDC's National project.

For those incidents that did not have a police report available in the OCME file, the individual police agencies were contacted and the needed reports sought. An abstractor reviewed these reports in the same fashion as the OCME files were reviewed. Once all obtainable information was entered for each incident and internal quality control exercises were completed to ensure the integrity of the database, the data were determined ready for interpretation.

Data for this publication were taken from one or a combination of these sources depending on which source had been given primacy for a particular variable. Whenever conflicting or missing documentation was present between sources, a system of document authoritative primacy allowed the analyst to choose the document source for a particular item of information in a disciplined, orderly fashion. Using this method to retrieve data allowed analysis of the most complete information available from the database. The order of primacy is different for each variable. The directive for primacy is found in the NVDRS Coding Manual.

MVDRS data collection is unique in its ability to capture circumstances surrounding a violent death from reports by the OCME and / or the police report. Each of the circumstances captured by MVDRS have been defined by the CDC and these definitions can be found in the NVDRS Coding Manual version 3 (<http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/Fullmanual.pdf>). The **Appendix** contains the CDC definitions for some of the more common precipitating circumstances found in this report.

Case assignment for this analysis was based on the manner of death reported by the abstractor assigned death type. For this reason, frequency numbers for cases may differ slightly from those found in violent death figures published by the Vital Statistics Administration or in other MVDRS reports which use the ICD-10 code definition. The statistical software for analysis was SAS version 9.2. Rates for 2003 – 2010 were calculated using the population data from the Maryland Annual Vital Statistics Report.²

² <http://www.dhmh.state.md.us/vsa/SitePages/Home.aspx>

Section 1: Overview of Maryland Resident Violent Deaths, 2010

In 2010, MVDRS reported a total of 1,427 violent deaths amongst Maryland residents. Figure 1 displays the trend in violent death rates over the past eight years, by manner of death. Of all violent deaths among Maryland residents in 2010, deaths of undetermined manner accounted for 38.3% of deaths, followed by suicides (33.7%), homicides (27.3%) and deaths by legal intervention (0.6%) [Table 1].

Violent deaths of undetermined manner (n=547) accounted for the highest crude death rate at 9.5 per 100,000 population, followed by suicides (n=481) at 8.3 per 100,000 population and homicides (n=389) at 6.7 per 100,000 population [Table 1].

The 25–29 age group had the highest age-specific death rate (44.5 per 100,000) followed by the 20-24 age group (41.1 per 100,000) [Table 1]. Although over half of all violent deaths occurred amongst whites (60.1%), the death rate among blacks was 1.3 times higher than whites (29.8 vs. 23.8 per 100,000 population, respectively) [Table 1]. Males had a violent death rate 3.5 times that of females (39.0 vs. 11.3 per 100,000 population, respectively) [Table 1]. Males in the 30-34 age group had a violent death rate 5.8 times that of females (67.5 vs. 11.6 per 100,000 population, respectively) [Figure 2]. Baltimore City had the highest crude death rate at 62.2 per 100,000 population which was 5.9 times that of Montgomery County, which had the lowest rate (10.6 per 100,000 population) [Figure 3]. The most common method of injury was poisoning (41.4%), followed by firearms (35%). 11.3% of the deaths were by Hanging/strangulation/suffocation.

Males accounted for most of the legal intervention deaths (89%), of which 63% were black. One third of all the legal intervention deaths occurred in the 25-34 age group (33.3%).

Figure 1: Trends in Violent Death Rates among Maryland Residents, by Manner of Death, 2003 – 2010

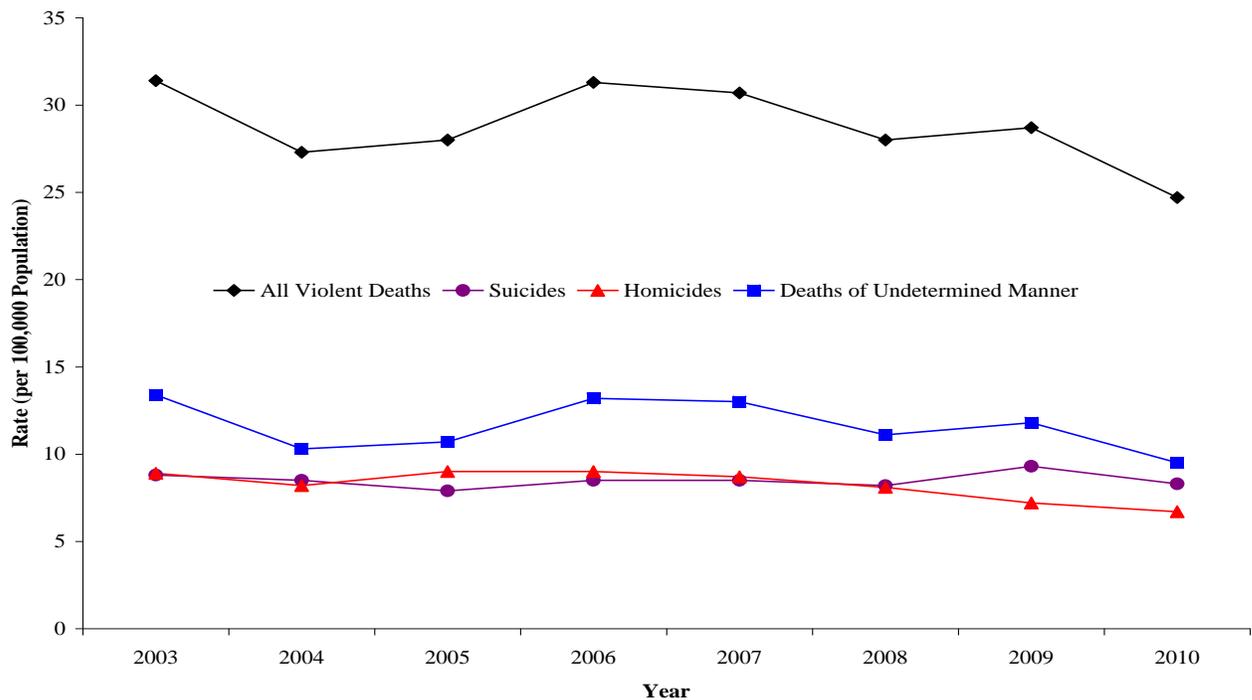


Table 1: Maryland Resident Violent Deaths (Demographics), 2010

	Number	Percent	Population	Rate per 100,000
All Violent Deaths	1,427	100	5,773,552	24.7
Intent				
Homicides	389	27.3	5,773,552	6.7
Suicides	481	33.7	5,773,552	8.3
Deaths of Undetermined Manner	547	38.3	5,773,552	9.5
Unintentional Self-inflicted	*	0.1	5,773,552	**
Legal Intervention	9	0.6	5,773,552	**
Sex				
Male	1,090	76.4	2,791,762	39.0
Female	337	23.6	2,981,790	11.3
Age Group (years)				
00-09	9	0.6	731,356	**
10-14	*	0.4	379,029	**
15-19	72	5.1	406,241	17.7
20-24	162	11.4	393,698	41.1
25-29	175	12.3	393,548	44.5
30-34	143	10.0	368,494	38.8
35-44	266	18.6	795,572	33.4
45-54	334	23.4	902,204	37.0
55-64	166	11.6	695,768	23.9
65-74	53	3.7	386,357	13.7
75-84	28	2.0	223,159	12.5
>=85	14	1.0	98,126	**
Race				
White	858	60.1	3,600,864	23.8
Black	532	37.3	1,783,183	29.8
Other	36	2.5	389,505	9.2
Unknown	*	0.1	---	---
Ethnicity				
Hispanic	49	3.4	470,632	10.4
Unknown	3	0.2	---	---

*Counts less than 6 are not reported.

**Rates are not calculated for counts < 20 because they are considered unstable.

Figure 2: Age- and Sex-Specific Rates for Maryland Violent Deaths, 2010

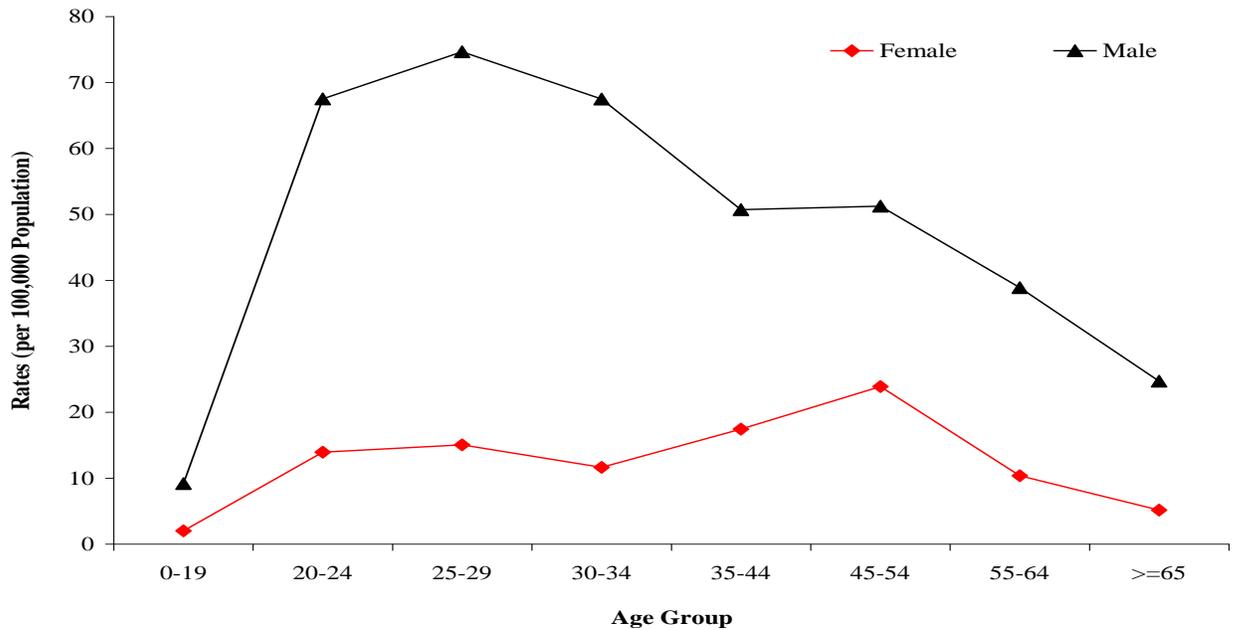
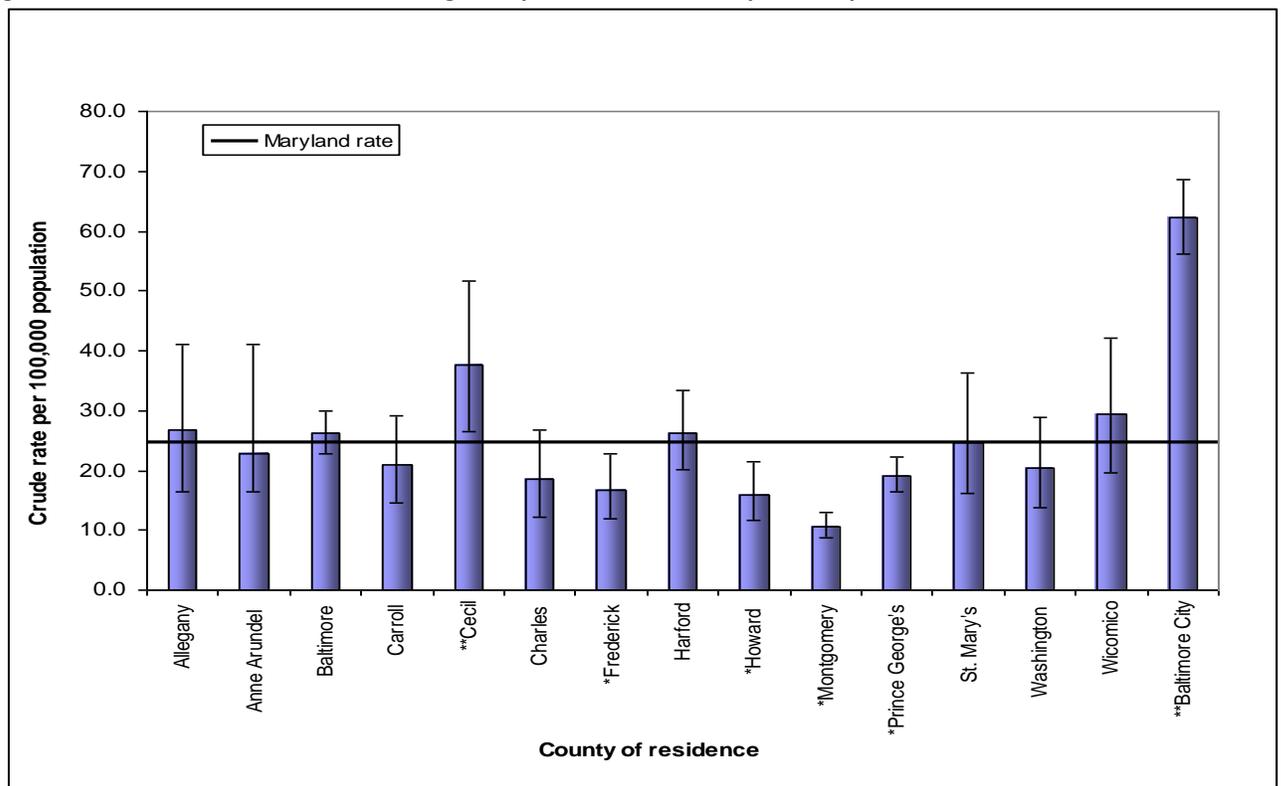


Figure 3: Violent Death Rates among Maryland Residents by County of Residence, 2010



*Counties with violent death rates statistically significantly lower than the Maryland rate.

** Counties with violent death rates statistically significantly higher than the Maryland rate.

I Error bars indicate 95% confidence intervals. These indicate the level of uncertainty about each value on the graph. Longer intervals mean more uncertainty.

Note: Rates with counts <20 are not calculated because they are considered unstable. Therefore, the following county rates were not calculated: , Calvert, Caroline, Dorchester, Garrett, Kent, Queen Anne's, Somerset, Talbot, Worcester.

Section 2: Homicides among Maryland Residents, 2010

Highlighted Findings

- In 2010, MVDRS reported 389 homicides among Maryland residents of which close to half were among Baltimore City residents (47.8%). [Table 2 & Figure 4]
- The homicide rate for males was 5.9 times that for females (11.8 and 2.0 per 100,000 population, respectively). [Table 2]
- Blacks accounted for the majority of homicide deaths (79.2%) and the homicide rate for blacks was 7.9 times that for whites (17.3 and 2.2 per 100,000 population, respectively). [Table 2]
- Baltimore City had the highest homicide rate at 30.0 per 100,000 population followed by Prince George's County residents at 9.3 per 100,000 population. [Figure 4]
- Over two thirds of all the homicides occurred in the street / road, sidewalk / alley (40.6%) and the house / apartment (34.2%). [Figure 5]
- The most common method of injury for all homicides were firearms (71.2%). [Table 3] Three out of four male homicides were due to firearms (77.6%), whereas one out of three female homicides were due to firearms (35.6%). [Figure 6]

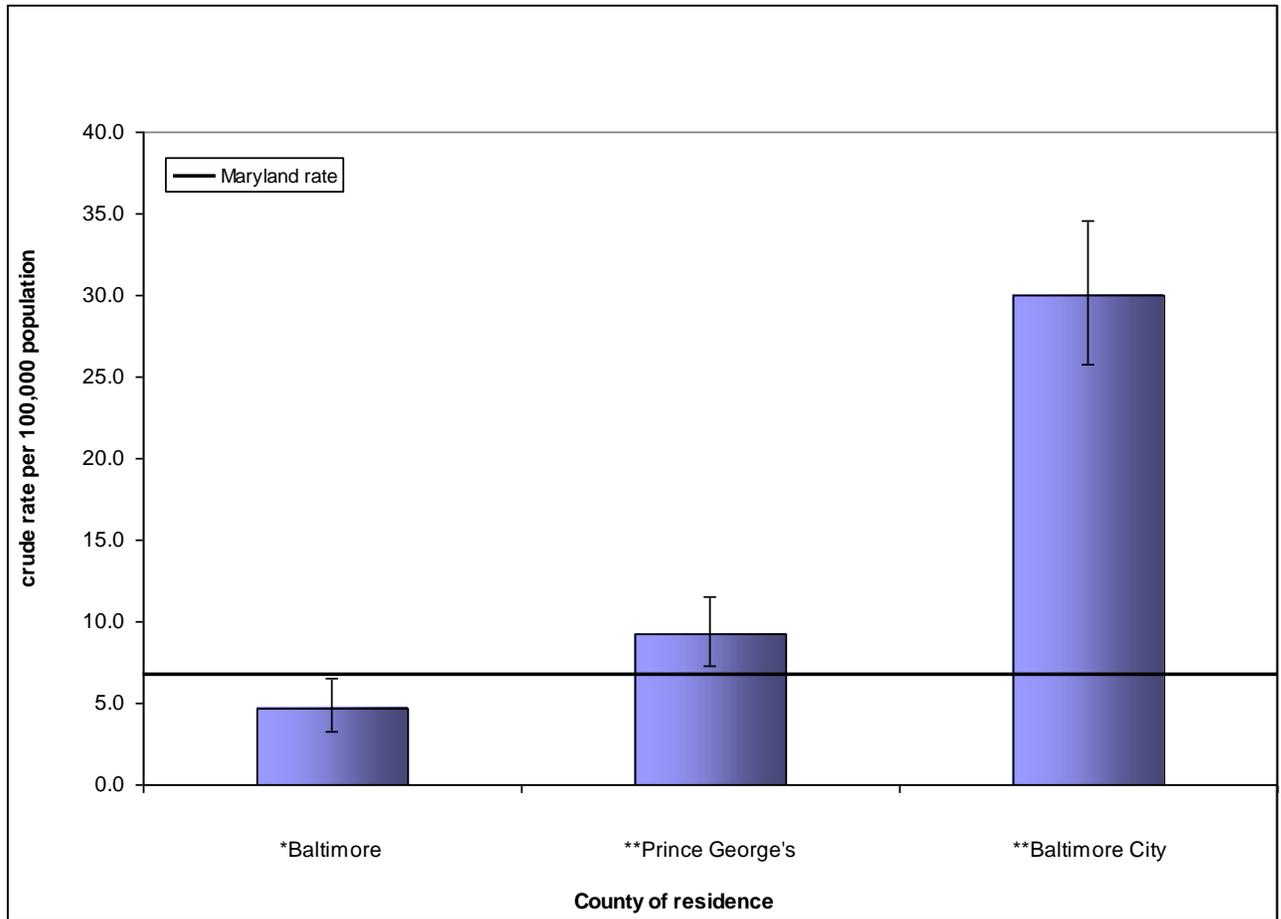
Table 2: Homicides among Maryland Residents (Demographics), 2010

	Number	Percent	Population	Rate per 100,000
All Homicide Deaths	389	100	5,773,552	6.7
Sex				
Male	330	84.8	2,791,762	11.8
Female	59	15.2	2,981,790	2.0
Age Group (years)				
00-09	9	2.3	731,356	**
10-14	*	--	379,029	**
15-19	39	10.0	406,241	9.6
20-24	76	19.5	393,698	19.3
25-29	70	18.0	393,548	17.8
30-34	54	13.9	368,494	14.7
35-44	71	18.3	795,572	8.9
45-54	42	10.8	902,204	4.7
55-64	16	4.1	695,768	**
65-74	7	1.8	386,357	**
75-84	*	--	223,159	**
>=85	*	--	98,126	**
Race				
White	78	20.1	3,600,864	2.2
Black	308	79.2	1,783,183	17.3
Other	*	---	---	**
Ethnicity				
Hispanic	26	6.7	470,632	5.5
Education				
<=8 years	31	8.0	--	--
9-12 years	297	76.4	--	--
13-16 years	48	12.3	--	--
>=17 years	6	1.5	--	--
Unknown	7	7.8	--	--

*Counts less than 6 are not reported

**Rates are not calculated for counts < 20 because they are considered unstable.

Figure 4: Homicide Death Rates among Maryland Residents by County of Residence, 2010



** Counties with violent death rates statistically significantly higher than the Maryland rate.

* County with violent death rate statistically significantly lower than the Maryland rate.

I Error bars indicate 95% confidence intervals. These indicate the level of uncertainty about each value on the graph. Longer intervals mean more uncertainty.

Note: Rates with counts <20 are not calculated because they are considered unstable. Therefore, the following county rates were not calculated: Allegany, Anne Arundel, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, Worcester.

Figure 5. Top Five Locations of Maryland Homicides, 2010

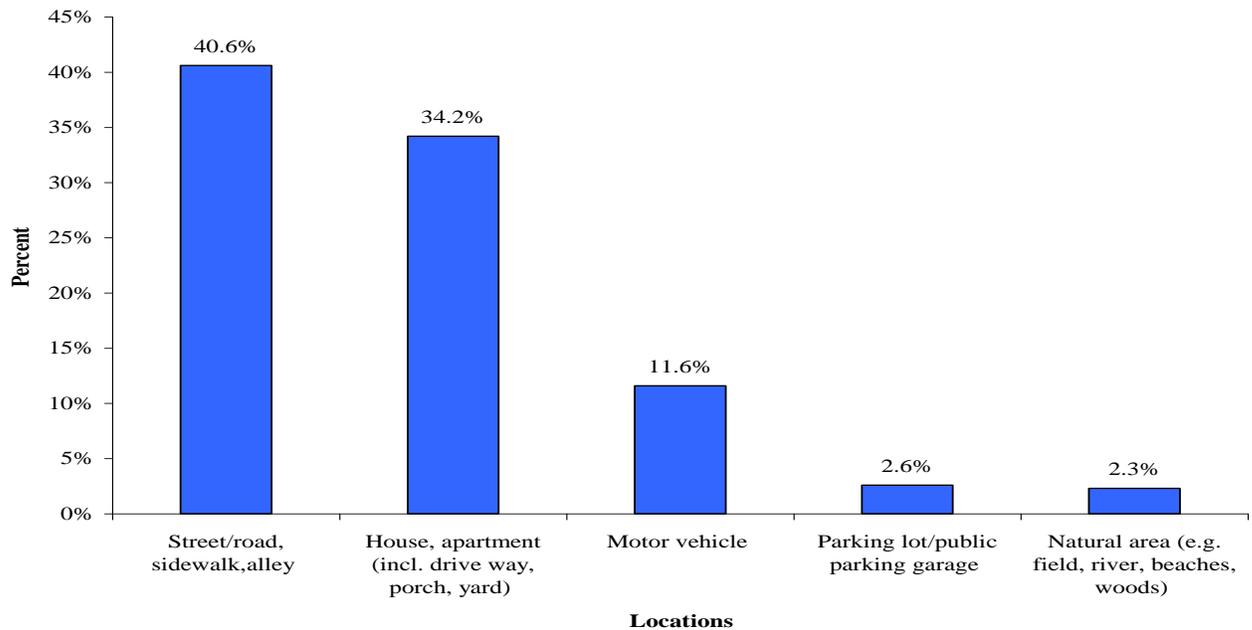
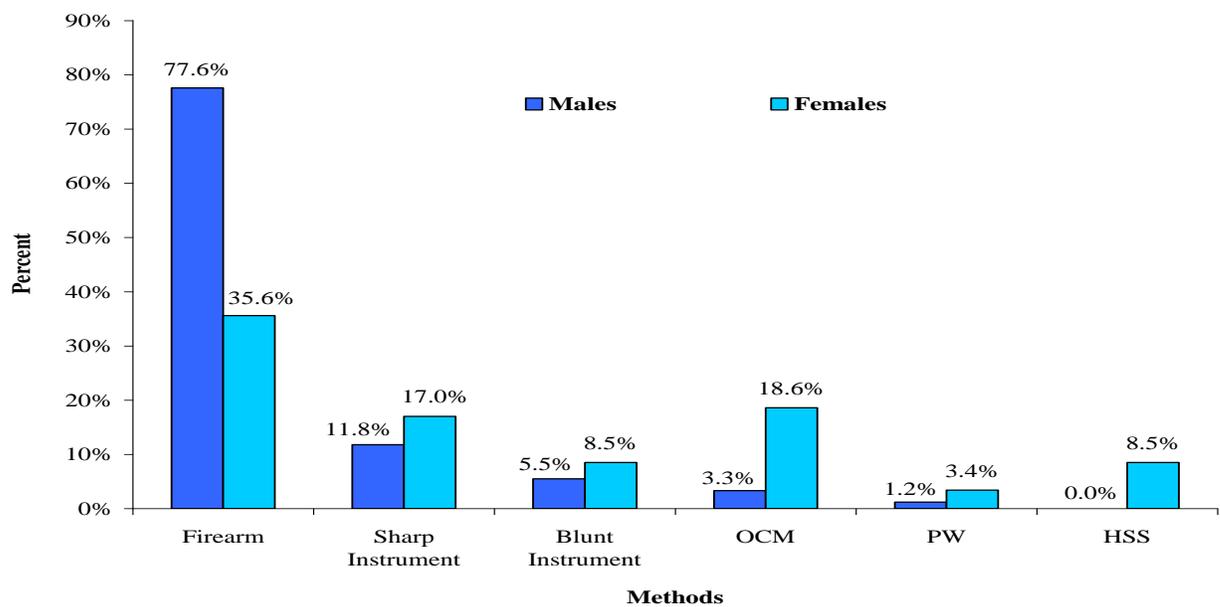


Table 3. Top Five Methods of Maryland Homicides, 2010

Top Five Methods of Injury	Number	Percent
Firearm	277	71.2
Sharp Instrument	49	12.6
Blunt Instrument	23	5.9
Other Combination of methods	22	5.7
Personal Weapons (hands, feet, or fists)	6	1.5

Figure 6. Distribution of Top Methods of Maryland Homicides, by Gender, 2010



OCM = Other Combination of Methods; PW = Personal Weapons (hands, feet, or fists); HSS = Hanging / Strangulation / Suffocation

Table 4: Homicide Characteristics among Maryland Residents, 2010

	Total Number	Percent	Male Number	Percent	Female Number	Percent
All Homicide Deaths	389	100	330	100	59	100
EMS at the Scene						
Yes	330	84.8	280	84.9	50	84.8
Homeless						
Yes	13	3.3	10	3.0	3	5.1
Veteran Status						
Yes	23	5.4	22	6.0	1	1.5
Victim in Custody when Injured						
Yes, in jail or prison	1	0.3	1	0.3	0	0
Month of Injury						
January	19	4.9	17	5.2	2	3.4
February	20	5.1	17	5.2	3	5.1
March	33	8.5	31	9.4	2	3.4
April	25	6.4	21	6.4	4	6.8
May	39	10.0	35	10.6	4	6.8
June	37	9.5	30	9.1	7	11.9
July	41	10.5	38	11.5	3	5.1
August	47	12.1	37	11.2	10	17.0
September	32	8.2	23	7.0	9	15.3
October	35	9.0	29	8.8	6	10.2
November	31	8.0	26	7.9	5	8.5
December	30	7.7	26	7.9	4	6.8
Weekday of Injury						
Monday	62	15.9	56	17.0	6	10.2
Tuesday	48	12.3	42	12.7	6	10.2
Wednesday	45	11.6	38	11.5	7	11.9
Thursday	39	10.0	35	10.6	4	6.8
Friday	44	11.3	37	11.2	7	11.9
Saturday	58	14.9	47	14.2	11	18.6
Sunday	76	19.5	65	19.7	11	18.6
Unknown	17	4.4	10	3.0	7	11.9
Time of Injury						
Night (18:00 – 5:59)	234	60.2	211	63.9	23	38.98
Daytime (6:00 – 17:59)	83	21.3	67	20.3	16	27.1
Unknown	72	18.5	52	15.8	20	33.9

Table 5: Number and Percent of Homicide Victims tested for Alcohol and Drugs among Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Homicide Deaths	389	100	330	100	59	100
Alcohol Testing						
Tested for Alcohol	387	99.5	328	99.4	59	100
Of those tested, positive for Alcohol	143	37.0	128	39.0	15	25.4
Of those positive for the presence of alcohol, BAC (mg/dL) levels						
>0-<0.08	55	14.2	48	14.6	7	11.9
0.08 - < 0.16	45	11.6	41	12.5	4	6.8
0.16 - < 0.24	25	6.5	23	7.0	2	3.4
>= 0.24	18	4.7	16	4.9	2	3.4
Drug Test Results						
Amphetamine Testing						
Tested for Amphetamines	381	97.9	324	98.2	57	96.6
Of those tested, positive for Amphetamines	16	4.2	15	4.6	1	1.8
Antidepressant Testing						
Tested for Antidepressants	381	97.9	324	98.2	57	96.6
Of those tested, positive for Antidepressants	11	2.9	8	2.5	3	5.3
Cocaine Testing						
Tested for Cocaine	380	97.7	323	97.9	57	96.6
Of those tested, positive for Cocaine	35	9.2	29	9.0	6	10.5
Opiate Testing						
Tested for Opiates	381	97.9	324	98.2	57	96.6
Of those tested, positive for Opiates	40	10.5	37	11.4	3	5.3
Testing for Other Drug(s)						
Tested for other drug(s)	381	97.9	324	98.2	57	96.6
Of those tested, positive for other drug(s)	102	26.8	87	26.9	15	26.3

Table 6: Associated Circumstances surrounding Homicides among Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Homicide Deaths	389	100	330	100	59	100
Unknown	168	43.2	159	48.2	9	15.3
Known*:	221	56.8	171	51.8	50	84.8
Crime-related						
Precipitated by another crime	72	32.6	59	34.5	13	26.0
Crime in progress	52	23.5	45	26.3	7	14.0
Drug involvement	45	20.4	40	23.4	5	10.0
Gang related	7	3.2	7	4.1	0	0
Hate Crime	1	0.5	1	0.6	0	0
Brawl	3	1.4	3	1.8	0	0
Victim was a bystander	2	0.9	1	0.6	1	2.0
Drive-by shooting	9	4.1	8	4.7	1	2.0
Relationship Problem						
Intimate partner problem	32	14.5	7	4.1	25	50.0
Other relationship problem	1	0.5	0	0	1	2.0
Arguments and Conflicts						
Argument over money or property	18	8.1	12	7.0	6	12.0
Jealousy	9	4.1	5	2.9	4	8.0
Intimate partner violence related	34	15.4	11	6.4	23	46.0
Other argument, abuse or conflict	88	39.8	75	43.9	13	14.8
Victim of interpersonal violence in the past month	3	1.4	0	0	3	6.0
Other						
Justifiable self-defense / law enforcement	5	2.3	5	2.9	0	0
Victim used weapon	10	4.5	9	5.3	1	2.0

*Total percentages might exceed 100% because one incident might have multiple circumstances.

Highlighted Findings of the Associated Circumstances

There were known circumstances in 56.8% of the homicides. Of these known circumstances:

- 32.6% of the homicides were precipitated by another crime and 39.8% were related to other arguments, conflicts or abuse.
- 23.4% of the male homicides had some drug involvement, compared to 10% of the female homicides.
- Half of the all the female homicides (50%) had reported intimate partner problems compared to 4.1% of the male homicides.
- Close to half of all the female homicides (46%) were intimate partner violence related compared to 6.4% of the male homicides.

Section 3: Suicides among Maryland Residents, 2010

Highlighted Findings

- In 2010, MVDRS reported 481 suicides among Maryland residents (rate of 8.3 per 100,000). [Table 7]
- Male suicide rates were 4.5 times that of female rates (13.9 and 3.1 per 100,000 population, respectively). [Table 7]
- Age-specific suicide rates were highest among persons aged 45-54 (13.7 per 100,000 population), followed by the 75-84 and 55-64 age groups (both 11.2 per 100,000 population). [Table 7]
- The suicide rate among whites was 2.4 times that of blacks (10.6 vs. 4.4 per 100,000, respectively). [Table 7]
- The suicide rate was highest among residents of Harford County (11.4 per 100,000) followed by Baltimore City residents (10.3 per 100,000 population). [Figure 7]
- Three out of four of the suicides occurred in the House, apartment (incl. drive way, porch, yard). [Figure 8]
- Firearms were used in the majority of suicide deaths (43.9%) followed by hanging /strangulation /suffocation (31.8%) and poisoning (14.1%). [Table 8] Of the victims of poisoning, a total of 118 poisons were listed as causes of death, of which 50.4% were prescription drugs.*
- Amongst all the male suicides, 21.9% were veterans. [Table 9]

* Some victims had multiple prescription drugs listed as causes of death.

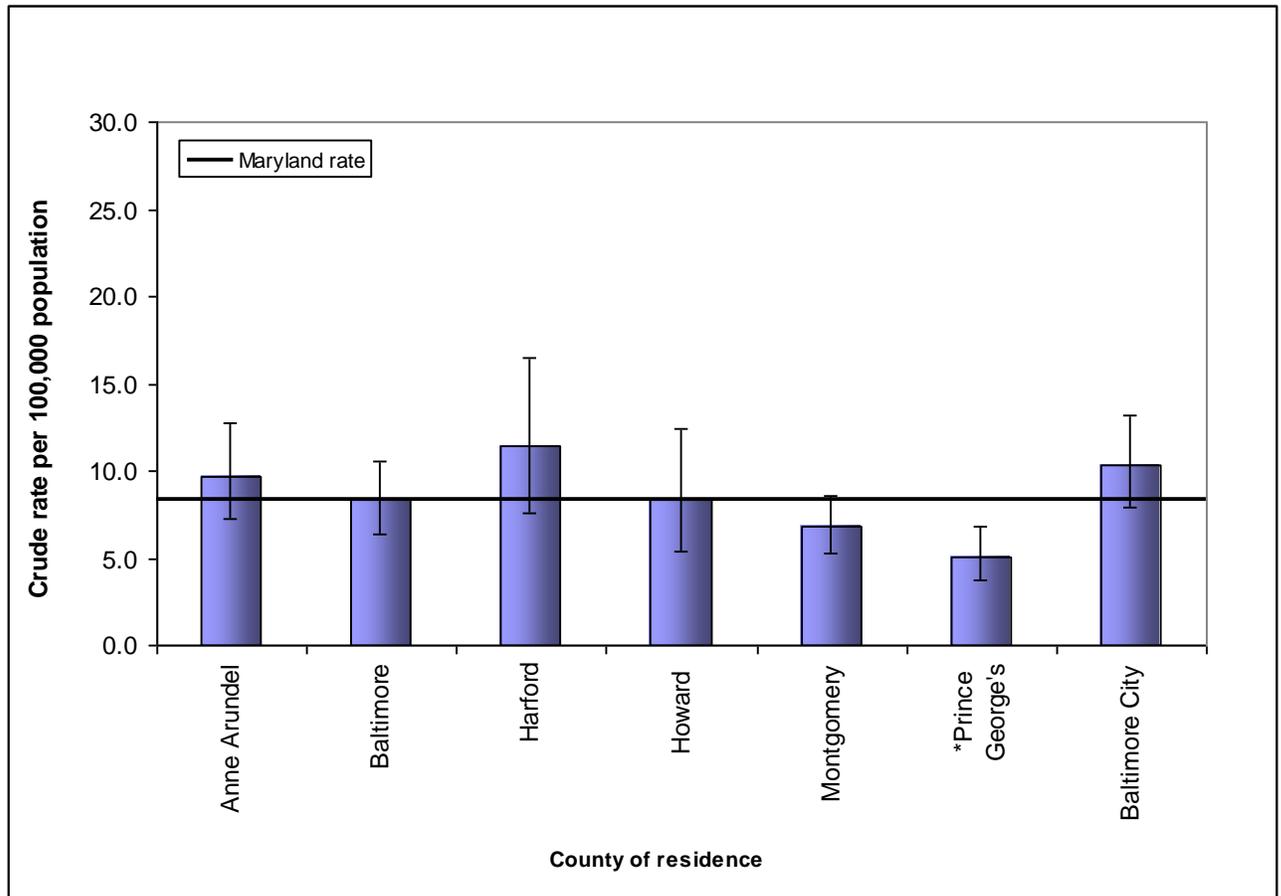
Table 7: Suicides among Maryland Residents (Demographics), 2010

	Number	Percent	Population	Rate per 100,000
All Suicide Deaths	481	100	5,773,552	8.3
Sex				
Male	388	80.7	2,791,762	13.9
Female	93	19.3	2,981,790	3.1
Age Group (years)				
00-09	0	0	731,356	**
10-14	*	*	379,029	**
15-19	18	3.7	406,241	4.4
20-24	41	8.5	393,698	10.4
25-29	36	7.5	393,548	9.1
30-34	34	7.1	368,494	9.2
35-44	68	14.1	795,572	8.5
45-54	124	25.8	902,204	13.7
55-64	78	16.2	695,768	11.2
65-74	42	8.7	386,357	10.9
75-84	25	5.2	223,159	11.2
>=85	12	2.5	98,126	**
Race				
White	381	79.2	3,600,864	10.6
Black	78	16.2	1,783,183	4.4
Other	22	4.6	--	--
Ethnicity				
Hispanic	10	2.1	470,632	**
Education				
<=8 years	15	3.1	--	--
9-12 years	256	53.2	--	--
13-16 years	155	32.2	--	--
>=17 years	47	8.5	--	--
Unknown	14	2.9	--	--

*Counts less than 6 are not reported.

**Rates are not calculated for counts < 20 because they are considered unstable.

Figure 7: Suicide Death Rates among Maryland Residents by County of Residence, 2010



*Counties with violent death rates statistically significantly lower than the Maryland rate.

** Counties with violent death rates statistically significantly higher than the Maryland rate.

I Error bars indicate 95% confidence intervals. These indicate the level of uncertainty about each value on the graph. Longer intervals mean more uncertainty.

Note: Rates with counts <20 are not calculated because they are considered unstable. Therefore, the following county rates were not calculated: Allegany, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, Worcester.

Figure 8: Top Five Locations of Maryland Suicides, 2010

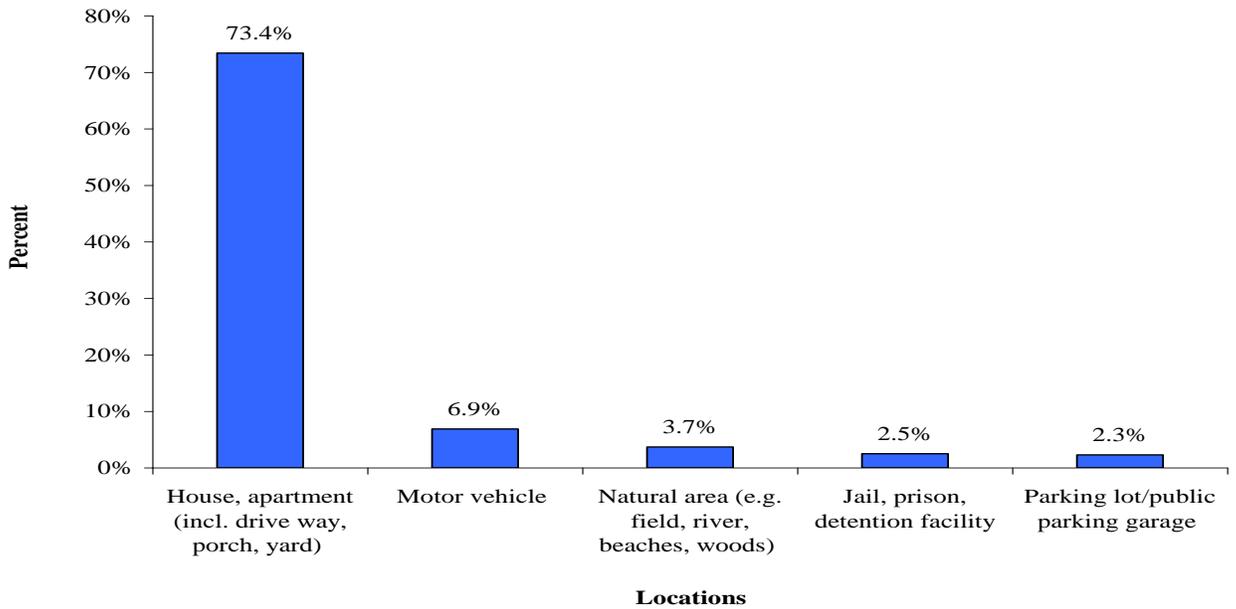
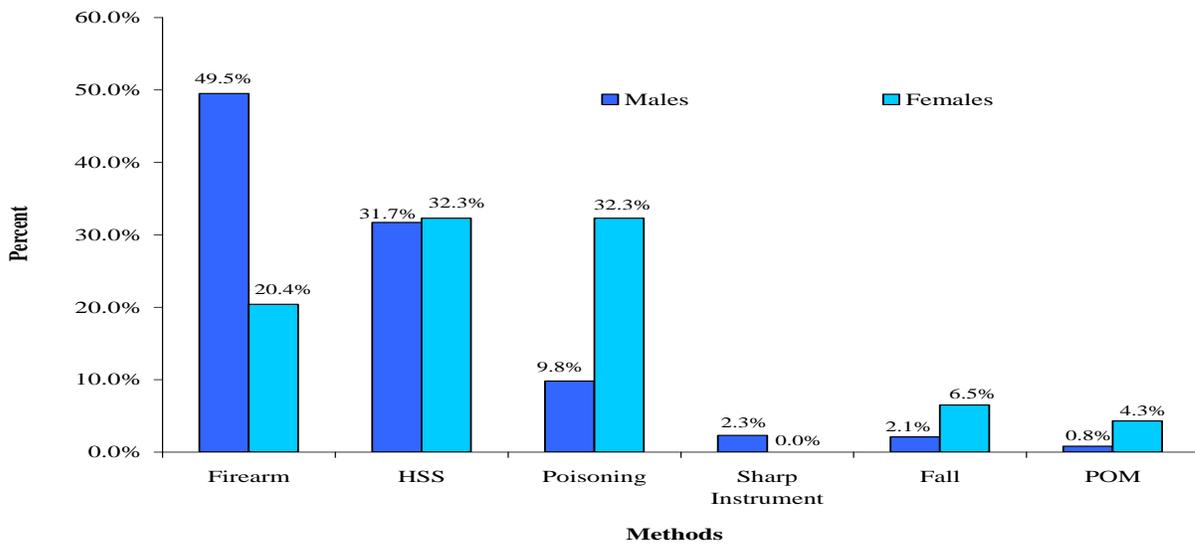


Table 8: Top Five Methods of Maryland Suicides, 2010

Top Five Methods of Injury	Number	Percent
Firearm	211	43.9
Hanging/Strangulation/Suffocation	153	31.8
Poisoning	68	14.1
Fall	14	2.9
Sharp Instrument	9	1.9

Figure 9: Distribution of Top Methods of Maryland Suicides, by Gender, 2010



HSS = Hanging / Strangulation / Suffocation; POM = Poisoning and Other Methods

Table 9: Suicide Characteristics among Maryland Residents, 2010

	Total Number	Percent	Male Number	Percent	Female Number	Percent
All Suicide Deaths	481	100	388	100	93	100
EMS at the Scene						
Yes	339	70.5	279	71.9	60	64.5
Homeless						
Yes	6	1.3	5	1.3	1	1.1
Veteran Status						
Yes	85	17.7	85	21.9	0	0
Victim in Custody when Injured						
Yes, in jail or prison	11	2.3	9	2.3	2	2.2
Month of Injury						
January	30	6.2	24	6.2	6	6.5
February	29	6.0	23	5.9	6	6.5
March	40	8.3	30	7.7	10	10.8
April	47	9.8	38	9.8	9	9.7
May	42	8.7	33	8.5	9	9.7
June	44	9.2	31	8.0	13	14.0
July	52	10.8	42	10.8	10	10.8
August	39	8.1	35	9.0	4	4.3
September	46	9.6	40	10.3	6	6.5
October	46	9.6	39	10.1	7	7.5
November	38	7.9	30	7.7	8	8.6
December	28	5.8	23	5.9	5	5.4
Weekday of Injury						
Monday	48	10.0	37	9.5	11	11.8
Tuesday	67	13.9	50	12.9	17	18.3
Wednesday	73	15.2	60	15.5	13	14.0
Thursday	59	12.3	53	13.7	6	6.5
Friday	56	11.6	44	11.3	12	12.9
Saturday	54	11.2	44	11.3	10	10.8
Sunday	46	9.6	39	10.1	7	7.5
Unknown	78	16.2	61	15.7	17	18.3
Time of Injury						
Night (18:00 – 5:59)	92	19.1	75	19.3	17	18.3
Daytime (6:00 – 17:59)	122	25.4	103	26.6	19	20.4
Unknown	267	55.5	210	54.1	57	61.3

Table 10: Number and Percent of Suicide Victims tested for Alcohol and Drugs, Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Suicide Deaths	481	100	388	100	93	100
Alcohol Testing						
Tested for Alcohol	448	93.1	362	93.3	86	92.5
Of those tested, positive for Alcohol	143	31.9	119	32.9	24	27.9
Of those positive for the presence of alcohol, BAC (mg/dL) levels						
>0-<0.08	47	10.7	40	11.2	7	8.3
0.08 - < 0.16	43	9.8	37	10.4	6	7.1
0.16 - < 0.24	27	6.1	22	6.2	5	6.0
>= 0.24	25	5.7	19	5.3	6	7.1
Drug Test Results						
Amphetamine Testing						
Tested for Amphetamines	375	78.0	299	77.1	76	81.7
Of those tested, positive for Amphetamines	2	0.5	1	0.3	1	1.3
Antidepressant Testing						
Tested for Antidepressants	375	78.0	299	77.1	76	81.7
Of those tested, positive for Antidepressants	69	18.4	44	14.7	25	32.9
Cocaine Testing						
Tested for Cocaine	376	78.2	300	77.3	76	81.7
Of those tested, positive for Cocaine	18	4.8	14	4.7	4	5.3
Opiate Testing						
Tested for Opiates	375	78.0	299	77.1	76	81.7
Of those tested, positive for Opiates	48	12.8	35	11.7	13	17.1
Testing for Other Drug(s)						
Tested for other drug(s)	375	78.0	299	77.1	76	81.7
Of those tested, positive for other drug(s)	159	42.4	113	37.8	46	60.5

Table 11: Associated Circumstances surrounding Suicides among Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Suicide Deaths	481	100	388	100	93	100
Unknown	19	4.0	16	4.1	3	3.2
Known*:	462	96.1	372	95.9	90	96.8
Mental health and substance abuse						
Current depressed mood	236	51.1	188	50.5	48	53.3
Current mental health problem	214	46.3	154	41.4	60	66.7
Current mental health treatment	118	25.5	85	22.9	33	36.7
History of mental health treatment	180	39.0	133	35.8	47	52.2
Alcohol problem	77	16.7	66	17.7	11	12.2
Other substance abuse problem	88	19.1	70	18.8	18	20.0
Interpersonal						
Intimate partner problem	140	30.3	114	30.7	26	28.9
Other relationship problem	13	2.8	10	2.7	3	3.3
Suicide of friend or family in past 5 years	4	0.9	3	0.8	1	1.1
Other death of friend or family	48	10.4	39	10.5	9	10.0
Family stressor(s)	19	4.1	14	3.8	5	5.6
Perpetrator of interpersonal violence past month	12	2.6	10	2.7	2	2.2
Jealousy	14	3.0	13	3.5	1	1.1
Intimate partner violence related	5	1.1	5	1.3	0	0
Other argument, abuse or conflict	43	9.3	36	9.7	7	7.8
Suicide markers						
Left a suicide note	165	35.7	134	36.0	31	34.4
Disclosed intent to commit suicide	178	38.5	140	37.6	38	42.2
History of suicide attempt(s)	103	22.3	69	18.6	34	37.8
Life stressors						
Crisis during previous two weeks	36	7.8	31	8.3	5	5.6
Physical health problem	109	23.6	87	23.4	22	24.4
Job problem	73	15.8	62	16.7	11	12.2
School problem	8	1.7	4	1.1	4	4.4
Financial problem	68	14.7	59	15.9	9	10.0
Recent criminal legal problem	31	6.7	30	8.1	1	1.1
Other legal problems	20	4.3	17	4.6	3	3.3
Eviction/loss of home	23	5.0	18	4.8	5	5.6

*Total percentages might exceed 100% because one incident might have multiple circumstances.

Highlighted Findings of the Associated Circumstances

There were known circumstances in 96.1% of the suicides. Of these known circumstances;

- 214 (46.3%) victims had a current mental health problem, with only 118 (25.5%) being currently treated for their mental health problem.
- 39% of the victims had a history of mental health treatment.
- Even though 66.7% of the females had a current mental health problem, only 36.7% received mental health treatment currently.
- 37.8% of the females had a history of suicide attempt(s), compared to 18.6% of the males.

Section 4: Deaths of Undetermined Manner among Maryland Residents, 2010

Highlighted Findings

- In 2010, MVDRS reported 547 undetermined deaths in Maryland (rate of 9.5 per 100,000). [Table 12]
- The rate of undetermined deaths for males was 2.1 times the rate for females (13.0 and 6.2 per 100,000 population, respectively). [Table 12]
- Age-specific undetermined death rates were highest among those aged 45-54 years (18.4 per 100,000) followed by 25-29 age group (17.3 per 100,000). [Table 12]
- Whites accounted for 72.4% of undetermined deaths, and the rates were highest among whites (11.0 per 100,000 population) compared to blacks (7.9 per 100,000 population). [Table 12]
- Cecil County residents had the highest rate of undetermined deaths followed by Baltimore City residents (22.7 vs. 21.4 per 100,000 population, respectively). [Figure 10]
- 83.6% of all the undetermined deaths occurred in the house, apartment (including a driveway, porch, and yard). [Figure 11]
- Of the known methods of undetermined deaths, the most common method was poisoning, 95.3%. [Table 13] Of the victims of poisoning, a total of 918 poisons were listed as causes of death, of which 58.2% were prescription drugs.*

* Some victims had multiple prescription drugs listed as causes of death.

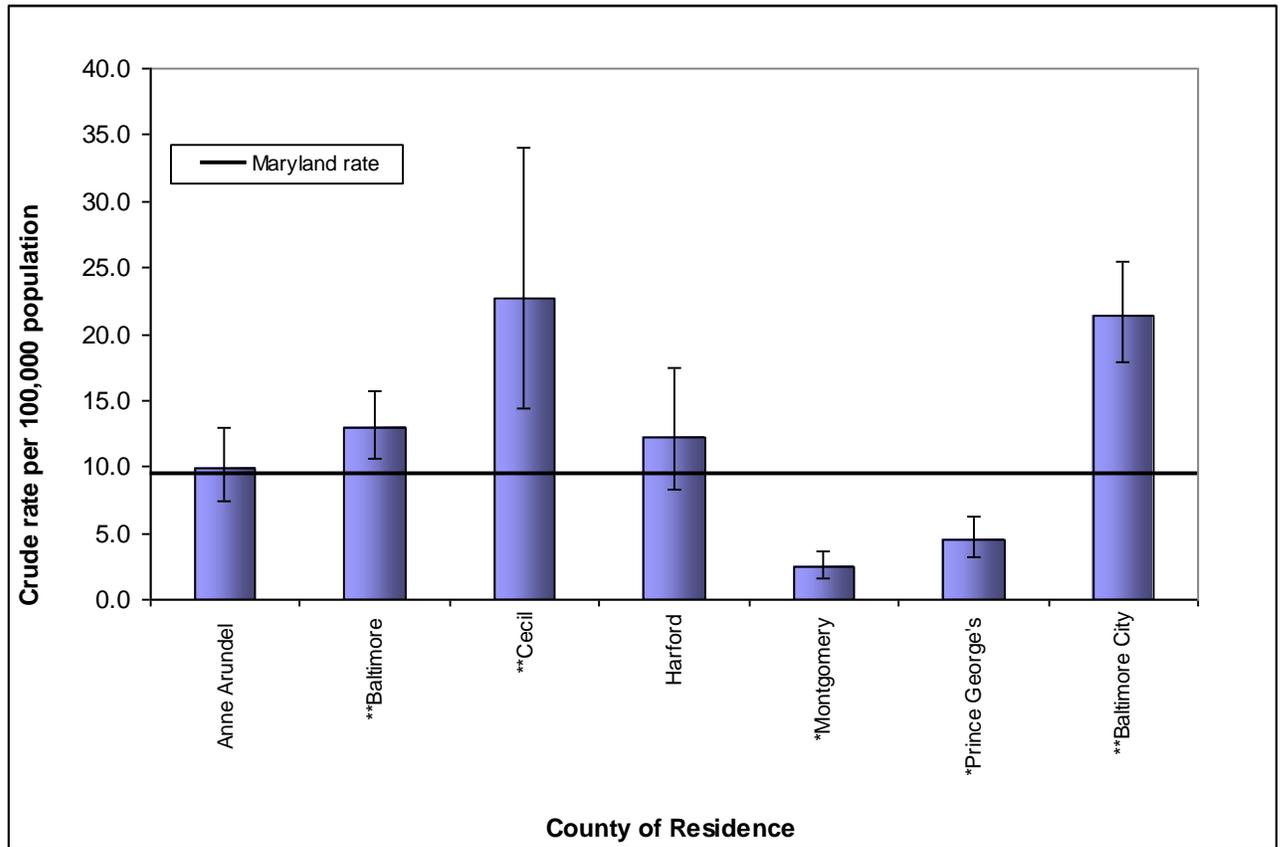
Table 12: Deaths of Undetermined Manner among Maryland Residents (Demographics), 2010

	Number	Percent	Population	Rate per 100,000
All Deaths of Undetermined Manner	547	100	5,773,552	9.5
Sex				
Male	363	66.4	2,791,762	13.0
Female	184	33.6	2,981,790	6.2
Age Group (years)				
00-09	0	0	731,356	0
10-14	0	0	379,029	0
15-19	14	2.6	406,241	**
20-24	45	8.2	393,698	11.4
25-29	68	12.4	393,548	17.3
30-34	53	9.7	368,494	14.4
35-44	125	22.9	795,572	15.7
45-54	166	30.4	902,204	18.4
55-64	71	13.0	695,768	10.2
65-74	*	0.7	386,357	**
75-84	0	0	223,159	0
>=85	*	0.2	98,126	**
Race				
White	396	72.4	3,600,864	11.0
Black	140	25.6	1,783,183	7.9
Other	10	1.8	---	**
Ethnicity				
Hispanic	13	2.4	470,632	**
Education				
<=8 years	24	4.4	--	--
9-12 years	374	68.4	--	--
13-16 years	124	22.7	--	--
>=17 years	9	1.7	--	--
Unknown	16	3.0	--	--

*Counts less than 6 are not reported.

**Rates are not calculated for counts < 20 because they are considered unstable.

Figure 10: Death Rates of Undetermined Manner among Maryland Residents by County of Residence, 2010



*Counties with violent death rates statistically significantly lower than the Maryland rate.

** Counties with violent death rates statistically significantly higher than the Maryland rate.

I Error bars indicate 95% confidence intervals. These indicate the level of uncertainty about each value on the graph. Longer intervals mean more uncertainty.

Note: Rates with counts <20 are not calculated because they are considered unstable. Therefore, the following county rates were not calculated: Allegany, Calvert, Caroline, Carroll, Charles, Dorchester, Frederick, Garrett, Howard, Kent, Queen Anne's, St Mary's, Somerset, Talbot, Washington, Wicomico, Worcester.

Figure 11: Top Five Locations of Deaths of Undetermined Manner among Maryland Residents, 2010

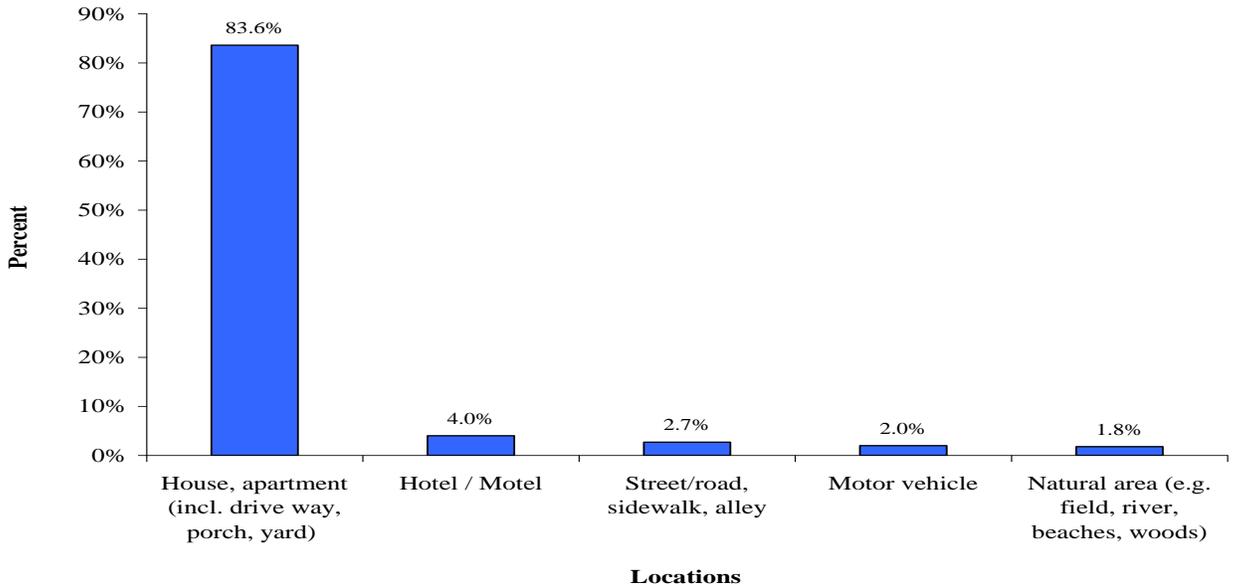
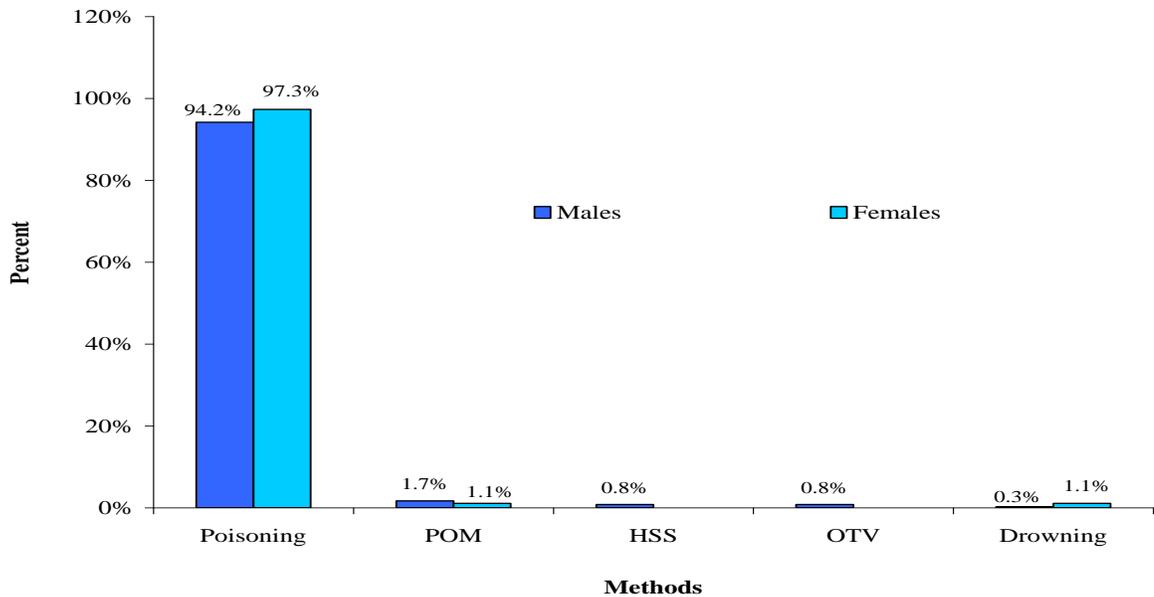


Table 13: Top Methods of Deaths of Undetermined Manner among Maryland Residents, 2010

Top Methods of Injury	Number	Percent
Poisoning	521	95.3
Poisoning and other method type	8	1.5

Figure 12: Distribution of Top Methods of Maryland Deaths of Undetermined Manner, by Gender, 2010



POM = Poisoning and Other Methods ; HSS = Hanging / Strangulation / Suffocation; OTV = Other Transport Vehicle

Table 14: Characteristics of Deaths of Undetermined Manner among Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Deaths of Undetermined Manner	547	100	363	100	184	100
EMS at the Scene						
Yes	478	87.4	316	87.1	162	88.0
Homeless						
Yes	20	3.7	16	4.4	4	2.2
Veteran Status						
Yes	44	8.0	41	11.3	3	1.6
Victim in Custody when Injured						
Yes, in jail or prison	5	0.9	4	1.1	1	0.5
Month of Injury						
January	49	9.0	31	8.5	18	9.8
February	45	8.2	25	6.9	20	10.9
March	53	9.7	35	9.6	18	9.8
April	50	9.1	39	10.7	11	6.0
May	33	6.0	21	5.8	12	6.5
June	41	7.5	30	8.3	11	6.0
July	43	7.9	27	7.4	16	8.7
August	33	6.0	24	6.6	9	4.9
September	51	9.3	32	8.8	19	10.3
October	50	9.1	33	9.1	17	9.2
November	47	8.6	32	9.1	17	9.2
December	52	9.5	34	9.4	18	9.8
Weekday of Injury						
Monday	67	12.3	50	13.8	17	9.2
Tuesday	61	11.2	41	11.3	20	10.9
Wednesday	52	9.5	27	7.4	25	13.6
Thursday	47	8.6	32	8.8	15	8.2
Friday	50	9.1	33	9.1	17	9.2
Saturday	61	11.2	40	11.0	21	11.4
Sunday	75	13.7	54	14.9	21	11.4
Unknown	134	24.5	86	23.7	48	26.1
Time of Injury						
Night (18:00 – 5:59)	48	8.8	30	8.3	18	9.8
Daytime (6:00 – 17:59)	87	15.9	59	16.3	28	15.2
Unknown	412	75.3	274	75.5	138	75.0

Table 15: Number and Percent of Undetermined Manner of Death Victims tested for Alcohol and Drugs among Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Deaths of Undetermined Manner	547	100	363	100	184	100
Alcohol Testing						
Tested for Alcohol	536	98.0	355	97.8	181	98.4
Of those tested, positive for Alcohol	200	37.3	148	41.7	52	28.7
Of those positive for the presence of alcohol, BAC (mg/dL) levels						
>0-<0.08	58	10.9	36	10.2	22	12.4
0.08 - < 0.16	53	10.0	43	12.2	10	5.6
0.16 - < 0.24	41	7.7	33	9.3	8	4.5
>= 0.24	46	8.7	35	9.9	11	6.2
Drug Test Results						
Amphetamine Testing						
Tested for Amphetamines	542	99.1	358	98.6	184	100.0
Of those tested, positive for Amphetamines	3	0.6	2	0.6	1	0.5
Antidepressant Testing						
Tested for Antidepressants	542	99.1	358	98.6	184	100.0
Of those tested, positive for Antidepressants	137	25.3	76	21.2	61	33.2
Cocaine Testing						
Tested for Cocaine	541	98.9	357	98.4	184	100.0
Of those tested, positive for Cocaine	148	27.4	104	29.1	44	23.9
Opiate Testing						
Tested for Opiates	544	99.5	360	99.2	184	100.0
Of those tested, positive for Opiates	443	81.4	289	80.3	154	83.7
Testing for Other Drug(s)						
Tested for other drug(s)	542	99.1	358	98.6	184	100.0
Of those tested, positive for other drug(s)	331	61.1	200	55.9	131	71.2

Table 16: Associated Circumstances surrounding Deaths of Undetermined Manner among Maryland Residents, 2010

	Total N	Percent	Male N	Percent	Female N	Percent
All Deaths of Undetermined Manner	547	100	363	100	184	100
Unknown	47	8.6	35	9.6	12	6.5
Known*:	500	91.4	328	90.4	172	93.5
Mental health and substance abuse						
Current depressed mood	68	13.6	44	13.4	24	14.0
Current mental health problem	151	30.2	88	26.8	63	36.6
Current mental health treatment	112	22.4	62	18.9	50	29.1
History of mental health treatment	160	32.0	92	28.1	68	39.5
Alcohol problem	181	36.2	134	40.1	47	27.3
Other substance abuse problem	392	78.4	255	77.7	137	79.7
Interpersonal						
Intimate partner problem	47	9.4	36	11.0	11	6.4
Other relationship problem	8	1.6	4	1.2	4	2.3
Other death of friend or family	16	3.2	8	2.4	8	4.7
Crime-Related						
Suicide markers						
Left a suicide note	2	0.4	2	0.6	0	0
Disclosed intent to commit suicide	29	5.8	21	6.4	8	4.7
History of suicide attempt(s)	36	7.2	18	5.5	18	10.5
Life stressors						
Crisis during previous two weeks	12	2.4	11	3.4	1	0.6
Physical health problem	111	22.2	66	20.1	45	26.2
Job problem	15	3.0	13	4.0	2	1.2
Financial problem	19	3.8	12	3.7	7	4.1
Recent criminal legal problem	20	4.0	16	4.9	4	2.3
Other legal problems	5	1.0	3	0.9	2	1.2
Eviction/loss of home	16	3.2	10	3.1	6	3.5

*Total percentages might exceed 100% because one incident might have multiple circumstances.

Highlighted Findings of the Associated Circumstances

There were known circumstances in 91.4% of the undetermined deaths. Of these known circumstances;

- 181 (36.2%) victims had alcohol problems and 392 (78.4%) had other substance abuse problems.
- 47 (9.4%) victims had intimate partner problems, of which three out of four were males.
- 18 (10.5%) of females had a history of suicide attempt(s) compared to 5.5% of the males.
- 111 (22.2%) victims had some physical health problem.

Appendix: Centers for Disease Control and Prevention (CDC) Definitions for some Common Precipitating Circumstances

Alcohol problem - Person has alcohol dependence or alcohol problem. Code a victim as “Yes” if the victim was perceived by self or others to have a problem with, or to be addicted to, alcohol. There does not need to be any indication that the alcohol problem directly contributed to the death. A victim who is noted as participating in an alcohol rehabilitation program or treatment — including self-help groups and 12-step programs — should be coded as “Yes” even if the victim was noted as being currently sober. A problem from the past (i.e., five years or more ago) that has resolved and no longer appears to apply should not be coded. Do not code as “Yes” if victim was using alcohol in the hours preceding the incident and there is no evidence of dependence or a problem (these cases should be coded “Yes”).

Crime in progress - The precipitative crime was in progress at the time of the incident. An “in-progress crime” is a serious or felony-related crime, as discussed under “Precipitated by another crime,” that is being committed or attempted at the time of the incident.

Current depressed mood - Code this variable as “Yes” if the victim was perceived by self or others to be depressed at the time of the injury. There does not need to be any indication that the depression directly contributed to the death. Other words that can trigger coding this variable besides “depressed” are sad, despondent, down, blue, low, unhappy, etc. Words that should not trigger coding this variable are agitated, angry, mad, anxious, overwrought, etc. If the victim has a known clinical history of depression, but no depressive symptoms at the time of the incident, this variable should NOT be selected. Depressed mood should not be inferred by the coder based on the circumstances; rather it must be noted in the record.

Current mental health problem - Code a victim as “Yes” if he or she has been identified as currently having a mental health problem. There does not need to be any indication that the mental health condition directly contributed to the death. Mental health problems include those disorders and syndromes listed in the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Revision) with the exception of alcohol and other substance dependence (as these are captured in separate variables). Examples of disorders qualifying as mental health problems include not only diagnoses such as major depression, schizophrenia, and generalized anxiety disorder, but developmental disorders (such as mental retardation, autism, attention-deficit hyperactivity disorder), eating disorders, personality disorders, and organic mental disorders such as Alzheimer’s and other dementias. Also indicate “Yes” if it is mentioned in the source document that the victim was being treated for a mental health problem, even if the nature of the problem is unclear (e.g., “was being treated for various psychiatric problems”). It is acceptable to endorse this variable on the basis of past treatment of a mental health problem, unless it is specifically noted that the past problem has been resolved.

Disclosed intent to commit suicide - Victim disclosed to another person the intention to commit Suicide. Code as “Yes” if 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”). Include in the incident narrative any available details about who the intent was disclosed to, how long before the death the intent was disclosed, and what was said during the disclosure.

History of suicide attempt(s) - Victim has a history of attempting suicide. Code as “Yes” if the victim was known to have made previous suicide attempts, regardless of the severity of those attempts or whether any resulted in injury. Evidence of a history of suicide attempts includes self-report and report or documentation from others including family, friends, and health professionals. For purposes of this data element, a suicide “attempt” should include the commission of an act that could lead to a fatal injury. If a person decides not to go through with an act after it has begun or is prevented from carrying out the action, this circumstance should not be endorsed.

Intimate partner problem - Problems with a current or former intimate partner appear to have contributed to the death. Code as “Yes” if at the time of the incident the victim was experiencing problems with a current or former intimate partner, such as a divorce, break-up, argument, jealousy, conflict, or discord, and this appears to have contributed to the death. The specific situation may also call for coding “Jealousy,” “Other argument/abuse/conflict,” “Victim of interpersonal violence in past month,” etc. The burden of caring for an ill spouse or partner should not be coded as an intimate partner problem unless there is also evidence of relationship problems. Phrases such as “victim was having relationship problems” can be assumed to indicate intimate partner problems. If a victim kills or attacks his or her current or former intimate partner, code as “Yes” (this will also call for coding “Intimate partner violence related”). The only exception to this rule is if the death was clearly a consensual act, as in a mercy killing followed by suicide. Extreme caution should be used when identifying a case as a mercy killing; see discussion of the variable Mercy (mercy killing) in Section 8 of the NVDRS Coding Manual version 3 (<http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/Fullmanual.pdf>).

Intimate partner violence related (IPV) - identifies cases in which a death is related to conflict between current or former intimate partners. An intimate partner is defined as a current or former girlfriend/boyfriend, date, or spouse. If other people are also killed (a child, friend of the victim, a bystander), and even if the intimate partner is not (e.g., the child of the intimate partner is the victim), code “Yes” for those victims as well. It will be apparent in the Victim-Suspect Relationship variable whether the victim and suspect were intimate partners. The definition of intimate partner includes first dates.

Jealousy Identifies cases in which jealousy or distress over an intimate partner’s relationship or suspected relationship with another person led to the incident.

Other argument, abuse or conflict An argument or other interpersonal conflict such as abuse, insult, grudge, or personal revenge that precipitated the incident. Excludes arguments over money/property (Argue), intimate partner violence (IPV), and jealousy between intimate partners (Jealous). Cases that appear to involve child abuse, elder abuse, and abuse by a caretaker should be coded “Yes”.

Other substance problem - Person has drug abuse problem. Code a victim as “Yes” if the victim was perceived by self or others to have a problem with, or to be addicted to drugs other than alcohol. There does not need to be any indication that the addiction directly contributed to the death. Code as “Yes” if a 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).

Precipitated by another crime - The death was precipitated by another serious crime (e.g., drug dealing, robbery). Code a victim as “Yes” if the incident occurred as the result of another serious crime. Note that the crime must occur *prior* to the violent injury, and not after it.