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Department of Public Health
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**CHARLES D. BAKER**
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Lieutenant Governor

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December 29, 2015

Steven T. James
House Clerk
State House Room 145
Boston, MA 02133

William F. Welch
Senate Clerk
State House Room 335
Boston, MA 02133

Dear Mr. Clerk,

Pursuant to Section 232 of Chapter 111 of the Massachusetts General Laws, please find enclosed a report from the Department of Public Health entitled the "*Suicides in Massachusetts: Data Report.*"

Sincerely,

Monica Bharel, MD, MPH
Commissioner
Department of Public Health

**Charles D. Baker**
Governor

**Karyn Polito**
Lieutenant Governor

**Marylou Sudders**
Secretary

**Monica Bharel, MD, MPH**
Commissioner

# Suicides in Massachusetts: 2013 Data Report

**December 2015**

Massachusetts Department of Public Health

## Legislative Mandate

The following report is hereby issued pursuant to Section 232 of Chapter 111 of the Massachusetts General Laws as follows:

Chapter 111 Massachusetts General Laws, Section 232

*The department, in consultation with the executive office of public safety and security shall, subject to appropriation, collect, record and analyze data on all suicides in the commonwealth. Data collected for each incident shall include, to the extent possible and with respect to all applicable privacy protection laws, the following: (i) the means of the suicide; (ii) the source of the means of the suicide; (iii) the length of time between purchase of the means and the death of the decedent; (iv) the relationship of the owner of the means to the decedent; (v) whether the means was legally obtained and owned pursuant to the laws of the commonwealth; (vi) a record of past suicide attempts by the decedent; and (vii) a record of past mental health treatment of the decedent.*

*The department shall annually submit a report, which shall include aggregate data collected for the preceding calendar year and the department's analysis, with the clerks of the house of representatives and the senate and the executive office of public safety and security not later than December 31. Names, addresses or other identifying factors shall not be included.*

*The commissioner shall work in conjunction with the offices and agencies in custody of the data listed in this section to facilitate collection of the data and to ensure that data sharing mechanisms are in compliance with all applicable laws relating to privacy protection. Data collected and held by the department to complete the report pursuant to this section shall not be subject to section 10 of chapter 66 and clause Twenty-sixth of section 7 of chapter.*

## Executive Summary

Section 232 of Chapter 111 of the Massachusetts General Laws tasked the Massachusetts Department of Public Health (DPH) with collecting, recording and analyzing data on all suicides in the Commonwealth and submitting an annual report.

The department analyzed data collected on suicides for 2013 and found the following:

- In 2013, 585 suicides occurred in Massachusetts. This number was greater than the number of deaths due to motor vehicles (N=326) and homicides (N=148) combined.
- The rate of suicides was 8.7/100,000 persons. This rate has increased an average of 3.6% per year since 2003. There were approximately 38% more suicides in 2013 than in 2003.
- The majority (76%) of suicide victims were male. However, rates for both males and females have increased since 2003.
- The majority of suicides that occurred in 2013 were among individuals 35-64 years old (N=334, 57%).
- The most prevalent means of suicide for males were hanging/suffocation (50%) and firearm (26%), which combined accounted for 76% of male suicides.
- For females, the most prevalent means of suicide were hanging/suffocation (45%) and poisoning/overdose (41%), which combined accounted for 86% of female suicides.
- Males (N=110) accounted for 96% of firearm suicides (N=115). Handguns (N=86, 75%) were the most common type of firearm used in suicides.
- For poisoning suicides, opiates (N=54, 21%) and antidepressants (N=53, 20%) were the most common classes of drugs used.
- 34% of female suicide victims (N=53) and 17% of male suicide victims (N=73) were known to have a prior suicide attempt.
- 63% of female suicide victims (N=99) and 27% of male suicide victims were known to have a history of treatment for a mental health or substance abuse problem.

## Introduction

In 2014 the Legislature passed Chapter 284 of the Acts of 2014: An Act to reduce gun violence. This law included a requirement for the Massachusetts Department of Public Health (DPH) to collect, record and analyze data on all suicides in the Commonwealth and to include the following information on each incident to the extent possible: (i) the means of the suicide; (ii) the source of the means of the suicide; (iii) the length of time between purchase of the means and the death of the decedent; (iv) the relationship of the owner of the means to the decedent; (v) whether the means was legally obtained and owned pursuant to the laws of the Commonwealth; (vi) a record of past suicide attempts by the decedent; and (vii) a record of past mental health treatment of the decedent.

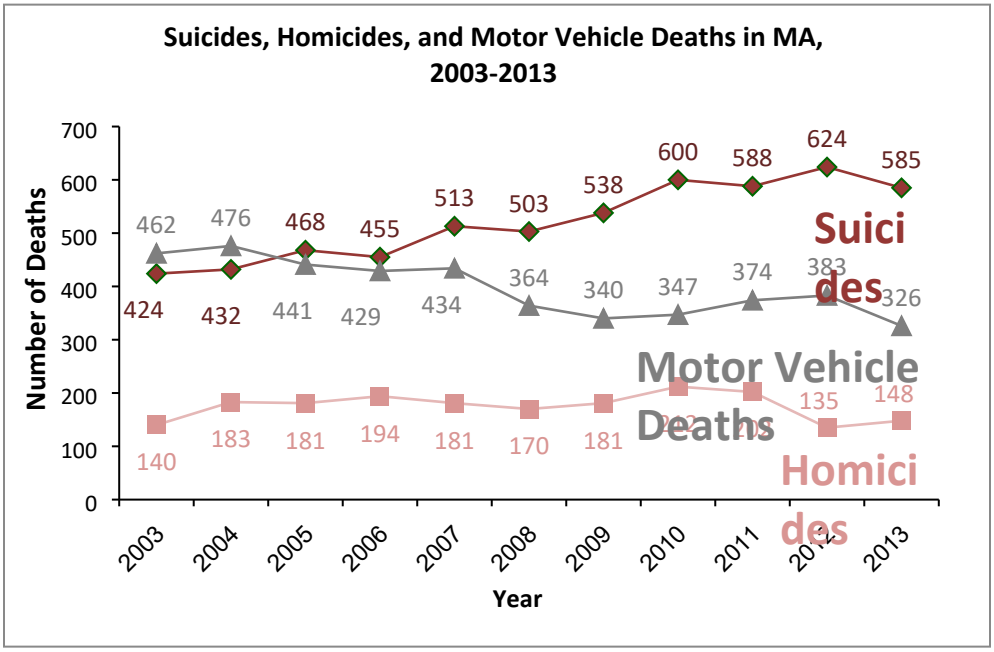
DPH currently has two data surveillance systems that capture information on suicides. The first system is the mortality data collected by the Registry of Vital Records and Statistics (RVRS) and the second is the Massachusetts Violent Death Reporting System (MAVDRS). The data used in this report is from MAVDRS. MAVDRS combines the death certificate information from RVRS with other data sources and contains more detailed information. The additional information included in MAVDRS makes it better suited for use in this report.

MAVDRS is housed in the Injury Surveillance Program (ISP) in the Office of Statistics & Evaluation (OSE) in the Bureau of Community Health & Prevention (BCHAP) at DPH. MAVDRS began collecting data on all homicides, suicides, deaths of undetermined intent, unintentional firearm deaths and legal intervention deaths that occurred in the Commonwealth starting in 2003. MAVDRS is a part of the National Violent Death Reporting System (NVDRS) and is funded by the Centers for Disease Control and Prevention (CDC). The data is collected from death certificates, medical examiner files, toxicology reports, hospital records, and police reports. The software, variables and coding guidance are standardized by CDC across all funded states. The data contained in this report is for 2013, the latest year available. Due to the extensive information collected, CDC allows eighteen months after the end of the data year for data completion.

The data in this report was collected prior to the passage of the legislation and therefore, does not contain all information described in the legislation. MAVDRS has been working with current data partners, which include the Registry of Vital Records and Statistics (RVRS), the Office of the Chief Medical Examiner (OCME), the Massachusetts State Police (MSP) and the Boston Police Department (BPD), as well as new partners like the Executive Office of Public Safety and Security (EOPSS) to work on obtaining additional data elements as well as improving upon the quality of data currently collected.

## Suicide Data 2013

From January 1st 2013 to December 31st 2013, there were 585 suicides (8.7/100,000) that occurred in the Commonwealth of Massachusetts. Of the 585 suicide deaths, 427 of the victims were male (13.2/100,000, 76%) and 158 victims were female (4.6/100,000, 24%).




Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health; Fatality Analysis Reporting System, National Highway Traffic Safety Administration

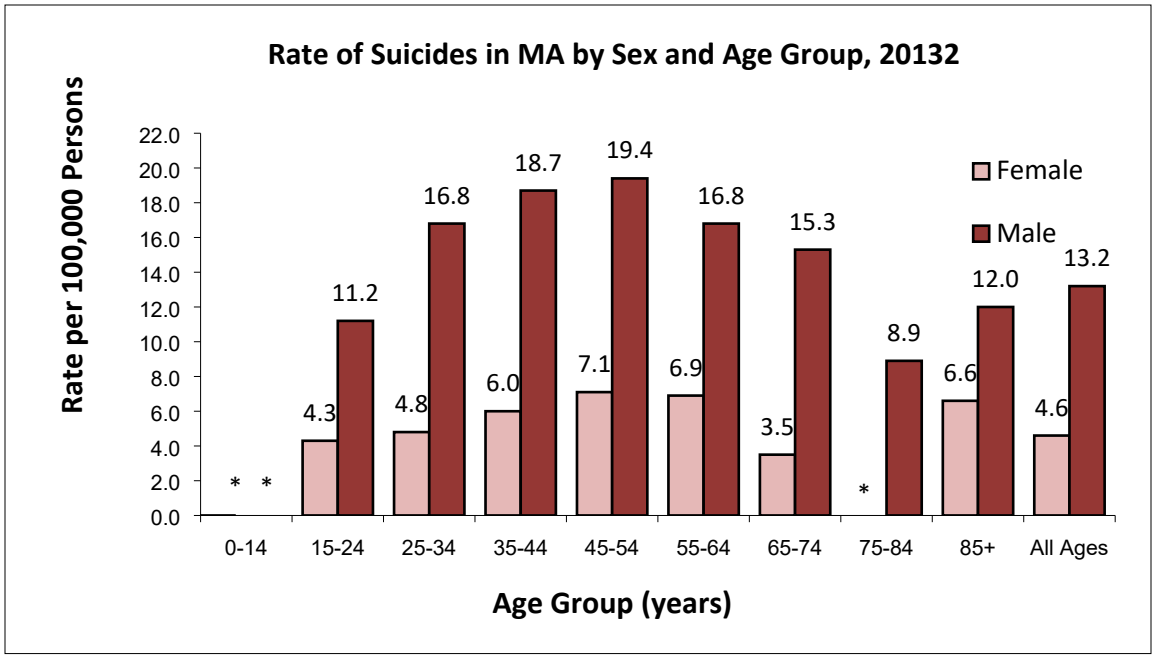
- The number of suicide deaths was almost two times higher than the number of motor vehicle traffic-related deaths (N=326) and almost four times higher than homicides (N=148) in 2013.

- Massachusetts has lower rates of suicides compared to the rest of the U.S. The age-adjusted rate for the U.S in 2013 was 12.6/100,000. [1]

- Suicide rates increased an average of 3.6% per year. There were approximately 38% more suicides in 2013 than in 2003. This increase mirrors an increase in the U.S. age-adjusted suicides rates, which increased an average of 1.8% per year since 2003. [1]

- While the majority of deaths by suicide occurred in males, there has been a steady increase in the rate of suicides in both sexes between 2003 and 2013. The rate of suicides in males increased 29% from 2003 to 2013; in females, the rate increased 44%.

[1] Source: Centers for Disease Control and Prevention, WISQARS – Fatal Injuries Report, 1993-2013, for National, Regional, and States



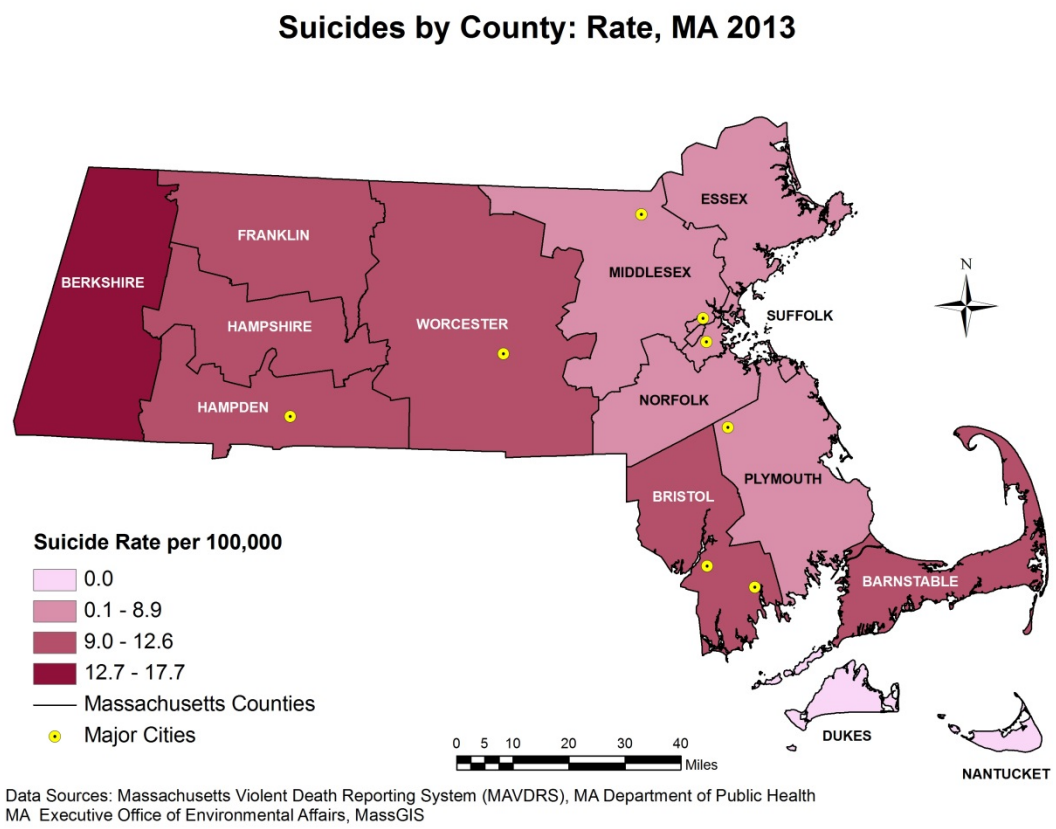

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

- The majority of suicides that occurred in 2013 were among individuals age 35-64 years (N=334, 57%). Between 2003 and 2013, the rate of suicides in this group increased an average of 4.2% per year.

- The highest suicide rates were among individuals age 45-54 years for both males (19.4/100,000, N=94) and females (7.1/100,000, N=36).

[2] *Rates are not calculated for counts less than 5.

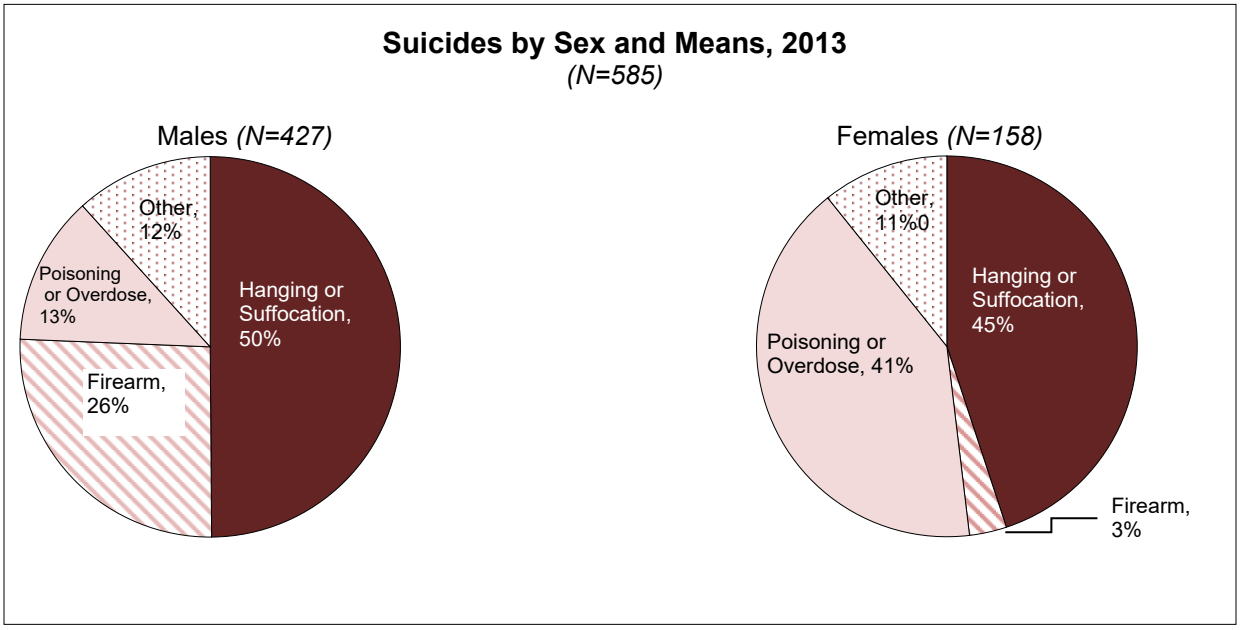
## Suicides by County of Injury




- In 2013, Berkshire county had the highest rate of suicide (17.7/100,000, N=23) and Middlesex county had the highest number of suicides (N=112, 7.2/100,000).

## The Means of Suicide and Source of the Means of Suicide

Chapter 11 M.G.L, Section 232, (i) and (ii) specify that this report contain both the means of the suicide (e.g., firearm suicides) and the source of the means (e.g., type of firearm). The means used in suicides varies greatly as does its source. The following information represents the data currently available on the type and source of means used in suicides.




Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

| Means of Suicide: Number, Percent and Rate, MA 2013 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | | | Female | | | Total | | |
| **Means of Suicide** | **Count** | **Percent** | **Rate per 100,000** | **Count** | **Percent** | **Rate per 100,000** | **Count** | **Percent** | **Rate per 100,000** |
| Firearm | 110 | 25.8 | 3.4 | 5 | 3.2 | 0.1 | 115 | 19.7 | 1.7 |
| Hanging/Suffocation | 213 | 49.9 | 6.6 | 71 | 44.9 | 2.1 | 284 | 48.5 | 4.2 |
| Poisoning | 54 | 12.6 | 1.7 | 65 | 41.1 | 1.9 | 119 | 20.3 | 1.8 |
| Sharp Instrument | 15 | 3.5 | 0.5 | 5 | 3.2 | 0.1 | 20 | 3.4 | 0.3 |
| Fall | 12 | 2.8 | 0.4 | 5 | 3.2 | 0.1 | 17 | 2.9 | 0.3 |
| Other Means | 23 | 5.4 | 0.7 | 7 | 4.4 | 0.2 | 30 | 5.1 | 0.4 |
| **Total** | **427** | **100.0** | **13.2** | **158** | **100.0** | **4.6** | **585** | **100.0** | **8.7** |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

- The most prevalent methods of suicide in 2013 were hanging/suffocation (N=284, 49%), poisoning (N=119, 20%) and firearms (N=115, 20%).

- Methods varied by sex in 2013.
    - Hanging/suffocation (N=213) and firearm (N=110) were the most common methods for men.

- Hanging/suffocation (N=71) and poisoning/overdose (N=65) were the most common methods for women.

| Source of Means of Firearm Suicides: Number, MA 2013[3] | | |
|---|---|---|
| **Means** | **N** | **%** |
| **Firearm** | **115** | **100.0** |
| **Handgun** | **86** | **74.8** |
| *Semi-Automatic Pistol* | *43* | |
| *Revolver* | *34* | |
| *Unknown Type* | *9* | |
| **Rifle** | **14** | **12.2** |
| *Semi-Automatic* | *6* | |
| *Bolt Action* | *<6* | |
| *Lever Action* | *<6* | |
| *Pump Action* | *<6* | |
| *Unknown Type* | *<6* | |
| **Shotgun** | **14** | **12.2** |
| *Pump Action* | *7* | |
| *Single Shot* | *<6* | |
| *Double Barrel* | *<6* | |
| *Semi-Automatic* | *<6* | |
| *Unknown Type* | *<6* | |
| **Submachine Gun** | **<6** | -- |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

- There were four types of firearms used in firearm-related suicides in 2013: handguns, rifles, shotguns and submachine guns.
- The most common amongst these types were handguns (N = 86, 75%).
- The majority of victims who died from firearm-related suicides were male (N=110, 96%).

| Source of Means of Hanging/Suffocation Suicides: Number, MA 2013[3] | | | |
|---|---|---|---|
| **Means** | **Male** | **Female** | **Total** |
| **Hanging/Suffocation** | **213** | **71** | **284** |
| Rope/Clothing Line | -- | -- | 43 |
| Cord/Cable/Wire | 33 | 7 | 40 |
| Belt | 28 | 7 | 35 |
| Plastic Bag/Plastic Bag + Helium | 16 | 17 | 33 |
| Dog Leash | 13 | 6 | 19 |

- For suicides by hanging/suffocation, the most common known ligatures used were a rope/clothing line (N=43, 15%), cord/cable/wire (N=40, 14%), and belt (N=35, 12%).
- For men, the most common ligature used was a rope/clothing line.
- For women, the most common ligatures used were a cord/cable/wire (N=7) and a belt (N=7).
- Seventeen female victims used plastic bags as a means of suffocation, either alone or in conjunction with a gas (helium).

[3] Data suppressed for counts less than 6 for select variables. Some values greater than 6 have also been suppressed when it would allow for a value of less than 6 to be calculated.

| | | | |
|---|---|---|---|
| Sheet | -- | -- | 13 |
| Scarf/Tie | -- | -- | 8 |
| Shoe Lace/String | <6 | 0 | <6 |
| Other Specified Means | 11 | 0 | 11 |
| Not Specified | 54 | 23 | 77 |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

| Source of Means of Poisoning Suicides: Number, MA 2013[4][5] | | | |
|---|---|---|---|
| **Means** | **Male** | **Female** | **Total** |
| **Poisoning[1]** | | | |
| **Substance Classes** | 101 | 159 | 260 |
| Alcohol | -- | -- | 9 |
| Amphetamine | <6 | 0 | <6 |
| Anticonvulsant | -- | -- | 8 |
| Antidepressant | 15 | 38 | 53 |
| Antipsychotic | 6 | 8 | 14 |
| Barbiturates | -- | -- | <6 |
| Benzodiazepines | 10 | 20 | 30 |
| Carbon Monoxide | -- | -- | 13 |
| Cocaine | -- | -- | <6 |
| Muscle Relaxant | -- | -- | <6 |
| Opiate | 23 | 31 | 54 |
| Other Substance Class | 26 | 38 | 64 |
| *Acetaminophen* | -- | -- | *6* |
| *Diphenhydramine* | 7 | 10 | *17* |
| *Zolpidem* | -- | -- | *8* |
| *Other/Unknown Substance* | 14 | 19 | *33* |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

This table includes all substances listed in the cause of death for poisoning suicides by substance class.

- Opiates (N=54, 21%) and antidepressants (N=53, 20%) were the most common classes of substances used in poisoning suicides.

| Source of Means of Sharp Instrument Suicides: Number, MA 2013[5] | | | |
|---|---|---|---|
| **Means** | **Male** | **Female** | **Total** |
| **Sharp Instrument** | 15 | 5 | 20 |
| Knife | -- | -- | 11 |
| Razor Blade/Box Cutter | -- | -- | <6 |

- The most prevalent sharp instrument used in suicides was a knife (N=11, 55%).

[4] The substances listed have been identified as the cause of death of victims; however, please note that more than one substance may be associated with a single suicide. Because these substances are not mutually exclusive, the total count will add up to more than the 119 victims who died from poisoning.

[5] Data suppressed for counts less than 6 for select variables. Some values greater than 6 have also been suppressed when it would allow for a value of less than 6 to be calculated.

| | | | |
|---|---|---|---|
| Scissors | <6 | 0 | <6 |
| Other/Not Specified | <6 | <6 | <6 |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

| Source of Means of Fall Suicides: Number, MA 2013[6] | | | |
|---|---|---|---|
| **Means** | **Male** | **Female** | **Total** |
| **Fall** | 12 | 5 | 17 |
| Residential Building | -- | -- | 8 |
| Bridge | <6 | <6 | <6 |
| Parking Garage | <6 | <6 | <6 |
| Health Care Facility | <6 | 0 | <6 |
| Cliff | <6 | 0 | <6 |
| Construction Site | <6 | 0 | <6 |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

- In 2013, residential buildings were utilized the most in suicides from fall/jumping (N=8, 47%).

| Source of Means of Other Suicides: Number, MA 2013[6] | | | |
|---|---|---|---|
| **Means** | **Male** | **Female** | **Total** |
| **Other Means** | 23 | 7 | 30 |
| Train | -- | -- | 12 |
| Drowning | -- | -- | 9 |
| Motor Vehicle | <6 | <6 | <6 |
| Fire | <6 | 0 | <6 |
| Nail Gun | <6 | 0 | <6 |

Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

- The most prevalent methods of suicide in the other category were those involving trains (N=12) and drowning (N=9).

## The Length of Time between Purchase of the Means and the Death of the Decedent

The length of time between the purchase of the means and the death of the decedent is not currently available and captured in MAVDRS. Work is currently being done to obtain any available information on this as it pertains to firearms and it is planned to be included in future reports.

## The Relationship between the Owner of the Means and the Decedent

MAVDRS collects information on the relationship of the owner of a firearm to the decedent. However, information on the relationship between the owner and decedent is not always clearly documented in the records. In 2013, of the 115 firearm suicides, only 27 had information recorded on the relationship of owner of the firearm to the decedent. Of these, 20

[6] Data suppressed for counts less than 6 for select variables. Some values greater than 6 have also been suppressed when it would allow for a value of less than 6 to be calculated.

were known that the decedent was the owner of the firearm. MAVDRS will be working to improve upon the quality of the information received so that more information on this can be included in future reports.

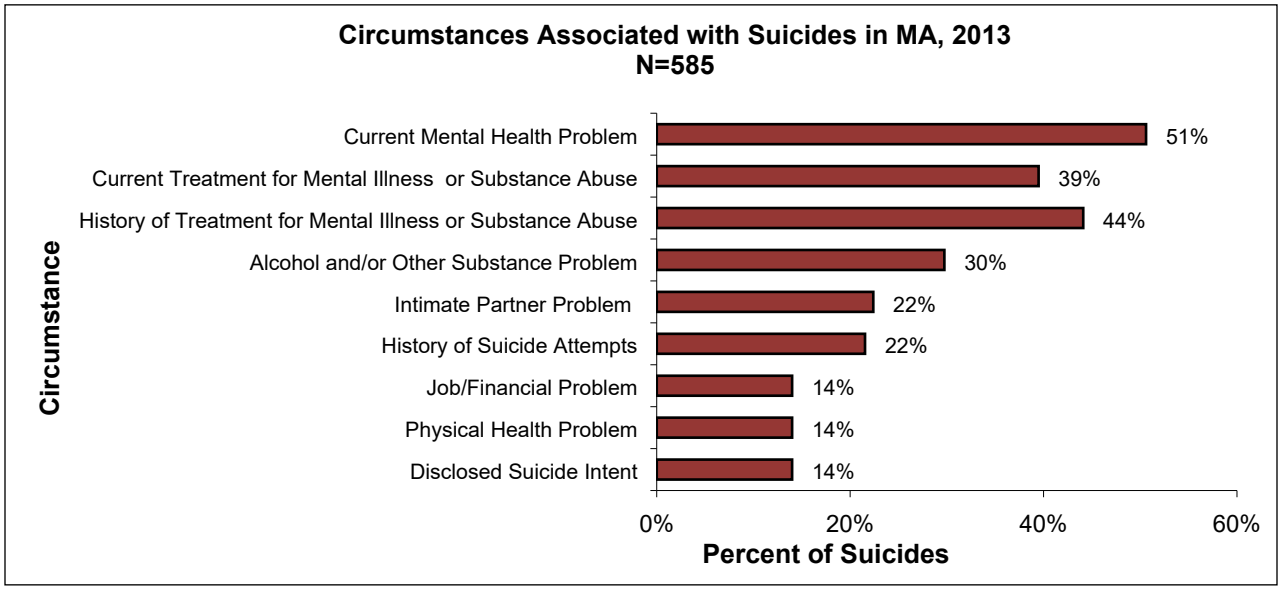
For prescription drugs used in poisoning suicides, MAVDRS collects information on the relationship between the decedent and the person for whom the prescription medication was prescribed. In 2013, 64% of pharmaceutical drugs used in poisoning suicides were known to be prescribed to the decedent. MAVDRS will also be working to improve upon the quality of information received on this so that additional information can be included in future reports.

MAVDRS does not collect information on the relationship between on the owner of the means and the decedent for the following means because these are commonly available and non-regulated objects: hanging/suffocation and sharps instrument. MAVDRS also does not collect information on the owner of the means for non-prescription drugs or falls.

## Whether the Means was Legally Obtained and Owned Pursuant to the Laws of the Commonwealth

Of the variety of means used in suicides, only those by firearm and poisoning may or may not be obtained and owned legally. For firearms, MAVDRS currently collects information on whether a firearm was known to be stolen, but this information is often incomplete. Of the 115 firearm suicides in 2013, less than six were known to be stolen. MAVDRS is working to improve on the completeness of this variable and determine whether or not a firearm was legally obtained and owned. MAVDRS does not currently have a variable for capturing whether substances used in poisoning suicides were obtained legally or not. MAVDRS is working with data partners to capture this information for future reports.

## Circumstances




[7] Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health

A circumstance is a condition, fact or event that affects a situation. Circumstances surrounding the decedent's life prior to the death can highlight opportunities for future prevention efforts. MAVDRS systematically collects information on suicides and allows for more than one circumstance to be listed for a suicide victim. 94% of suicide victims had at least one circumstance identified during case-review (N=548) and 84% had multiple circumstances known (N=491). It is important to remember that some circumstances are more likely to be known and documented than others and if a circumstance is not identified, that does not mean it was not present in the decedent's life. The above chart represents percentages of circumstances noted out of all suicides (N=585).

[7] More than one circumstance may be noted for each suicide.

- 51% of suicide victims had a documented current mental health problem, such as depression, anxiety disorder, schizophrenia and post-traumatic stress disorder.

- 39% were currently receiving treatment for a mental health or substance abuse problem and 44% had any history of treatment for a mental illness or substance abuse problem.

- 30% had an alcohol or other substance use problem.

- 22% experienced an intimate partner problem prior to their death such as divorce, break-up, jealousy and conflict.

- 22% had a history of suicide attempts.

## Past Suicide Attempts

Information on past suicide attempts is obtained from the medical examiner file and police reports. This information may come from the decedent's family, friends or psychiatric/hospital records. Friends and family of the decedent may not know of the decedent's past suicide attempts or may choose not to report that information to the authorities. Also, hospital records are not available on all suicides and even if they are present, not all suicide attempts would cause an injury that would make this information be present in the records.

| Confirmed Past Suicide Attempts by Means Used in Suicide & Sex: Number & Percent, MA 2013 | | | |
|---|---|---|---|
| | N | % | Total N |
| **Firearm** | | | |
| Male | -- | -- | 110 |
| Female | -- | -- | 5 |
| Total | 7 | 6% | 115 |
| **Hanging/Suffocation** | | | |
| Male | 40 | 19% | 213 |
| Female | 19 | 27% | 71 |
| Total | 59 | 21% | 284 |
| **Poisoning** | | | |
| Male | 14 | 26% | 54 |
| Female | 27 | 42% | 65 |
| Total | 41 | 34% | 119 |
| **All Other Means** | | | |
| Male | 13 | 26% | 50 |
| Female | 6 | 35% | 17 |
| Total | 19 | 28% | 67 |

Source: Massachusetts Violent Death Reporting System,
Massachusetts Department of Public Health

- Thirty-four percent of female victims (N=53) and 17% of male victims (N=73) were confirmed to have prior suicide attempts.
- Forty-two percent of female poisoning victims (N=27) and 27% of female hanging/suffocation victims (N=19) had prior suicide attempts.
- Nineteen percent of male hanging/suffocation victims (N=40) and 26% of male poisoning victims (N=14) had prior suicide attempts.

## Past Mental Health Treatment of the Decedent

| History of Treatment for Mental Health or Substance Abuse Problem: Number, MA 2013 | | | |
|---|---|---|---|
| | N | % | Total N |
| **Firearm** | | | |
| Male | -- | -- | 110 |
| Female | <6 | -- | 5 |
| Total | 30 | 26% | 115 |
| **Hanging/Suffocation** | | | |
| Male | 82 | 38% | 213 |
| Female | 47 | 66% | 71 |
| Total | 129 | 45% | 284 |
| **Poisoning** | | | |
| Male | 29 | 54% | 54 |
| Female | 43 | 66% | 65 |
| Total | 72 | 61% | 119 |
| **All Other Means** | | | |
| Male | 20 | 40% | 50 |
| Female | 7 | 41% | 17 |
| Total | 27 | 40% | 67 |

Source: Massachusetts Violent Death Reporting System,
Massachusetts Department of Public Health

- Sixty-three percent of female victims (N=99) and 37% of male victims (N=159) were noted to have a history of treatment for a mental health or substance abuse problem.

## Suicide Prevention Program

The Suicide Prevention Program (SPP) at DPH employs the latest suicide prevention strategies using the public health approach and is funded by a specific line item in the Massachusetts State budget. The SPP uses data to help inform its prevention strategies.

Massachusetts has one of the lowest suicide rates in the country. Factors that contribute to Massachusetts' low rate include: the Commonwealth's low rate of household gun ownership, better access to emergency medical care, a robust behavioral health industry and a 10-year history of state suicide prevention funding.

A major public health strategy is to identify health disparities – when a disease, illness or injury disproportionately effects a particular population. Analyzing data on suicides and non-fatal self-injuries enables the Program to identify at-risk populations and target funding to those populations. The Program issued a competitive procurement for FY15 that resulted in the funding of 20 community-based providers to address the needs of these vulnerable populations statewide. Services provided include:

- The four Samaritan agencies funded to provide a toll free helpline and survivor to survivor grief support services.
- Survivor support groups facilitated by individuals who themselves are survivors of suicide loss.
- Online screening and referral for conditions such as depression, anxiety, substance abuse, post-traumatic stress and eating disorders available across the Commonwealth.
- Postvention services after a suicide occurs; often conducted in a school setting where the suicide death of a student has a profound effect on the school and the community.

Through Inter-agency Service Agreements (ISAs), the program funds activities specific to the populations served by the Executive Office of Elder Affairs, the Department of Mental Health and the Department of Veterans' Services' SAVE Program.

The SAVE Program (Statewide Advocacy for Veterans Empowerment) is composed of outreach workers who are returning veterans or family members of returning veterans who reach out to military personnel coming back from Iraq and Afghanistan to educate them on services and benefits available to them, and to screen for behavioral health issues. They are highly mobile and attend veterans' gatherings all across the state. SAVE is not restricted to working only with returning veterans. They can serve any veteran. Despite the age differences when dealing with Viet Nam war veterans, for example, they still command credibility because of their military service.

The SPP also funds the statewide MA Coalition for Suicide Prevention and its prevention activities. The Coalition develops and supports nine Regional Coalitions covering the entire Commonwealth. The Regional Coalitions provide the local networking to assure that prevention services reach all areas of the Commonwealth.

Community Coalitions are given technical assistance and some Program funding in their initial stages to support their development. Some coalitions, like Montachusett, Needham, Newton, Nantucket and New Bedford, for example, were formed in response to one or more youth suicides. After a year or two of operation, these coalitions usually expand to include activities addressing suicide across the lifespan.

The SPP works in partnership with these agencies as well as the Department of Elementary and Secondary Education, the Department of Corrections, our own Bureau of Substance Abuse Services, the Office of Emergency Services, Department of Children and Families, Department of Youth Services, County Sheriff's Departments, and the MA National Guard. An especially significant and close partner is the Department of Mental Health which provides senior management staff participation in all aspects of the Program.

A primary strategy for preventing suicide is raising public awareness that suicide is preventable. Gatekeeper training teaches everyone how to recognize signs of suicide and instills confidence in talking about suicide.

Behavioral health professionals, until very recently, received little education in assessing and managing suicide risk despite the fact that they inevitably served clients with suicidality. Skills training for clinicians fill that gap.

Education and screening training for health professionals helps them to identify at risk individuals in their practices.

We prefer to introduce system-wide approaches to suicide that include appropriate levels of training, protocols to follow and postvention strategies to minimize further deaths if a suicide occurs. Schools, DYS, Community mental health centers and hospital systems are some examples of systems with which we are working.

Last April, 500 participants attended each of the two days of our annual conference. Participants were from clinical settings, schools, law enforcement, policy makers, survivors, attempters and service providers.

The Program provides technical assistance to interagency prevention policy initiatives to assure that the most current suicide prevention strategies are employed.

Recently, the Program has worked with the Department of Elementary and Secondary Education to implement the requirements of suicide prevention training for licensed school personnel, the Department of Labor and Workforce Development to establish protocols to guide employees when they identify a client as at-risk, and the Bureau of Health Care Safety & Quality implementing the Valor Act (2) which calls for emergency medical staff in ambulances, emergency departments and in inpatient units to determine whether individuals with behavioral health issues are veterans and, if so identified, to receive referrals.

## Conclusion

Suicide is a major public health problem and Massachusetts needs to collect data on these deaths to better inform prevention efforts. Suicides have been tracked in the Massachusetts Violent Death Reporting System since 2003 and have been increasing. Suicides have been increasing for both sexes, although males have a higher rate and make up about 73% of suicides. The majority (57%) of suicides occurred in persons ages 35-64 in 2013. The means most commonly used in suicides are hanging/suffocation (49%), poisoning/overdose (20%) and firearm (20%). For suicides by hanging, rope/clothing line was the most common ligature (15%). For suicide by firearm, handguns (75%) were the most common type of firearm used. For suicides by poisoning, opiates (21%) and antidepressants (20%) were the most common class of substance used. 22% of suicide victims had made a prior suicide attempt. 44% had a history of treatment for a mental health or substance abuse problem.

MAVDRS is working with other data partners capturing additional data required by the legislature and improving data quality of existing data fields. There are three essential data elements that the MAVDRS staff are working on to either capture, or improve the quality of, to more accurately identify the opportunities for suicide prevention in the Commonwealth: the length of time between purchase of the means and the death of the decedent, the relationship of the owner of the means to the decedent and whether the means was legally obtained and owned pursuant to the laws of the Commonwealth. More information on these will be included in future reports.

The Suicide Prevention Program at DPH frequently uses all of the data available at DPH, including MAVDRS, to help inform its ongoing prevention efforts and new strategies. This data helps the Program target efforts towards populations with the greatest need.