Maryland Violent Death Reporting System 2008

Surveillance Report

Maryland Department of Health & Mental Hygiene

Maryland Resident Homicides, Suicides, and Deaths of Undetermined Manner

July 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". 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 2008, 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 4 (http://www.cdc.gov/ncipc/pub-res/nvdrs-coding/Fullmanual.pdf)¹.

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 Supplementary 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 what 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.

Case assignment for this analysis was based on the manner of death reported by the OCME. 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 - 2008 were calculated using the population data from the Maryland Annual Vital Statistics Report, 2008.²

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² http://vsa.maryland.gov/doc/08annual.pdf

Section 1: Overview of Maryland Resident Violent Deaths, 2008

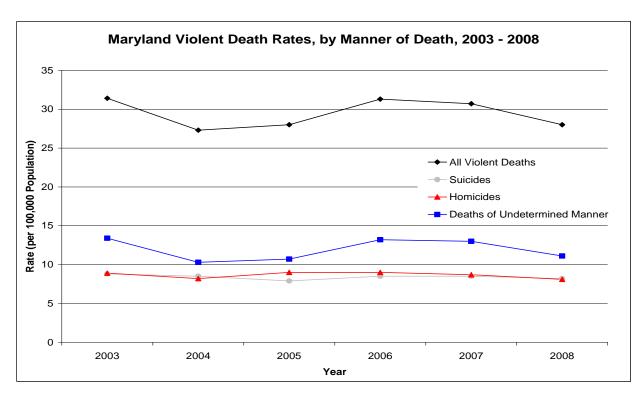
In 2008, MVDRS reported a total of 1,577 violent deaths amongst Maryland residents. The Maryland crude violent death rate was 1.5 times that of the NVDRS states combined rate (28.0 per 100,000 vs. 19.3 per 100,000, respectively).³ Figure 1 displays the trend in violent death rates over the past five years, by manner of death. Of all the violent deaths among Maryland residents in 2008, deaths of undetermined manner accounted for 39.8%, followed by suicides (29.4%), homicides (28.9%) and deaths by legal intervention (1.9%) [Table 1]. Violent deaths of undetermined manner (n=627) accounted for the highest crude death rate at 11.1 per 100,000 population, followed by suicides (n=463) at 8.2 per 100,000 population and homicides (n=456) at 8.1 per 100,000 population [Table 1].

The 20–24 age group had the highest age-specific death rate (50.9 per 100,000) followed by the 25-29 age group (45.6 per 100,000) [Table 1]. Although over half of all violent deaths occurred amongst whites (59.9%), the death rate among blacks was 1.4 times higher than whites (35.7 vs. 26.1 per 100,000 population, respectively) [Table 1]. Males had a violent death rate 3.5 times that of females (44.6 vs. 12.4 per 100,000 population, respectively) [Table 1]. Males in the 25-29 age group had a violent death rate 6.4 times that of females (44.6 vs. 12.4 per 100,000 population, respectively) [Figure 2].

Baltimore City had the highest crude death rate at 68.3 per 100,000 population which was 5 times that of Howard County, which had the lowest rate (13.8 per 100,000 population) [Figure 3]. The most common method of injury was poisoning (41.1%), followed closely by firearms (38.9%). Close to 9% of the deaths were by Hanging / strangulation / suffocation.

Males accounted for all the legal intervention deaths (n = 30) of which 70% were black. Twenty-three percent of all the legal intervention deaths occurred in the 10 - 24 age group.

Figure 1: Trends in Violent Death Rates among Maryland Residents, by Manner of Death, 2003 – 2008



³ http://wisqars.cdc.gov:8080/nvdrs/nvdrsDisplay.jsp

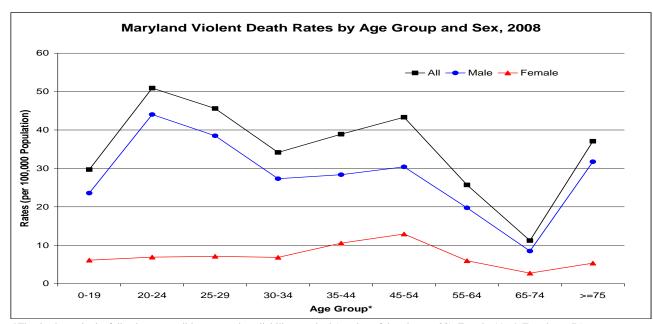
Table 1: Maryland Resident Violent Deaths (Demographics), 2008

	Number	Percent	Population	Rate per 100,000
All Violent Deaths	1,577	100	5,633,597	28.0
Intent				
Homicides	456	28.9	5,633,597	8.1
Suicides	463	29.4	5,633,597	8.2
Deaths of Undetermined Manner	627	39.8	5,633,597	11.1
Unintentional Firearm	*	0.1	5,633,597	**
Legal Intervention	30	1.9	5,633,597	0.5
Sex				
Male	1,216	77.1	2,727,323	44.6
Female	361	22.9	2,906,274	12.4
Age Group (years)				
00-090	15	1.0	732,942	**
10-14	14	0.9	366,710	**
15-19	97	6.2	407,227	23.8
20-24	192	12.2	377,174	50.9
25-29	173	11.0	379,506	45.6
30-34	120	7.6	351,482	34.1
35-44	321	24.0	825,237	38.9
45-54	379	24.0	875,065	43.3
55-64	164	10.4	638,689	25.7
65-74	41	2.6	365,801	11.2
75-84	46	2.9	221,880	20.7
>=85	15	1.0	91,884	**
Race				
White	944	59.9	3,611,787	26.1
Black	604	38.3	1,692,495	35.7
Other	29	1.8	329,315	8.8
Ethnicity				
Hispanic	40	2.5	375,830	10.6

^{*}Counts less than 6 are not reported.

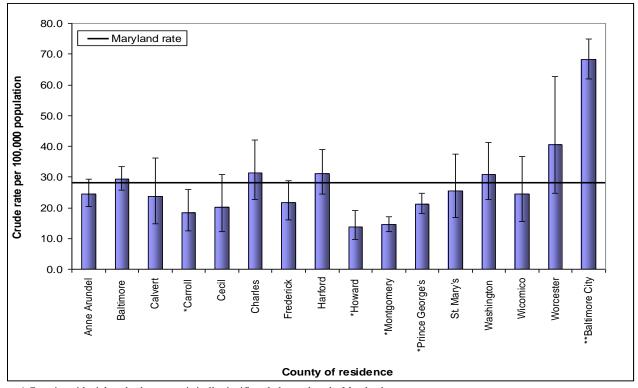
**Rates are not calculated for counts < 20 because they are considered unstable.

Figure 2: Maryland Violent Death Rates by Age Group and Sex, 2008



^{*}The death rate in the following group did not meet the reliability standard (number of decedents < 20): Female 55-64, Female >= 75 years.

Figure 3. Violent Death Rates among Maryland Residents by County of Residence, 2008



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

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

^{**} Counties with violent death rates statistically significantly higher than 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.

Section 2: Homicides among Maryland Residents, 2008

Highlighted Findings

- In 2008, MVDRS reported 456 homicides among Maryland residents of which close to half were among Baltimore City residents (47.4%). [Table 2 & Figure 4]
- The homicide rate for males was 4.7 times that for females (13.6 and 2.9 per 100,000 population, respectively). [Table 2]
- Blacks accounted for the majority of homicide deaths (75%) and the homicide rate for blacks was 7 times that for whites (20.2 and 2.9 per 100,000 population, respectively). [Table 2]
- Baltimore City residents had the highest homicide rate at 33.9 per 100,000 population followed by Prince George's County residents at 11.1 per 100,000 population. [Figure 4]
- Two thirds of all the homicides occurred in the house/apartment (32.2%) and the street/road, sidewalk / alley (31.1%). [Figure 5]
- The most common method of injury for all homicides were firearms (73.9%). [Table 3]

Table 2: Homicides among Maryland Residents (Demographics), 2008

	Number	Percent	Population	Rate per 100,000
All Homicide Deaths	456	100	5,633,597	8.1
Sex				
Male	372	81.9	2,727,323	13.6
Female	84	18.4	2,906,274	2.9
Age Group (years)				
00-09	12	2.6	732,942	**
10-14	10	2.2	366,710	**
15-19	64	14.0	407,227	15.7
20-24	108	23.7	377,174	28.6
25-29	78	17.1	379,506	20.6
30-34	42	9.2	351,482	12.0
35-44	67	14.7	825,237	8.1
45-54	57	12.5	875,065	6.5
55-64	10	2.2	638,689	**
65-74	*	1.1	365,801	**
75-84	*	0.7	221,880	**
>=85	0	0.0	91,884	
Race				
White	104	22.8	3,611,787	2.9
Black	342	75.0	1,692,495	20.2
Other	10	2.2	329,315	**
Ethnicity				
Hispanio	27	5.9	375,830	7.2
Education				
<=8 years	53	11.8		
9-12 years	322	71.7		
13-16 years	67	14.9		
>=17 years	, 7	1.6		

^{*}Counts less than 6 are not reported

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

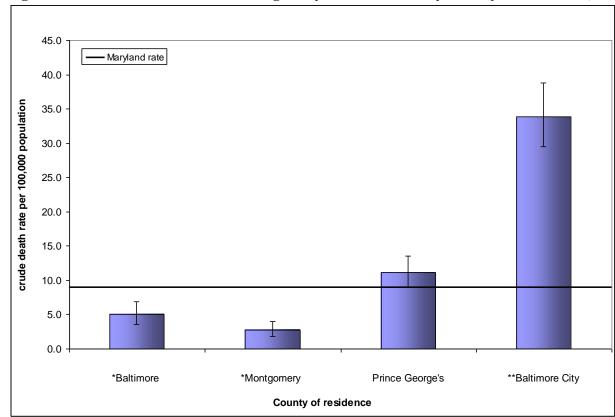


Figure 4: Homicide Death Rates among Maryland Residents by County of Residence, 2008

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, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, Worcester.

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

^{**} Counties with violent death rates statistically significantly higher than 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.

Figure 5. Top Five Locations of Maryland Homicides, 2008 (n = 375)

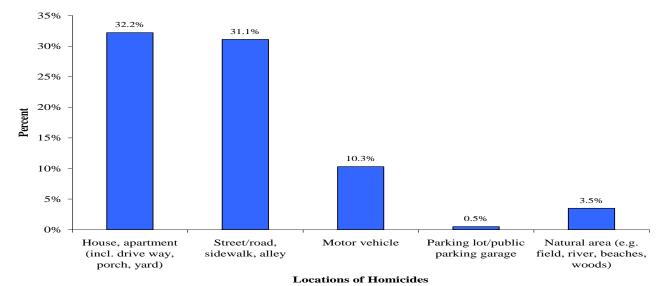
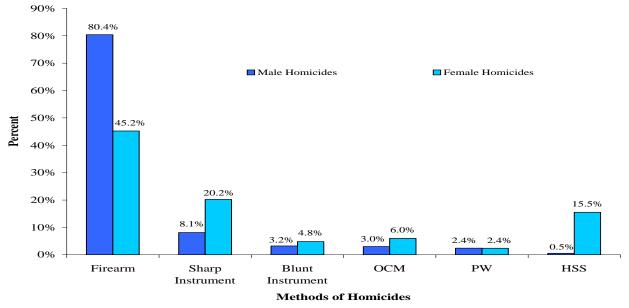


Table 3. Top Five Methods of Maryland Homicides, 2008 (n = 431)

Top Five Methods of Injury	Number	Percent
Firearm	337	73.9
Sharp Instrument	47	10.3
Blunt Instrument	16	3.5
Other Combination of methods	16	3.5
Hanging/Strangulation/Suffocation	15	3.3

Figure 6. Distribution of Top Methods of Maryland Homicides, 2008, by Gender



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

Table 4: Homicide Characteristics among Maryland Residents, 2008

	Total	_	Male	_	Female	_
	Number	Percent	Number	Percent	Number	Percent
All Homicide Deaths	456	100	372	81.6	84	18.4
EMS at the Scene						
Yes	409	89.7	342	91.9	67	79.8
Homeless						
Yes	5	1.1	3	0.8	2	2.4
Veteran Status						
Yes	13	2.9	9	2.4	4	4.8
Victim in Custody when Injured						
Yes, in jail or prison	3	0.7	3	0.8	0	0.0
Month of Injury						
January	28	6.1	21	5.7	7	8.3
February	31	6.8	24	6.5	7	8.3
March	42	9.2	36	9.7	6	7.1
April	30	6.6	23	6.2	7	8.3
May	47	10.3	36	9.7	11	13.1
June	42	9.2	35	9.4	7	8.3
July	32	7.0	26	7.0	6	7.1
August	41	9.0	34	9.1	7	8.3
September	34	7.5	26	7.0	8	9.5
October	41	9.0	37	10.0	4	4.8
November	52	11.4	44	11.8	8	9.5
December	36	7.9	30	8.1	6	7.1
Weekday of Injury						
Monday	88	19.3	75	20.2	13	15.5
Tuesday	59	12.9	51	13.7	8	9.5
Wednesday	67	14.7	55	14.8	12	14.3
Thursday	63	13.8	53	14.3	10	11.9
Friday	57	12.5	45	12.1	12	14.3
Saturday	59	12.9	47	12.6	12	14.3
Sunday	59	12.9	45	12.1	14	16.7
Unknown	4	0.9	1	0.3	3	3.6
Time of Injury						
Night $(18:00 - 5:59)$	228	50.0	206	55.4	22	26.2
Daytime (6:00 – 17:59)	67	14.7	55	14.8	12	14.3
Unknown	161	35.3	111	29.8	50	59.5

Table 5: Number and Percent of Homicide Victims tested for Alcohol and Drugs among Maryland Residents, 2008

	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
All Homicide Deaths	456	100	372	81.6	84	18.4
Alcohol Testing						
Tested for Alcohol	452	99.1	368	99.2	83	98.8
Of those tested, positive for Alcohol	157	34.7	136	36.9	21	25.3
Of those positive for the presence of alcohol, BAC (mg/dL) levels						
>0-<0.08	72	16.0	63	17.1	9	10.8
0.08 - < 0.16	52	11.5	44	12.0	8	9.6
0.16 - < 0.24	18	4.0	15	4.1	3	3.6
>= 0.24	15	3.3	14	3.8	1	1.2
Drug Test Results Amephtamine Testing						
Tested for Amphetamines	448	98.3	364	97.9	84	100
Of those tested, positive for						
Amphetamines	15	3.4	15	4.1	0	0
Antidepressant Testing						
Tested for Antidepressants	447	98.0	364	97.9	83	98.8
Of those tested, positive for	8	1.8	4	1.1	4	4.0
Antidepressants Cocaine Testing	8	1.8	4	1.1	4	4.8
Tested for Cocaine	447	98.0	364	97.9	83	98.8
Of those tested, positive for	77/	70.0	301	21.5	03	70.0
Cocaine	50	11.2	39	10.7	11	13.3
Opiate Testing						
Tested for Opiates	446	97.8	363	97.6	83	98.8
Of those tested, positive for						
Opiates	55	12.3	40	11.0	15	18.1
Testing for Other Drug(s)						
Tested for other drug(s)	447	98.0	364	97.9	83	98.8
Of those tested, positive for other drug(s)	119	26.6	90	24.7	29	34.9
other drug(s)	117	20.0	70	∠ , ,,	49	57.7

Table 6: Associated Circumstances surrounding Homicides among Maryland Residents, 2008

	Total		Male		Female	-
	Number	Percent	Number	Percent	Number	Percent
All Homicide Deaths	456	100	372	81.6	84	18.4
Unknown	232	50.9	205	55.1	27	32.1
Known*:	224	49.1	167	44.9	57	67.9
Crime-related						
Precipitated by another crime	72	32.1	56	33.5	16	28.1
Crime in progress	39	17.4	31	18.6	8	14.0
Drug involvement	43	19.2	40	24.0	3	5.3
Gang related	5	2.2	5	3.0	0	0
Brawl	8	3.6	8	4.8	0	0
Victim was a bystander	3	1.3	3	1.8	0	0
Drive-by shooting	15	6.7	14	8.4	1	1.8
Relationship Problem						
Intimate partner problem	5	2.2	1	0.6	4	7.0
Other relationship problem	2	0.9	0	0	2	3.5
Arguments and Conflicts						
Argument over money or property	14	6.3	11	6.6	3	5.3
Jealousy	10	4.5	8	4.8	2	3.5
Intimate partner violence related	26	11.6	3	1.8	23	40.4
Other argument, abuse or conflict	60	26.8	46	27.5	14	24.6
Other						
Justifiable self-defense / law enforcement	4	1.8	4	2.4	0	0
Victim used weapon	7	3.1	7	4.2	0	0
Victim was an intervener assisting crime victim	2	0.9	2	1.2	0	0

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

Highlighted Findings of the Associated Circumstances

There were known circumstances in 49.1% of the homicides. Of these known circumstances:

- Almost one third of the homicides were precipitated by another crime (32.1%) and 26.8% were related to other arguments, conflicts or abuse.
- 24% of the male homicides had some drug involvement, compared to 5.3% of the female homicides.
- 7% of the female homicides had reported intimate partner problems.
- 40.4% of the female homicides were intimate partner violence related compared to 1.8% of the male homicides.

Section 3: Maryland Resident Suicides, 2008

Highlighted Findings

- In 2008, MVDRS reported 463 suicides among Maryland residents (rate of 8.2 per 100,000). [Table 7]
- Male suicide rates were 4.6 times that of female rates (13.8 and 3.0 per 100,000 population, respectively). [Table 7]
- Age-specific suicide rates were highest among persons aged 75-84 years (18.0 per 100,000 population). [Table 7]
- The suicide rate among whites was 2.6 times that of blacks (10.5 vs. 4.0 per 100,000, respectively). [Table 7]
- The suicide rate was highest among residents of Charles County (14.2 per 100,000) followed by Harford County residents (12.1 per 100,000 population). [Figure 7]
- Close to 70% of all suicides occurred in the House, apartment (incl. drive way, porch, yard). [Figure 8]
- Firearms were used in the majority of suicide deaths (53.1%) followed by hanging/strangulation /suffocation (25.3%) and poisoning (12.7%). [Table 8] Of the victims of poisoning, a total of 116 poisons were listed as causes of death, of which 70.1% were prescription drugs.*
- Amongst all the male suicides, twenty five percent were veterans. [Table 9]

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

Table 7: Suicides among Maryland Residents (Demographics), 2008

	Number	Percent	Population	Rate per 100,000
All Suicide Deaths	463	100	5,633,597	8.2
Sex				
Male	376	81.2	2,727,323	13.8
Female	87	18.8	2,906,274	3.0
Age Group (years)				
10-14	*	0.7	366,710	**
15-19	19	4.1	407,227	**
20-24	31	6.7	377,174	8.2
25-29	38	8.2	379,506	10.0
30-34	27	5.8	351,482	7.7
35-44	81	17.5	825,237	9.8
45-54	111	24.0	875,065	12.7
55-64	70	15.1	638,689	11.0
65-74	28	6.1	365,801	7.7
75-84	40	8.6	221,880	18.0
>=85	15	3.2	91,884	**
Race				
White	379	81.9	3,611,787	10.5
Black	68	14.7	1,692,495	4.0
Other	16	3.5	329,315	**
Ethnicity				
Hispanic	6	1.3	375,830	1.6
Education				
<=8 years	18	3.9		
9-12 years	271	58.5		
13-16 years	134	28.9		
>=17 years	36	7.8		
Unknown	4	0.9		

^{*}Counts less than 6 are not reported.

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

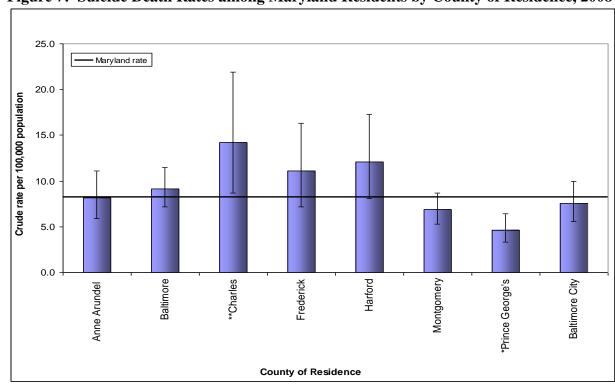


Figure 7: Suicide Death Rates among Maryland Residents by County of Residence, 2008

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, Dorchester, Garrett, Howard, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, Worcester.

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

^{**} Counties with violent death rates statistically significantly higher than 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.

Figure 8: Top Five Locations of Maryland Suicides, 2008 (n = 402)

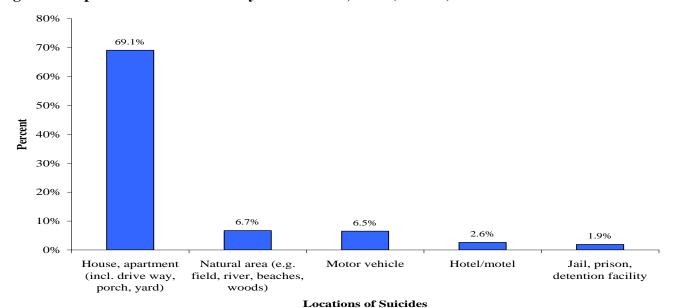
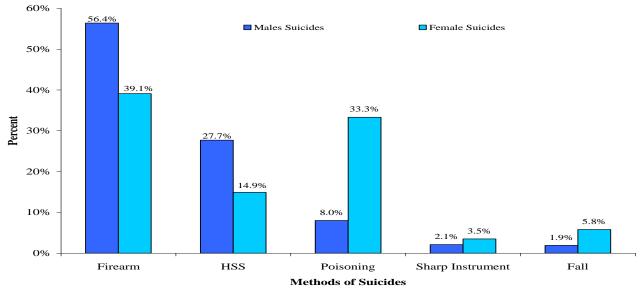


Table 8: Top Five Methods of Maryland Suicides, 2008

Top Five Methods of Injury	Number	Percent
Firearm	246	53.1
Hanging/Strangulation/Suffocation	117	25.3
Poisoning	59	12.7
Fall	12	2.6
Sharp Instrument	11	2.4

Figure 9. Distribution of Top Methods of Maryland Suicides, by Gender, 2003-2009



HSS = Hanging / Strangulation / Suffocation

Table 9: Suicide Characteristics among Maryland Residents, 2008

	Total	Donasut	Male	Danasut	Female	Donourt
All Suicide Deaths	Number 463	Percent 100	Number 376	Percent 81.2	Number 87	Percent 18.8
EMS at the Scene	403	100	370	01.2	87	10.0
Yes	360	77.8	295	78.5	65	74.7
Homeless	300	77.0	273	76.5	0.5	/ 4. /
Yes	5	1.1	5	1.3	0	0
Veteran Status	3	1.1	3	1.5	· ·	Ů
Yes	94	20.3	94	25.0	0	0
Victim in Custody when Injured						
Yes, in jail or prison	9	1.9	8	2.1	1	1.2
Month of Injury						
January	54	11.7	41	10.9	13	14.9
February	20	4.3	18	4.8	2	2.3
March	37	8.0	30	8.0	7	8.1
April	35	7.6	28	7.5	7	8.1
May	49	10.6	38	10.1	11	12.6
June	42	9.1	37	9.8	5	5.8
July	39	8.4	35	9.3	4	4.6
August	36	7.8	31	8.2	5	5.8
September	32	6.9	27	7.2	5	5.8
October	36	7.8	23	6.1	13	14.9
November	38	8.2	34	9.0	4	4.6
December	45	9.7	34	9.0	11	12.6
Weekday of Injury						
Monday	81	17.5	64	17.0	17	19.5
Tuesday	68	14.7	51	13.6	17	19.5
Wednesday	64	13.8	46	12.2	18	20.7
Thursday	68	14.7	54	14.4	14	16.1
Friday	59	12.7	52	13.8	7	8.1
Saturday	52	11.2	47	12.5	5	5.8
Sunday	70	15.1	61	16.2	9	10.3
Unknown	1	0.2	1	0.3	0	0
Time of Injury						
Night (18:00 – 5:59)	54	11.7	47	12.5	7	8.1
Daytime (6:00-7:59)	88	19.0	71	18.9	17	19.5
Unknown	321	69.3	258	68.6	63	72.4

 $\begin{tabular}{ll} Table 10: Number and Percent of Suicide Victims tested for Alcohol and Drugs, Maryland Residents, 2008 \end{tabular}$

	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
All Suicide Deaths	463	100	376	81.2	87	18.8
Alcohol Testing						
Tested for Alcohol	398	86.0	325	86.4	73	83.9
Of those tested, positive for Alcohol	145	36.4	126	38.8	19	26.0
Of those positive for the presence of alcohol, BAC (mg/dL) levels						
>0-<0.08	55	13.9	49	15.1	6	8.3
0.08 - < 0.16	40	10.1	35	10.8	5	6.9
0.16 - < 0.24	27	6.8	24	7.4	3	4.2
>= 0.24	23	5.8	18	5.6	5	6.9
Drug Test Results						
Amphetamine Testing						
Tested for Amphetamines	347	75.0	281	74.7	66	75.9
Of those tested, positive for Amphetamines	3	0.9	3	1.1	0	0
Antidepressant Testing						
Tested for Antidepressants	347	75.0	281	74.7	66	75.9
Of those tested, positive for Antidepressants	78	22.5	51	18.2	27	40.9
Cocaine Testing						
Tested for Cocaine	347	75.0	281	74.7	66	75.9
Of those tested, positive for Cocaine	32	9.2	30	10.7	2	3.0
Opiate Testing						
Tested for Opiates	347	75.0	281	74.7	66	75.9
Of those tested, positive for Opiates	70	20.2	49	17.4	21	31.8
Testing for Other Drug(s)						
Tested for other drug(s)	348	75.2	282	75.0	66	75.9
Of those tested, positive for other drug(s)	137	39.4	97	34.4	40	60.6

Table 11: Associated Circumstances surrounding Suicides among Maryland Residents, 2008

	Total		Male		Female	
	Number	Percent 100	Number 376	Percent 81.2	Number	Percent 18.8
All Suicide Deaths	463	3.2	13		87	2.3
Unknown	15			3.5	2	
Known*:	448	96.8	363	96.5	85	97.7
Mental health and substance abuse						
Current depressed mood	131	29.2	106	29.2	25	29.4
Current mental health problem	225	50.2	163	44.9	62	72.9
Current mental health treatment	100	22.3	66	18.2	34	40.0
History of mental health treatment	218	48.7	156	43.0	62	72.9
Alcohol problem	96	21.4	85	23.4	11	12.9
Other substance abuse problem	81	18.1	69	19.0	12	14.1
Interpersonal						
Intimate partner problem	104	23.2	90	24.8	14	16.5
Other relationship problem	49	10.9	35	9.6	14	16.5
Suicide of friend or family in past 5 years	5	1.1	4	1.1	1	1.2
Other death of friend or family	41	9.2	30	8.3	11	12.9
Perpetrator of interpersonal violence past month	14	3.1	13	3.6	1	1.2
Victim of interpersonal violence past month	1	0.2	1	0.3	0	0
Suicide markers						
Left a suicide note	144	32.1	106	29.2	38	44.7
Disclosed intent to commit suicide	99	22.1	84	23.1	15	17.7
History of suicide attempt(s)	88	19.6	56	15.4	32	37.7
Life stressors						
Crisis during previous two weeks	75	16.7	68	18.7	7	8.2
Physical health problem	115	25.7	87	24.0	28	32.9
Job problem	49	10.9	41	11.3	8	9.4
School problem	3	0.7	2	0.6	1	1.2
Financial problem	56	12.5	50	13.8	6	7.1
Recent criminal legal problem	47	10.5	46	12.7	1	1.2
Other legal problems	28	6.3	24	6.6	4	4.7

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

Highlighted Findings of the Associated Circumstances

There were known circumstances in 96.8% of the suicides. Of these known circumstances;

- 225 (50.2%) victims had a current mental health problem, with only 100 (22.3%) having been currently treated for their mental health problem.
- Close to half (48.7%) of the victims had a history of mental health treatment.
- Even though 72.9% of the females had a current mental health problem, only 40% received mental health treatment currently.
- 37.7% of the females had history of suicide attempt(s) compared to 15.4% of the males.

Section 4: Deaths of Undetermined Manner among Maryland Residents, 2008

Highlighted Findings

- In 2008, MVDRS reported 627 deaths of undetermined manner among Maryland residents (rate of 11.1 per 100,000). [Table 12]
- The rate of undetermined deaths for males was 2.5 times the rate for females (16.0 and 6.5 per 100,000 population, respectively). [Table 12]
- Age-specific undetermined death rates were highest among those aged 45-54 years (23.1 per 100,000) followed by 35-44 age group (20.5 per 100,000). [Table 12]
- Whites accounted for 72.1% of undetermined deaths, and the rates were highest among whites (12.5 per 100,000 population) compared to blacks (10.2 per 100,000 population). [Table 12]
- Baltimore City residents had the highest rate of undetermined deaths followed by Washington County residents (24.8 vs. 15.8 per 100,000 population, respectively). [Figure 10]
- 78.1% 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, 93.8%. [Table 13] Of the victims of poisoning, a total of 1,022 poisons were listed as causes of death, of which 56.5% were prescription drugs.*

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

Table 12: Deaths of Undetermined Manner among Maryland Residents (Demographics), 2008

	Number	Percent	Population	Rate per 100,000
All Deaths of Undetermined Manner	627	100	5,633,597	11.1
Sex				
Male	437	69.7	2,727,323	16.0
Female	190	30.3	2,906,274	6.5
Age Group (years)				
00-09	*	0.5	732,942	**
10-14	*	0.2	366,710	**
15-19	12	1.9	407,227	**
20-24	47	7.5	377,174	12.5
25-29	48	7.7	379,506	12.7
30-34	51	8.1	351,482	14.5
35-44	169	27.0	825,237	20.5
45-54	202	32.2	875,065	23.1
55-64	84	13.4	638,689	13.2
65-74	7	1.1	365,801	**
75-84	*	0.5	221,880	**
>=85	0	0	91,884	0
Race				
White	452	72.1	3,611,787	12.5
Black	172	27.4	1,692,495	10.2
Other	*	0.5	329,315	**
Ethnicity				
Hispanic	7	1.1	375,830	**
Education				
<=8 years	35	5.6		
9-12 years	439	10.0		
13-16 years	110	17.5		
>=17 years	17	2.7		
Unknown	26	4.2		

^{*}Counts less than 6 are not reported.

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

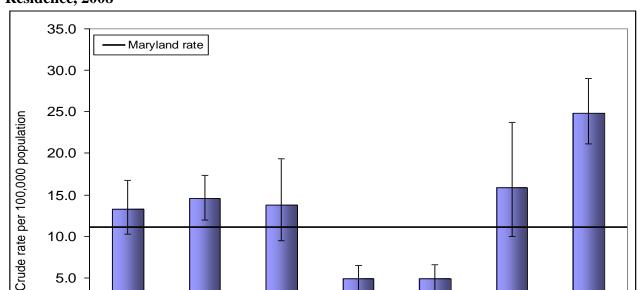


Figure 10: Death Rates of Undetermined Manner among Maryland Residents by County of Residence, 2008

**Baltimore

5.0

0.0

Anne Arundel

*Montgomery

County of Residence

*Prince

George's

Washington

**Baltimore

City

Harford

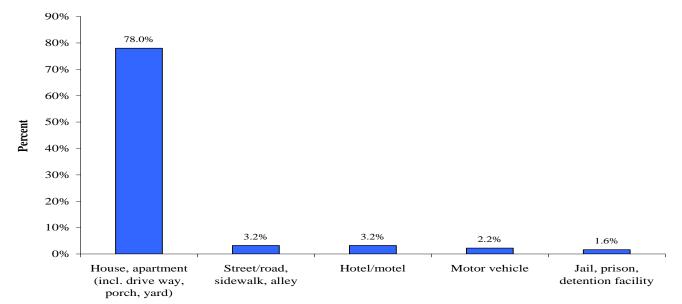
Note: Rates with counts <20 are not calculated because they are considered unstable. Therefore, the following county rates were not calculated: Allegany, Calvert, Caroline, Carroll, Cecil, Charles, Dorchester, Frederick, Garrett, Howard, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Wicomico, Worcester.

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

^{**} Counties with violent death rates statistically significantly higher than 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.

Figure 11: Top Five Locations of Deaths of Undetermined Manner among Maryland Residents, 2008 (n = 553)



Locations of Deaths of Undetermined Manner

Table 13: Top Three Methods of Deaths of Undetermined Manner among Maryland Residents, 2008

Top Three Methods of Injury	Number	Percent
Poisoning	588	93.8
Poisoning and other method type	14	2.2
Drowning	6	1.0

Figure 12. Distribution of Top Methods of Maryland Deaths of Undetermined Manner, 2008, by Gender

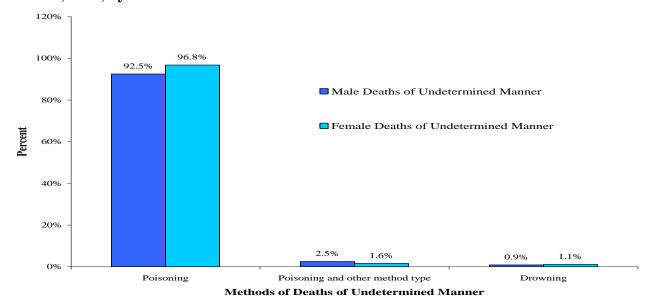


Table 14: Characteristics of Deaths of Undetermined Manner among Maryland Residents, 2008

	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
All Deaths of Undetermined Manner	627	100	437	69.7	190	30.3
EMS at the Scene						
Yes	562	89.6	393	89.9	169	89.0
Homeless						
Yes	26	4.2	25	5.7	1	0.5
Veteran Status						
Yes	50	8.0	45	10.3	5	2.6
Victim in Custody when Injured						
Yes, in jail or prison	10	1.6	9	2.1	1	0.5
Month of Injury						
January	37	5.9	30	6.9	7	3.7
February	55	8.8	42	9.6	13	6.8
March	54	8.6	36	8.2	18	9.5
April	44	7.0	34	7.8	10	5.3
May	51	8.1	27	6.2	24	12.6
June	60	9.6	44	10.1	16	8.4
July	46	7.3	37	8.5	9	4.7
August	62	9.9	46	10.5	16	8.4
September	52	8.3	31	7.1	21	11.1
October	51	8.1	37	8.5	14	7.4
November	58	9.3	39	8.9	19	10.0
December	57	9.1	34	7.8	23	12.1
Weekday of Injury						
Monday	114	18.2	81	18.5	33	17.4
Tuesday	73	11.6	44	10.1	29	15.3
Wednesday	61	9.7	42	9.6	19	10.0
Thursday	87	13.9	60	13.7	27	14.2
Friday	71	11.3	48	11.0	23	12.1
Saturday	106	16.9	78	17.9	28	14.7
Sunday	110	17.5	81	18.5	29	15.3
Unknown	5	0.8	3	0.7	2	1.1
Time of Injury						
Night (18:00 – 5:59)	55	8.8	41	9.4	14	7.4
Daytime (6:00 – 17:59)	50	8.0	35	8.0	15	7.9
Unknown	522	83.3	361	82.6	161	84.7

Table 15: Number and Percent of Undetermined Manner of Death Victims tested for Alcohol and Drugs among Maryland Residents, 2008

	Total Number	Percent	Male Number	Percent	Female Number	Percent
All Deaths of Undetermined						
Manner	627	100	437	69.7	190	30.3
Alcohol Testing						
Tested for Alcohol	612	97.6	428	97.9	184	96.8
Of those tested, positive for						
Alcohol	237	38.7	175	40.9	62	33.7
Of those positive for the						
presence of alcohol, BAC						
(mg/dL) levels		12.0		12.5		4.5.0
>0-<0.08	84	13.8	54	12.7	30	16.3
0.08 - < 0.16	63	10.3	51	12.0	12	6.5
0.16 - < 0.24	39	6.4	29	6.8	10	5.4
>= 0.24	49	8.0	40	9.4	9	4.9
Drug Test Results						
Amphetamine Testing						
Tested for Amphetamines	612	97.6	429	98.2	183	96.3
Of those tested, positive for						
Amphetamines	13	2.1	9	2.1	4	2.2
Antidepressant Testing						
Tested for Antidepressants	612	97.6	429	98.2	183	96.3
Of those tested, positive for						
Antidepressants	171	27.9	85	19.8	86	47.0
Cocaine Testing						
Tested for Cocaine	612	97.6	429	98.2	183	96.3
Of those tested, positive for						
Cocaine	183	29.9	141	32.9	42	23.0
Opiate Testing						
Tested for Opiates	613	97.8	430	98.4	183	96.3
Of those tested, positive for						
Opiates	500	81.6	349	81.2	151	82.5
Testing for Other Drug(s)						
Tested for other drug(s)	613	97.8	429	98.2	184	96.8
Of those tested, positive for						
other drug(s)	384	62.6	240	55.9	144	78.3

Table 16: Associated Circumstances surrounding Deaths of Undetermined Manner among Maryland Residents, 2008

	Total Number	Percent	Male Number	Percent	Female Number	Percent
All Deaths of Undetermined Manner	627	100	437	69.7	190	30.3
Unknown	29	4.6	17	3.9	12	6.3
Known*:	598	95.4	420	96.1	178	93.7
Mental health and substance abuse						
Current depressed mood	41	6.9	24	5.7	17	9.6
Current mental health problem	169	28.3	98	23.3	71	39.9
Current mental health treatment	83	13.9	47	11.2	36	20.2
History of mental health treatment	165	27.6	94	22.4	71	39.9
Alcohol problem	250	41.8	194	46.2	56	31.5
Other substance abuse problem	481	80.4	344	81.9	137	77.0
Interpersonal						
Intimate partner problem	33	5.5	16	3.8	17	9.6
Other relationship problem	13	2.2	6	1.4	7	3.9
Other death of friend or family	12	2.0	4	1.0	8	4.5
Suicide markers						
Left a suicide note	2	0.3	1	0.2	1	0.2
Disclosed intent to commit suicide	9	1.5	6	1.4	3	1.7
History of suicide attempt(s)	37	6.2	12	2.9	25	14.0
Life stressors						
Crisis during previous two weeks	35	5.9	20	4.8	15	8.4
Physical health problem	196	32.8	127	30.2	69	38.8
Job problem	4	0.7	3	0.7	1	0.6
Financial problem	7	1.2	2	0.5	5	2.8
Recent criminal legal problem	13	2.2	9	2.1	4	2.3
Other legal problems	10	1.7	6	1.4	4	2.3

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

Highlighted Findings of the Associated Circumstances

There were known circumstances in 95.4% of the undetermined deaths. Of these known circumstances;

- 240 (41.8%) victims had alcohol problems and 481 (80.4%) had other substance abuse problems
- 25 (14%) of the females had a history of suicide attempt(s).
- 196 (32.8%) 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 a 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.