



Suicide and Self-Inflicted Injury



Suicide is a significant and preventable public health issue. On average, there are two to three times as many suicides in the Commonwealth as homicides. In 2007, the latest year for which mortality data are available, there were 504 recorded suicides among Massachusetts residents. In comparison, there were 183 homicides in that same year.

While the term “suicide” refers to completed suicides, nonfatal self-inflicted injuries can include suicide attempts and other self-injury such as intentionally cutting or burning oneself.

In fiscal year 2007, there were 4,305 acute care hospital stays for nonfatal self-inflicted injuries and an additional 6,720 emergency department visits.

The impact of suicide is enormous: it is estimated, very conservatively, that for every suicide completion there are six loved ones who are left behind to experience the particularly complicated grief that comes from losing someone to suicide. In the last ten years, with a range of suicide deaths between 400 and 500 per year, there are between 24,000 and 30,000 survivors in the

In an average week in 2007:

- » 10 Massachusetts residents died by suicide.
- » More than 200 were treated at an acute care hospital for self-inflicted injuries.

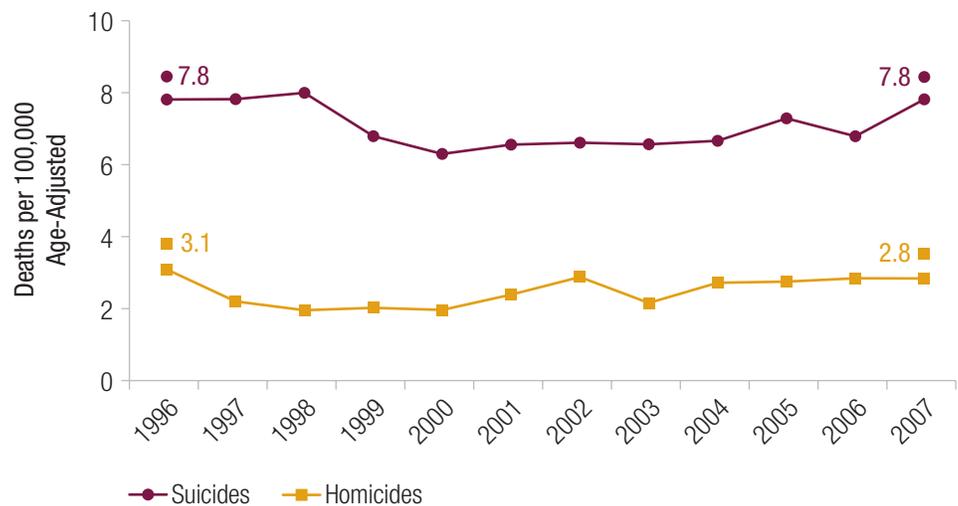
**In the past ten years,
24,000 to 30,000 survivors
have been affected by the
suicide death of a loved one.**

Commonwealth who have been directly effected. Along with the sadness that attends any death, most of these survivors also suffer from guilt. Many feel tremendous pain that they could have/should have “done something” to prevent the suicide.

Scope of the Problem in Massachusetts

Despite the alarming numbers of suicide in Massachusetts, the rate of suicide (7.8 per 100,000 residents) is lower than that of the US (11.2 per 100,000 residents in 2006).

Figure 12.1 Suicide and Homicide Rates



Source: MDPH Death File, 1996-2007.

Most poisoning-related suicides and nonfatal self-inflicted hospital stays are the result of drug overdoses.

Although hospitals are not required to report suicide attempts, they do report self-inflicted injuries which serve as indicators of suicide attempts. The overwhelming majority of hospital stays for self-inflicted injuries are for poisonings, including drug overdoses. Poisoning is the most common method for a non-lethal suicide attempt.

**Males account for
approximately 80% of
completed suicides in
Massachusetts.**

Hanging is the leading method for completed suicide in Massachusetts and firearms are the second most common method. Massachusetts differs in this regard from the US. According to the American Association of Suicidology, nationally, firearms account for approximately 50% of all suicides. In states where household gun ownership is high, the suicide rate is also high.

In Massachusetts, as across the country, there are differences in the numbers and rates of male and female suicide and self-inflicted injury. Females attempt suicide at a rate approximately three times that of males. However, since females tend to use less lethal means than males, males complete suicide at higher numbers and rates.

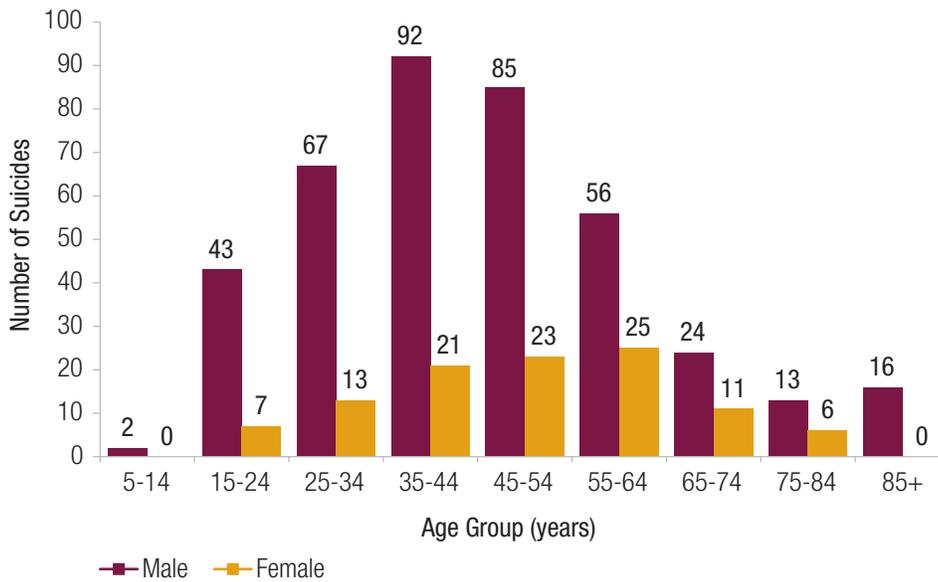
Gender and Age

In 2007, there were 398 suicides by males (12.7 per 100,000) compared with 106 by females (3.2 per 100,000).

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Figure 12.2 Suicides by Gender and Age



Source: MDPH Death File, 2007.

Figure 12.3a Suicides Among Males by Method

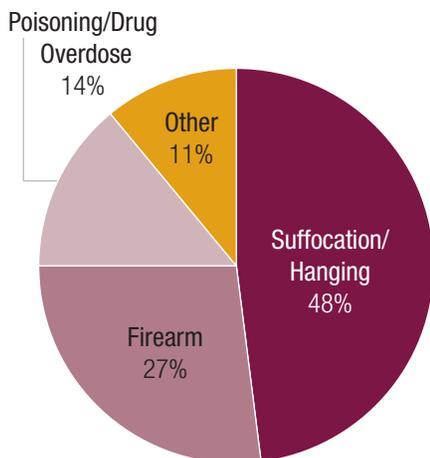
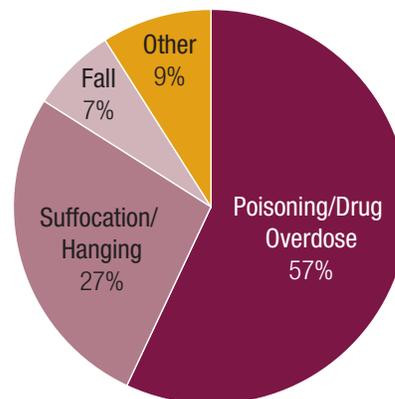


Figure 12.3b Suicides Among Females by Method



Source: MDPH Death File, 2007.

Among males, the highest number of suicides was among those 35-44 (N=92), but males ages 85 and older had the highest rate (38.9 per 100,000).

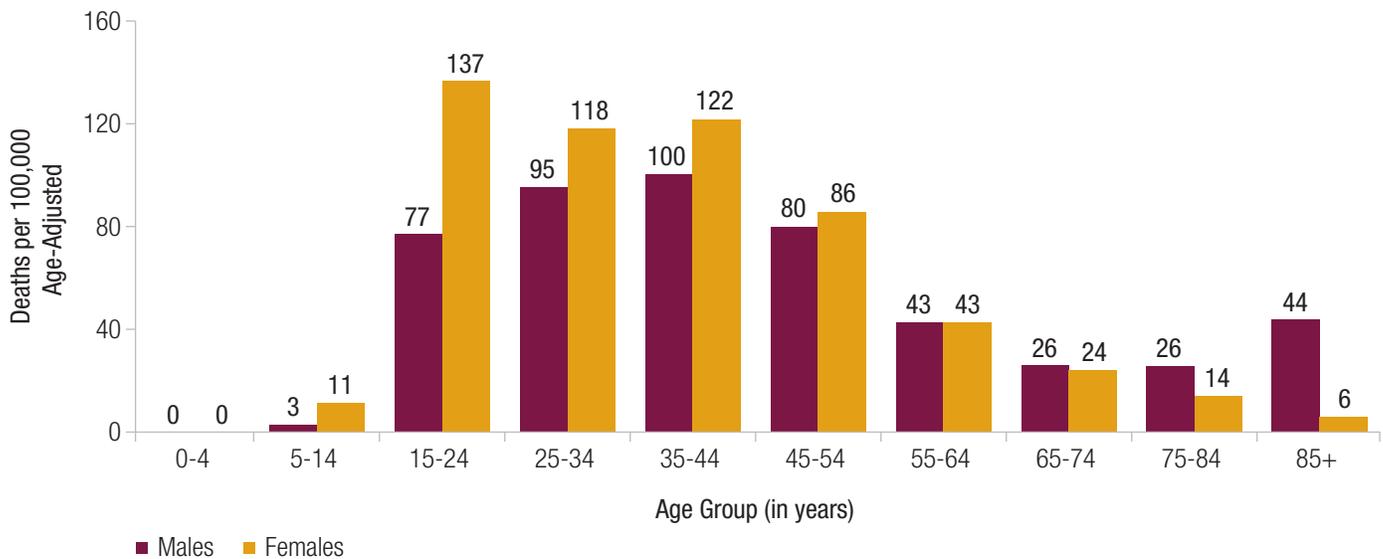
Among females, the highest number and rate of suicides were among those 55-64 years of age (N=25, rate=6.6 per 100,000).

The leading suicide methods also vary by gender. For males, suffocation and firearms were the most common methods. For females, the leading methods were poisoning, followed by suffocation.

Eighty percent of nonfatal self-inflicted hospital stays, a total of 3,458 individuals, were due to poisoning, the leading method for *both* males and females.

Hospital stays for non-lethal self-inflicted injuries vary dramatically with age and gender.

Figure 12.4 Nonfatal Hospital Stays Due to Self-Inflicted Injuries by Age and Gender



Source: MA Hospital Discharge Database and MA Observation Stay Database, Division of Health Care Financing and Policy, FY2007.

The highest rate of hospital stays for self-inflicted injuries was among females aged 15-24.

The overall rate of hospital stays for self-inflicted injury among MA residents was 66.7 per 100,000. Females had a higher rate than males. Up to the age of 64, females had higher rates of hospital stays for self-inflicted injury than did men. Among females, the highest rate was in the 15-24 year age group. Among males, the highest rate was in the 35-44 year age group.

Up to the age of 64, females had higher rates of hospitalization for self-inflicted injury than did men. Among females, the highest rate was in the 15-24 year age group (136.6 per 100,000); among males, the highest rate was in the 35-44 year age group (100.4 per 100,000).

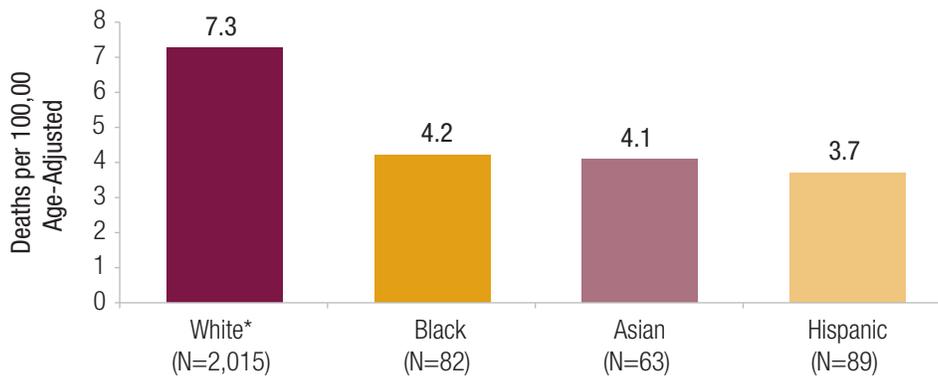
Racial/Ethnic Differences

The great majority of suicide deaths of Massachusetts residents are of White, Non-Hispanic individuals. There are trends, however, noted in the literature¹ that point to increases in suicide rates among young Blacks and high rates of attempts by young female Hispanics. American Indians have the highest rates of suicide of the race/ethnic groups, though their numbers are small in Massachusetts.

Average annual rates for the time-period 2003-2007 were highest among American Indian, Non-Hispanic residents. Although the difference between this rate and the others was not statistically significant due to the small numbers (and thus they do not appear in Figure 12.5,) they are still socially significant and, therefore, warrant attention.

White, Non-Hispanic residents had the second highest rate (7.3 per 100,000, N=2,015), which was statistically higher than all other race and ethnic groups with the exception of American Indian, Non-Hispanics.

Figure 12.5 Annual Suicide Rates, 2003-2007



Source: MDPH Death File, 2003-2007.

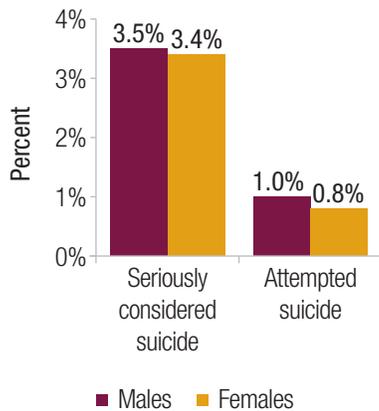
*Statistically higher than other race and ethnic groups represented here ($p \leq .05$).

Suicide and Mental Illness

There is a strong association between suicide and mental illness. Studies indicate that as many as 90% of completed suicides are by men and women who have a diagnosable mental illness or substance abuse problem or both.

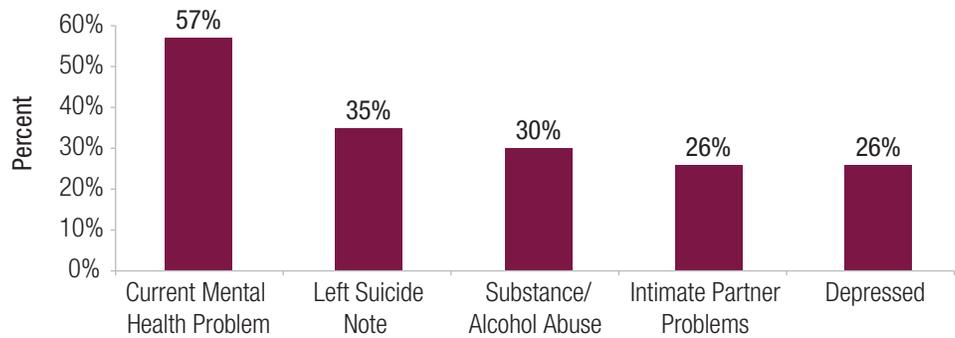
Some information on suicide circumstances is available from the MA Violent Death Reporting System, a surveillance system that collects detailed information from medical examiners, police crime labs and death certificates. This includes homicides, suicides, deaths of undetermined intent, and unintentional firearm deaths.

Figure 12.7 Suicidal Thinking and Behavior Among Adults (Ages 18+)



Sources: MDPH BRFSS, 2005-2007.

Figure 12.6 Circumstances Associated with Suicides



Source: MDPH Violent Death Reporting System.

Survey findings from the Behavioral Risk Factor Surveillance System indicate the extent of suicidal thinking and attempts reported between 2005 and 2007.

Young People and Suicide

Despite the relative rarity of a death by suicide of a younger person (approximately 10% of the 2007 suicides were of individuals 24 or under), the tragic loss of a child, the effect of the death on schoolmates, family and friends, and the fear engendered in the community by these events heighten the impact of the death. Survey findings from the MA Youth Risk Behavior Survey, an anonymous written survey of youth in public high schools in MA, indicate that in 2007:

- 17% of high school students reported a self-inflicted injury that was not a suicide attempt;
- 13% of students seriously considered suicide during the past year, 11% made a suicide plan and 8% made an attempt;
- 24% of high school students reported feeling so sad or depressed daily for at least two weeks during the previous year that they discontinued usual activities. A significantly larger percentage of females than males reported feeling this way (31% vs. 17%).

There is a strong association between students who report having made suicide attempts and students who report experiencing dating violence, bullying and other forms of victimization.² (See Chapter 13 on Violence.)

Geographic Differences

Suicide and Self-inflicted injuries vary slightly across the state. The rates were highest in the Western and Southeast regions and lowest in the metro West and Boston Regions.

Suicide Prevention Strategies

The Massachusetts Department of Public Health Suicide Prevention Program works to reduce the number of suicides and suicide attempts in the Commonwealth. The program employs prevention strategies recommended by the National Suicide Prevention Plan, which include increasing public awareness of suicide as a public health problem, reducing the stigma of help-seeking, screening for depression, skills training for mental health, substance abuse and healthcare professionals, gatekeeper training for the general public and services for families and communities after a suicide occurs.

The program provides leadership, technical assistance and funding to the Massachusetts Coalition for Suicide Prevention, a broad-based alliance of suicide prevention advocates, public and private agency representatives, policy makers, suicide survivors, mental health and public health providers, and concerned citizens who work together to reduce the incidence of self-harm and suicide in the Commonwealth.

Figure 12.8 **Annual Suicide Rates by EOHHS Region, 2003-2007**

EOHHS Region	Average Annual Rate per 100,000
Western	7.6
Southeast	7.5
Central	7.4
Northeast	7.1
Metro West	5.7*
Boston Region	5.5*
Total	6.7

Source: Registry of Vital Records and Statistics, MDPH.

*The Boston and Metro West Regions were statistically lower than the state-wide rate and other regions ($p \leq .05$); they were not, however, statistically different from each other.



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Founder, Mass Coalition for Suicide Prevention

The Massachusetts Department of Public Health Suicide Prevention Program (SPP) has worked with the Massachusetts Coalition for Suicide Prevention (MCSP) to define policy objectives towards preventing and reducing suicide and self-harm. These goals and objectives are outlined in the Massachusetts Strategic Plan for Suicide Prevention. The DPH SPP seeks to increase broad based support for suicide prevention, and maintain and promote political will and ongoing support for suicide prevention and resiliency building. To do this, we must reduce the stigma and discrimination associated with suicide and promote healthy and help-seeking behaviors, with supportive policy, regulation, and law.

State Structure

We are very fortunate the Massachusetts Legislature takes a strong interest in suicide prevention, supporting efforts through line-item funding of the DPH SPP, legislation, and holding hearings on suicide prevention. We also have strong support in the state's Executive branch, in the Governor's office and through sister agencies in the Executive Office of Health and Human Services (EOHHS).

A state commission to study and implement strategies to prevent suicide and self-harm would further this work. This commission would include representation from legislative and executive branches and the private sector, work to implement objectives of the Massachusetts Strategic Plan for Suicide Prevention, and recommend policy changes to maximize prevention resources.

Suicide prevention is not the work of a single state agency. While DPH has been at the forefront of prevention efforts, along with the Department of Mental Health (DMH), suicide prevention requires that sister EOHHS agencies support policies that promote cross-agency dialogue about suicide prevention within EOHHS agencies, and throughout state government.

While suicide prevention is a young field with a limited evidence base, science continues to identify the most effective practices. Suicide prevention strategies must be grounded in the best evidence available.

Means restriction—restricting access to lethal means of suicide—is among the most evidence based and effective suicide prevention strategies. In the 1990’s the Massachusetts legislature enacted stringent gun safety legislation that has contributed to our state’s low rates of firearm suicide, and is a successful suicide prevention strategy that should be continued. Policies that promote further means restriction include architectural barriers on bridges, overpasses and tall structures; blister packaging of lethal medication, and reviews of train crossings can continue to reduce suicide in Massachusetts. Health and mental health providers can be trained to counsel patients and families on the risks of access to lethal means.

Disparity in access to mental health care remains a significant barrier to suicide prevention. We must support state policies that ensure equitable mental health and substance use coverage for all. We must also ensure that disparities in access to services, whether influenced by geography, language, culture (including GLBT populations) or incarceration are addressed in our prioritization of planning, policy and resources.

Because successful suicide prevention will involve a multi-disciplinary approach, those with knowledge of suicide prevention should be incorporated into state commissions targeting related issues. People with expertise in suicide prevention can be identified and made available to serve on related planning efforts. In addition, while survivors of suicide are long-standing advocates for suicide prevention, those who suffer with their own suicidal ideation aren’t always included in planning efforts. Mental health consumers should also be integrated into all state commissions, and at all levels of suicide prevention planning.

The Massachusetts Strategic Plan for Suicide Prevention is designed to address statewide suicide prevention efforts with broad strategies appropriate to the whole population as well as high risk groups. It is hoped that groups associated with both populations at increased risk of suicide and coalitions addressing prevention for regions or cities and towns will use the State Plan as a starting point to develop their own population-specific, more tailored suicide prevention plans.



FIGURE NOTES

Figure 12.4: Fiscal Year 2007 (October 1, 2006 - September 30, 2007).

Figure 12.5: The five most recent years available were combined to stabilize rates.
Rates for American Indians were not calculated because of small numbers.

Figure 12.6: More than one circumstance may be noted for a suicide.
Intimate Partner Problems refer to any problem with a current or former intimate partner and may or may not involve violence.

Figure 12.7: The five most recent years available were combined to stabilize rates.

Figure 12.8: The five most recent years available were combined to stabilize rates.

ENDNOTES

- 1 Ialongo N, McCreary BK, Pearson JK, et.al. Suicidal behavior among urban, African American young adults. *Suicide and Life-Threatening Behavior*. September 2002;32(3): 256-271.
- 2 Massachusetts Dept. of Elementary and Secondary Education. *Health and Risk Behaviors of Massachusetts Youth, 2007: The Report*, May 2008.