

# SUICIDES AND SELF-INFLICTED INJURIES IN MASSACHUSETTS: DATA UPDATE

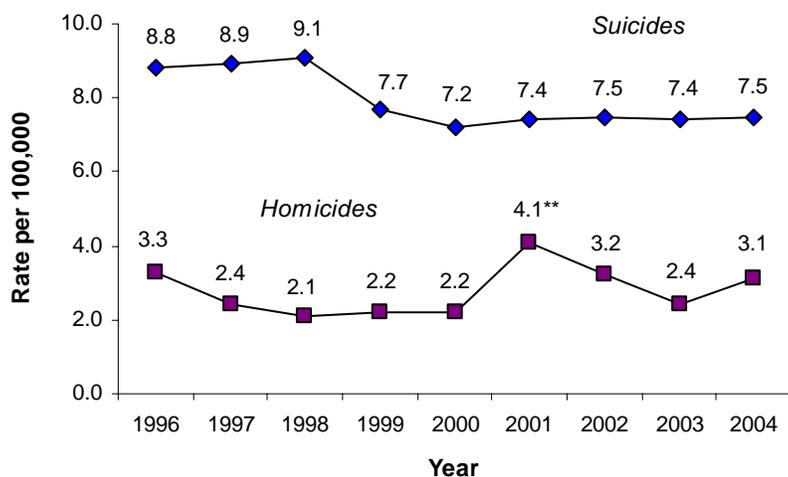
The Injury Surveillance Program, MA Department of Public Health

January, 2007

## Suicides

This bulletin provides an overview of suicide and self-inflicted injuries among Massachusetts residents. These data may be used to inform decisions regarding the development and evaluation of suicide prevention initiatives and policies. The data reported represents the latest year available at publication (for death data this is 2004, and for hospital stays, emergency department visits, youth behavioral survey and adult behavioral survey data this is 2005). Data on hospital stays combines both hospital discharges and observation stays, and therefore may not be directly comparable to previous years.

**Figure 1. Suicide and Homicide Rates,\* MA Residents Ages 10 and Older, 1996-2004**



### In 2004:

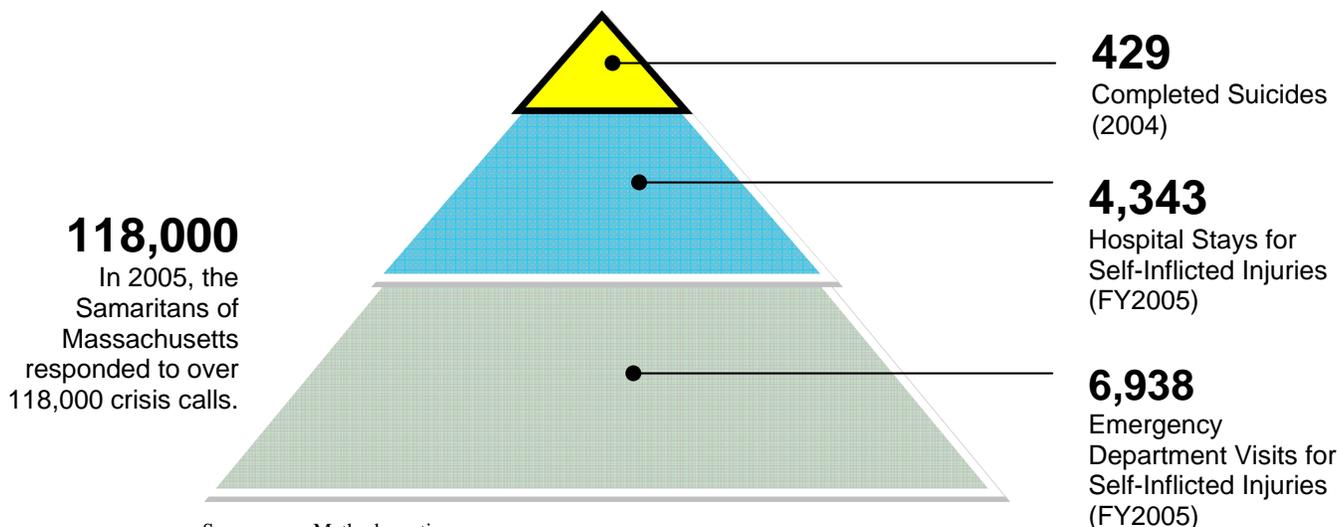
- 429 Massachusetts residents died by suicide (age-adjusted rate, 7.5 per 100,000 residents).
- There were more than 2.5 times the number of suicides than homicides.
- The suicide rate from 2000 through 2004 was relatively stable (from 7.2 to 7.5 per 100,000).
- Nationally, the suicide rate among persons ages 10 and older was 12.7 per 100,000 in 2004.

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

\*Rates are age-adjusted using the Standard US Census 2000 population

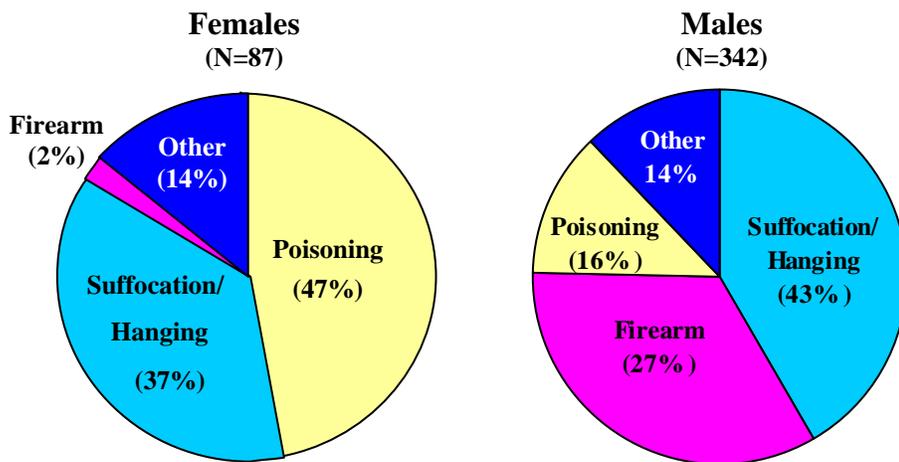
\*\* 2001 homicide deaths include victims of the September 11 terrorist attacks.

**Figure 2. Magnitude of Suicides and Self-Inflicted Injuries resulting in Acute Care Hospital Stays or Emergency Department Visit, MA Residents Ages 10 and Older**



Sources: see Methods section

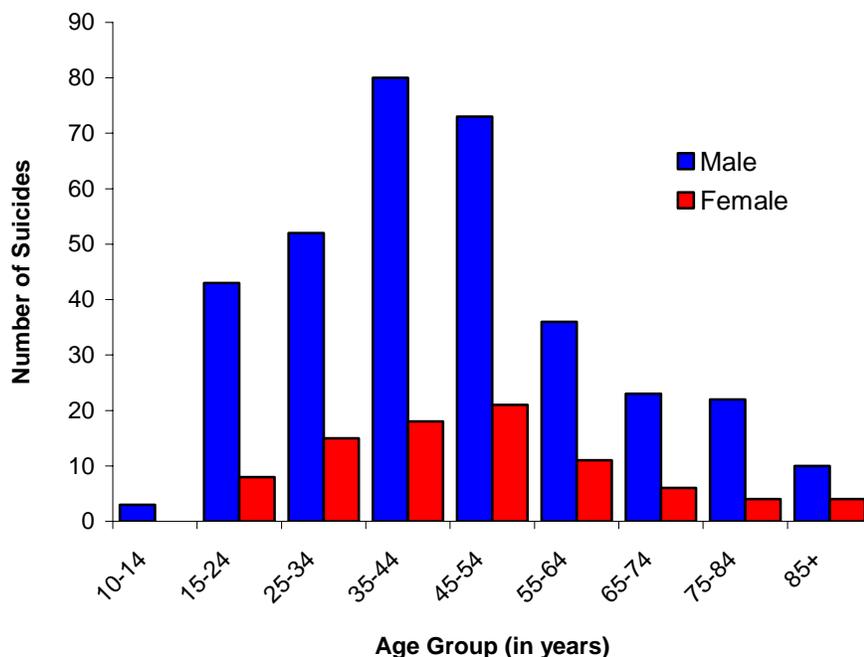
**Figure 3. Suicides by Method and Sex, Massachusetts Residents Ages 10 and Older, 2004**



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

- Overall, for both sexes combined, suffocation (including hanging, suffocation by plastic bag, etc.) was the leading method of suicide (n=180) among Massachusetts residents, followed by poisoning (n=95) and firearms (n=94). *(Data Not Shown)*
- The leading suicide methods, however, varied by sex. For males, suffocation (n=148) and firearm (n=92) were the most common methods. For females, the leading methods were poisoning (n=41), followed by suffocation (n=32).

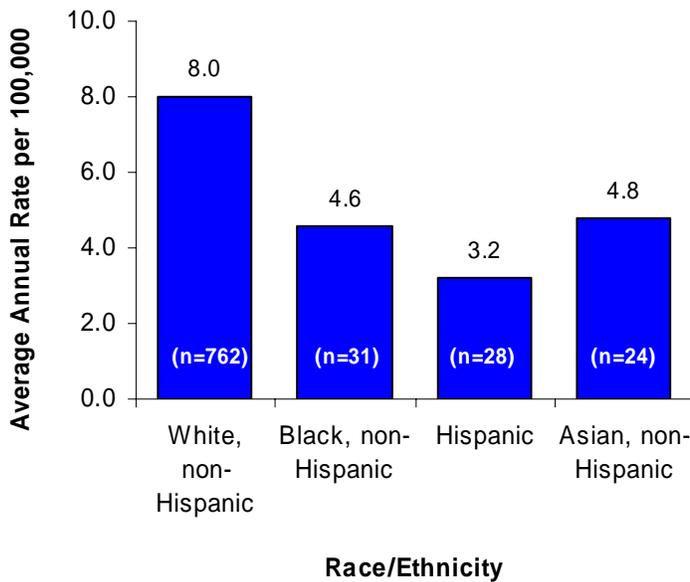
**Figure 4. Suicides by Age Group and Sex, Massachusetts Residents Ages 10 and Older, 2004**



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

- The number of male suicides exceeded female suicides. In 2004, there were 342 suicides by males (12.7 per 100,000) compared with 87 by females (3.0 per 100,000).
- Most suicides occur in the middle age population; 45% 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 (24.6 per 100,000). *(Data Not Shown)*
- The highest *rate* of suicide among females was in the 45-54 year age group (4.4 per 100,000). *(Data Not Shown)*

**Figure 5. Average Annual Suicide Rates\* by Race/Ethnicity, Massachusetts Residents Ages 10 and Older, 2003-2004**

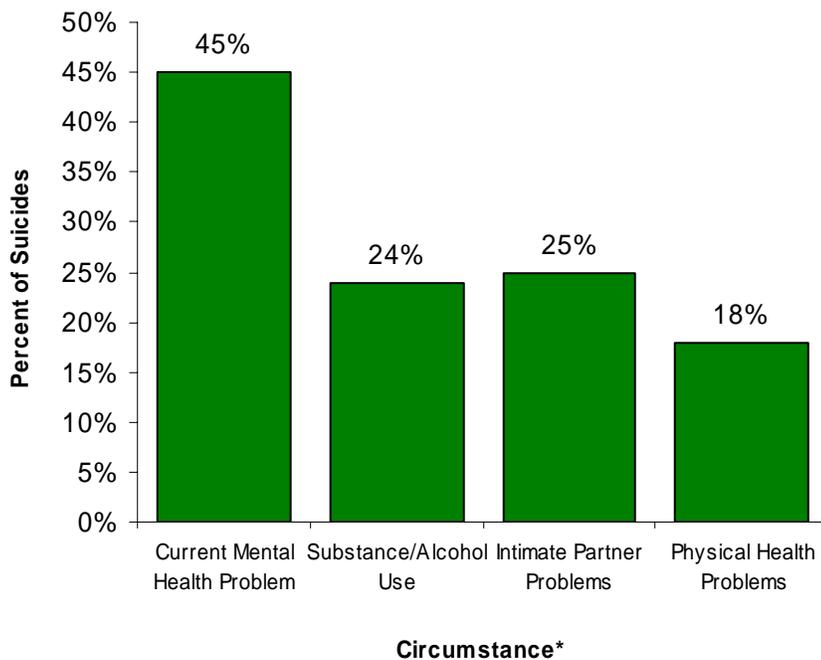


For the two year period 2003 and 2004:

- The highest average annual suicide rates were among White, non-Hispanic residents.
- The lowest suicide rates were among Hispanic residents.

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

**Figure 6. Circumstances that may be Associated with Suicide, Massachusetts Residents, 2004**



Some information on suicide circumstances is available from the MA Violent Death Reporting System, a surveillance system that collects detailed information on homicides, suicides, and deaths of undetermined intent from medical examiners, police lab data, and death certificates. In 2004, among suicides where circumstances were documented:

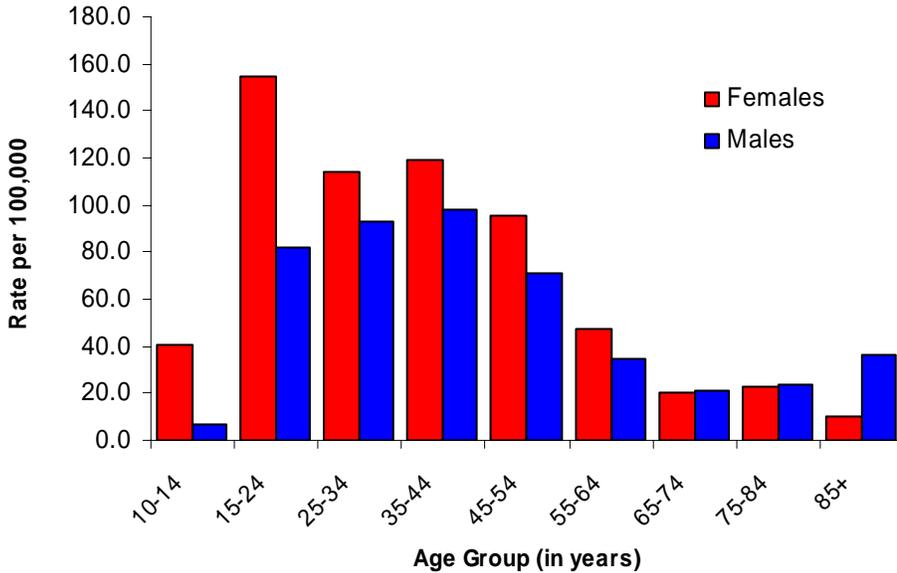
- 45% had a current mental health problem such as depression;
- 24% had a history of substance/alcohol abuse;
- 25% had current intimate partner problems; and
- 18% had physical health problems.

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

## Non-Fatal Self-Inflicted Injuries

Non-fatal self-inflicted injuries include non-fatal suicide attempts as well as injuries sustained during other intentional acts of self-harm (e.g., cutting, burning).

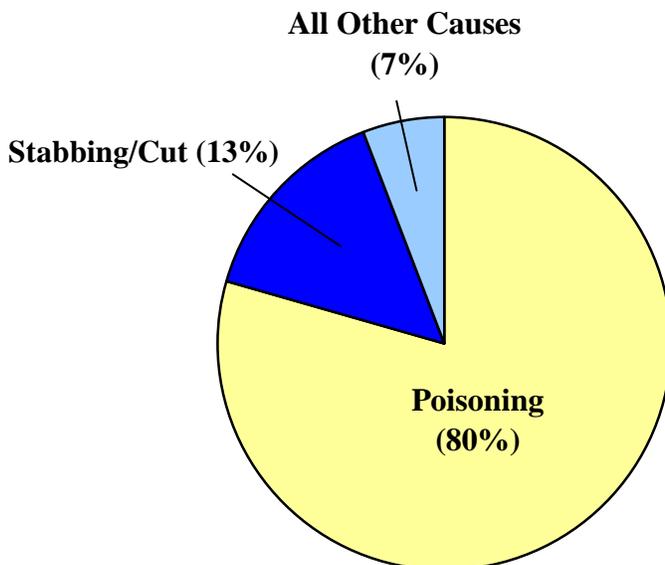
**Figure 7. Self-Inflicted Injury Hospital Stay Rates by Age Group and Sex, Massachusetts Residents Ages 10 and Older, FY 2005**



- The overall rate of hospital stays for self-inflicted injury among MA residents ages 10 and older was 77 per 100,000 (n=4,343).
- Females had a higher rate (88 per 100,000, n=2,568) than males (66 per 100,000, n=1,775).
- 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 (155 per 100,000); among males, the highest rate was in the 35-44 year age group (98 per 100,000).

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

**Figure 8. Self-Inflicted Injury Hospitalizations by Method, Massachusetts Residents Ages 10 and Older, FY 2005**

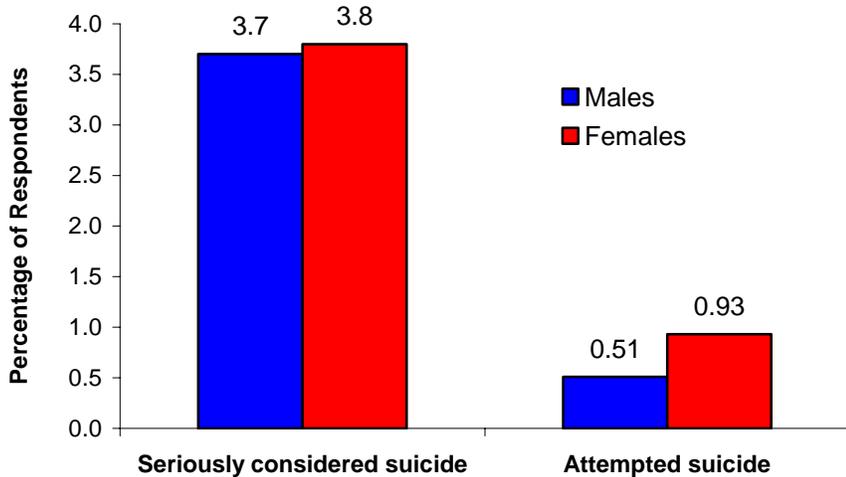


- The vast majority (80%) of hospitalizations for self-inflicted injuries were due to poisoning (n=3,474).
- Unlike completed suicides, the leading method of hospitalizations for self-inflicted injuries for both males and females was poisoning.
- Stabbing and cutting accounted for 13% of the hospitalizations for self-inflicted injuries (n=580).

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

## Survey Findings

**Figure 9. Suicidal Thinking and Behavior among Massachusetts Residents Ages 18 and Older, 2005**

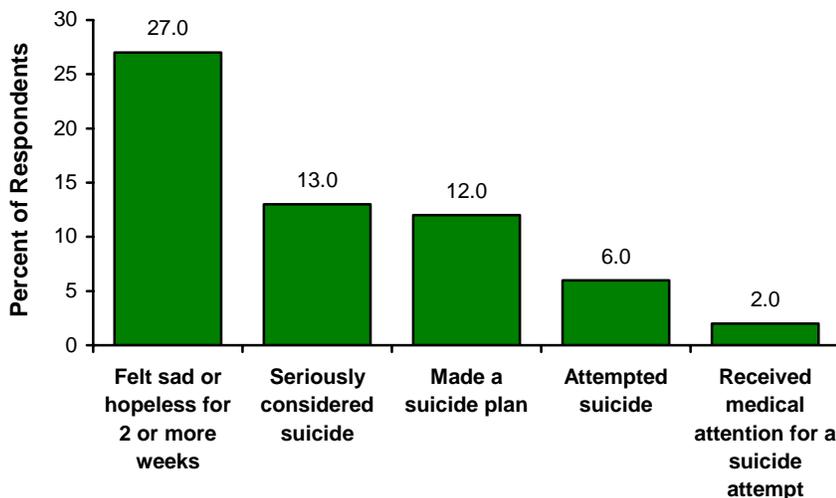


Source: MA Behavioral Risk Factor Surveillance System, Health Survey Program, MA Department of Public Health

Survey findings from the MA Behavioral Risk Factor Surveillance System, an anonymous random digit dialing telephone survey of Massachusetts residents ages 18 and older, indicate that in 2005:

- 3.77%, or approximately 183,600 MA adults, considered attempting suicide during the past year (3.70% or 86,900 males and 3.80% or 96,700 females);
- 0.72%, or approximately 35,700 MA adults, attempted suicide during the past year (0.51% or 12,000 males and 0.93% or 23,700 females).

**Figure 10. Suicidal Thinking and Behavior among Massachusetts 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

Center for Health Information, Statistics, Research, & Evaluation  
Massachusetts Department of Public Health  
250 Washington Street, 6<sup>th</sup> Floor  
Boston, MA 02108  
617-624-5648 (general injury)/617-624-5663 (MA-VDRS)  
<http://www.mass.gov/dph/bhsre/isp/isp.htm>

### Massachusetts Coalition for Suicide Prevention

Chapel Bridge Park  
55 Chapel Street  
Room 3217  
Newton, MA 02458  
617-817-6977  
<http://www.MassPreventsSuicide.org>

### The Suicide Prevention Program

#### The Injury Prevention and Control Program

Center for Community Health  
Massachusetts Department of Public Health  
250 Washington Street, 4<sup>th</sup> Floor  
Boston, MA 02108  
617-624-5476  
<http://www.state.ma.us/dph/fch/injury/index.htm>

#### Help lines:

Samaritans (Boston) 1-877-870-HOPE  
National LifeLine: 1-800-273-TALK

## Methods

#### Data Sources:

*Death Data (with the exception of Figure 6):* Registry of Vital Records and Statistics, MA Department of Public Health. Data reported are for calendar year.

*Death Data (Figure 6 only):* Massachusetts Violent Death Reporting System, MA Department of Public Health. 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: (with the exception of Figure 5)* Population Estimates Program, U.S. Census Bureau. Release Date August 4, 2006. Population data from the 2004 NCHS MARS File was used to calculate age-adjusted rates for Figure 5. Release Date September 9,2005.

*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]. (2006) {Accessed 12/29/06}. Available from: [www.cdc.gov/ncipc/wisqars](http://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. As suicide and self-inflicted injury events are rare under age 10, we excluded any event occurring under age 10, in order to display rates for those most at risk.

All rates reported in this bulletin are crude rates with the exception of Figures 1 & 5. Age-adjusted rates are used for Figures 1 & 5 to minimize distortions that may occur by differences in age distribution among compared groups.