

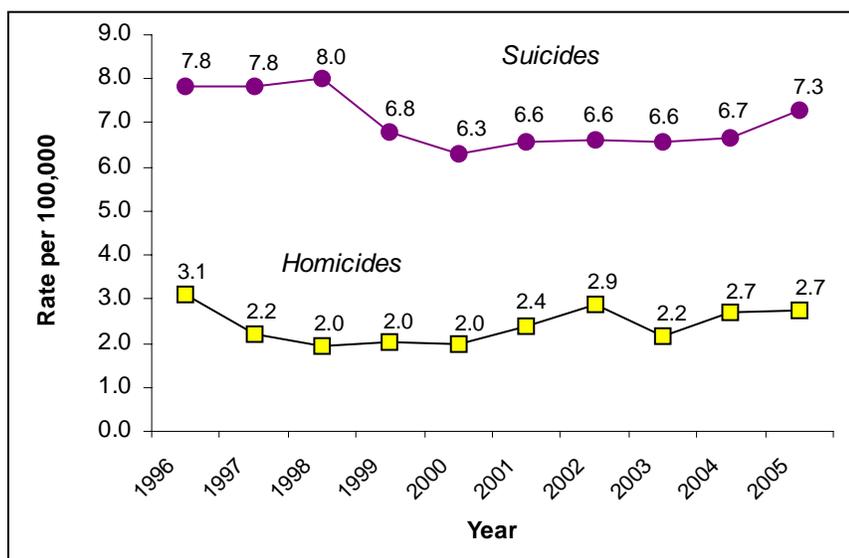
SUICIDES AND SELF-INFLICTED INJURIES IN MASSACHUSETTS: DATA UPDATE

The Injury Surveillance Program, MA Department of Public Health

January, 2008

This bulletin provides an overview of suicide and self-inflicted injuries among Massachusetts residents. While suicide refers to completed suicides, nonfatal self-inflicted injuries can include suicide attempts, as well as other self-injurious behavior such as cutting or burning oneself. There is no way to distinguish nonfatal injuries that are actual suicide attempts from those that are not, so the broader term “self-inflicted injury” is used to describe these cases. Age-adjusted rates are provided for race and ethnicity data in order to minimize differences in age distributions between the groups. All other rates are crude rates (total number of cases divided by the total population). Please note that we have used the most recently available year of data for each data source.

Figure 1. Suicide and Homicide Rates,* MA Residents, 1996-2005



- In 2005, there were 469 suicides among Massachusetts residents; a rate of 7.3 per 100,000 residents.
- The number of suicides was 2.6 times higher than homicides (N=469 and N=177 respectively) in 2005.
- The total number of suicides among MA residents increased from 429 in 2004 to 469 in 2005.
- The suicide rate among MA residents is lower than that of the U.S. In 2004 (the latest statistics available nationally) the suicide rate for the U.S. was 11.1 per 100,000 residents compared to 6.7 per 100,000 for Massachusetts.

Source: Registry of Vital Records and Statistics, MA Department of Public Health
 *Rates presented in this bulletin cannot be compared to previous bulletins. Methods were changed to calculate rates based on all ages for this bulletin rather than only persons ages 10 and older which was the method previously used. Rates overall are only slightly lower due to this change.

Figure 2. Magnitude of Suicides and Self-Inflicted Injuries resulting in Acute Care Hospital Stays or Emergency Department Visits, MA Residents, 2005

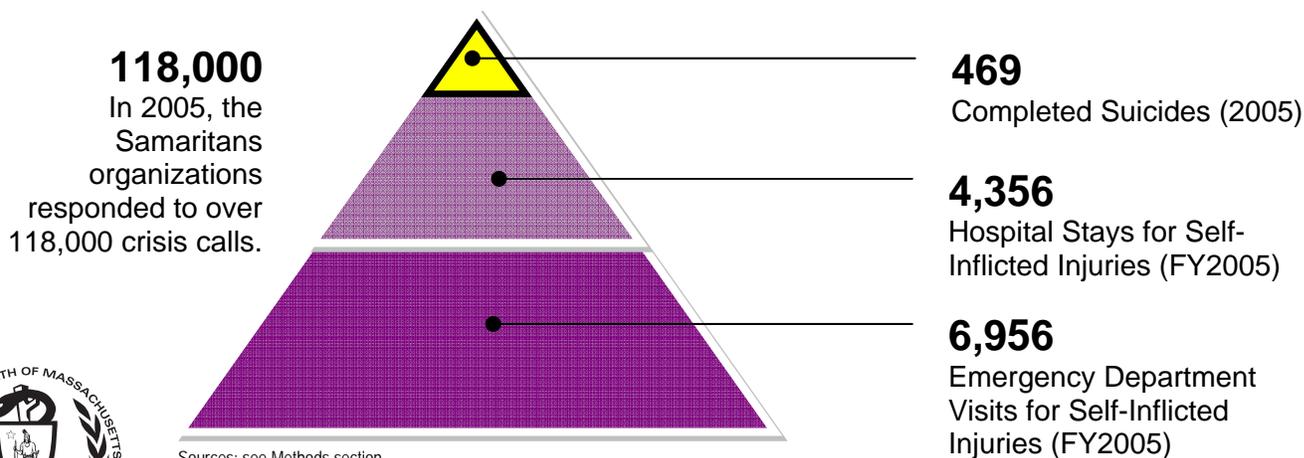
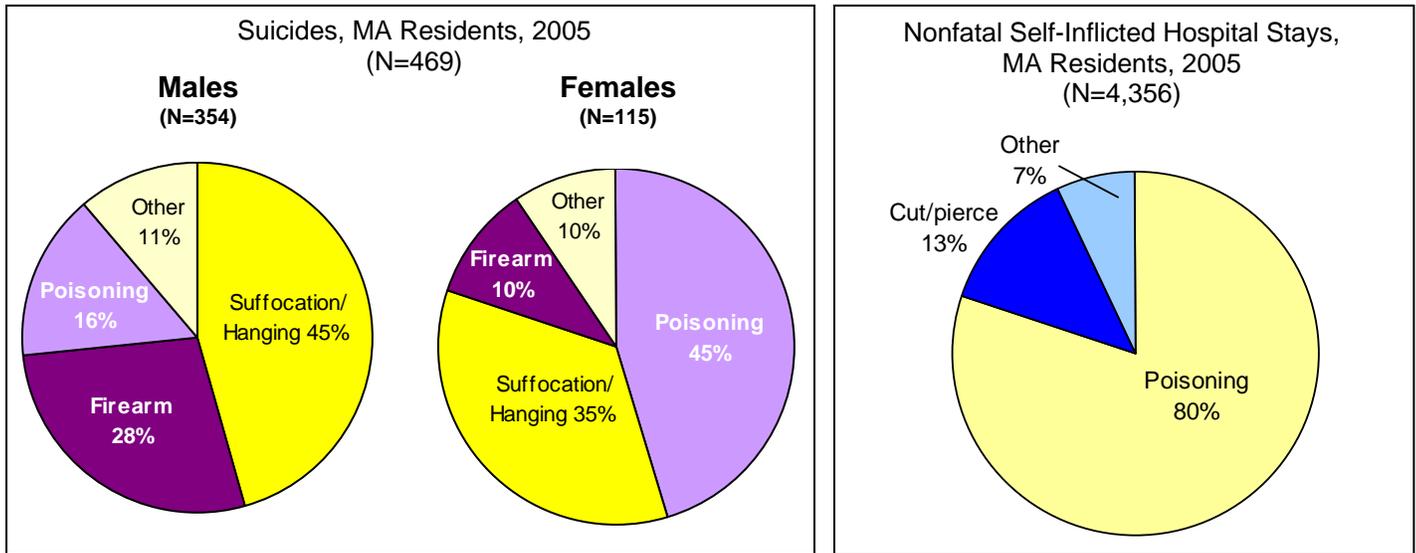


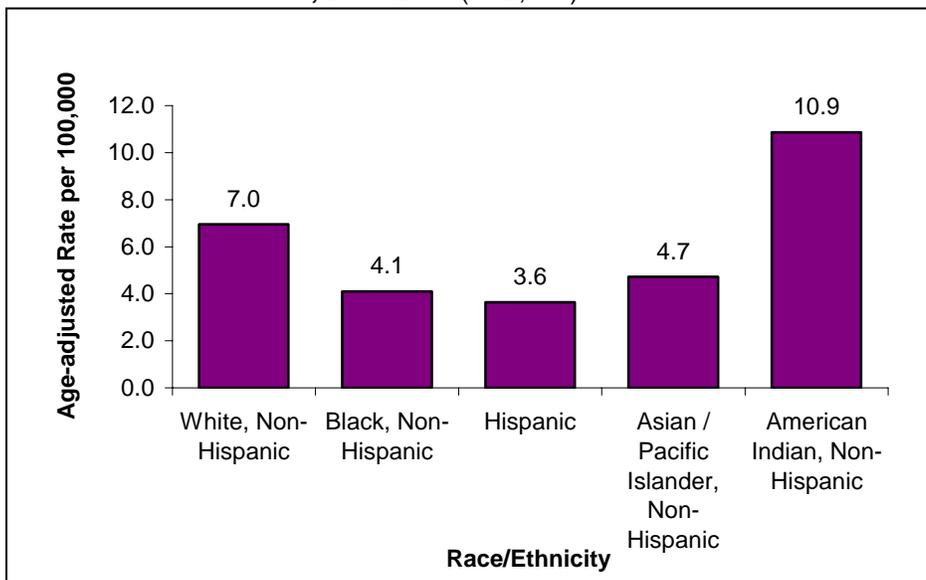
Figure 3. Suicides and Nonfatal Hospital Stays for Self-Inflicted Injury by Method, MA Residents, 2005



Sources: Registry of Vital Records and Statistics, Massachusetts Department of Public Health; MA Hospital Discharge Database and MA Outpatient Observation Stay Database, MA Division of Health Care Finance and Policy

- The leading suicide methods vary by sex. For males, suffocation (N=161) and firearm (N=99) were the most common methods. For females, the leading methods were poisoning (N=52), followed by suffocation (N=40).
- The leading method of nonfatal self-inflicted hospital stays, however, did not vary by sex. Poisoning (80%, N=3,474) was the leading method for both males and females.
- Most poisoning-related suicides and nonfatal self-inflicted hospital stays are the result of drug overdoses.

Figure 4. Average Annual Suicide Rates* by Race/Ethnicity, MA Residents, 2001-2005 (N=2,163)

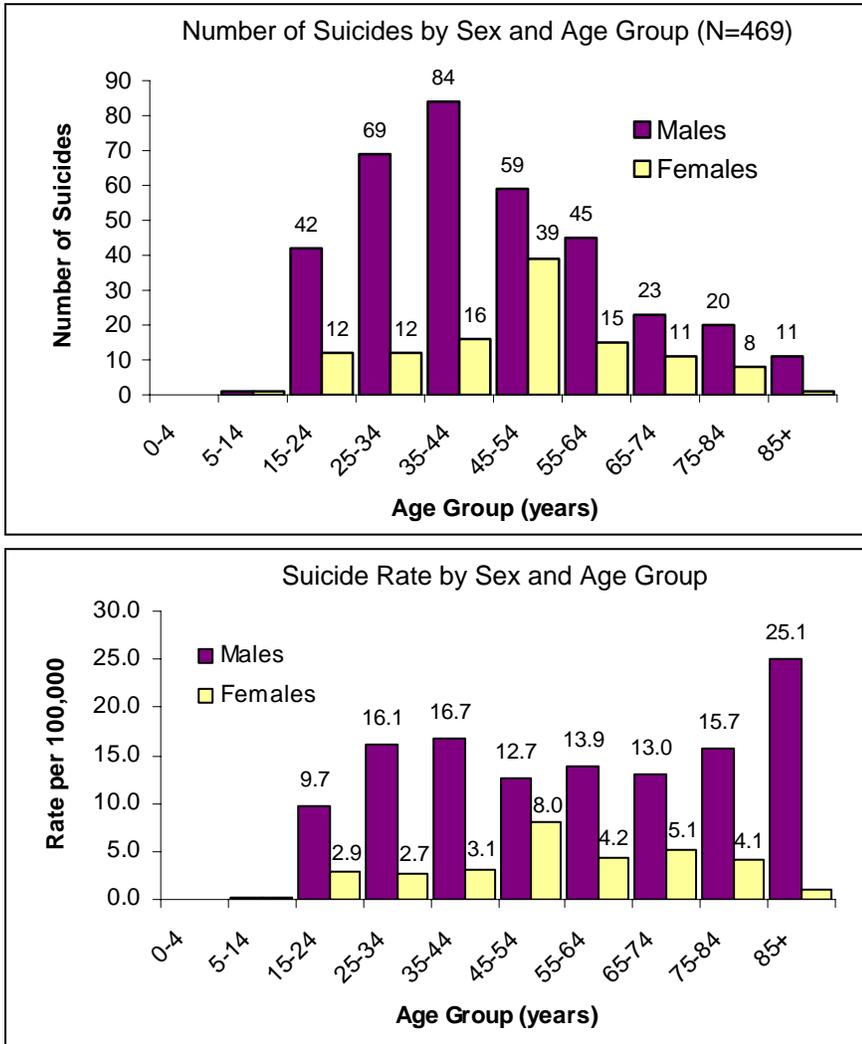


Average annual rate for the five year period 2001 through 2005:

- While the highest suicide rate was observed among American Indian, Non-Hispanic residents (10.9 per 100,000, N=8), there was no statistically significant difference between this rate and that of any other race/ethnicity.
- White, Non-Hispanic residents had the second highest rate (7.0 per 100,000, N=1,938). This rate was significantly higher statistically than that of all other race and ethnic groups with the exception of American Indian, Non-Hispanics.

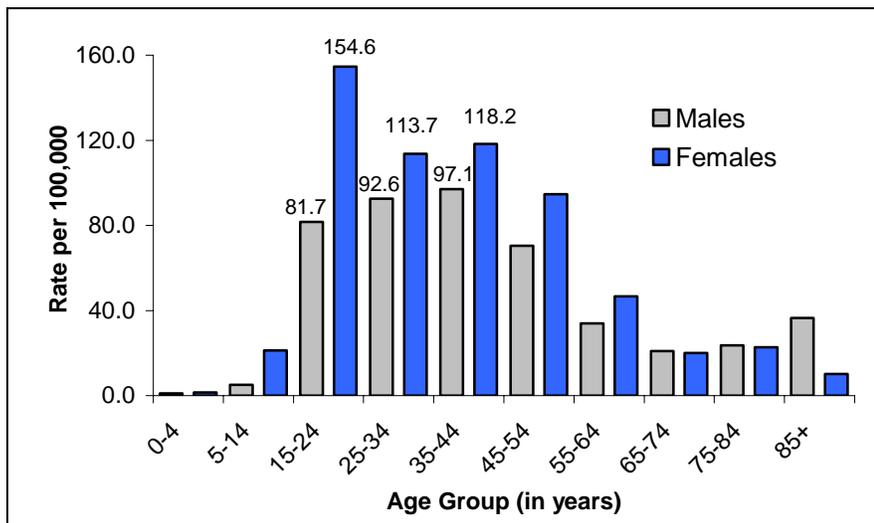
Source: Registry of Vital Records and Statistics, Massachusetts Department of Public Health
 *Rates are age-adjusted using the Standard US Census 2000 population. The three most recent years of data were used to improve the stability of the rates.

Figure 5. Number and Rate of Suicides by Age Group and Sex, MA Residents, 2005



Source: Registry of Vital Records and Statistics, MA Department of Public Health

Figure 6. Rate of Hospital Stays for Self-Inflicted Injury by Age Group and Sex, MA Residents, 2005 (N=4,356)



Sources: MA Hospital Discharge Database and MA Outpatient Observation Stay Database, MA Division of Health Care Finance and Policy

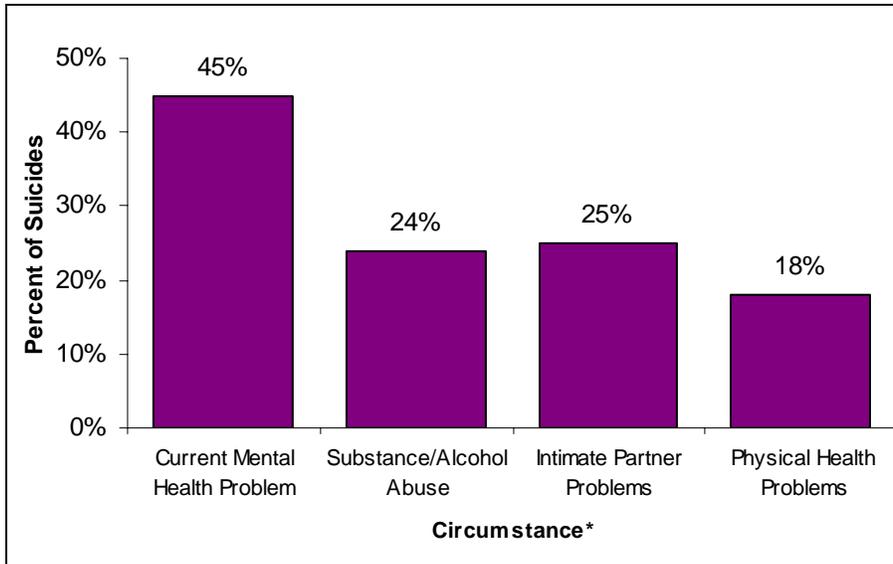
Suicides:

- The number and rate of male suicides exceeded female suicides. In 2005, there were 354 suicides by males (11.3 per 100,000) compared with 115 by females (3.5 per 100,000).
- Most suicides occur in the middle age population; 42.2% of all suicides were among individuals ages 35-54 years.
- Although the highest number of suicides among males occurred in middle age, the highest *rate* of suicides occurred among men ages 85 and older (25.1 per 100,000).
- The highest number *and* rate of suicides among females were among those ages 45-54 years (N=39, 8.0 per 100,000).

Hospital Stays:

- The overall rate of hospital stays for self-inflicted injury among MA residents was 67.7 per 100,000 (N=4,356).
- Females had a higher rate (77.6 per 100,000, N=2,573) than males (57.1 per 100,000, N=1,783).
- 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 (154.6 per 100,000); among males, the highest rate was in the 35-44 year age group (97.1 per 100,000).

Figure 7. Circumstances Associated with Suicide, MA Residents, 2005

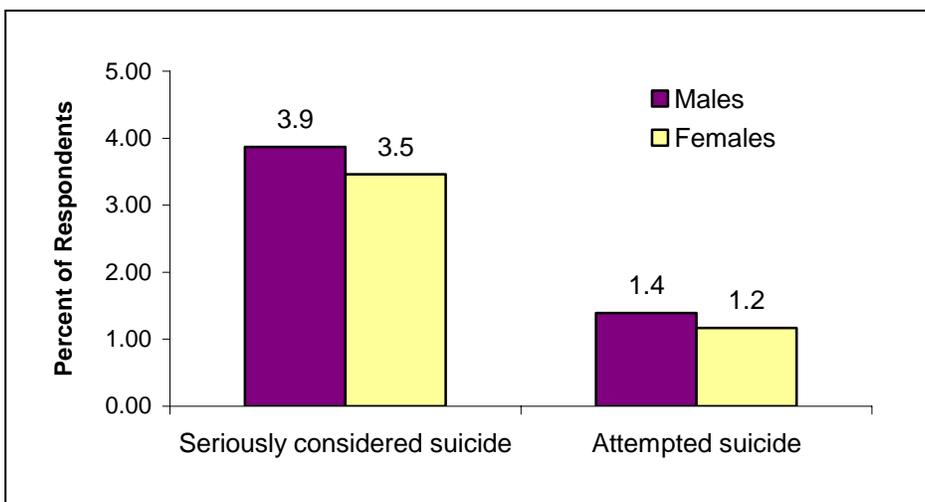


Source: Massachusetts Violent Death Reporting System, Massachusetts Department of Public Health
 * More than one circumstance may be noted for a suicide.

Some information on suicide circumstances is available from the MA Violent Death Reporting System, a surveillance system that collects detailed information on homicides, suicides, deaths of undetermined intent, and unintentional firearm deaths from medical examiners, police crime lab, and death certificates. In 2005, among suicides where circumstances were documented:

- 45% had a current mental health problem such as depression;
- 24% had a history of substance/alcohol abuse;
- 25% had current intimate partner problems; and
- 18% had physical health problems.

Figure 8. Suicidal Thinking and Behavior among MA Residents Ages 18 and Older, 2006

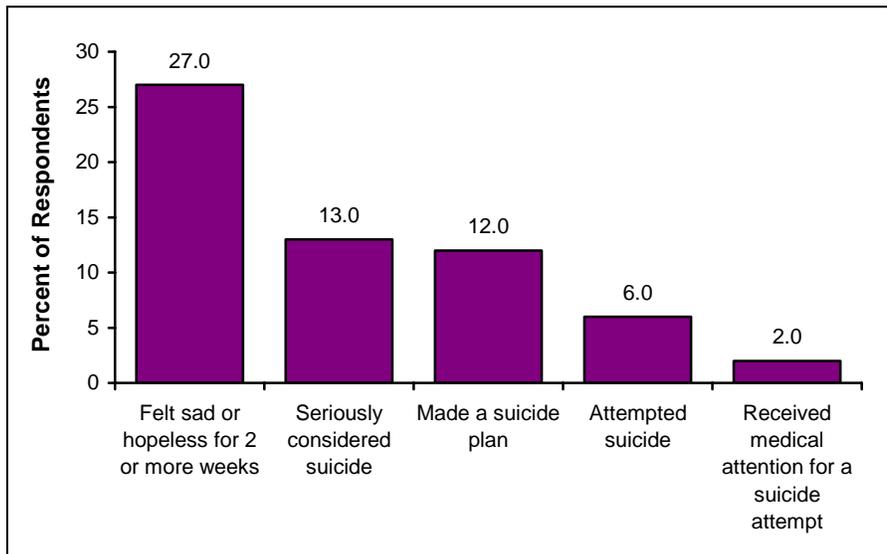


Source: MA Behavioral Risk Factor Surveillance System, Health Survey Program, MA Department of Public Health

Survey findings from the MA Behavioral Risk Factor Surveillance System, an anonymous random digit dialing telephone survey of Massachusetts residents ages 18 and older indicates that in 2006:

- 3.7%, or approximately 181,396 MA adults, seriously considered attempting suicide during the past year; 3.9% of males (N=89,975) and 3.5% of females (N=91,692).
- 1.3% of MA adults, ages 18 and older, attempted suicide.

Figure 9. Suicidal Thinking and Behavior among MA High School Students, 2005



Source: Massachusetts Youth Risk Behavior Survey 2005, MA Department of Education

Survey findings from the MA Youth Risk Behavior Survey, an anonymous written survey of youth in public high schools in MA, indicate that in 2005:

- 27% of high school students reported feeling sad or hopeless for 2 or more weeks during the past year;
- 13% of students seriously considered suicide during the past year, 12% made a suicide plan and 6% made an attempt;
- Students more likely to have made a suicide attempt compared to peers included sexual minority youth (21%), students who experienced dating violence or sexual contact against their will (23%), recent immigrants (8.6%), and students in special education (8.9%).

Resources

For more information on suicide data or to learn more about suicide prevention activities in Massachusetts, please contact:

The Injury Surveillance Program

MA Violent Death Reporting System

Bureau of Health Information, Statistics, Research, and Evaluation

Massachusetts Department of Public Health

250 Washington Street, 6th Floor

Boston, MA 02108

Phone: 617-624-5648 (general injury)

Phone: 617-624-5663 (MA-VDRS)

<http://www.mass.gov/dph/bhsre/isp/isp.htm>

Massachusetts Suicide Prevention Program

The Injury Prevention and Control Program

Bureau of Community Health Access and Promotion

Massachusetts Department of Public Health

250 Washington Street, 4th Floor

Boston, MA 02108

Phone: 617-624-5544

<http://www.state.ma.us/dph/fch/injury>

Massachusetts Coalition for Suicide Prevention

PO Box 400792

Cambridge, MA 02140

Phone: 617-817-1977

For information: info@MassPreventsSuicide.org

www.MassPreventsSuicide.org

24-hour help lines:

Samaritans:

1-877-870-HOPE (4673)

Samariteens:

1-800-252-TEEN (8336)

National LifeLine:

1-800-273-TALK (8255)

TTY: 1-800-799-4TTY (4889)

Methods

Data Sources:

Death Data (with the exception of Figure 7): Registry of Vital Records and Statistics, MA Department of Public Health. Data reported are for calendar year.

Death Data (Figure 7 only): Massachusetts Violent Death Reporting System, MA Department of Public Health. Preliminary 2005 File. Data reported are for calendar year.

Statewide Acute-care Hospital Stays: Massachusetts Inpatient Hospital Discharge Database, MA Division of Health Care Finance and Policy and Massachusetts Outpatient Observation Stay Database, MA Division of Health Care Finance and Policy. Data reported are for fiscal years (October 1 - September 30). Deaths occurring during the hospital stay and transfers to another acute care facility were excluded from the counts presented. All discharge diagnoses were analyzed to ascertain injury.

Statewide Emergency Department Discharges at Acute Care Hospitals: Massachusetts Emergency Department Discharge Database, MA Division of Health Care Finance and Policy. Data reported are for fiscal years (October 1 -September 30). Deaths occurring during treatment or those admitted to the hospital were excluded from the counts presented. All discharge diagnoses were analyzed to ascertain injury.

Suicide Crisis Data: Samaritans, United Way of Massachusetts Bay (Samaritans of Boston, Suburban West, Merrimack Valley, Fall River/New Bedford, and Cape Cod and the Islands).

MA Youth Risk Behavior Survey: MA Department of Education.

MA Behavioral Risk Factor Surveillance System: MA Department of Public Health.

Population Data estimates were obtained from MassCHIP (<http://masschip.state.ma.us>).

U. S. Data: Centers for Disease Control and Prevention, National Centers for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2004 Data) (Accessed 01/07/08). Available from: www.cdc.gov/ncipc/wisqars

All suicides and self-inflicted injuries were ascertained using guidelines recommended by the Centers for Disease Control and Prevention and are based upon the International Classification of Disease codes for morbidity and mortality. Suicides and self-inflicted injuries were identified utilizing the first listed external cause of injury.

All rates reported in this bulletin are crude rates with the exception of Figure 4. Age-adjusted rates are used for Figure 4 to minimize distortions that may occur by differences in age distribution among compared groups.

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