

# DATA BRIEF: VIOLENT DEATHS IN MASSACHUSETTS Surveillance Update, 2015

Massachusetts Violent Death Reporting System – MAVDRS Massachusetts Department of Public Health

Spring 2019

# Violent deaths in Massachusetts represent a serious, but preventable public health problem.

In 2015, there were 835 violent deaths that occurred in Massachusetts. The majority of these deaths were suicides (76%), followed by homicides (17%), and deaths of undetermined intent (6%). This information was collected by the Massachusetts Violent Death Reporting System (MAVDRS) at the MA Department of Public Health. The data not only identifies the 835 violent deaths, but multi-victim incidents as well. These include six homicide/suicide incidents, five multiple homicide incidents, one suicide/undetermined incident, and one homicide/legal intervention incident. Other unique characteristics provided by MAVDRS include circumstances surrounding each death or incident, toxicology of the victims, weapons used, and many other pertinent variables. This Surveillance Update of the 2015 violent deaths in Massachusetts provides communities with a clearer understanding of these serious, but preventable deaths.

Table 1. Violent Death Number and Age-adjusted Rate in MA and U.S. Age-adjusted Rate, 2015				
Intent	MA N	MA Rate/ 100,0001	US Rate/ 100,000 <sup>2</sup>	
Suicide	631	9.3	13.3	
Homicide	146	2.1	5.6	
Undetermined	49	0.7	1.5	
Legal Intervention <sup>3</sup>	8	0.1	0.2	
Unintentional Firearm	1		0.2	
Total	835	12.3	20.8	

 $^1\,\rm Rates$  are not calculated on numbers less than six and are considered unstable for counts less than 20. Rates are age-adjusted on this table only.

 $^2$  The U.S. age-adjusted rate was accessed from the Centers of Disease Control and Prevention, National Center for Injury Prevention and Control's Web-based Injury Statistics

Query and Reporting System (WISQARS). <sup>3</sup>There were two additional deaths that were identified as legal intervention by abstractorassigned manner but were not assigned a legal intervention ICD-10 code. These two cases are included in the total number and rate of homicides.

The CDC defines a violent death

as a death that results from the intentional use of physical force or power against oneself, another person, or a group or community. Violent deaths include suicides, homicides, deaths due to legal intervention (excluding executions), deaths of undetermined intent, and firearmrelated deaths regardless of intent.

### Of the 835 Violent Deaths in MA in 2015:

- 76% were suicides.
- 17% were homicides.
- 6% were deaths of undetermined intent.
- 1% were legal intervention deaths.
- Less than 1% were unintentional firearm deaths.

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- > Suicides:

Demographics, Method Types, Circumstances, Toxicology

- Homicides: Demographics, Weapons, Circumstances, Victim-Suspect Relationships
- > Deaths of Undetermined Intent: Demographics, Toxicology
- > And other variables

Table 2: Violent Death Demographics, MA 2015				
	N	Percent <sup>1</sup>	Rate per 100,000 <sup>2</sup>	
Intent				
Suicide	631	75.6	9.3	
Homicide	146	17.5	2.2	
Undetermined	49	5.9	0.7	
Legal Intervention <sup>3</sup>	8	1.0	0.1	
Unintentional Firearm	1	0.1		
Sex				
Male	620	74.3	18.8	
Female	215	25.7	6.2	
Race/Ethnicity				
White, non-Hispanic	645	77.2	12.8	
Black, non-Hispanic	94	11.3	18.7	
Asian, non-Hispanic	20	2.4	4.4	
Hispanic	71	8.5	9.4	
Other race/ethnicity <sup>4</sup>	5	0.6		
Age Group				
0-14	8	1.0	0.7	
15-24	126	15.1	13.2	
25-34	164	19.6	17.4	
35-44	122	14.6	14.7	
45-54	183	21.9	18.8	
55-64	130	15.6	14.4	
65-74	56	6.7	9.5	
75-84	31	3.7	10.4	
85+	15	1.8	9.5	
Total	835	100.0	12.3	

- The youngest victim of a violent death was 2 years old and the oldest victim was 100 years old.
- The mean age of all victims was 43.9 years old and the median age was 44 years old.
- 13 victims of a violent death were known to be homeless.
- 33 victims were fatally injured while in custody, such as in a jail or prison. A victim is also considered in custody if he or she is under arrest or injured prior to arrest.
- There were eight legal intervention deaths that were assigned a legal intervention ICD-10 code (depicted on Table 2). However, there were two additional deaths that were identified as legal intervention by *abstractor-assigned manner*<sup>5</sup>. These two cases are included in the total number and rate of homicides.
- There were 75 veterans who were victims of a violent death.
- 11 victims of a violent death were fatally injured at their workplace.

#### The National Violent Death Reporting System

To understand the complex circumstances surrounding violent deaths, the Centers for Disease Control and Prevention (CDC) developed a standardized database: the National Violent Death Reporting System (NVDRS). This unique system includes data not captured in other databases by linking information from multiple sources such as death certificates, medical examiner records, toxicology reports, and law enforcement records. Individually, these sources explain violence only in a narrow context; but together, they provide comprehensive answers to the questions that surround violent death. MAVDRS has been collecting data on violent deaths since 2003.

<sup>&</sup>lt;sup>1</sup> Percents may not add up to 100 due to rounding.

<sup>&</sup>lt;sup>2</sup> Rates were not calculated for counts less than six and are considered unstable for counts less than 20.

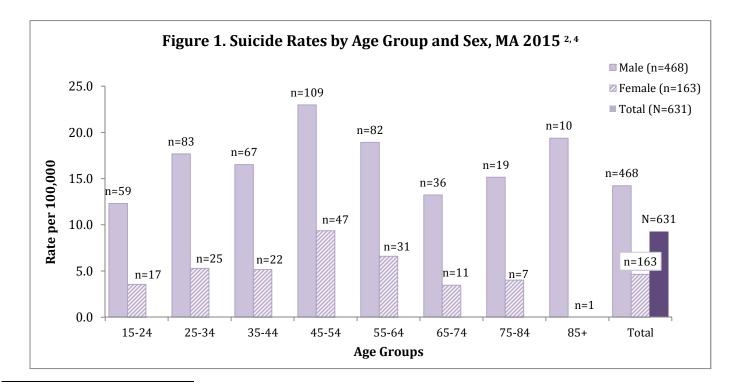
<sup>&</sup>lt;sup>3</sup> There were two additional deaths that were identified as legal intervention by abstractor-assigned manner but were not assigned a legal intervention ICD-10 code. These two cases are included in the total number and rate of homicides.

<sup>&</sup>lt;sup>4</sup> Rates for other race/ethnicity were not calculated due to lack of denominator information.

<sup>&</sup>lt;sup>5</sup> The "abstractor-assigned manner" is a manner of death that is assigned by the abstractor based on reading the death certificate, medical examiner reports, and law enforcement information about the death, as well as applying the NVDRS case definition.

Table 3: Suicide Demographics, MA 2015					
	N	<b>Percent</b> <sup>1</sup>	Rate per 100,000 <sup>2</sup>		
Sex					
Male	468	74.2	14.2		
Female	163	25.8	4.7		
Race/Ethnicity					
White, non-Hispanic	552	87.5	10.9		
Black, non-Hispanic	32	5.1	6.4		
Asian, non-Hispanic	18	2.9	4.0		
Hispanic	26	4.1	3.4		
Other race/ethnicity <sup>3</sup>	3	0.5			
Age Group					
0-14	5	0.8			
15-24	76	12.0	8.0		
25-34	108	17.1	11.5		
35-44	89	14.1	10.7		
45-54	156	24.7	16.0		
55-64	113	17.9	12.5		
65-74	47	7.4	8.0		
75-84	26	4.1	8.7		
85+	11	1.7	7.0		
Total	631	100.0	9.3		

- Male rates of suicides were 3 times higher than female rates.
- The youngest victim of suicide was 10 years old and the oldest victim was 100 years old.
- The mean age was 46.0 and the median age was 47.0 years old.
- 57 percent of suicides were among individuals aged 35 to 64 years old (n=358).
- 67 veterans died by suicide. This accounted for 89% of the total violent deaths among veterans.
- 19 victims were in custody, such as a jail or prison. A victim is also considered "in custody" if he or she is under arrest or injured prior to arrest.
- Five suicide victims were fatally injured at their workplace.



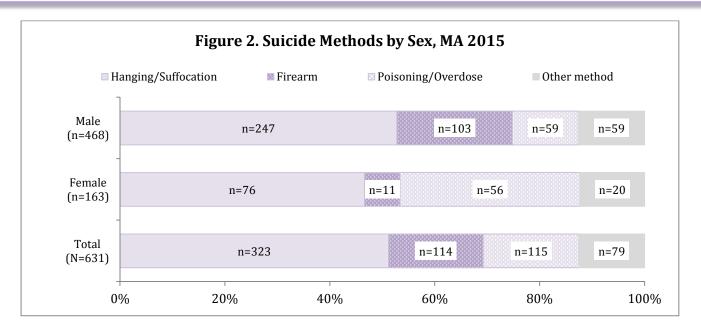
<sup>1</sup> Percents may not add up to 100 due to rounding.

<u>\*The 0-14 age group (n=5) is not depicted in Figure 1, but is included in the total number and rate.</u> DATA BRIEF: MASSACHUSETTS VIOLENT DEATH SURVEILLANCE REPORT 2015

<sup>&</sup>lt;sup>2</sup> Rates were not calculated for counts less than six and are considered unstable for counts less than 20.

 $<sup>^{\</sup>rm 3}$  Rates for other race/ethnicity were not calculated due to lack of denominator information.

# SUICIDES Methods Used in Suicides



- The most common method of suicide was hanging/suffocation (51%, n=323).
- The second and third leading methods of suicide were similar: firearm (18%, n=114) and poisoning/drug overdoses, also18%, n=115.
- Methods of suicide also varied by age group: hanging/suffocation was the most common method through age 64. Firearm was the most common method among those 65 and over.

## LOCATIONS WHERE SUICIDES OCCUR

#### **County of Injury**

These counties had the highest **rates** of suicide: Barnstable (16.3/100,000, n=35) Hampshire (14.9/100,000, n=24) Franklin (14.2/100,000, n=10)

These counties had the highest **numbers** of suicide:

Middlesex (n=125, 7.9/100,000) Worcester (n=94, 11.5/100,000) Bristol (n=69, 12.4/100,000)

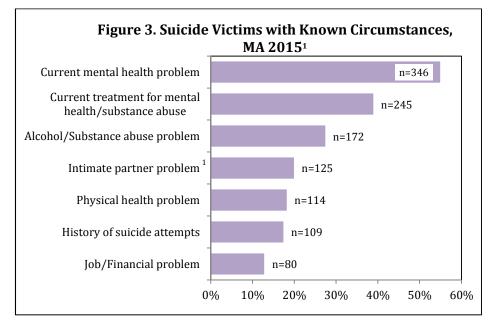
#### **City of Injury**

The cities (50,000+) with the highest **rates** of suicides were: Taunton (19.4/100,000, n=11) Fall River (15.7/100,000, n=14) Cambridge (13.7/100,000, n=15)

These cities had the highest **numbers** of suicide: Boston (n=46, 6.9/100,000) Worcester (n=23, 12.5/100,000) Cambridge (n=15, 13.7/100,000)

#### **Places Where Suicides Occur**

- The majority of suicides (74%, n=466) occurred in a house, apartment, or in its surroundings (yard, porch, driveway).
- Approximately 7% (n=41) of suicides occurred in a natural area (e.g., field, river, beaches, woods).
- Approximately 4% (n=24) of suicides occurred in a motor vehicle. Location type is classified as motor vehicle regardless of where the motor vehicle is located.

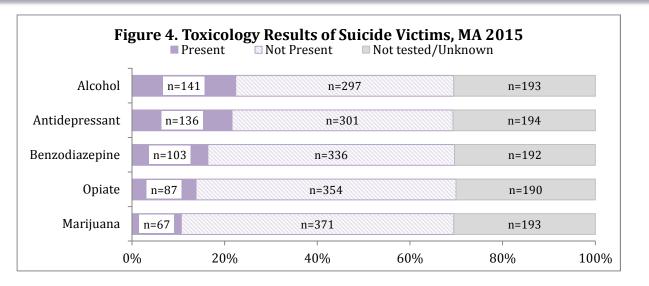


SUICIDES SUICIDE CIRCUMSTANCES

Of the 631 suicides, circumstance information was available for 94% (n=592) of victims. Of suicide victims:

- 55% were known to have a current mental health problem.
- 39% were currently being treated for a mental health or substance abuse problem.
- A larger percentage of females than males were reported to have the following circumstances: history of suicide attempts, a current mental health problem, treatment for a mental health disorder, or a physical health problem.
- A larger percentage of males than females were reported to have the following circumstances: alcohol/substance problem, financial/job problem, or an intimate partner problem.<sup>2</sup>

## TOXICOLOGY OF SUICIDE VICTIMS



Of the 631 suicide victims, approximately 70% (n=441) were tested for alcohol, antidepressants, cocaine, opiates, and/or marijuana; of those tested, 70% (n=308) had positive results for at least one of those substances.

- Of the suicide victims who were tested, 31% tested positive for an antidepressant at the time of their death (n=136).
- Among the suicide victims who had a positive test result for alcohol, 72% had a blood alcohol concentration (BAC) of 0.041 or higher (n=102). Eighty-three (n=85) percent of those victims had a BAC of 0.08.<sup>3</sup>

<sup>3</sup> Caution should be used when interpreting BAC due to variation in time among ingestion of alcohol, time of death, and drawing of blood for testing which will affect the outcome of the test. BAC of 0.04% or less could be due to decomposition rather than ingestion of alcohol.

<sup>&</sup>lt;sup>1</sup> Circumstances are not mutually exclusive and will not add up to 100.

<sup>&</sup>lt;sup>2</sup> Intimate partner problem refers to problems with a current or former intimate partner which appear to have contributed to the suicide such as divorce, breakup, argument, jealousy, violence in the relationship, etc.

Table 4. Homicide Demographics, MA 2015				
	N	Percent <sup>1</sup>	Rate/ 100,000 <sup>2</sup>	
Sex				
Male	114	78.1	3.5	
Female	32	21.9	0.9	
Race/Ethnicity				
White, non-Hispanic	45	30.8	0.9	
Black, non-Hispanic	60	41.1	12.0	
Asian, non-Hispanic	2	1.4		
Hispanic	38	26.0	5.0	
Other race/ethnicity <sup>3</sup>	1	0.7		
Age Group				
0-14	3	2.1		
15-24	48	32.9	5.0	
25-34	48	32.9	5.1	
35-44	22	15.1	2.6	
45-54	8	5.5	0.8	
55-64	6	4.1	0.7	
65-74	6	4.1	1.0	
75-84	5	3.4		
85+	0	0.0	0.0	
Total	146	100.0	2.2	

- The male rate of homicide was almost four times higher than the female rate.
- The youngest victim of a homicide was two years old and the oldest victim was 82 years old.
- The mean age was 32.5 and the median age was 28 years old for homicide victims.
- There were three veterans who were victims of homicide.
- Two victims were fatally injured while in custody, such as in a jail or prison. A victim is also considered "in custody" if he or she is under arrest or injured prior to arrest.
- Black, non-Hispanics accounted for 41% of homicide victims (n=60), although they make up only 7% of the Massachusetts population.
- Hispanics accounted for approximately 26% of homicide victims (n=38) although they make up only 11% of the Massachusetts population.

Table 5. Homicides by Race/Ethnicity and Sex, MA 2015						
	Male			Female		
	N	Percent <sup>1</sup>	Rate per 100,000 <sup>2</sup>	N	Percent <sup>1</sup>	Rate per 100,000 <sup>2</sup>
White, non-Hispanic	25	21.9	1.0	20	62.5	0.8
Black, non-Hispanic	53	46.5	21.7	7	21.9	2.7
Asian, non-Hispanic	1	0.9		1	3.1	
Hispanic	34	29.8	9.0	4	12.5	
Other race/ethnicity <sup>3</sup>	1	0.9		0	0.0	0.0
Total	114	100.0	3.5	32	100.0	0.9

- Black, non-Hispanics had the **highest** homicide victimization rate among males (21.7/100,000).
- White, non-Hispanics had the **lowest** homicide victimization rate for both males and females (1.0/100,000 and 0.8/100,000, respectively).

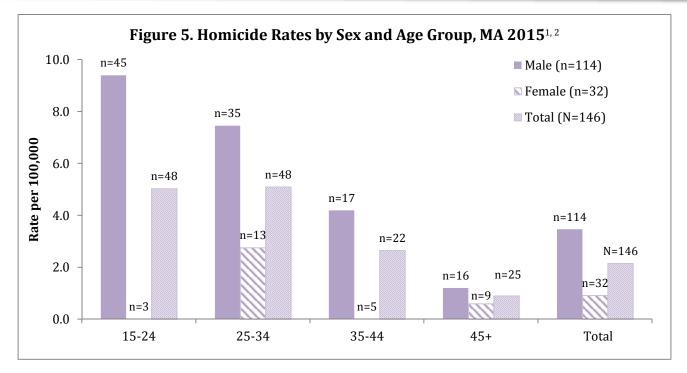
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<sup>&</sup>lt;sup>2</sup> Rates were not calculated for counts less than six and are considered unstable for counts less than 20.

<sup>&</sup>lt;sup>3</sup> Rates for other race/ethnicity were not calculated due to lack of denominator information.

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# HOMICIDES Age Group and Sex



- The highest homicide rates by age group was among 25-34 year olds (5.1/100,000, n=48) and 15-24 year olds (5.0/100,000, n=48). The rate for both these age groups was **twice** the overall statewide rate of 2.2/100,000.
- The highest **male** homicide rates by age group were among 15-24 year olds (9.4/100,00, n=45) and 25-34 year olds (7.5/100,00, n=35). The rates for both these age groups was over **twice** the male statewide rate of 3.5/100,000 and **three and a half times higher** than the overall statewide rate of 2.2/100,000.
- For **females**, rates for only two age groups were able to be calculated: 25-34 (2.8/100,000, n=13) and 45+ (0.6/100,000, n= 9). The overall rate for female homicide was 0.9/100,000 (n=32).

## **BIRTH COUNTRY OF HOMICIDE VICTIMS**

- 88% of victims were born in the U.S.
- 60% of victims were born in Massachusetts.
- 8% of victims were born in Mexico, Central America, South America, or the Caribbean.
- 4% of victims were born in other countries including Australia, Cabo Verde, China, and United Kingdom.

Table 6: Birth Country of Homicide Victims, MA 2015			
Victim's Country of Birth	Ν	Percent <sup>3</sup>	
U.S. States and Territories	128	88%	
Mexico, Central America, South America, and the Caribbean	12	8%	
Other countries/unknown	6	4%	

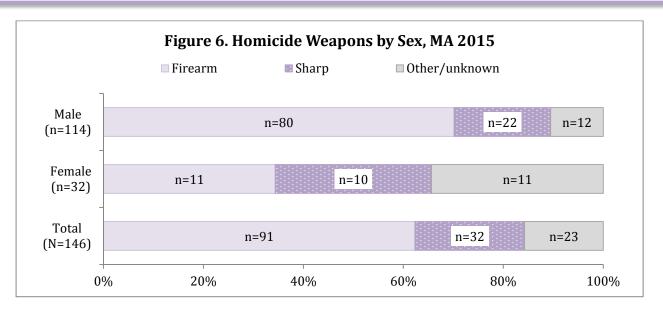
<sup>&</sup>lt;sup>1</sup> Rates were not calculated for counts less than six and are considered unstable for counts less than 20.

<sup>&</sup>lt;sup>2</sup> The 0-14 age group (n=3) is not depicted in Figure 5, but is included in the total number and rate. Ages 45+ were combined due to low numbers.

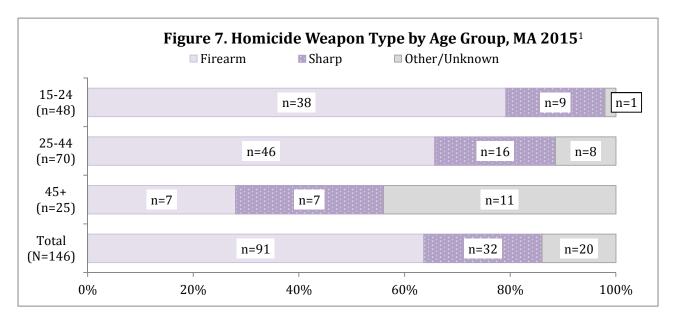
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# HOMICIDES WEAPONS USED IN HOMICIDES



- Across the state, firearms were the most commonly used weapon in homicides (62%, n=91).
- Of those firearm deaths, most (86%, n=78) had information regarding the type of firearm. Handguns (which include semi-automatic pistols and revolvers) were the most prevalent type of firearm used (99%, n=77).
- Other weapons include blunt instrument, sharp instrument, fire/burns, hanging/suffocation, non-powder guns, personal weapons, and unknown weapons.



• A majority (79%) of the homicide victims in the 15-24 age group and 25-44 (66%) were killed by firearms.

<sup>&</sup>lt;sup>1</sup> There were three homicides in the 0-14 age range not depicted on Figure 7, but is included in the total number.

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Table 7: Homicides by County of Injury, MA 2015				
County	N	Percent <sup>1</sup>	Rate/ 100,000 <sup>2</sup>	
Barnstable	3	2.2		
Berkshire	3	2.2		
Bristol	9	6.6	1.6	
Dukes	0	0.0	0.0	
Essex	16	11.7	2.1	
Franklin	0	0.0	0.0	
Hampden	23	16.8	4.9	
Hampshire	0	0.0	0.0	
Middlesex	14	10.2	0.9	
Nantucket	0	0.0	0.0	
Norfolk	2	1.5		
Plymouth	11	8.0	2.2	
Suffolk	45	32.8	5.8	
Worcester	11	8.0	1.3	
Total MA	137	100.0	2.0	
Out of State	9			
Total	146			

- Accounting for 33% of homicides, Suffolk County had the highest number (n=45) as well as the highest rate (5.8/100,000). This rate is three times higher than the state rate of 2.0/100,000.
- Four counties' rates were higher than the state rate: Suffolk, Hampden, Plymouth, and Essex.
- The cities with the highest rate of homicide were Springfield (13.0/100,000, n=20), Brockton (9.4/100,000, n=9) and Boston (6.2/100,000 n=41).
- The majority of homicides (35%, n=51) occurred on a street/road, sidewalk, or alley.
- Thirty-four percent (n=50) occurred in a place of residence.

Table 8: Known Circumstances associated with HomicideVictims, MA 2015			
Total Number of Homicides 146			
Number of Homicides with Circumstance Information			
Circumstances	Ν	Percent <sup>3</sup>	
Precipitated by another crime	42	29%	
Precipitated crime was in progress at time of homicide	36	86%	
Argument/conflict	46	32%	
Gang-related	37	25%	
Drug-related	26	18%	
Intimate partner violence-related	22	15%	

## HOMICIDE CIRCUMSTANCES

# *Of the homicide victims, at least one circumstance was known for 95% of victims (n=139).*

- Thirty-two percent of homicides were precipitated by an argument/conflict.
- Twenty-nine percent were precipitated by another crime. These crimes include:
  - o robbery/burglary (n=21)
  - $\circ$  drug trade (n=16)
  - $\circ$  other (n=19)
- The most frequently noted circumstance for **males** was argument (33%, n=38).
- The most frequently noted circumstance for **females** was intimate partner violence-related (44%, n=14).
- About 20% of homicide victims (n=29) were noted to have an alcohol or substance abuse problem (not depicted on table).

<sup>3</sup> Circumstances are not mutually exclusive and will not add up to 100%.

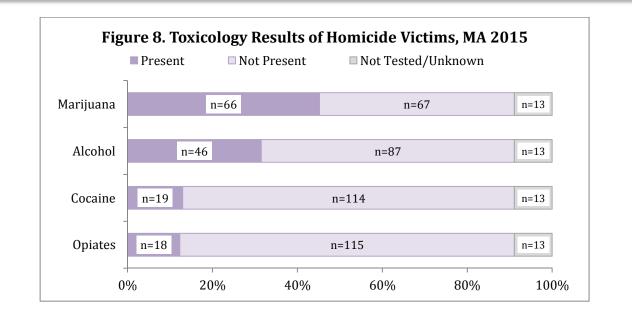
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# HOMICIDES VICTIM-SUSPECT RELATIONSHIP IN HOMICIDE INCIDENTS

- Among homicide victims, there were 125 homicide victims with suspect information available such as suspect demographics. Of these victims, 78% (n=97) involved one suspect and 22% (n=28) involved muliple suspects.
- There were 114 known relationships between the victim and suspect. *In the majority of these cases (n=97, 85%), the victim and suspect were known to each other.* Of these identified suspects:
  - $\circ$  14% (n=16) were a current or former intimate partner.
  - $\circ$  5% (n=6) of suspects were a family member or a caregiver of the victim (including the boyfriend of a child's mother but is not the father of the child).
  - $\circ$  66% (n=75) of suspects were someone else known to the victim.



## **TOXICOLOGY OF HOMICIDE VICTIMS**

- Among the 146 homicide victims, approximately 91% of victims (n=133) were tested for marijuana, opiates, cocaine, and/or alcohol (blood alcohol concentration- BAC).
- Fifty-percent (n=66) of homicide victims had marijuana in their system at their time of death, 35% (n=46) tested positive for alcohol, 14% (n=18) tested positive for opiates, and 14% of homicide victims (n=19) tested positive for cocaine.
- Among the homicide victims who tested positive for alcohol, 65% had a BAC of 0.041 or higher.<sup>1</sup>
- Fifty-seven percent of homicide victims who were positive for alcohol had a BAC result of 0.08 or over (n=26). Of those, the majority of victims (85%) were between the ages of 21 and 44 (n=22).

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<sup>&</sup>lt;sup>1</sup> Caution should be used when interpreting BAC due to variation in time among ingestion of alcohol, time of death, and drawing of blood for testing which will affect the outcome of the test. BAC of 0.04% or less could be due to decomposition rather than ingestion of alcohol.

Table 9: Deaths of Undetermined Intent Demographics, MA 2015				
	N	Percent <sup>1</sup>	Rate/ 100,000 <sup>2</sup>	
Sex				
Male	29	59.2	0.9	
Female	20	40.8	0.6	
Race/Ethnicity				
White, non-Hispanic	44	89.8	0.9	
Black, non-Hispanic	0	0.0	0.0	
Asian, non-Hispanic	0	0.0	0.0	
Hispanic	4	8.2		
Other race/ethnicity <sup>3</sup>	1	2.0		
Age Group				
0-14	0	0.0	0.0	
15-24	0	0.0	0.0	
25-34	6	12.2	0.6	
35-44	8	16.3	1.0	
45-54	17	34.7	1.7	
55-64	11	22.4	1.2	
65-74	3	6.1		
75-84	0	0.0	0.0	
85+	4	8.2		
Total	49	100.0	0.7	

- The youngest undetermined intent victim was 25 years old and the oldest victim was 95 years old.
- The mean age was 52.2 years old and the median age was 51 years old.
- Approximately 86% (n=42) victims were between the ages of 25-64 years old.

## WEAPON TYPES OF UNDETERMINED INTENT DEATH VICTIMS

- Poisonings (drug overdoses) accounted for the most (47%) deaths of undetermined intent across the state (n=23). It was the leading weapon type for both males (38%, n=11) and females (60%, n=12).
- Other weapons for undetermined intent deaths include drowning (16%, n=8) and fire/burns (10%, n=5). Blunt instruments, falls, firearms, and motor vehicles were also weapons involved in deaths of undetermined intent.

#### **TOXICOLOGY OF UNDETERMINED INTENT DEATH VICTIMS**

- Of the 49 undetermined intent victims, 86% (n=42) were tested for alcohol, cocaine, opiates, marijuana, and/or antidepressants.
- Approximately 29% of victims had positive test results for alcohol (n=12), 38% for opiates (n=16), 38% for benzodiazepines (n=16) and 33% for antidepressants (n=14).

<sup>&</sup>lt;sup>1</sup> Percents may not add up to 100 due to rounding.

<sup>&</sup>lt;sup>2</sup> Rates were not calculated for counts less than six and are considered unstable for counts less than 20.

<sup>&</sup>lt;sup>3</sup> Rates for other race/ethnicity were not calculated due to lack of denominator information.

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# **MAVDRS METHODOLOGY**

The National Violent Death Reporting System (NVDRS) is a CDC-funded system in 40 states, the District of Colombia, and Puerto Rico that links data from death certificates, medical examiner files, and police reports to provide a more complete picture of the circumstances surrounding violent deaths. MAVDRS operates within the Injury Surveillance Program (ISP) at the MA Department of Public Health (DPH). MAVDRS captures all violent deaths (homicides, suicides, deaths of undetermined intent, and all firearm deaths) occurring in MA and has been collecting data since 2003. Data reported are for calendar year and were analyzed by ICD-10 code and is used to establish the final database for all cases meeting the NVDRS case definition.

#### RATES

Rates were not calculated for counts less than six and are considered unstable for counts less than 20. Rates for other/unknown race were not calculated due to lack of denominator information. In calculating rates for race, Hispanic origin, sex, age group, and county, 2015 population estimates were used from the National Center for Health Statistics vintage 2015 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010-July 1, 2015), by year, county, single-year of age (0, 1, 2, ..., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: <a href="http://www.cdc.gov/nchs/nvss/bridged">http://www.cdc.gov/nchs/nvss/bridged</a> race.htmas of June 8, 2016, following release by the U.S. Census Bureau of the unbridged Vintage 2015 postcensal estimates by 5-year age group on June 8, 2016.

City/town rates are calculated using Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2015 U.S. Census Bureau, Population Division, Release Dates: For the United States, regions, divisions, states, and Puerto Rico Commonwealth, December 2015. For counties, municipios, metropolitan statistical areas, micropolitan statistical areas, metropolitan divisions, and combined statistical areas, March 2015. For Cities and Towns (Incorporated Places and Minor Civil Divisions), May 2016. <u>https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk</u>

Rates for educational attainment and marital status were calculated using the American Community Survey.

U.S. injury rates and U.S. popuation were accessed from Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) available from: http://www.cdc.gov/injury/wisqars/index.html

# MAVDRS

#### Massachusetts Violent Death Reporting System

Injury Surveillance Program (ISP)

Bureau of Community Health and Prevention (BCHAP) Massachusetts Department of Public Health (DPH) 250 Washington Street, 4th Floor Boston, MA 02108 (617) 624 – 5664 For general injury information: (617) 624 – 5648

https://www.mass.gov/injury-surveillance-program

More information regarding NVDRS and the CDC can be found at: www.cdc.gov/ViolencePrevention/NVDRS/index.html

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