

# INJURIES

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**TO MASSACHUSETTS RESIDENTS • 2006**

**Massachusetts Department of Public Health  
Injury Surveillance Program**

**December 2008**



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# INJURIES

TO MASSACHUSETTS RESIDENTS, 2006

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**December 2008**

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## Acknowledgements

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This and other Massachusetts Department of Public Health publications and materials can be accessed on-line at: <http://www.state.ma.us/dph/pubstats.htm>

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# **Executive Summary**

## Executive Summary

Injuries – which include homicides, suicides, unintentional injuries, and injuries of undetermined intent – are the leading cause of death for Massachusetts residents, ages 1 to 44 years, and the third leading cause of death for all ages combined.

On an average day, in 2006, 8 Massachusetts residents died from an injury and over 2,130 were discharged from an acute care hospital for nonfatal injury (includes inpatient, observation, and emergency department visits).

This report describes the overall magnitude of the injury problem in Massachusetts, the causes of these injuries and the groups with the highest rates of injury. It is hoped that this information will assist in the development, implementation, and evaluation of effective interventions. A new “Spotlight” section has been added to the report to focus attention on injuries of particular concern. The spotlight section this year will focus on falls among Massachusetts residents ages 65 and older.

Important findings for 2006 are summarized below:

### ***Injury Deaths, 2006***

- 2,910 injury deaths occurred among MA residents during 2006, an age-adjusted rate of 42.5 per 100,000 residents.
- Unintentional injuries account for most injury deaths (75%), followed by suicide (15%) and homicide (6%).
- Poisonings, which include drug overdoses, were the leading cause of injury death, accounting for nearly 1,000 deaths in 2006 (N=989).
- Among poisonings, 64% (N=637) were associated with an opioid, such as heroin or methadone.
- Motor vehicles (N=444) and falls (N=424) were the second and third leading causes of injury death.
- Males had a rate of injury death greater than twice that of females (age-adjusted rates were 60.0 and 26.2 per 100,000 respectively).
- Rates for the leading causes of injury death varied considerably by age group; younger age groups (15-19 and 20-24) had the highest rates of motor vehicle traffic and

**On an average day, in 2006, 8 Massachusetts residents died from an injury and over 2,130 were discharged from an acute care hospital for a nonfatal injury.**

firearm deaths, while poisoning death rates peaked among persons ages 45-54.

- White, non-Hispanic residents had the highest age-adjusted death rates for suicide (7.1 per 100,000).
- Black, non-Hispanic and White, non-Hispanic residents had the highest age-adjusted death rates for unintentional injury (33.7 and 32.3 per 100,000 respectively).
- Black, non-Hispanic residents had the highest age-adjusted homicide rate (19.2 per 100,000) followed by Hispanic residents (5.5 per 100,000).

### ***Important Changes from 2005 to 2006\****

- Injury deaths increased 9.5% from 2,657 in 2005 to 2,910 in 2006.
- Poisoning deaths due to drug overdoses continue to increase. Drug overdose deaths associated with an opioid, such as heroin or methadone, increased 17% from 2005 to 2006.
- Unintentional fall deaths among persons ages 65 years and older increased 65% from 2005 (N=206) to 2006 (340).

*\*Statistically significant at the  $P \leq .05$  level.*

### ***Nonfatal Injuries, 2006***

#### Injury-related Hospital Stays

- Among MA residents there were 66,516 hospital stays in 2006 (57,339 injury-related inpatient hospital discharges and 9,177 observation bed stays).
- The majority of injury-related hospital stays were unintentional (79%).
- Falls were the leading cause (44%) of injury-related hospital stays, followed by poisonings (11%) and motor vehicles (8%).
- Males had a higher age-adjusted rate of injury-related hospital stays than females (1,033.8 and 871.2 per 100,000 respectively).
- Rates for the leading causes varied by age group; motor vehicle traffic injury were

highest among persons ages 15-19 and 20-24, while those for falls began increasing at ages 35-44 and continued to rise throughout the life span.

- Charges for injury-related acute care hospital stays totaled over \$1.2 billion, of which nearly half (\$532 million) were associated with unintentional fall injuries.

#### Injury-related Emergency Department Visits

- In 2006, there were 711,189 injury-related emergency department (ED) visits among MA residents.
- Ninety-three percent of injury-related ED visits were unintentional.
- The leading causes of injury-related ED visits were fall (25%), struck-by or against an object (16%), overexertion (12%), and motor vehicle traffic (11%).
- Males had a higher age-adjusted rate of injury-related ED visits (12,654.6 per 100,000) than females (9,694.7 per 100,000).
- Acute care hospital charges for injury-related ED visits totaled over \$747 million.

#### **Conclusion**

The data presented in this report illustrate clearly the significant burden of injuries on Massachusetts' residents. Injury is the leading cause of death among Massachusetts residents between the ages of 1 and 44 years old. In 2006, 2,910 Massachusetts residents died as a result of an injury. Injury deaths represent the most extreme, but smallest share of the overall burden of injuries among Massachusetts residents. In 2006, there were over 777,000 injuries among Massachusetts residents severe enough to require treatment at an acute care hospital. Many more injuries are treated at home, in a health care center, or a physician's office. While minor injuries can result in temporary pain and inconvenience, more severe nonfatal injuries can result in long term medical care and/or life-long disability.

*Fortunately, most injuries are preventable.* They generally follow a predictable sequence of events. Examining how different injuries affect different groups, will allow injury prevention advocates, to improve allocation of resources, and to prioritize, plan, and design effective prevention strategies to reduce the burden of injuries among Massachusetts residents. Appendix D includes additional data and prevention resources.

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# **Data Notes**

## Data Notes

### General Methodology

For this report, death certificate data from the Massachusetts Registry of Vital Records and Statistics, and statewide inpatient hospital discharge, observation stay, and outpatient emergency department data from the Massachusetts Division of Health Care Finance and Policy (DHCFP) were used for analysis.

Death data are based on calendar year 2006. DHCFP data (inpatient hospital discharge, observation stay, and emergency department data) are submitted and available by fiscal year (October 1, 2005 – September 30, 2006). Fiscal year is therefore used for these data sets so that we may provide the most current data available in a timely manner. Both fatal and nonfatal databases include 12 full months of data and are relatively comparable due to the static nature of injuries.

Injuries are classified according to specific codes in the International Classification of Diseases (ICD) manual. These codes provide information on the “nature and anatomic location of the injury” (e.g., multiple fractures involving skull or face, dislocation of hip, open wound to chest), “cause” of the injury, such as fall or motor vehicle crash, and the “intent” of the injury such as assault, self-inflicted, or unintentional.

For this report, an injury death was defined as a death with a valid ICD–10 external cause code in the underlying cause of death field. Injury-related hospital cases are defined as a hospital visit (hospital discharge, observation stay, or emergency department discharge) with a valid ICD-9-CM diagnostic code for injury in either the primary or any of the associated diagnosis fields (up to 16 discharge diagnoses can be submitted depending on the data set). It is also not possible to distinguish whether a case is a follow-up visit for a previous injury. Nonfatal injuries in this report, therefore, reflect the injury “burden” and not necessarily the number of acute care hospital visits explicitly caused by injury.

Throughout the report we compare fatal to nonfatal injuries, and where considered useful we provide counts and rates by specific data

source (i.e., death, hospital discharge, observation stay, or ED visit). For certain tables, hospital discharges and observation stays are combined as “hospital stays” for ease of interpretation.

Crude rates, important for developing proper community-level prevention strategies are presented throughout this report. The crude rate represents the actual or “true” rate of injury for a given population. Age-adjusted rates, useful for comparing rates for populations with different age compositions are used for regional maps, and for race and ethnicity.

### Strengths and Limitations

One of the strengths of the data presented here is that it represents a complete census of the injury-related deaths and nonfatal acute care hospital cases in Massachusetts. Using population-based statewide databases allows us to better assess and gauge the injury burden statewide, regionally, and locally. Another strength is the completeness of external cause codes (E-Codes) in the hospital databases. Over 98% of injury cases have a cause code assigned.

This report has several limitations. The time between data collection and its availability for analysis is a limitation with most statewide datasets. Death data for example are not available until approximately 12-14 months after the end of a year - due to the application of necessary but extensive quality control measures.

This report includes nonfatal injury data from Massachusetts acute care hospitals only; it does not include cases requiring treatment at long-term care facilities, Veterans Administration, psychiatric or rehabilitation hospitals, nor does it capture injuries treated at health care centers or physicians' offices. Massachusetts residents that are treated at out-of-state hospitals are not captured in the datasets used for this report.

For this report, data on race and ethnicity are presented for injury deaths only. While it is important to include race and ethnicity information to examine disparities, race and ethnicity were not mutually exclusive categories in the hospital databases for fiscal year 2006. This makes it difficult to provide accurate rates

for nonfatal injuries by race and ethnicity. As of January 1, 2007 all hospital databases will capture both Hispanic ethnicity and race categories. This should result in more accurate data on nonfatal injuries by race and ethnicity.

This report, though comprehensive, does not include every category of interest. One category of injury that is not separately analyzed in this report is occupational. These injuries can be of any nature, cause, and intent. While the report captures such injuries as part of the overall totals, it does not provide in-depth analysis specifically on work-related injuries. The Department's Occupational Health Surveillance Program (OHSP) has published many publications on work-related injury and disease and has expertise in the prevention of such injuries. For more information please refer to the Resources section in Appendix D.

### **Documentation**

The data generated for this report are dependent on multiple factors, including the diagnosis and documentation of injuries and their causes in the medical record or on the death certificate. While over 98% of injury cases have a cause code assigned, they are sometimes "unspecified" codes (e.g., unspecified fall). Such limited data can result in the development of less effective prevention strategies.

*Additional technical notes and methodology can be found in Appendix D.*

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# **Introduction**

## Introduction

Injuries are a major public health problem in Massachusetts and around the world. Injuries, in fact, claim more lives worldwide than any disease group. It is estimated that about one fourth of the U.S. population will sustain a nonfatal injury requiring medical attention each year.<sup>1</sup> These nonfatal injuries not only cause temporary pain and inconvenience, they may also be associated with life-long disability. Due to the extent of this health problem the economic impact is enormous. Nationwide, the financial cost of injuries is estimated at more than \$224 billion per year.<sup>2</sup> In Massachusetts, total acute care hospital charges for nonfatal injury-related hospital stays and emergency department visits exceeded \$2 billion in 2006. These costs do not include nonfatal injuries that are treated at a health care center, a physician's office, or rehabilitation facilities.

In 2006, injury – including homicides, suicides, unintentional injuries, and injuries of undetermined intent – were the leading cause of death for MA residents between the ages of 1 and 44 years and the third leading cause of death among all residents (Table 1). Injuries rank as one of the 10 leading causes of death in Massachusetts for every age group.

A measure of overall impact of mortality on the population is the total years of potential life lost (YPLL). Since injuries disproportionately affect the young, the YPLL for injury deaths is far greater than many diseases that are prevalent among older persons. In 2006, injury ranked second only to cancer deaths in total years of potential life lost. Injury deaths accounted for a total of 74,929 years of potential life lost among

**Table 1. Ten Leading Causes of Death, Massachusetts Residents, 2006\***

Rank	Age Groups								Total
	<1 year	1-14 years	15-24 years	25-44 years	45-64 years	65-74 years	75-84 years	85+ years	
1	Short gestation	Unintentional Injuries	Unintentional Injuries	Unintentional Injuries	Cancer	Cancer	Cancer	Heart disease	Heart disease
2	Congenital malformations	Cancer	Homicide	Cancer	Heart disease	Heart disease	Heart disease	Cancer	Cancer
3	SIDS	Congenital malformations	Suicide	Heart disease	Unintentional Injuries	Chronic Lower Resp. Disease	Stroke	Stroke	<b>INJURIES</b>
4	Pregnancy Complications	Ill defined conditions	Cancer	Suicide	Chronic Liver Disease	Stroke	Chronic Lower Resp. Disease	Alzheimer's Disease	Stroke
5	Complications of placenta	Homicide	Ill defined conditions	HIV/AIDS	Chronic Lower Resp. Disease	Diabetes	Influenza & pneumonia	Influenza & pneumonia	Chronic Lower Resp. Disease
6	Intrauterine hypoxia	Heart disease	Heart disease	Homicide	Diabetes	Nephritis	Nephritis	Chronic Lower Resp. Disease	Influenza & pneumonia
7	Neonatal hemorrhage	Influenza & pneumonia	Congenital malformations	Ill defined conditions	Stroke	Septicemia	Alzheimer's Disease	Nephritis	Alzheimer's Disease
8	Unintentional Injuries	Septicemia	Stroke	Stroke	Suicide	Influenza & pneumonia	Diabetes	Unintentional Injuries	Nephritis
9	Bacterial sepsis of newborn	In situ neoplasms	Aortic aneurysm	Chronic Liver Disease	Septicemia	Unintentional Injuries	Septicemia	Ill defined conditions	Diabetes
10	Necrotizing enterocolitis	Acute bronchitis	Nephritis	Diabetes	Nephritis	Chronic Liver Disease	Unintentional Injuries	Diabetes	Septicemia

\*This table is based on data from the report *Massachusetts Deaths, 2006*. The overall "TOTAL" injury ranking is based on all injury intents for all ages combined. <sup>1</sup> Christofell, T., Gallagher, S. *Injury Prevention and Public Health*. Maryland: Aspen Publishers, 1999.

<sup>2</sup> National Center for Injury Prevention and Control. *Injury Fact Book 2001-2002*. Atlanta, GA: Centers for Disease Control and Prevention.

MA residents, or an average of 25.7 years per MA resident who died of an injury. Injury rates in Massachusetts compare favorably with the rest of the nation. In 2005, the age-adjusted rate for injury deaths in Massachusetts was significantly lower than the U.S. (39.1 and 58.6 per 100,000 respectively).<sup>3</sup>

**Figure 1. Injury Deaths and Nonfatal Acute Care Hospital Cases\* Associated with Injury, MA Residents, 2006**

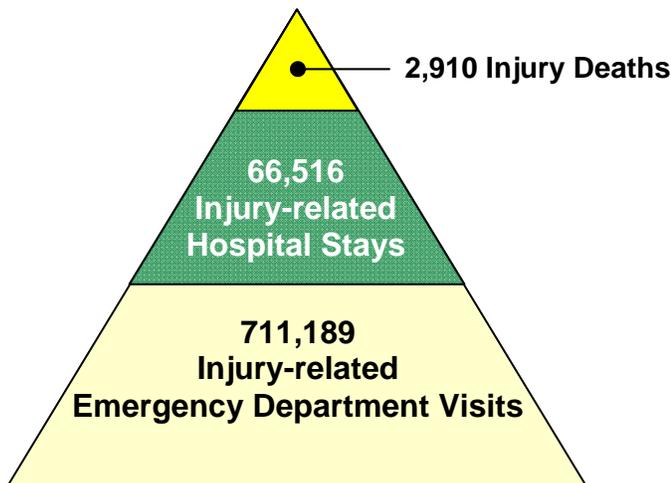


Figure 1 demonstrates that injury deaths while the most extreme outcome, represent the smallest share of the overall burden of injuries among Massachusetts residents.

Injuries are not “accidents”. Nearly all injuries are preventable, and most follow a very predictable sequence of events. In 2004, to address the problem of injury deaths and nonfatal injuries, the Massachusetts Department of Public Health (MDPH) Injury Prevention and Control Program (IPCP), in collaboration with the Injury Surveillance Program (ISP), prepared *Maximizing our Efforts: The Massachusetts State Injury Prevention Plan*. The purpose of the plan is to document the problem of injury in Massachusetts and to identify steps to be taken to more effectively use existing resources, strengthen infrastructure, coordinate efforts, and prioritize injury prevention interventions. While injuries are prevalent across all demographic strata, differences in rates among causes and intents exist. By identifying the risk factors for and circumstances of these injuries we can inform the development of appropriate and accessible strategies to prevent injuries. Historically, the most successful public health injury prevention programs combine three types

of intervention strategies. These are categorized as the 3E's:

- **Engineering/technological interventions:** Changes in the design of products or of the physical environment.
- **Education/behavior change:** Efforts to alter specific injury-related behaviors in the population at large or in targeted groups.
- **Enforcement/legislative interventions:** Passage and enforcement of new laws and regulations, or the increased enforcement of existing ones.

Injury prevention experience suggests that “passive” countermeasures are generally the most effective since these require little or no individual action on the part of those being protected. “Active” countermeasures are less reliable because they are more subject to human error. Child-resistant medicine caps are an example of a passive countermeasure, while action required to put on a bicycle helmet is an active countermeasure.

This report provides information on injuries to Massachusetts residents for 2006. It describes the magnitude of the problem, enumerates injuries by their causes and intents, quantifies some of the economic costs, and characterizes high-risk populations. It is intended to further the goals and objectives detailed in the Massachusetts injury prevention plan, and to assist policy makers, researchers, injury prevention advocates, and the general public in creating a safer Massachusetts to reduce the number, severity, and resulting disabilities and deaths from injury.

<sup>3</sup>Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. (2007). Available from: URL: [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars). [October, 2007]. Age-adjusted rates for the U.S. are based on WISQARS data.

\* Injury-related hospital cases are defined as a hospital visit (hospital discharge, observation stay, or emergency department discharge) with a valid ICD-9-CM diagnostic code for injury in either the primary or any of the associated diagnosis fields.

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# Injury Overview

# Injury Overview

## INJURY CLASSIFICATIONS

Injuries are classified according to specific codes in the International Classification of Diseases (ICD) Manual. These codes provide information on the “intent” of the injury (e.g., assault-related, intentionally self-inflicted, unintentional), “cause” of the injury, such as fall or motor vehicle crash, and the “nature and anatomic location” of the injury (e.g., multiple fractures involving skull or face, dislocation of hip).

### Intent of Injury

- Unintentional – “Accidental”
- Suicide/Intentional Self-inflicted
- Homicide/Assault-related
- Other/Legal
- Injury of Undetermined Intent
- Adverse Effects

### External Cause of Injury

(Examples)

- Fall
- Firearm
- Poisoning/Drug overdose
- Motor vehicle
- Fire/burn
- Drowning
- Cut/pierce
- Machinery
- Struck by or against an object
- Suffocation/hanging

### Nature and Anatomical Location of Injury

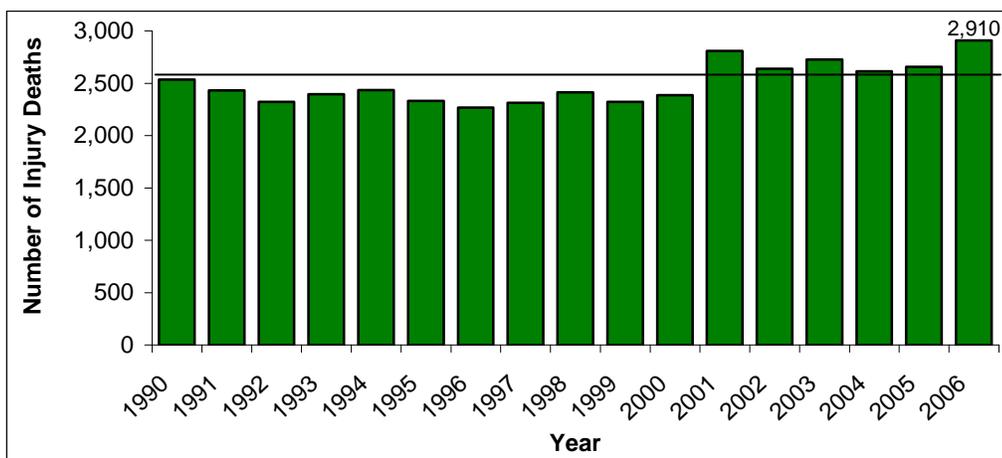
(Examples)

- Fracture of skull
- Open wound to the chest
- Sprain to ankle
- Dislocation to shoulder
- Internal injury to abdomen
- Burn to upper back
- Crushing injury of forearm
- Foreign body in trachea

## DATA HIGHLIGHTS

- Most injury deaths in Massachusetts are unintentional. In 2006, 75% of all injury deaths were unintentional, 15% were suicide, 6% were homicide, and 4% were of undetermined intent, other, or adverse effects.
- **Poisonings were the leading cause of injury death**, accounting for nearly 1,000 deaths in 2006 (N=989).
- **Poisoning deaths due to drug overdoses continue to increase.** Drug overdose deaths associated with an opioid, such as heroin or methadone, increased 17% from 2005 (N=544) to 2006 (N=637).
- Falls were the third leading cause of injury death, but the *leading* cause of injury-related hospital stays (44%) and emergency department visits (24.5%).
- **Unintentional fall deaths among persons ages 65 years and older increased 65% from 2005 (N=206) to 2006 (N=340).**
- The majority of injuries associated with fall-related hospital stays among persons 65 and older were to the lower extremities (N=10,156), and to the head and neck area (N=6,786).
- The leading circumstance of fall-related hospital stays among persons ages 65 and older was due to “slipping, tripping, or stumbling on the same level” (N=7,876). More information on older adult falls can be found in the Spotlight section on page 27.

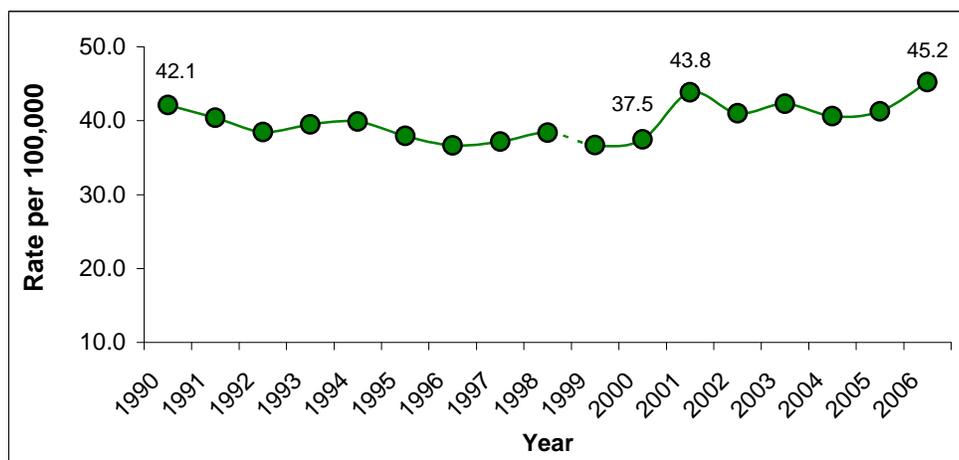
**Figure 2. Number of Injury Deaths by Year, MA Residents, 1990-2006**



Source: Registry of Vital Records and Statistics, MDPH

- Injury deaths between 1990 and 2000 averaged 2,377 per year.
- In 2001, which included 87 deaths related to the September 11, 2001 terrorist attacks, the number of injury deaths increased 18% from the previous year (2,386 in 2000 and 2,809 in 2001).
- Injury deaths have numbered more than 2,600 every year since 2001, with 2006 having the highest count (N=2,910) during the time period examined, 1990-2006.

**Figure 3. Rate of Injury Deaths by Year, MA Residents, 1990-2006**

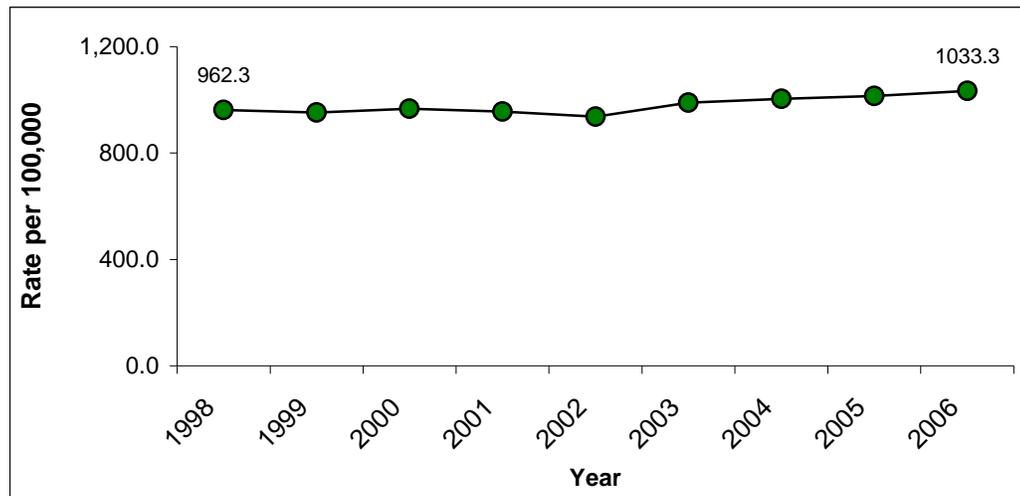


Source: Registry of Vital Records and Statistics, MDPH

A change in the classification coding manual from ICD-9 in 1998 to ICD-10 in 1999 is indicated in the graph by a dotted line. The overall comparability ratio between the two systems for injury deaths is very high; 1.0159.

- Injury death rates gradually declined from 1990 (42.1 per 100,000) to a low of 36.7 per 100,000 in 1999, then increased (20.5%) from 2000 through 2006 (37.5 and 45.2 per 100,000 respectively).
- 2001 includes 87 deaths associated with the September 11, 2001 terrorist attacks. Excluding these 87 cases, the crude death rate for 2001 would be 42.5 per 100,000.

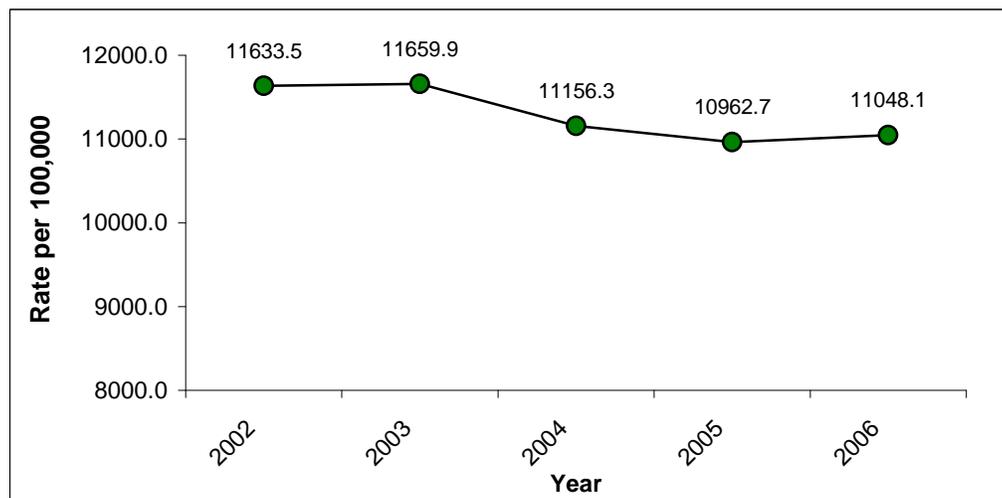
**Figure 4. Rate of Nonfatal Injury-related Acute Care Hospital Stays by Year, MA Residents, 1998-2006**



Source: MA Inpatient Hospital Discharge Database and MA Outpatient Observation Stay Database, MA Division of Health Care Finance and Policy. 1998 was the first year of statewide data submission for observation stay data.

- Rates for nonfatal injury-related hospital stay cases, which include inpatient hospital discharges and observation stays, increased 7.4% from 1998 (962.3 per 100,000, N=60,538) to 2006 (1,033 per 100,000, N=66,516).

**Figure 5. Rate of Nonfatal Injury-related Acute Care Emergency Department Visits by Year, MA Residents, 2002-2006**



Source: MA Emergency Department Database, MA Division of Health Care Finance and Policy. 2002 was the first year of statewide data submission for emergency department data.

- Between 2002 and 2006, the total number and rate of nonfatal injury-related emergency department visits decreased by about 5% from 11,633.5 per 100,000 (N=748,005) in 2002 to 11,048.1 per 100,000 (N=711,189) in 2006.

In 2006:

In 2006, there were a total of 2,910 injury deaths to Massachusetts residents and over 780,000 nonfatal acute care hospital cases (including inpatient hospital discharges, observation stays, and emergency department visits) associated with injury.

Table 2 provides a summary of the overall burden of injuries to Massachusetts residents for the year 2006. An overall count of injuries, the crude rate, and age-adjusted rate, is provided for all injuries and by sex, for each data source. Total injury counts and age-specific rates are provided by selected age groups.

- The overall age-adjusted injury death rate among MA residents in 2006 was 42.5 per 100,000 residents.
- Males had higher rates of injury death than females with age-adjusted rates of 60.0 per 100,000 and 26.2 per 100,000 respectively.
- Males had a higher age-adjusted *rate* of nonfatal injury-related acute care hospital discharges, but females had a higher *number* of nonfatal acute care hospital discharges.
- Persons ages 85 years and older had the highest combined injury rate (fatal and nonfatal combined) followed by

**Table 2. Injury Characteristics, MA Residents, 2006**

		Deaths	Nonfatal Hospital Discharges	Nonfatal Observation Stays	Nonfatal Emergency Department Visits	TOTAL
Injury Totals	Number	2,910	57,339	9,177	711,189	780,615
	Crude rate	45.2	890.7	142.6	11,048.1	12,126.6
	Age-adjusted rate	42.5	824.5	138.1	11,190.0	12,171.3
Female	Number	1036	30,586	4,293	318,907	354,822
	Crude rate	31.2	921.3	129.3	9,605.7	10,687.4
	Age-adjusted rate	26.2	752.6	118.6	9,694.7	10,592.0
Male	Number	1,874	26,753	4,884	392,251	425,762
	Crude rate	60.1	858.2	156.7	12,583.4	13,658.5
	Age-adjusted rate	60.0	877.4	156.5	12,654.6	13,748.4
<1 year	Number	11	342	111	4,739	5,203
	Age-specific rate	14.3	443.1	143.8	6,140.0	6,741.1
1-14 years	Number	41	2,149	848	130,169	133,207
	Age-specific rate	3.7	193.7	76.4	11,734.6	12,008.5
15-24 years	Number	325	4,688	1,453	145,778	152,244
	Age-specific rate	36.3	523.4	162.2	16,275.2	16,997.1
25-44 years	Number	851	10,057	2,253	224,474	237,635
	Age-specific rate	46.7	551.9	123.6	12,319.5	13,041.7
45-64 years	Number	839	12,285	2,241	136,576	151,941
	Age-specific rate	50.0	732.6	133.6	8,144.3	9,060.5
65-74 years	Number	178	6,003	665	26,056	32,902
	Age-specific rate	43.4	1,465.3	162.3	6,360.1	8,031.1
75-84 years	Number	296	11,523	917	27,127	39,863
	Age-specific rate	95.7	3,726.0	296.5	8,771.6	12,889.8
85+ years	Number	369	10,292	689	16,264	27,614
	Age-specific rate	269.3	7,511.2	502.8	11,869.6	20,153.0

Detailed tables by sex and age groups are provided by data source in Appendices B and C.

\*Rates are per 100,000 residents. Rates are not calculated on counts less than five. Rates based on counts less than 20 may be unstable and should be interpreted with caution.

- persons ages 15-24 years old (20,153.0 and 16,997.1 per 100,000 respectively).
- Children ages 1-14 years had the lowest injury death rate (3.7 per 100,000) while older adults ages 75-84 and 85 and older had the highest (95.7 per 100,000 and 269.3 per 100,000 respectively).
- Adults ages 65 years and older had the highest rates of injury-related hospital stays; 1,627.6, 4,022.5, and 8,014.0 per 100,000 for age groups 65-74, 75-84, and 85 and older respectively).
- Persons ages 15-24 years had the highest injury-related ED visit (16,275.2 per 100,000), followed by persons ages 25-44 years old (12,319.5 per 100,000).

### Intent of Injury

Table 3 provides overall counts and rates by intent of injury. Six intent categories are presented in this report (unintentional, suicide/self-inflicted, homicide/assault, undetermined intent, other/legal, and adverse effects), as well as cases where an injury occurred but cause and intent were not assigned.

In this report homicide is defined as any death purposefully inflicted by one person against one or more other persons (with the exception of those that are a result of legal intervention). Assault-related injuries are purposefully inflicted by one person against one or more other persons but do not result in death.

Unintentional injuries refer to those for which there was no intent to injure or harm oneself or another person. Unintentional injuries account for the vast majority of fatal and nonfatal injuries. In 2006, 92% of all injuries among Massachusetts residents were unintentional. While unintentional intent is sometimes referred to as “accidental” which for some people may imply a random or non-preventable event, the preferred term “unintentional injury” is used throughout this report.

While suicide refers to completed suicides, nonfatal self-inflicted injuries include suicide attempts, as well as other self-injurious behavior like cutting or burning oneself. There is no way to distinguish between those that are actual suicide attempts and those that are not, so the broader term “self-inflicted injury” is used to describe these cases.

Undetermined intent includes injuries for which there is not enough information to make a determination of intent.

Legal/Other intent includes injuries sustained from operations related to war, and legal interventions such as police actions.

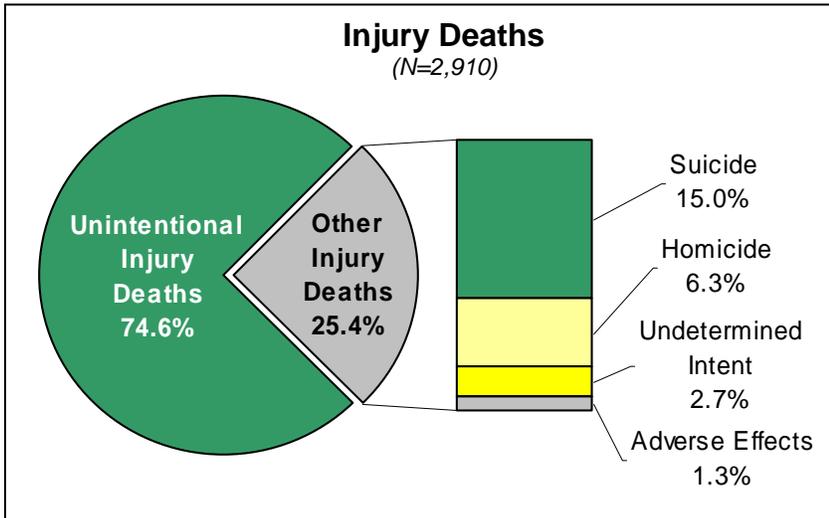
Adverse effects from drugs and medical procedures also fall within the scope of injury and are presented in totals and all overview tables.

**Table 3. Number and Rate of Injury Deaths and Nonfatal Injury-related Acute Care Hospital Cases by Intent, MA Residents, 2006**

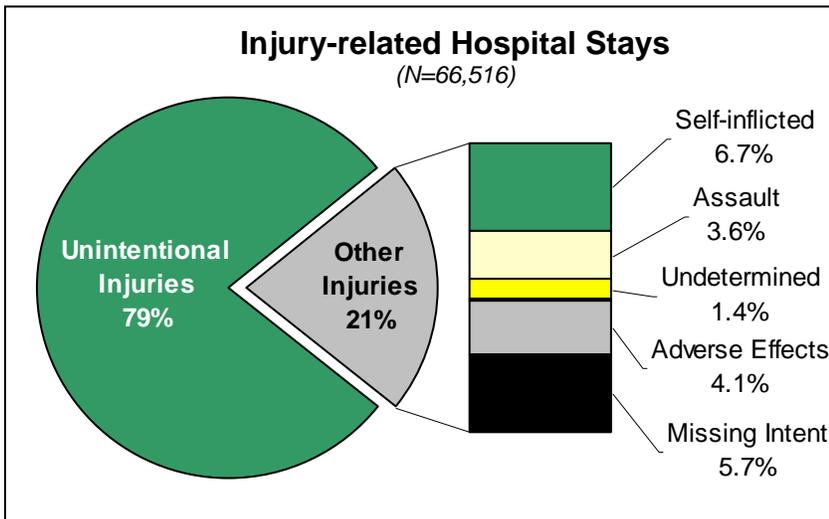
Intent of Injury	Injury Deaths		Nonfatal Hospital Stays		Nonfatal ED Visits		Total Injuries	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
Unintentional	2,170	33.7	52,196	810.9	659,220	10240.8	713,586	11,085.4
Suicide and Self-Inflicted	437	6.8	4,454	69.2	6,969	108.3	11,860	184.2
Homicide and Assault	183	2.8	2,367	36.8	24,497	380.6	27,047	420.2
Undetermined Intent	80	1.2	943	14.6	5,263	81.8	6,286	97.7
Other/Legal	3	0.0	59	0.9	553	8.6	615	9.6
Adverse effects	37	0.6	2,701	42.0	1,191	18.5	3,929	61.0
No cause/intent code assigned	0	0.0	3,796	59.0	13,496	209.7	17,292	268.6
<b>TOTAL</b>	<b>2,910</b>	<b>45.2</b>	<b>66,516</b>	<b>1,033.3</b>	<b>711,189</b>	<b>11,048.1</b>	<b>780,615</b>	<b>12,126.6</b>

\*Represents crude rates per 100,000 residents. Rates based on counts < 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts < 5. Detailed tables for intent by sex and age group are provided in Appendix C.

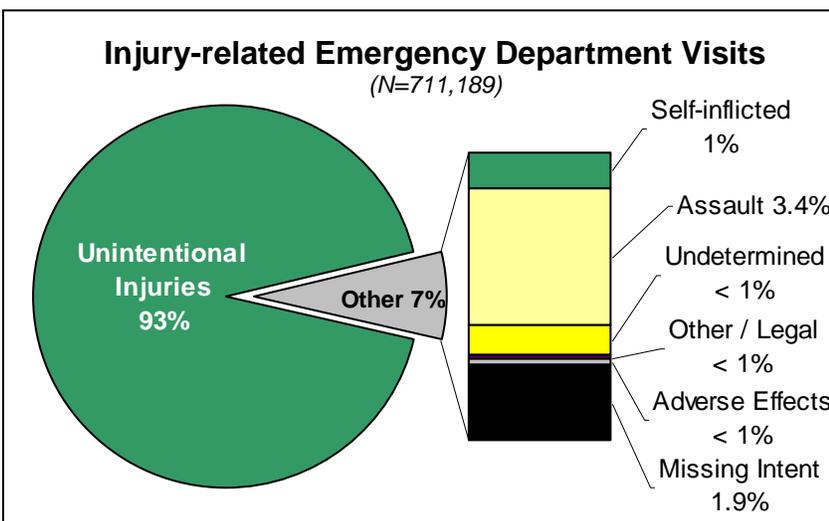
**Figure 6. Percent of Injury Deaths and Nonfatal Injury-related Acute Care Hospital Cases by Intent, MA Residents, 2006**



Among injury deaths, 74.6% were unintentional; suicide accounted for 15.0%, homicide 6.3%, undetermined intent 2.7%, and adverse effects 1.3%.

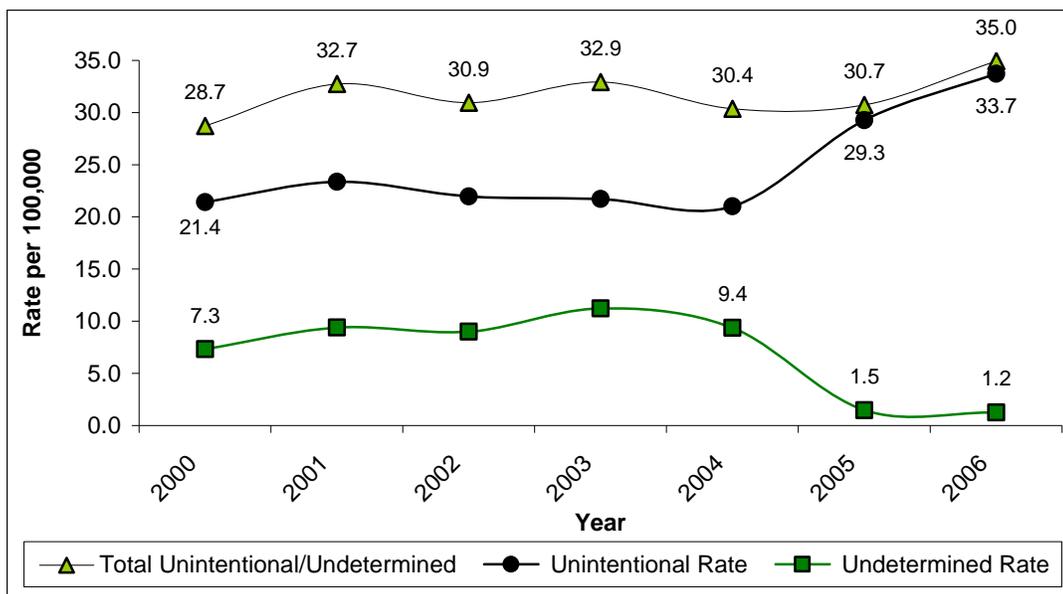


Among nonfatal injury-related hospital stays, 79% were unintentional, self-inflicted injuries accounted for 6.7%, assaults 3.6%, adverse effects 4.1%, missing intent 5.7%.



Among nonfatal injury-related emergency department visits, unintentional injuries accounted for 93% of total injuries, only 1% of injuries resulted from self-inflicted injury, while assault-related injuries accounted for 3.4% of the total.

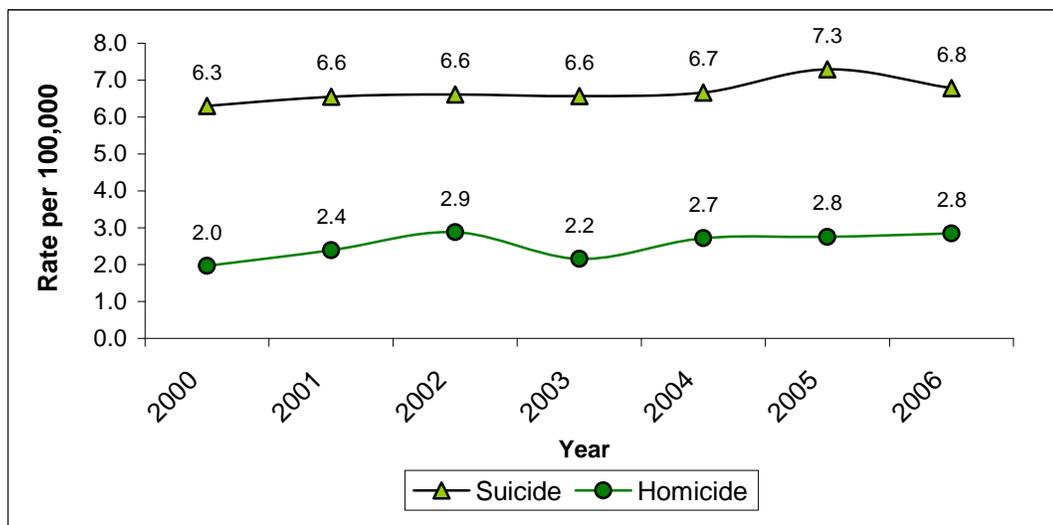
**Figure 7. Unintentional and Undetermined Injury Death Rates by Year, MA Residents, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- Unintentional injury death rates remained relatively stable from 2000 (21.4 per 100,000) through 2004 (21.0 per 100,000). A major classification change occurred in May 2005 in which poisoning deaths without evidence of suicide or homicide were classified as “unintentional” rather than as “undetermined intent”. This change brings Massachusetts more in line with how these deaths are classified nationally, but the result is a dramatic increase in unintentional deaths and a decrease in deaths of undetermined intent.

**Figure 8. Suicide and Homicide Death Rates by Year, MA Residents, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- Suicides consistently outnumber homicides by more than 2 to 1. In 2006, there were 437 suicides and 183 homicides among MA residents. Additional data tables for suicide/self-inflicted and homicide/assault-related injuries by age groups are located in Appendix C (Tables 34 and 35).

## Cause of Injury

For most cause categories the mechanism of injury is apparent (e.g., firearm, machinery, drowning, and fire and burn injuries) but a few categories warrant further clarification. Poisonings refer to the damaging physiologic effects of ingestion, inhalation, or other exposure to a range of agents, including medicines and household cleaning agents, gases and vapors, and drug overdoses by legal or illicit drugs.<sup>10</sup>

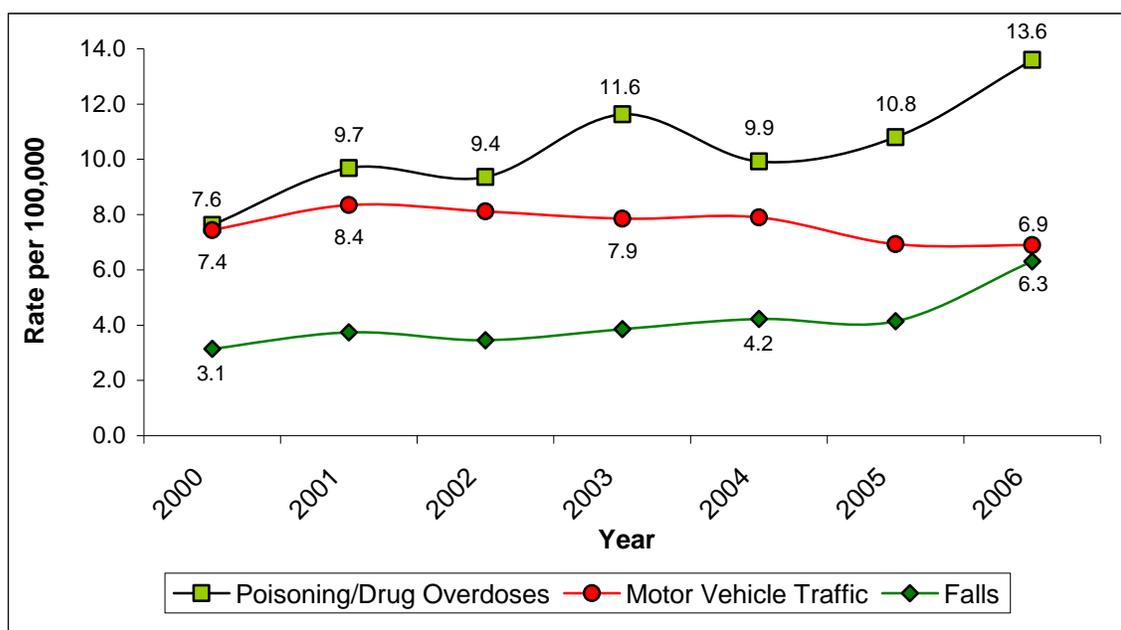
Natural and environmental injuries include such categories as animal (including dog bites) and insect bites, electrical-related injuries, and weather related causes such as excessive heat or cold, storms, and floods.

The category of struck by or against an object can include injury by a falling object or objects, strikes against an object or a person such as in sports, struck by a thrown object, and struck by a blunt object including fists.

Suffocation/strangulation/hanging includes: suffocation due to lack of air in closed place, by plastic bag, hanging, strangulation, and inhalation and ingestion of food or other object causing obstruction of respiratory tract (i.e., choking). Additional definitions for selected causes can be found in Appendix D.

Total numbers and rates for 2006 by sex and age group for selected cause categories are located in Appendix B (Table 28).

**Figure 9. Injury Death Rates by Year, Selected Cause and Intent, MA Residents, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- Rates for unintentional fall deaths and unintentional and undetermined poisoning deaths increased 103.2% and 78.9% respectively, between 2000 and 2006. Motor vehicle traffic-related injury deaths decreased 6.8% during the same time period.

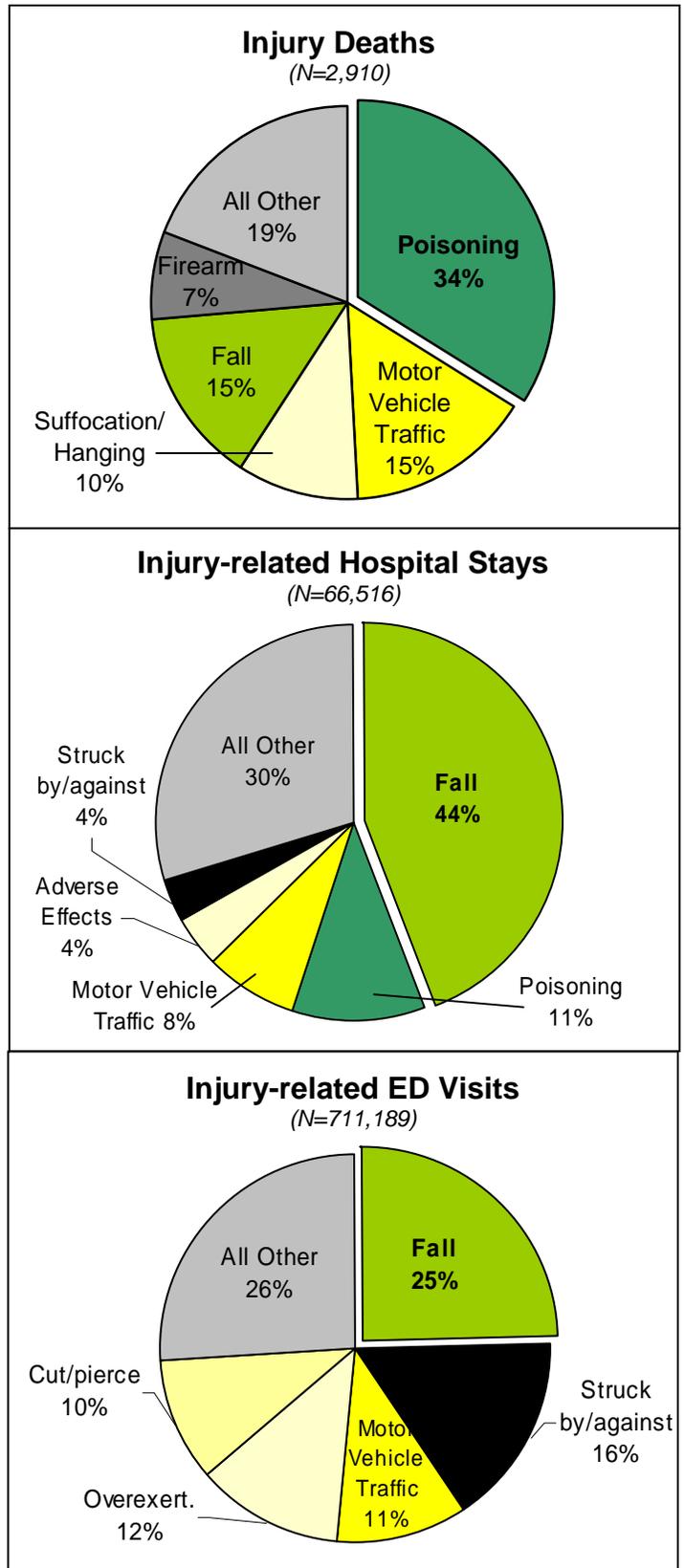
Cause of Injury by Data Source

The leading causes of injury vary by data source.

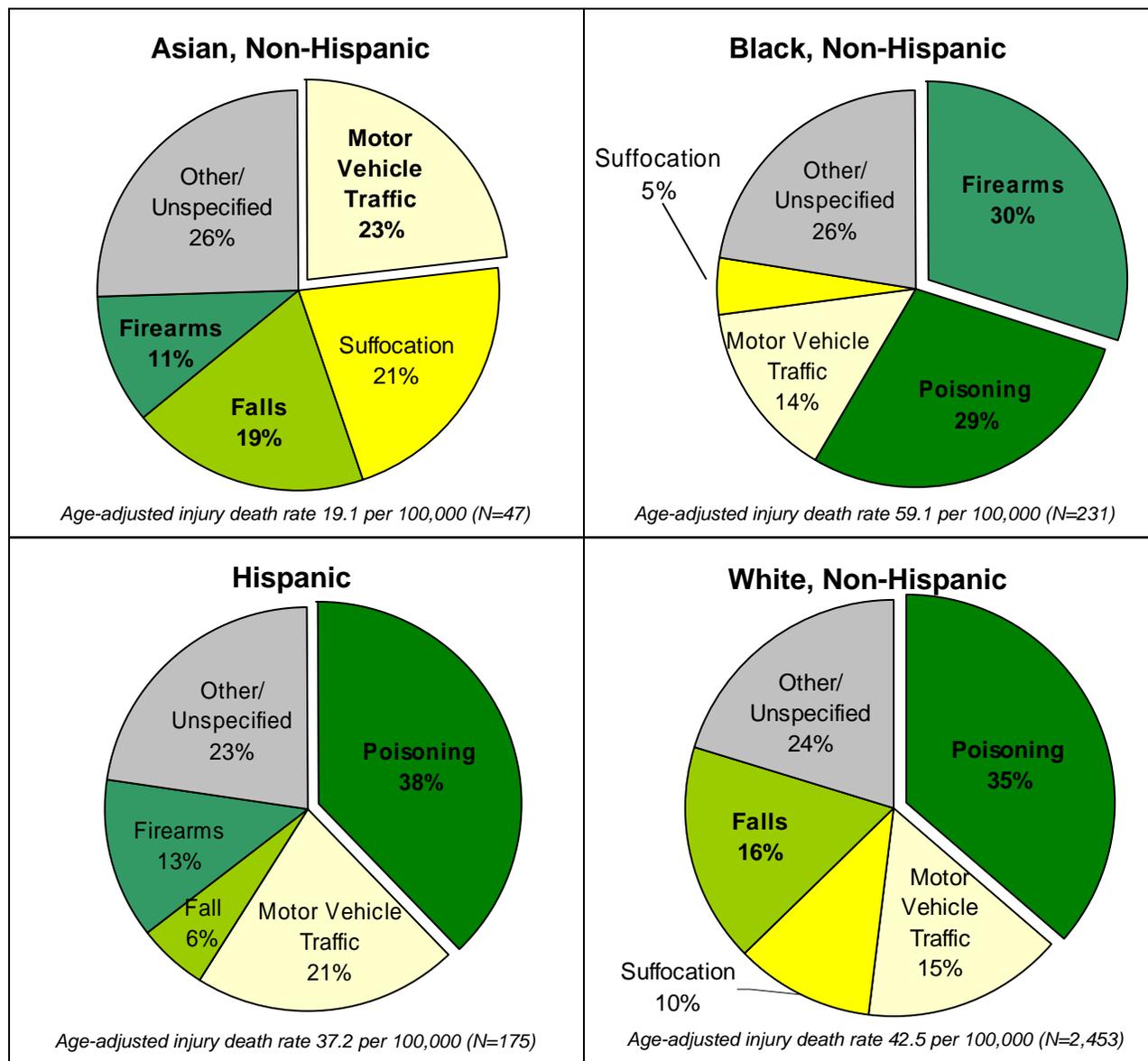
- Among injury deaths, poisonings, including overdoses (34%), were the leading cause in 2006, followed by motor vehicle traffic and falls (15%). Suffocation/hanging accounted for 10% of the overall total, and firearms accounted for 7%.
- Among nonfatal injury-related hospital stays, the leading cause was falls (44%) followed by poisonings (11%) and motor vehicle traffic (8%).
- Falls (25%) were also the leading cause among nonfatal injury-related emergency department visits, followed by struck by or against an object (16%), overexertion (12%) and motor vehicle traffic (11%).

A full listing of cause by each data source is provided in Appendix B (Table 25).

**Figure 10. Percent of Injury Deaths and Nonfatal Injury-related Acute Care Hospital Cases by Cause, 2006**



**Figure 11. Percent of Injury Deaths by Race and Ethnicity by Cause, MA Residents, 2006**



Injury death rates and causes differ by race and ethnicity. In 2006, Asian, non-Hispanic residents had a significantly lower injury death rate (19.1 per 100,000) than all other race and ethnic groups, while Black, non-Hispanics had a significantly higher injury death rate (59.1 per 100,000). The difference in age-adjusted rates between Hispanic and White, non-Hispanic residents was not statistically significant.

- Poisoning was the leading cause among Hispanic (N=66) and White, non-Hispanic residents (N=853). Poisoning death rates, however, were highest among Black, non-Hispanic and White,

non-Hispanic residents (16.5 and 16.4 per 100,000 respectively).

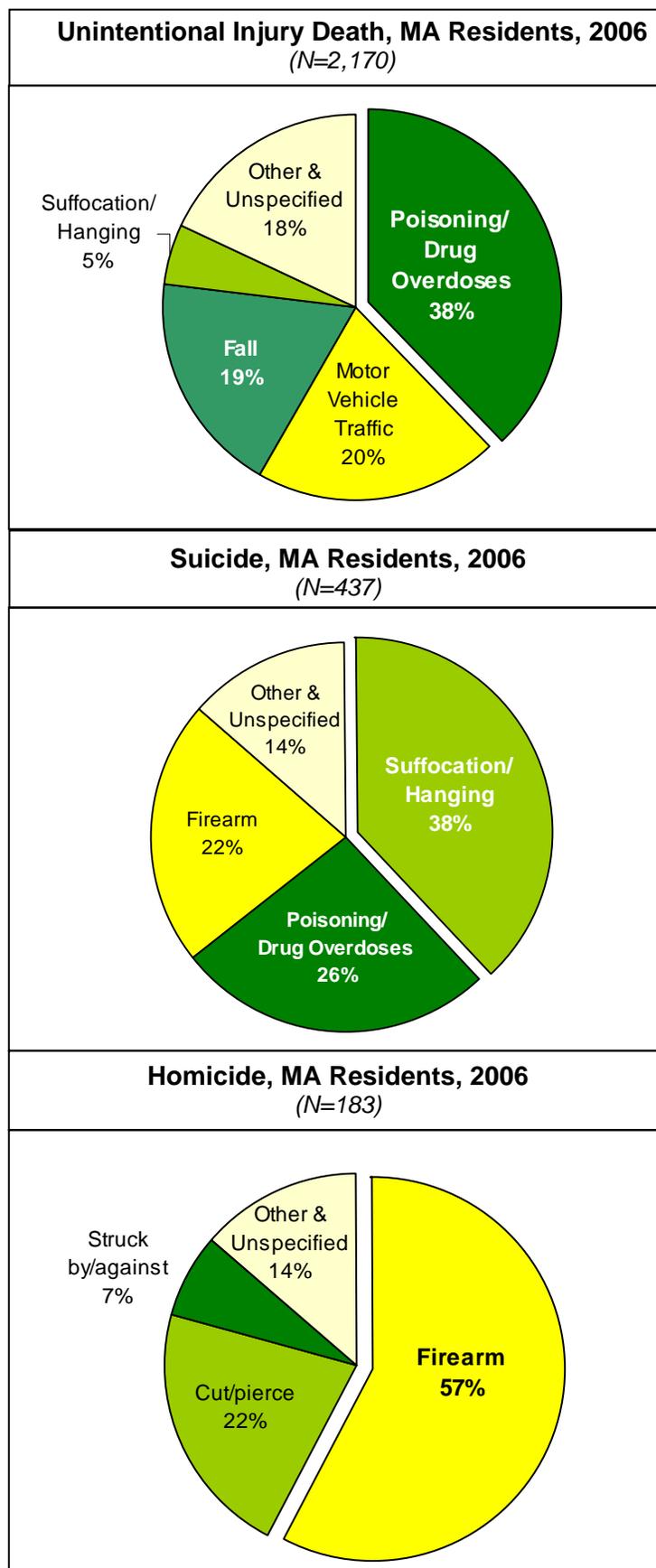
- Motor vehicle traffic injury death was one of the leading causes for all race and ethnic groups examined:
  - Asian, Non-Hispanics, 3.4 per 100,000
  - Black, Non-Hispanics, 8.3 per 100,000
  - Hispanics, 7.2 per 100,000
  - White, Non-Hispanics, 7.0 per 100,000.
- Black, non-Hispanic residents had higher firearm injury death rates (17.3 per 100,000) than Hispanic and White, non-Hispanic residents (4.3 and 2.1 per 100,000 respectively).

## Leading Causes of Injury Deaths by Intent

- Poisoning and drug overdose was the leading cause of unintentional injury death (38%) among Massachusetts residents in 2006 (N=989).
- 72% of unintentional poisoning/drug overdose deaths were associated with an opioid such as heroin, methadone, fentanyl, codeine, and oxycodone.
- Motor vehicle traffic-related injury, which includes occupants of motor vehicles, motorcyclists, and pedestrians and pedal cyclists struck by a motor vehicle, was the second leading cause of unintentional injury death (N=444).
- Suffocation/hanging was the most common cause of suicides (38%) among Massachusetts residents (N=166), which differs from the leading cause of suicide nationally, which is firearm. The second leading cause of suicide was poisoning/drug overdose.
- Firearm was the leading cause of all homicides (57%) among Massachusetts residents in 2006 (N=105), followed by cut/pierce instrument (N=40).
- Among **nonfatal** injuries (*data not shown*) the leading causes for unintentional injuries was fall and motor vehicle; for self-inflicted injuries poisoning/drug overdose was the leading cause, and for assault-related injuries the leading cause was struck by or against an object.

Numbers by data source for leading causes and intent are listed in Appendix B (Table 26).

**Figure 12. Leading Causes by Intent, 2006**



## Nature and Anatomical Location of Injury

**Table 4. Total Count of Injuries by Nature and Body Region\* for Nonfatal Injury-related Acute Care Hospital Stay Cases, MA Residents, 2006**

		Nature of Injury							TOTAL
		Fractures	Sprains/ Strains/ Dislocations	Internal	Open wound	Contusion/ superficial	Other	Un- specified	
Body Region									
Head / Neck	<i>Total Head and Neck</i>	4,254	14	4,477	6,127	4,516	397	1,271	21,056
Spine / Back	Spinal Cord Injury	190	0	134	0	0	0	0	324
	Vertebral Column Injury	4,028	995	0	0	0	0	0	5,023
	<i>Total Spine and Back</i>	4,218	995	134	0	0	0	0	5,347
Torso	Chest/thorax	3,347	57	2,092	166	896	113	0	6,671
	Abdomen	0	0	1,847	240	415	133	0	2,635
	Pelvis/urogenital	2,503	146	794	156	48	39	0	3,686
	Trunk	<7	0	0	28	400	37	389	856
	Back and buttocks	0	76	0	110	630	73	0	889
	<i>Total torso</i>	5,852	279	4,733	700	2,389	395	389	14,737
Extremity	Upper extremity	7,767	1,506	0	2,726	2,474	1,187	215	15,875
	Lower extremity	15,075	2,460	0	1,459	3,777	485	330	23,586
	<i>Total extremities</i>	22,842	3,966	0	4,185	6,251	1,672	545	39,461
Other / Unspecified	Other and unspecified	<7	151	<7	44	758	592	149	1,703
	System wide / late effects								18,937
	<i>Total Other / Unspecified</i>	<7	151	<7	44	758	592	149	20,640
<b>TOTAL</b>		<b>37,171</b>	<b>5,405</b>	<b>9,348</b>	<b>11,056</b>	<b>13,914</b>	<b>3,056</b>	<b>2,354</b>	<b>101,241</b>

Source: MA Inpatient Hospital Discharge Database, Division of Health Care Finance and Policy.  
\*Modified version of The Barell Injury Diagnosis Matrix.

One incident can obviously result in multiple injuries. Tables 4 and 5 are modified versions of the Barell Matrix, a tool used to categorize *all* injuries into groupings by the nature of the injury and body region. These tables include total injuries associated with all injury-related hospital stays and emergency department visits.

In 2006

- There were a total of 101,241 injuries associated with the 66,516 nonfatal injury-related acute care hospital stay cases.
- The body region with the leading number of injuries (40.0%) was to the extremities (N=39,461), such as the upper or lower leg and arm. The majority (57.9%) of these injuries were fractures (N=22,842).
- The body region with the second leading number of injuries (20.7%) was to the head and neck region (N=21,056); 29.1% of which were open wounds, 21.3% internal injuries, and 20.2% fractures.

**Table 5. Total Count of Injuries by Nature and Body Region\* for Injury-related Emergency Department Cases, MA Residents, 2006**

		Nature of Injury							TOTAL
		Fractures	Sprains/ Strains/ Dislocations	Internal	Open wound	Contusion/ superficial	Other	Un- specified	
Body Region									
Head / Neck	<i>Total head and neck</i>	8,796	357	11,475	73,265	70,717	2,399	36,997	204,006
Spine / Back	Spinal Cord Injury	41	0	64	0	0	0	0	105
	Vertebral Column Injury	2,612	90,894	0	0	0	0	0	93,506
	<i>Total spine and back</i>	2,653	90,894	64	0	0	0	0	93,611
Torso	Chest/thorax	5,638	1,963	403	517	17,285	453	0	26,259
	Abdomen	0	0	429	614	3,114	413	0	4,570
	Pelvis/urogenital	787	6,697	94	841	438	70	0	8,927
	Trunk	0	0	0	86	4,975	127	5,398	10,586
	Back and buttocks	0	11,404	0	419	12,049	279	0	24,151
	<i>Total torso</i>	6,425	20,064	926	2,477	37,861	1,342	5,398	74,493
Extremity	Upper extremity	48,890	50,632	0	81,707	68,009	10,873	11,521	271,632
	Lower extremity	24,669	71,265	0	23,265	61,560	2,739	9,081	192,579
	<i>Total extremities</i>	73,559	121,897	0	104,972	129,569	13,612	20,602	464,211
Other / Unspecified	Other and unspecified	69	8,627	10	317	11,942	2,519	2,623	26,107
	System wide / late effects								41,732
	<i>Total other &amp; unspecified</i>	69	8,627	10	317	11,942	2,519	2,623	67,839
<b>TOTAL</b>		<b>91,502</b>	<b>241,839</b>	<b>12,475</b>	<b>181,031</b>	<b>250,089</b>	<b>19,872</b>	<b>65,620</b>	<b>904,160</b>

Source: MA Outpatient Emergency Department Database, Division of Health Care Finance and Policy.  
\*Modified version of The Barell Injury Diagnosis Matrix.

- In 2006, there were a total of 904,160 injuries associated with the 711,189 nonfatal injury-related acute care hospital emergency department cases.
- The body region with the leading number of injuries (51.3%) was to the extremities, such as the upper or lower leg and arm (N=464,211). The majority of these injuries (27.9%) were contusion or superficial injury, followed by sprains, strains, and dislocations (26.3%)
- The body region with the second leading number of injuries was the head and neck (22.5%); 35.9% of which were open wounds, and 34.7% were contusion or superficial injuries.

One special consideration for the data presented here and throughout the report is that the databases used to identify injury-related cases are mutually exclusive. For example, if a person is treated at the emergency department level and then subsequently admitted and discharged from the hospital, that patient is counted only in the inpatient hospital discharge database, not the emergency department database. This minimizes double counting the same patient for the same visit. However, that does not mean that a patient cannot be seen more than once for the same injury. For example, if a patient is being treated for something that requires follow-up care, they may return to the emergency department multiple times. While it is certainly possible, it is less likely that a patient be *admitted* to the hospital multiple times for the same injury. These “follow-up” visits are included in our analyses as they are not easily excluded from the databases.

## Injury Charges

Charges are presented in this report to provide an economic measurement associated with injuries overall, and for specific intents and causes.

All three databases from the Division of Health Care Finance and Policy used in this report include charges associated with each visit. Charges that are issued by the treating hospital are not necessarily the amount that it costs the hospital to treat the patients, nor is it what is ultimately paid to the hospital by the insurer/payer. These represent initial hospital charges only, not physician-related charges. Final payment is typically less than initial charges, but such information is not included in the databases. This basic method of economic measurement, however, does not take into account costs associated with long-term or rehabilitative care, nor other costs associated with injury and disability such as lost wages.

In 2006, charges for all nonfatal acute care hospital injuries exceeded \$2.2 billion: these included inpatient hospital discharges (\$1.38 billion), observation stays (\$72.5 million), and emergency department visits (\$749 million).

The overall mean (or average) charge for an injury-related emergency department visit in 2006 was \$1,053 per visit. For injury-related observation bed stays the mean charge was \$7,918; and for inpatient hospital discharges the mean charge was \$22,331 per injury-related visit.

Charges by intent and cause for inpatient hospital discharges are presented in Table 29 (Appendix B) as they account for the largest overall percent of charges. Findings include:

- Unintentional falls had the highest charges overall for inpatient hospital discharges (\$532 million). Charges for unintentional motor vehicle traffic occupant injuries were the second highest (\$164 million).
- For unintentional injuries, the highest mean charges were motor vehicle injuries to motorcyclists (\$46,731) and

to pedestrians (\$45,791) and fire-related injuries (\$41,672).

- Among inpatient hospital discharges associated with self-inflicted injuries, the highest mean charges were for firearm-related cases (\$75,557), followed by falls (\$61,001).
- Total charges for self-inflicted injuries were highest for poisonings (\$38.7 million), though the mean charge for such injuries was among the lowest (\$12,593).
- For assault-related injuries, firearms were the cause with the highest mean charges (\$54,953). Other causes resulted in a high mean charge but overall numbers for these causes were very small (N=<5).
- Injuries resulting from firearms also had the highest total charges for assault-related injuries (\$17.9 million).
- Charges for inpatient hospital discharges by intent for 2006 were: \$985.6 million for unintentional injuries, \$95.2 million for injuries where no cause or intent was provided, \$77.8 million for injuries related to adverse effects, \$52.8 million for self-inflicted injuries, and \$54.6 million for assault-related injuries.

## Length of Stay

Length of stay (LOS) can also be used as an economic or resource measurement. LOS information (mean, median, minimum, and maximum) is provided for nonfatal inpatient hospital discharges by intent and cause in Table 30 (Appendix B). Findings include:

- Among unintentional injuries the average LOS was 5.2 days, with the longest among suffocation/hanging injuries (average of 8.3 days).
- Among self-inflicted injuries the average LOS was 4.5 days, with the longest among firearm injuries (average of 18.6 days).
- Among assault-related injuries the average LOS was 5.2 days, with the longest among hot object burn injuries (average of 19.2 days).

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# **Spotlight: Falls to Older Adults**

## Spotlight: Unintentional Fall-related Injuries to Massachusetts Older Adults, Ages 65 and Older

This section focuses on falls among older adults. Falls are a common cause of injury and affect persons of all ages. Younger children fall from playground equipment or off of furniture, adolescents often fall as a result of recreational activity, and adults frequently fall while engaged in work-related activity or activity related to household chores. Persons ages 65 and older, however, have much higher fatal and nonfatal unintentional fall injury rates than other age groups. Falls are the leading cause of fatal and nonfatal injuries among persons ages 65 and older, and numbers and rates have been increasing.

### DATA HIGHLIGHTS

In 2006, there were 406 unintentional fall deaths to Massachusetts residents. Persons ages 65 years and older accounted for 83.7% of these deaths (N=340).

The number of unintentional fall-related deaths among persons ages 65 years and older have been increasing; from 154 in 2000 to 340 in 2006.

The unintentional fall injury death rate to persons ages 65 and older increased 122% from 2000 to 2006 (17.9 and 39.7 per 100,000, respectively).

The risk of death from a fall increases with age. Persons ages 85 and older had an unintentional fall death rate 3.3 times higher than persons ages 75-84, and 9 times higher than persons ages 65-74 (123.3, 37.2, and 13.7 per 100,000, respectively).

Unintentional fall injury deaths associated with traumatic brain injury (TBI) increased 76.4% from 2000 to 2006. Proportionately, however, TBI was associated with fewer fall deaths in 2006, than in previous years.

Nonfatal unintentional fall-related hospital stay rates also increased during this time; 10.8% from 2000 (2,131 per 100,000) to 2006 (2,361 per 100,000). Rates increased the most among persons ages 75-84 (13%). Rates decreased slightly among persons ages 85 and older.

The rate of unintentional fall-related hospital stays associated with TBI increased 60.9% between 2000 and 2006. TBI was associated with a greater proportion of falls in 2006 than in 2000 for all older age groups. The proportion of TBI associated falls went from 8.4% in 2000 to 11.4% in 2006 among persons ages 65-74, from 7.1% to 10.9% among persons ages 75-84, and from 6.5% to 9.2% among persons ages 85 and older.

There was a modest increase between 2002 and 2006 in rates of nonfatal unintentional fall-related ED visits (5.2%) among persons ages 65 and older, but much larger increases were seen in traumatic brain injuries (85.6%) associated with these falls.

Unintentional fall injury deaths among persons aged 65 and older are increasing. Every state, with one exception\* had higher counts and rates of unintentional fall deaths among persons aged 65 and older in 2005 than in 2000.<sup>4</sup> For the majority of states the increase was steady, while others fluctuated during this time.

The U.S. rate for unintentional fall injury deaths among persons aged 65 and older increased 46.3%, from 29.4 per 100,000 in 2000 to 43.0 per 100,000 in 2005.<sup>4</sup>

From 2000 to 2005, unintentional fall injury death rates among older Massachusetts adults (65+) compared favorably to the national rate as shown in Table 6, with considerably lower rates among all older age groups (65-74, 75-84, 85+).

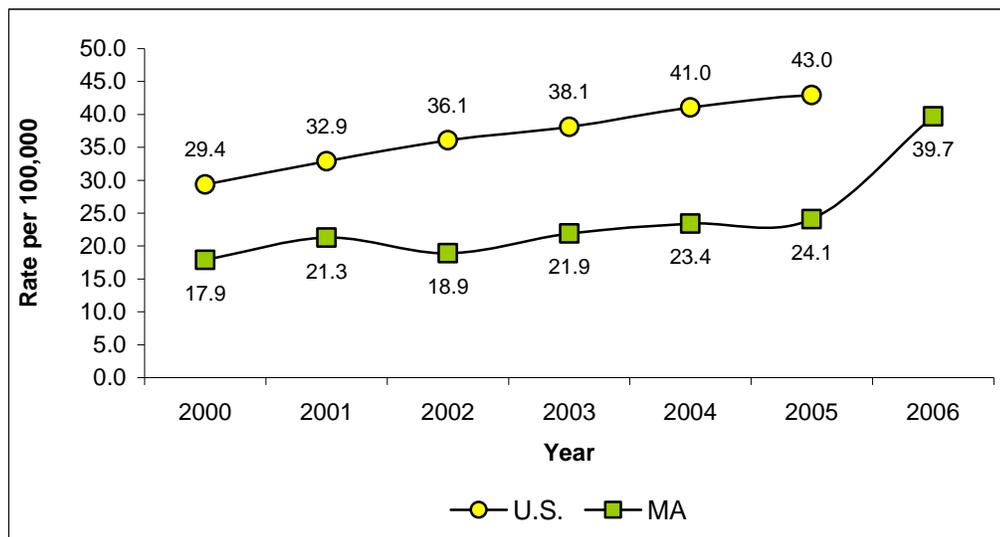
**Table 6. Comparison of U.S. and Massachusetts Unintentional Fall Death Rates of Older Adults, Ages 65+, 2000 and 2005\*\***

	U.S. <sup>3</sup>		Massachusetts	
	Age-Specific Rates		Age-Specific Rates	
	2000	2005	2000	2005
<b>Ages 65 and Older</b>	<b>29.4</b>	<b>43.0</b>	<b>17.9</b>	<b>24.1</b>
Ages 65-74	9.0	12.4	6.6	13.7
Ages 75-84	31.1	45.6	18.9	37.2
Ages 85 and Older	112.6	148.2	56.0	123.3

\*Alaska had 6 deaths in both 2000 and 2005.  
 \*\*2006 U.S. data are not yet available.

From 2000 to 2005, unintentional fall injury death rates among Massachusetts' adults aged 65 and older increased 34.6%, from 17.9 in 2000 to 24.1 in 2005. Between 2005 and 2006, however, there was an even greater increase. Rates increased 64.7% during this one year, from 24.1 per 100,000 to 39.7 per 100,000, placing Massachusetts much closer to the national rate. Potential reasons for this sharp increase are included in the following section of frequently asked questions.

**Figure 13. Rate of Unintentional Fall Injury Death Rates among Massachusetts and U.S. Older Adults, Ages 65 and Older, 2000-2006**



\*2006 national data are not available.

- Between 2000 and 2005, unintentional fall death counts and rates among persons ages 65 and older increased nationally and for every state except Alaska.
- Most states showed a steady increase over the years, but a few states fluctuated.
- In Massachusetts, there was an overall increase of 34% in the rate of unintentional fall deaths between 2000 and 2005, and a dramatic increase between 2005 and 2006 (65%).

## **Frequently Asked Questions**

A number of questions come to mind related to the increase of unintentional fall-related deaths among persons ages 65 and older. Simple answers are difficult to tease out of the data. The following questions and possible answers are meant to serve as a starting point for this discussion.

**Q:** Is the number of falls *actually* increasing among persons ages 65 and older?

**A:** Currently there is no way to know whether or not the number of falls has been increasing over time. The Behavioral Risk Factor Surveillance System (BRFSS), an annual random digit-dial survey implemented by the MA Department of Public Health, collected information on fall-related experiences in 2006. This data may be useful as a baseline for future estimates.

**Q:** Why would falls among older adults actually be increasing?

**A:** Age is a major risk factor for falling. Between 2000 and 2006, the estimated Massachusetts population among persons ages 85 and older increased 16.3%. As people live longer, they may be living at home longer, continuing to be active, which could potentially increase the risk for a fall. They may be living with chronic or multiple adverse health conditions.<sup>5</sup>

There could also be an increase in, or a change of medication prescribed among this population. They may be using a medication or a mix of medications that result in dizziness making a fall more likely. According to studies, taking four or more medications increases the risk of falling.<sup>6,7</sup> Vision, hearing, and cognitive deficits may also contribute to falls.<sup>6,7</sup>

**Q:** If the number of actual falls among older adults is not increasing then why would fall-related injury deaths and nonfatal injuries be increasing?

**A:** The resulting injury from a fall may be more severe now than in the past, causing death or extended hospital treatment. For example, anti-coagulants which are blood thinners have received attention as a possible cause for increased injury severity. Many falls are associated with a traumatic brain injury and a head injury with bleeding is typically more severe in nature.<sup>11</sup> Among inpatient hospitalizations there has been a rise in the proportion of TBI-related falls associated with long-term anti-coagulant use among this population; from 3.2% in 2000 to 9.3% in 2006.<sup>9</sup> However, it is necessary to note that among MA residents ages 65 and older, the risk of death from a stroke, for which anti-coagulants are often prescribed as a prevention measure, is considerably higher than the risk of death from a fall (306.8 and 39.7 per 100,000, respectively).<sup>8</sup>

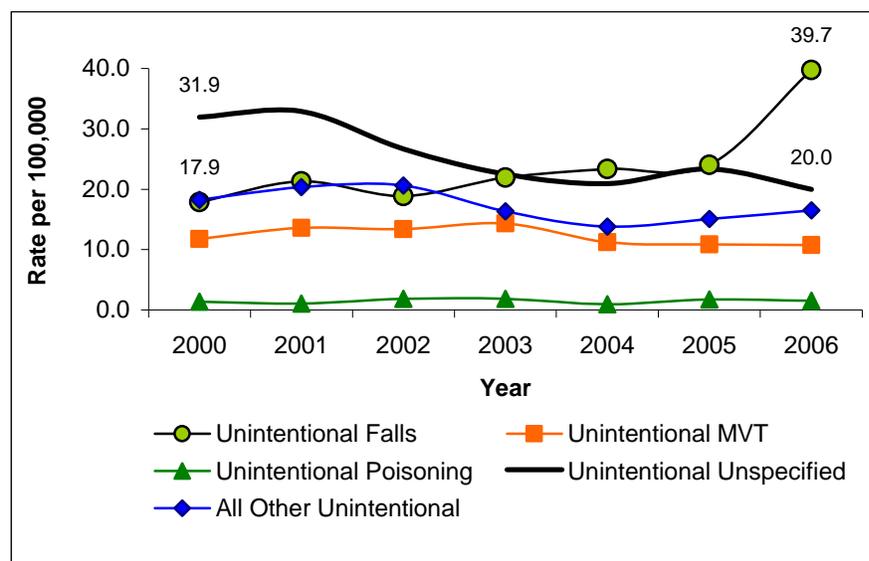
**Q:** Why was there such a large increase in the number and rate of unintentional fall deaths among Massachusetts residents aged 65 and older between 2005 and 2006?

**A:** Such a dramatic increase in a single cause of death, without an obvious reason, such as a catastrophic event, is fairly uncommon in the field of injury. The increase between 2005 and 2006 may be the result of policy changes, trainings, improved documentation, etc. that increased the identification of such deaths and improved the determination of cause. Physicians, nurses, nursing facilities, medical examiners, and others who document injury and disease may be more aware of the issue now than in the past and documenting it more often in official records.

The increase in unintentional fall deaths among persons aged 65 and older, as indicated by state and national data, is real. While the large increase between 2005 and 2006 in Massachusetts may have been due to better documentation and cause of death determination, falls among the elderly were already increasing as a long term trend. The rate increased 34.6% between 2000 and 2005.

The reason for the increase may be due to multiple factors interacting with each other. The Massachusetts Department of Public Health is currently engaged in a data-gathering project to better understand the nature of circumstances surrounding fall-related deaths. One preliminary finding suggests that some of the deaths that are coded as a fall in the home may actually have occurred in someone else's home. It is possible that the unfamiliarity or confusion about the environment contributed to the fall. Hopefully, such findings will be able to inform the development of better interventions to reduce fall-related injuries. The Department has also released a more detailed report "Unintentional Fall-related Injuries among Massachusetts Older Adults" that combines a close examination of the data, including the overall magnitude, trends, demographic data, statewide and regional mapping, and average annual rates by city and town, along with a prevention and resource guide that highlights evidence-based prevention efforts.

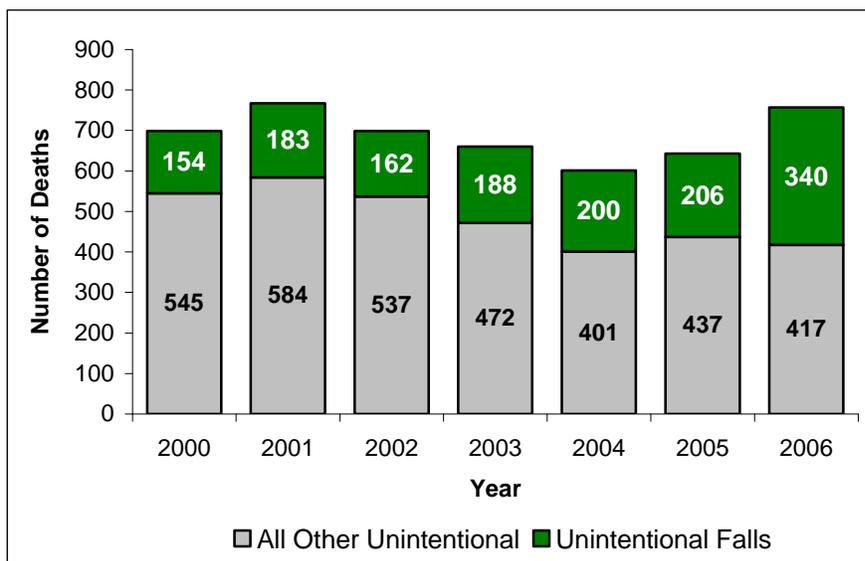
**Figure 14. Rate of Unintentional Injury Deaths by Selected Injury Cause among MA Older Adults, Ages 65 and Older, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- Unintentional fall death rates among persons ages 65 and older have increased. Between 2000 and 2006 death rates increased 122%, from 17.9 per 100,000 to 39.7 per 100,000. The largest increase (65%) was between 2005 and 2006.
- Injury death rates for “unspecified” injury cause decreased by 37.4% during this time period which points to an overall improvement in the determination of cause of death.

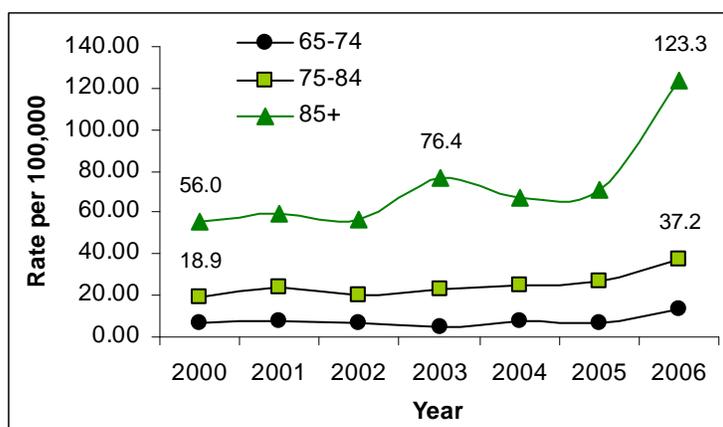
**Figure 15. Proportion of Unintentional Fall Injury Deaths to All Other Unintentional Injury Deaths among MA Older Adults, Ages 65 and Older, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- The number of unintentional fall deaths among persons ages 65 and older increased 121% from 154 in 2000 to 340 in 2006.
- The overall proportion of unintentional fall deaths to all other unintentional injury deaths increased 44.9% between 2000 and 2006.

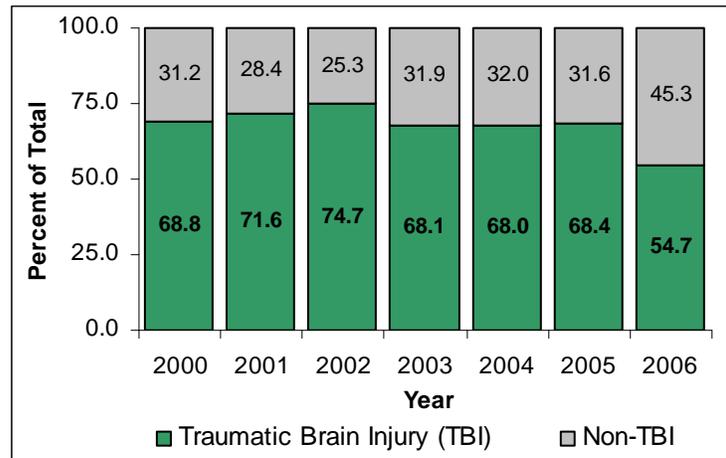
**Figure 16. Rate of Unintentional Fall Injury Deaths by Older Age Groups, MA Residents, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- While unintentional fall death rates have been increasing among all persons ages 65 and older, persons ages 85 and older increased the most. During this time period, unintentional fall death rates among persons ages 65-74 increased 108%, among persons ages 74-84 96%, and persons ages 85 and older by 120%.

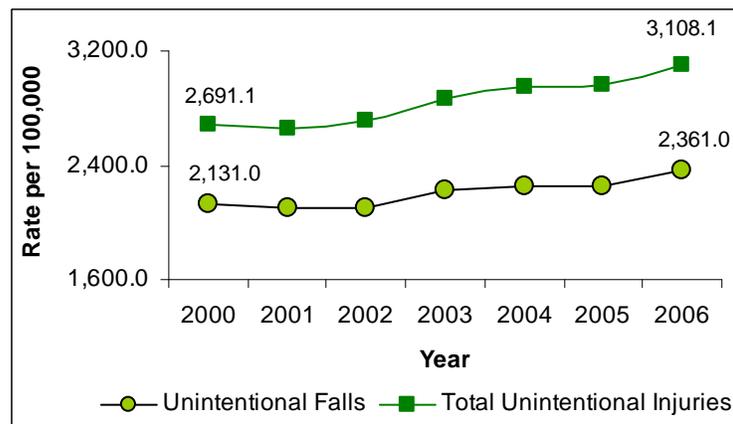
**Figure 17. Unintentional Fall Injury Deaths Associated with Traumatic Brain Injury (TBI), among MA Older Adults, Ages 65 and Older, 2000-2006**



Source: Registry of Vital Records and Statistics, MDPH

- The number of unintentional fall injury deaths associated with traumatic brain injury (TBI) among persons ages 65 and older increased 76.4% between 2000 and 2006.
- In 2000, the number of TBI associated unintentional fall deaths was 106 (12.3 per 100,000) and in 2006 the number was 186 (21.7 per 100,000).
- Proportionately, however, TBI was associated with fewer unintentional fall deaths in 2006 (54.7%), than in previous years.

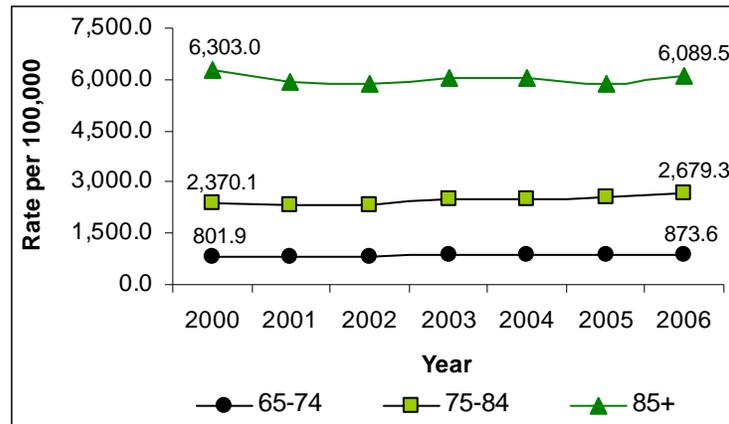
**Figure 18. Rate of Nonfatal Unintentional Fall-related and All Injury-related Acute Care Hospital Stay Rates among MA Older Adults, Ages 65 and Older, 2000-2006**



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

- Hospital stays for nonfatal unintentional fall injuries make up 76% of *all* unintentional injury-related hospital stays among persons ages 65 and older. In 2006, there were 26,604 unintentional injury-related hospital stays to persons ages 65 and older, of which, 20,209 were fall-related.
- Hospital stay rates for nonfatal unintentional fall injury among persons ages 65 and older increased 10.8% between 2000 (2,131 per 100,000) and 2006 (2,361 per 100,000).

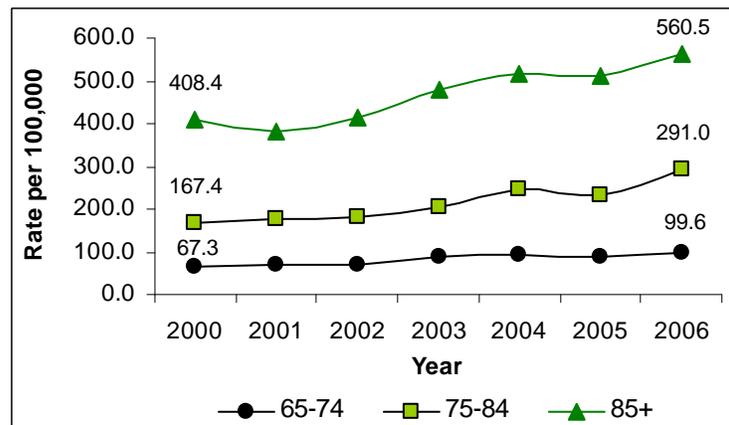
**Figure 19. Rate of Nonfatal Unintentional Fall-related Injury Acute Care Hospital Stays by Older Age Groups, MA Residents, 2000-2006**



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

- Rates increased most (13%) among persons ages 75-84 while rates among the oldest, persons ages 85 and older decreased slightly (3.4%).

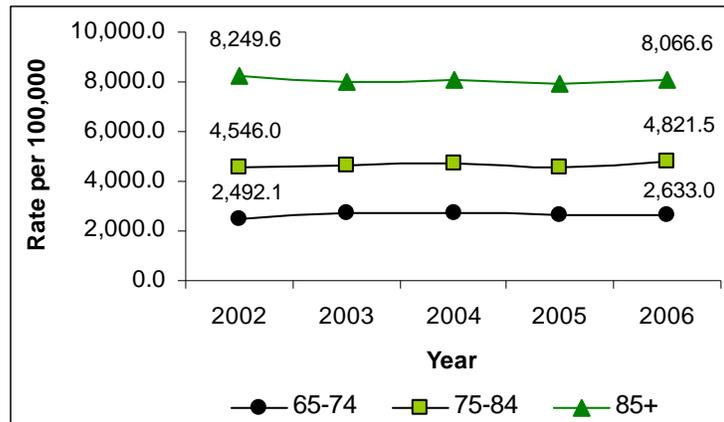
**Figure 20. Rate of Nonfatal Unintentional Fall-related Injury Acute Care Hospital Stays Associated with TBI among Older Age Groups, MA Residents, 2000-2006**



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

- While the rate of hospital stays for nonfatal unintentional fall injuries increased 10.8% between 2000 and 2006, the rate of those injuries associated with traumatic brain injury (TBI) increased 60.9% from 2000 to 2006 (150.7 and 242.5 per 100,000 respectively).
- Traumatic brain injury (TBI) associated with nonfatal unintentional fall-related hospital stays increased for all age groups 65 and over.
- The largest increase was among persons ages 75-84 (73.9%), followed by persons ages 65-74 (48.1%), and those ages 85 and older (37.3%).
- TBI was associated with a greater proportion of falls in 2006 than in 2000. This was the case for all age groups; the proportion of TBI associated falls went from 8.4% in 2000 to 11.4% in 2006 among persons ages 65-74, from 7.1% to 10.9% among persons ages 75-84, and from 6.5% to 9.2% among persons ages 85 and older.

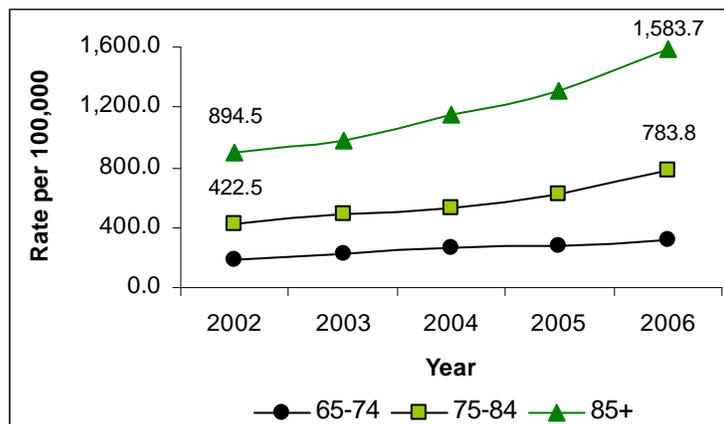
**Figure 21. Rate of Nonfatal Unintentional Fall-related Injury Acute Care Hospital ED Visits among Older Age Groups, MA Residents, 2002-2006**



Source: MA Outpatient Emergency Department Database, Division of Health Care Finance and Policy

- There was a modest increase between 2002 and 2006 in rates of nonfatal unintentional fall-related emergency department visits (5.2%) among persons ages 65 and older; from 4,080.9 per 100,000 in 2002 to 4,293.5 per 100,000 in 2006.
- Rates increased the most among persons ages 75-84 (6.1%), followed by persons ages 65-74 (5.7%).
- Rates among the oldest group, ages 85 and older *decreased* 2.2% from 2002 to 2006.

**Figure 22. Rate of Nonfatal Unintentional Fall-related Injury Acute Care Hospital ED Visits Associated with TBI among Older Age Groups, MA Residents, 2000-2006**



Source: MA Outpatient Emergency Department Database, Division of Health Care Finance and Policy

- While there was an increase of 5.2% between 2002 and 2006 in the rate of unintentional fall-related emergency department visits among persons ages 65 and older, a much larger increase (85.6%) was seen in traumatic brain injuries associated with these falls.
- Large increases were noted in every age group. Among persons ages 65-74 there was a 79.7% increase of nonfatal unintentional fall-related emergency department visits associated with TBI; 85.5% among persons ages 75-84, and 77.1% among persons ages 85 and older.

**Table 7. Circumstances for Unintentional Fall-Related Injuries Associated with an Acute Care Hospital Stay among MA Older Adults, Ages 65 and Older, 2006**

Circumstances*	Age Group (Years)			Total
	65-74	75-84	85+	
Fall on or from stairs or steps	395	688	401	1,484
<i>Fall on or from sidewalk curb</i>	16	47	26	89
<i>Other stairs or steps</i>	379	635	375	1,389
Fall on or from ladders or scaffolding	82	57	21	160
<i>Fall from ladder</i>	81	56	21	158
Fall from or out of building or other structure	9	12	<7	24
Fall into hole or other opening in surface	<7	<7	<7	8
Other fall from one level to another	301	762	775	1,838
<i>Fall from chair</i>	63	166	170	399
<i>Fall from wheelchair</i>	50	110	114	274
<i>Fall from bed</i>	103	329	356	788
<i>Fall from other furniture</i>	8	24	17	49
<i>Fall from commode</i>	24	63	73	160
<i>Other fall from one level to another</i>	53	68	44	165
Fall on same level from slipping, tripping, or stumbling	1,395	3,180	3,301	7,876
Fall on same level from collision, pushing, or shoving by or with other person	<7	8	13	25
Other and unspecified fall	1,391	3,574	3,829	8,794
<i>Fall resulting in striking against another object</i>	74	156	158	388
<i>Other fall</i>	188	397	441	1,026
<i>Unspecified fall</i>	1,126	3,008	3,228	7,362
<b>TOTAL</b>	<b>3,579</b>	<b>8,286</b>	<b>8,344</b>	<b>20,209</b>

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

- The leading circumstance associated with unintentional fall-related injuries among persons ages 65 and older was a fall on the same level from slipping, tripping, or stumbling. Nearly 8,000 fall-related injury hospital stays (39%) were due to slipping, tripping, or stumbling.
- 9.1% of hospital stays were due to a fall from one level to another, including from a chair (N=399) or a bed (N=788).
- Unfortunately, 36.4% of unintentional fall-related hospital stays among persons ages 65 and older did not include specific details on how the injury occurred, making accurate assessments of how to best prevent these injuries more difficult.

**Table 8. Nature of Injury by Body Region\* for Nonfatal Unintentional Fall-related Hospital Stays among MA Older Adults, Ages 65 and Older, 2006**

Hospital Stays		Nature of Injury							TOTAL	
		Fractures	Sprains/ sprains/ dislocations	Internal	Open wound	Contusion/ superficial	Other	Un- specified		
Body Region										
Head / Neck	<i>Total head and neck</i>	832	<7	1,476	2,002	1,965	8	500	6,786	
	Spine / Back	Spinal Cord Injury	28	0	27	0	0	0	0	55
		Vertebral Column Injury	1,459	164	0	0	0	0	0	1,623
		<i>Total spine and back</i>	1,487	164	27	0	0	0	0	1,678
Torso		Chest/thorax	1,174	<7	236	<7	377	<7	0	1,796
		Abdomen	0	0	102	<7	95	<7	0	206
		Pelvis/urogenital	1,419	33	53	<7	4	0	0	1,512
		Trunk	0	0	0	<7	53	0	86	140
		Back and buttocks	0	16	0	<7	367	<7	0	392
		<i>Total torso</i>	2,593	53	391	14	896	13	86	4,046
Extremity		Upper extremity	3,107	388	0	355	838	24	82	4,794
		Lower extremity	7,593	565	0	193	1,637	9	159	10,156
		<i>Total extremities</i>	10,700	953	0	548	2,475	33	241	14,950
Other / Unspecified		Other and unspecified	0	12	0	<7	269	10	30	325
		System wide and late effects								188
		<i>Total other &amp; unspecified</i>	0	12	0	<7	269	10	30	513
<b>TOTAL</b>		<b>15,612</b>	<b>1,185</b>	<b>1,894</b>	<b>2,568</b>	<b>5,605</b>	<b>64</b>	<b>857</b>	<b>27,973</b>	

Source: MA Inpatient Hospital Discharge Database, Division of Health Care Finance and Policy.  
\*Modified version of The Barell Injury Diagnosis Matrix.

- Among the 20,210 fall-related nonfatal acute care hospital stays among persons ages 65 and older, there were a total of 27,973 injuries.
- The extremities was the body region with the most injuries (N=14,950), accounting for 53.4% of total injuries. Most of these injuries were fractures (71.6%).
- The body region with the second highest number of injuries was the head and neck (N=6,786), accounting for 24.3% of total injuries. Most of these injuries were open wounds (29.5%) and contusions/superficial injuries.

**Table 9. Nature of Injury by Body Region\* for Nonfatal Unintentional Fall-related ED Visits, among MA Older Adults, Ages 65 and Older, 2006**

Emergency Department Visits		Nature of Injury							TOTAL	
		Fractures	Spains/ sprains/ dislocations	Internal	Open wound	Contusion/ superficial	Other	Un- specified		
Body Region										
Head / Neck	<i>Total head and neck</i>	1,012	<7	982	6,828	7,170	<7	5,283	21,285	
	Spine / Back	Spinal Cord Injury	10	0	7	0	0	0	17	
		Vertebral Column Injury	718	1,486	0	0	0	0	2,204	
		<i>Total spine and back</i>	728	1,486	7	0	0	0	2,221	
Torso		Chest/thorax	1,242	48	23	<7	2,056	0	3,374	
		Abdomen	0	0	18	<7	215	<7	237	
		Pelvis/urogenital	370	99	<7	10	8	0	492	
		Trunk	0	0	0	<7	105	<7	588	
		Back and buttocks	0	159	0	10	1,573	0	1,742	
		<i>Total torso</i>	1,612	306	46	29	3,957	<7	481	6,433
Extremity		Upper extremity	5,316	1,966	0	1,967	4,759	14	583	14,605
		Lower extremity	2,033	1,932	0	720	6,484	<7	453	11,627
		<i>Total extremities</i>	7,349	3,898	0	2,687	11,243	19	1,036	26,232
Other / Unspecified		Other and unspecified	<7	152	<7	27	1,016	8	146	1,355
		System wide / late effects								60
		<i>Total other / unspecified</i>	<7	152	<7	27	1,016	8	146	1,415
<b>TOTAL</b>		<b>10,706</b>	<b>5,846</b>	<b>1,036</b>	<b>9,571</b>	<b>23,386</b>	<b>35</b>	<b>6,946</b>	<b>57,586</b>	

Source: MA Outpatient Emergency Department Database, Division of Health Care Finance and Policy.  
\*Modified version of The Barell Injury Diagnosis Matrix.

- Among the 36,751 nonfatal fall-related acute care emergency department visits among persons ages 65 and older, there were a total of 57,586 injuries.
- The extremities was the body region with the most injuries (N=26,232), accounting for 45.6% of total injuries. Most of these injuries were contusions and superficial injuries (42.9%), followed by fractures (32.1%).
- The body region with the second highest number of injuries was the head and neck (N=21,285), accounting for 37.0% of total injuries. Most of these injuries were contusions/superficial injuries (33.7%) and open wounds (32.1%).

**Table 10. Charges for Acute Care Hospital Cases Associated with Nonfatal Unintentional Fall-related Injuries among MA Older Adults, Ages 65 and Older, 2006**

<b>Dataset</b>	<b>Total Charges</b>	<b>Mean Charge</b>
Emergency Department Visits	\$64,365,733	\$1,751.40
Observation Stays	\$8,241,369	\$6,850.68
Inpatient Hospital Discharges*	\$399,341,487	\$19,835.17
<b>TOTAL</b>	<b>\$471,948,589</b>	<b>n/a</b>

\* Inpatient hospital discharge is an admission to a hospital resulting in a live discharge.

Charges do not represent final payment for treatment, but rather initial charges associated with an admission or visit. Actual payment information is not collected in the databases used for this report, so charges are one way to provide an economic measurement associated with these injuries.

- Among all injury-related cases (including all intents, causes, and ages), charges associated with unintentional fall-related inpatient hospital discharges were the highest (\$574 million), and 69.5% of those charges (\$399 million) were among fall-related injuries to adults ages 65 and older.
- In 2006, total unintentional fall-related charges for ED visits, observation stays, and inpatient hospital discharges among persons ages 65 and older totaled more than \$471 million. This accounts for 21.4% of all injury-related charges for the year.
- The average inpatient hospital charge for an unintentional fall-related injury, to persons ages 65 and older, was \$19,835 per visit.

<sup>4</sup> Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. (2008). Available from: URL: [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars). [August, 2008].

<sup>5</sup> Stevens, JA, Ryan, G, Kresnow, M. Fatalities and injuries from falls among older adults, US, 1993-2003 and 2001-2005. Centers for Disease Control and Prevention, MMWR. November 17, 2006. 55(45); 1221-1224.

<sup>6</sup> Tinetti, ME. Preventing falls in elderly persons. New England Journal of Medicine, 2003, 348:1, 42-49.

<sup>7</sup> Division of Aging and Seniors, Public Health Agency of Canada. Report on Seniors' Falls in Canada. Minister of Public Works and Government Services Canada, 2005.

<sup>8</sup> MA Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation, Division of Research and Epidemiology. Massachusetts Deaths, 2006.

<sup>9</sup> Injury Surveillance Program, Unpublished data on the long-term use of anti-coagulants among persons ages 65+ using supplemental code V5861. 1994-2007. September 2008.

<sup>10</sup>Centers for Disease Control and Prevention. MMWR 53(11):233-238, March 26, 2004.

<sup>11</sup>HealthAtoZ.com. [Online]. (2008) Available from: URL: [http://www.healthatoz.com/healthatoz/Atoz/common/standard/transform.jsp?requestURI=/healthatoz/Atoz/ency/head\\_injury.jsp](http://www.healthatoz.com/healthatoz/Atoz/common/standard/transform.jsp?requestURI=/healthatoz/Atoz/ency/head_injury.jsp)

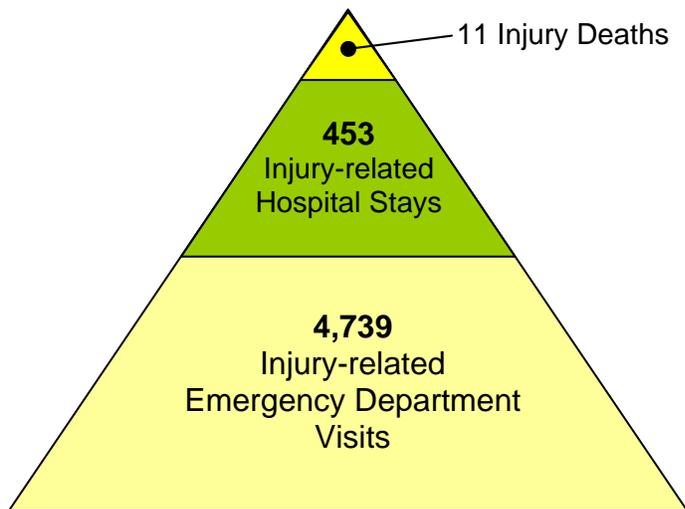
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# Lifespan Summaries

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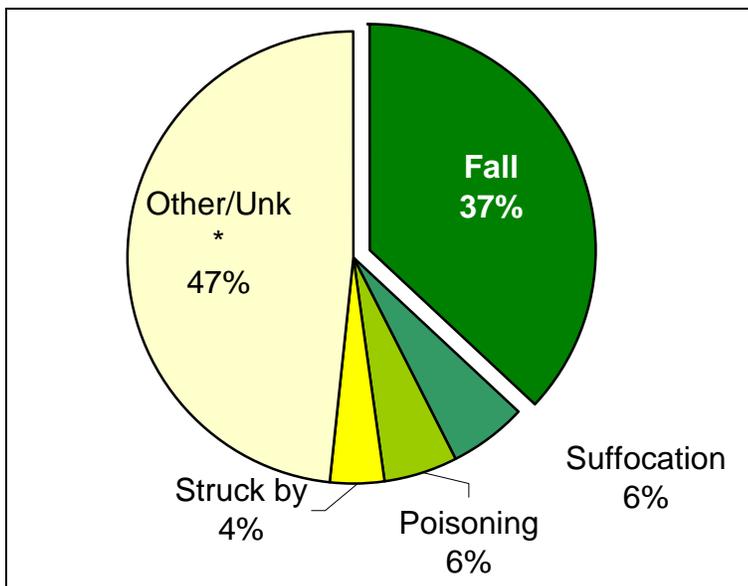
# Age < 1 year

**Figure 23. The Magnitude\* of Injuries to Massachusetts Infants Less than 1 Year**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 24. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Infants Less than 1 Year**



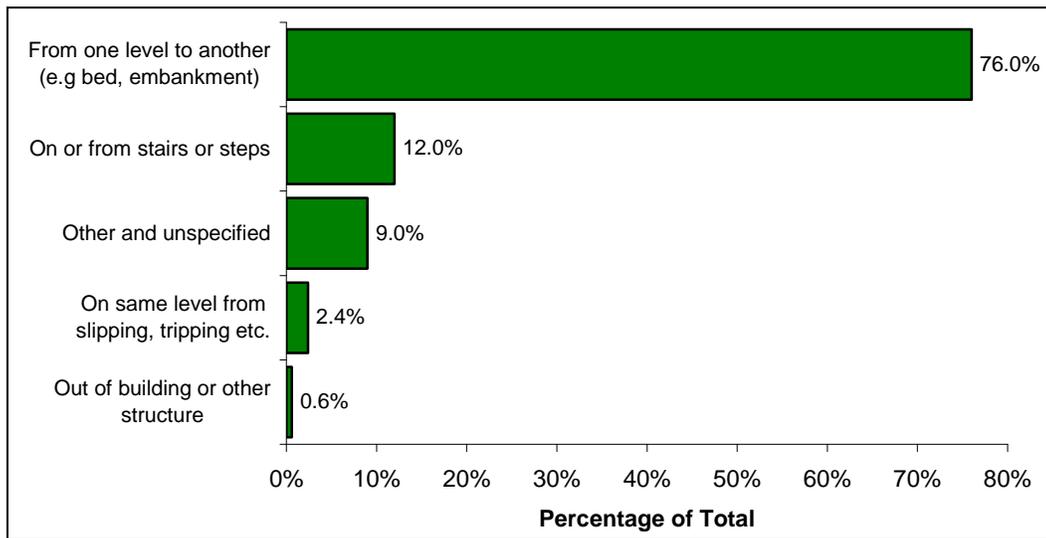
\*The majority of injuries in "other/unknown" are the result of foreign body into other orifice (e.g., ear). Excludes food or other object obstructing respiratory tract which are included in "suffocation".

Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 11 Massachusetts infants less than one year of age died as a result of injuries. There were more than 5,000 injury-related acute care hospital stays and emergency department visits.
- The leading cause of injury death for this age group was suffocation (N=6).
- Falls (37%, N=167) were the leading cause of nonfatal injuries requiring a hospital stay, followed by suffocation and poisoning with 25 cases each.
- Falls were also the leading cause of nonfatal injury-related ED visits for this age group (52.4%, N=2,418), followed by injuries resulting from "struck by or against an object" (10.9%, N=516).

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

**Figure 25. Nonfatal Unintentional Fall-related Acute Care Hospital Stays by Circumstance, MA Infants Less than 1 Year, 2006**

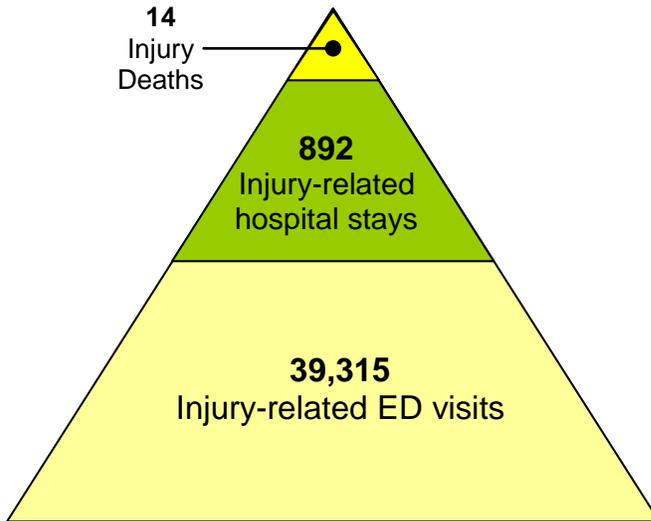


Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Among fall-related hospital stays, 76% (N=127) of injuries were a result of a fall from one level to another. More than half of these injuries were the result of a fall from a bed, chair, or other furniture (N=73).

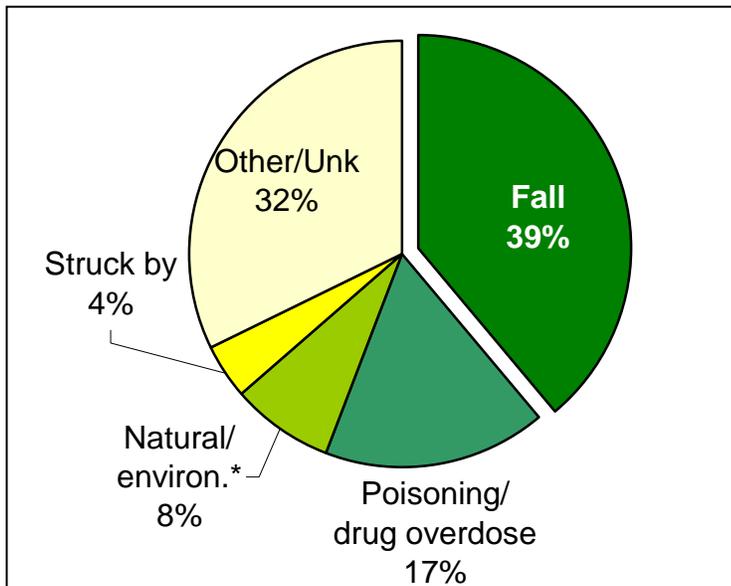
# Ages 1 - 4

**Figure 26. The Magnitude of Injuries to Massachusetts Children Ages 1-4, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 27. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among Children Ages 1-4**



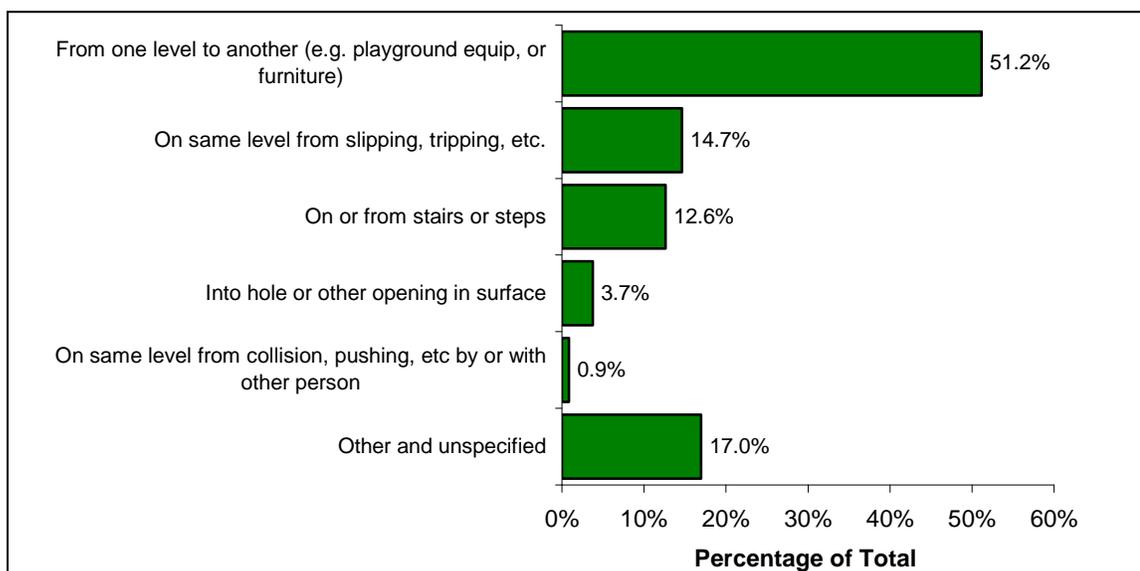
\* Natural/Environmental includes injuries related to factors such as excessive cold or hot weather, tornados, floods, lightning, as well as, dog bites, and other bites and stings from animals and insects.

Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 14 Massachusetts children ages 1 to 4 died as a result of injuries. There were more than 40,000 injury-related acute care hospital stays and emergency department visits for this age group.
- The leading cause of injury death for this age group was drowning (N=5).
- Falls (39%, N=348) were the leading cause of nonfatal injuries requiring a hospital stay. Poisonings were the second leading cause (17%, N=151), natural/environmental (8%, N=69).
- Falls were also the leading cause of nonfatal injury-related ED visits for this age group (40.6%, N=15,963), followed by "struck by or against an object" (16%, N=6,317).

Appendix B (Tables 22-24) includes leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

**Figure 28. Nonfatal Fall-related Acute Care Hospital Stays by Circumstance, MA Children Ages 1-4, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Falls from one level to another were the most common circumstance for unintentional falls among children ages 1-4 (N=178). Among these injuries, falls from furniture (N=82) accounted for 46.1% and playground equipment (N=48) accounted for 27%.

**Table 11. Nonfatal Poisoning-related Acute Care Hospital Stays by Class of Agent, MA Children Ages 1-4, 2006**

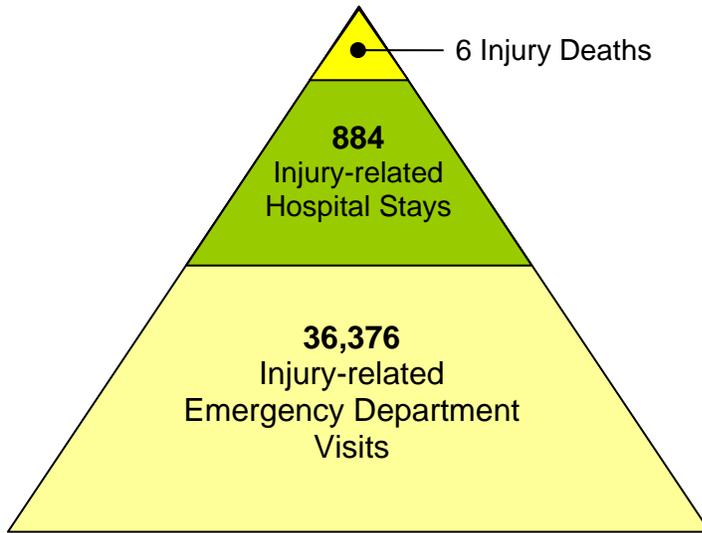
Class of Agent	Percent
<b>Drugs:</b>	
Drugs primarily affecting the cardiovascular system	17.1
Psychotropic agents (e.g., antidepressants, psychostimulants)	11.0
Sedatives and other hypnotics (includes barbituates)	11.0
Other drugs, hormones and synthetic substitutes	8.2
Analgesics, antipyretics and antirheumatics (includes opioid-based)	6.2
All other drugs	21.8
<b>Non-Drugs:</b>	
Cleansing/polishing agents, disinfectants, paints/varnishes	10.3
Other and unspecified solid and liquid substances	3.4
Gases/Vapors (includes carbon monoxide)	2.7
Corrosives and caustics	2.7
Petroleum products/solvents and their vapors	2.1
All other non-drugs	3.5

Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- The majority of poisoning-related hospital stays to children ages 1-4 years old were the result of drugs/medication (75.3%).
- Non-drugs, such as cleansing and polishing agents, disinfectants, poisonous food or plants, and carbon monoxide, accounted for 24.7% of unintentional poisonings for this age group.

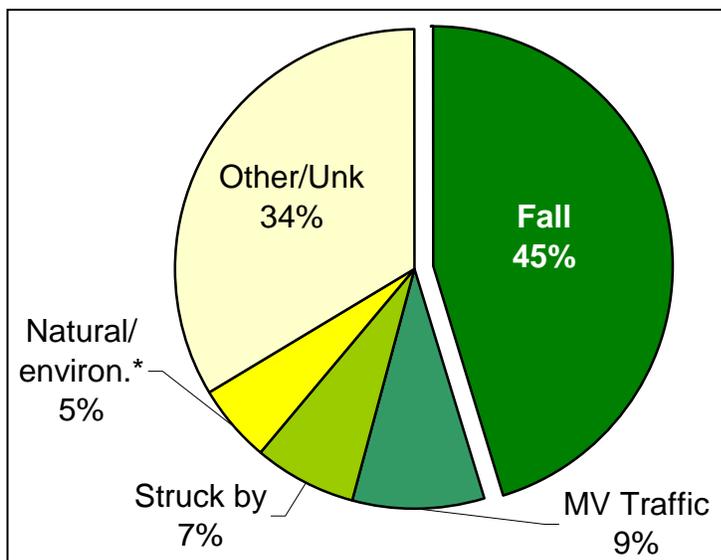
# Ages 5-9

**Figure 29. The Magnitude of Injuries to Massachusetts Children Ages 5-9, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 30. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Children Ages 5-9**



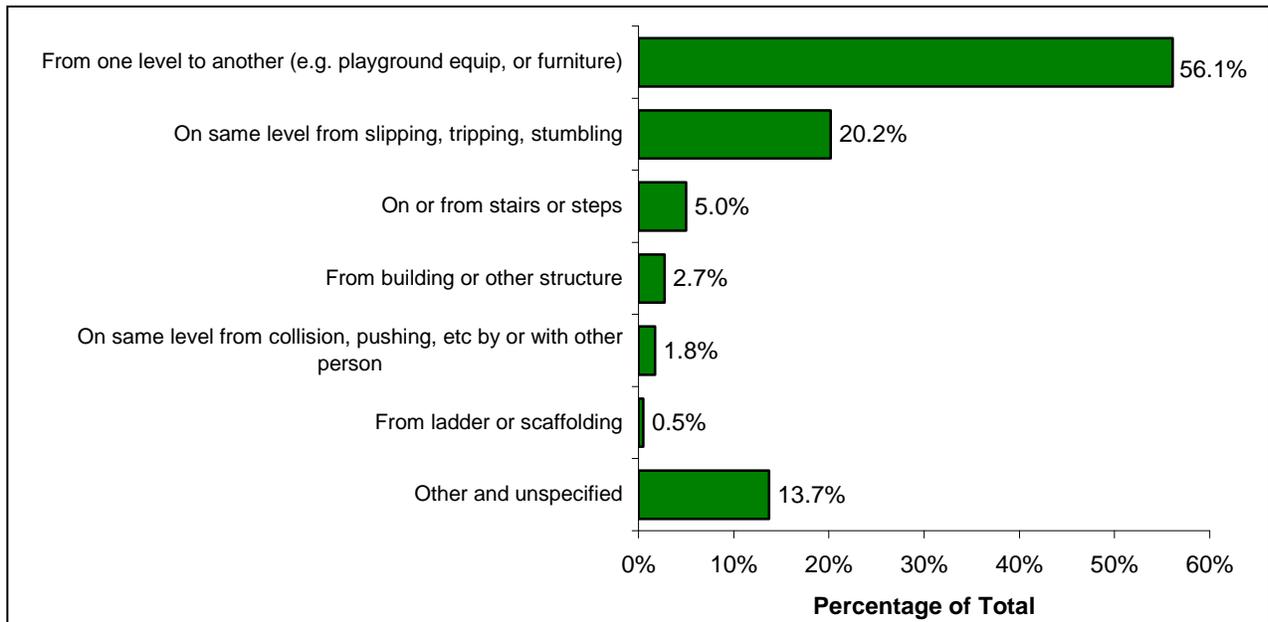
\*Natural/Environmental includes injuries related to factors such as excessive cold or hot weather, tornados, floods, lightning, as well as, dog bites, and other bites and stings from animals and insects.

Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 6 Massachusetts children between the ages of 5 and 9 died as a result of injuries, and there were more than 37,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause of injury death for this age group was drowning (N=3).
- Children in this age group had the lowest fatal injury rate of all age groups examined (1.5 per 100,000).
- Falls (45%, N=401) were the leading cause of nonfatal injuries requiring a hospital stay, followed by motor vehicle traffic-related injuries (9%, N=71).
- Falls were also the leading cause of nonfatal injury-related ED visits for this age group (34.1%, N=12,411), followed by "struck by or against an object" (22.2%, N=8,076).

Appendix B (Tables 22-24) includes leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

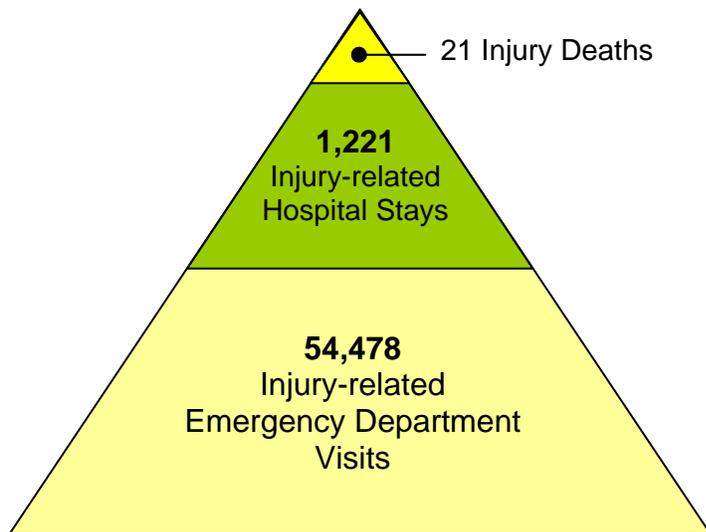
**Figure 31. Nonfatal Fall-related Acute Care Hospital Stays by Circumstance, MA Children Ages 5-9, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

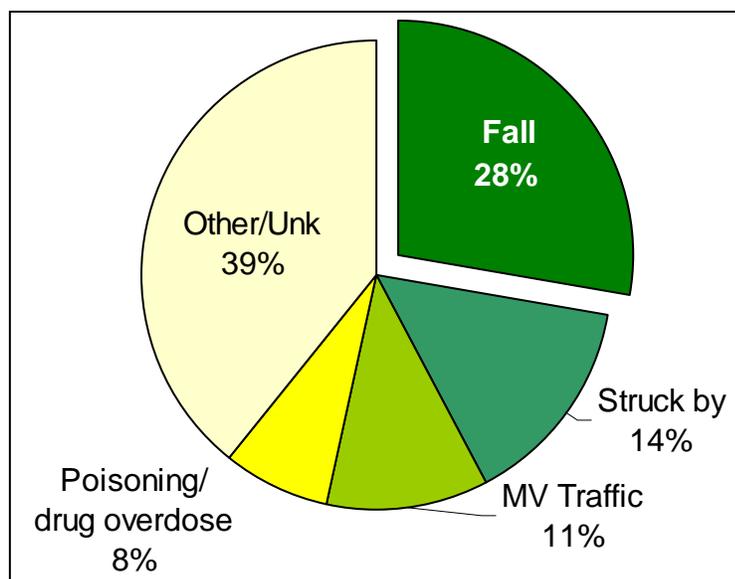
- Among the 401 fall-related hospital stays, more than half (56.1%, N=225) were the result of a fall from one level to another. Falls associated with playground equipment (N=121) accounted for nearly one third (30.2%) of all fall injuries.
- Falls from scooters, skates, skis, and skateboards (N=23) accounted for 5.7% of all fall injuries for this age group.

**Figure 32. The Magnitude of Injuries to Massachusetts Children Ages 10-14, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 33. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Children Ages 10-14**

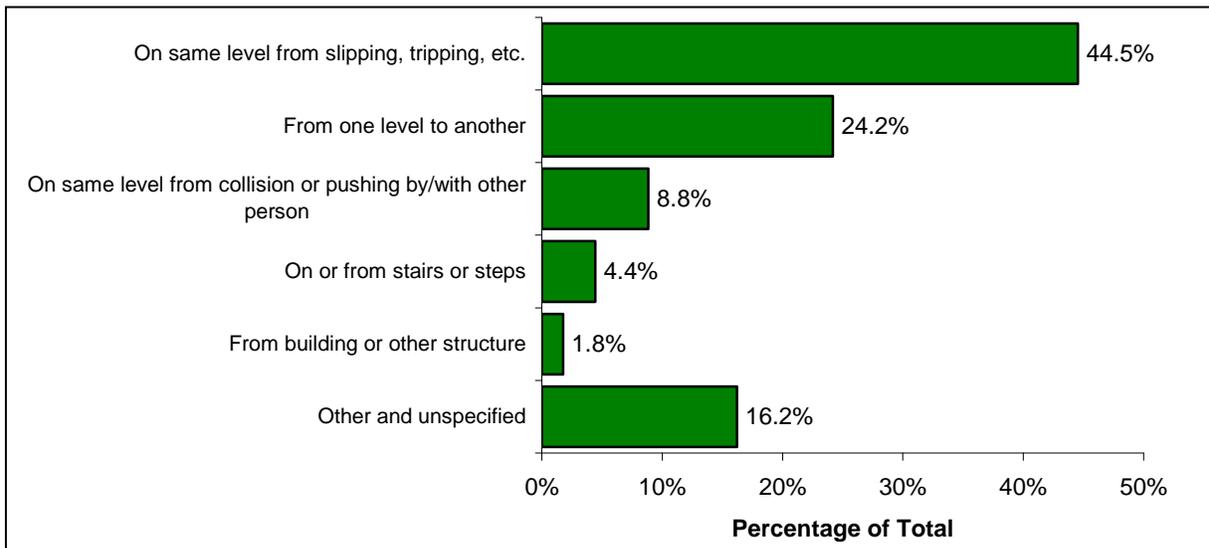


Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 21 Massachusetts children between the ages of 10 and 14 died as a result of injuries. There were more than 55,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause of injury death for this age group was motor vehicle traffic crashes (N=9).
- Falls (28%, N=340) were the leading cause of nonfatal injuries requiring a hospital stay, followed by struck by or against an object (14%, N=174).
- Injuries resulting from being struck by or against an object were the leading cause of nonfatal injury-related ED visit for this age group (30.2%, N=16,469).

Appendix B (Tables 22-24) includes leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

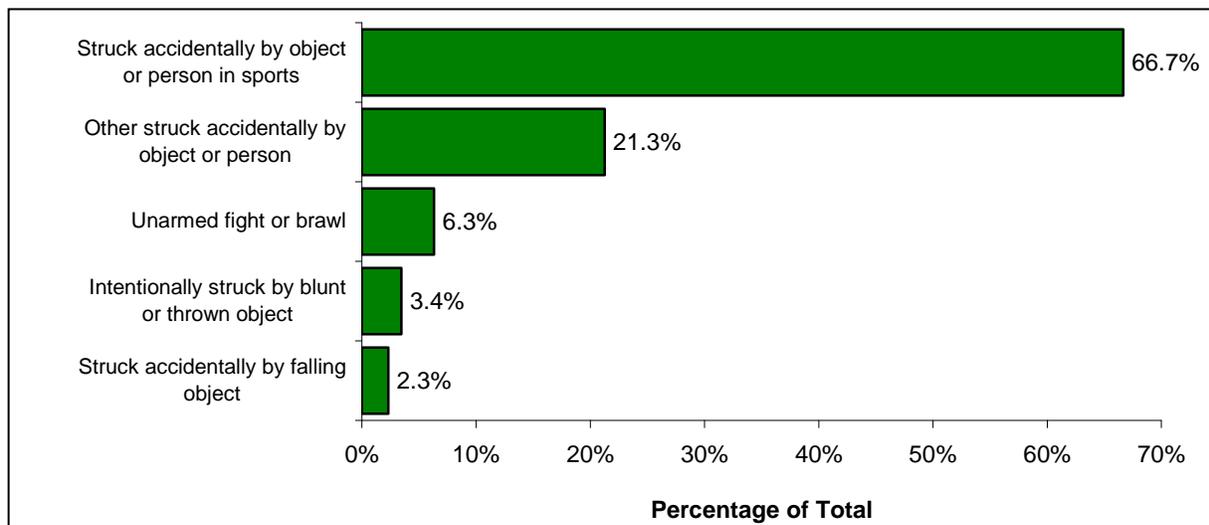
**Figure 34. Nonfatal Fall-related Injury Acute Care Hospital Stays by Circumstance, MA Children Ages 10-14, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Among fall-related hospital stays, 44.5% of injuries were the result of slipping, tripping, or stumbling on the same level, and 24.2% were the result of a fall from one level to another.

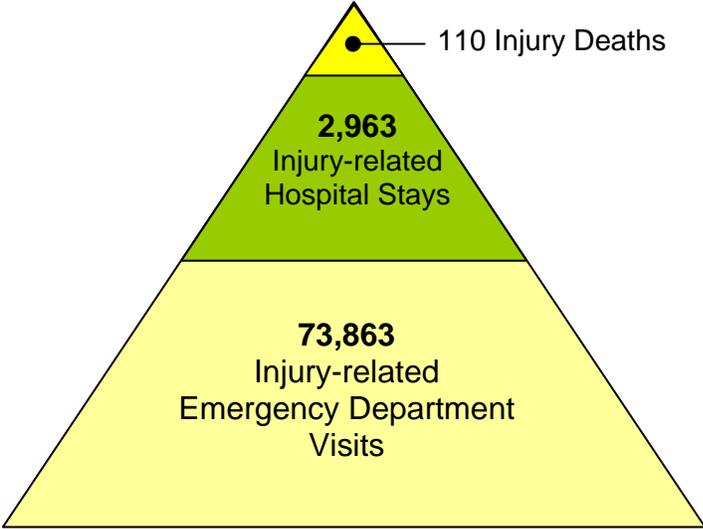
**Figure 35. Nonfatal “Struck-by or Against an Object” Injury Acute Care Hospital Stays by Circumstance, MA Children Ages 10-14, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

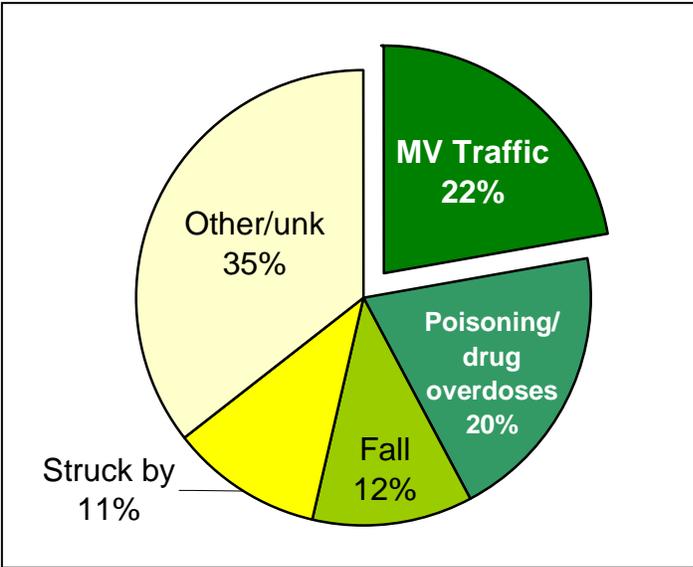
- Among struck-by injuries resulting in a hospital stay, 66.7% (N=116) were due to being unintentionally “struck by or against an object” during sports-related activity, 25% of these cases resulted in a subsequent fall.

**Figure 36. The Magnitude of Injuries to Massachusetts Adolescents 15-19, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 37. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Adolescents Ages 15-19**

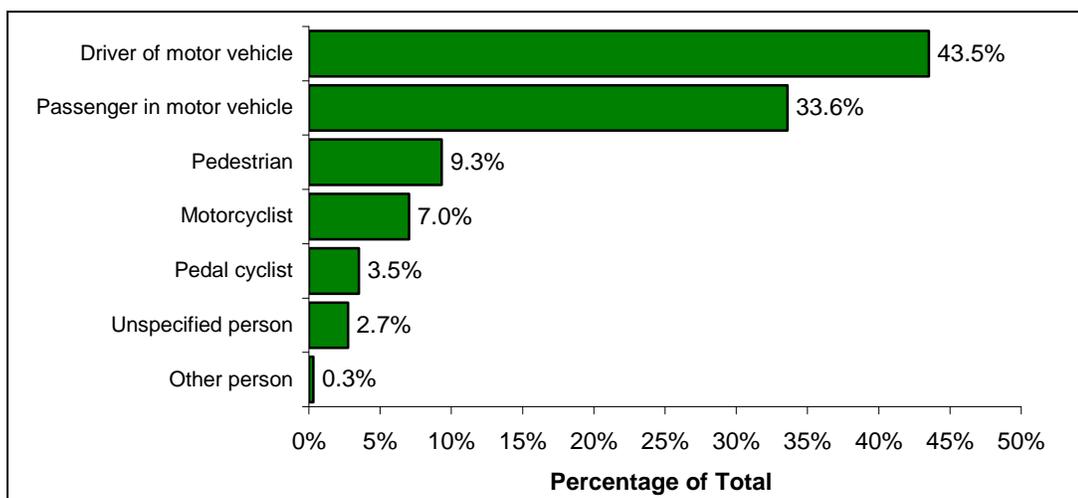


Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 110 Massachusetts adolescents between the ages of 15 and 19 died as a result of injuries. There were more than 76,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause of injury death for this age group was motor vehicle traffic crashes (N=43).
- Motor vehicle traffic crashes (22%, N=656) were the leading cause of nonfatal injuries requiring a hospital stay, followed by poisoning/drug overdoses (20%, N=594).
- This age group had the highest rate of nonfatal injury-related ED visits of all age groups examined (16,531.2 per 100,000).
- The leading cause of nonfatal injury-related ED visits was "struck by or against an object" (N=19,650).

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

**Figure 38. Nonfatal Motor Vehicle Traffic-related Acute Care Hospital Stays by Person Injured, MA Adolescents Ages 15-19, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Among motor vehicle traffic-related injuries to adolescents ages 15-19, 43.5% (N=285) were driving a vehicle, and 33.6% (N=220) were motor vehicle passengers.
- 9.3% of those injured were pedestrians struck-by a motor vehicle, and 7% were motorcyclists.

**Table 12. Nonfatal Poisoning/Drug Overdose Acute Care Hospital Stays by Class of Agent, MA Adolescents Ages 15-19, 2006**

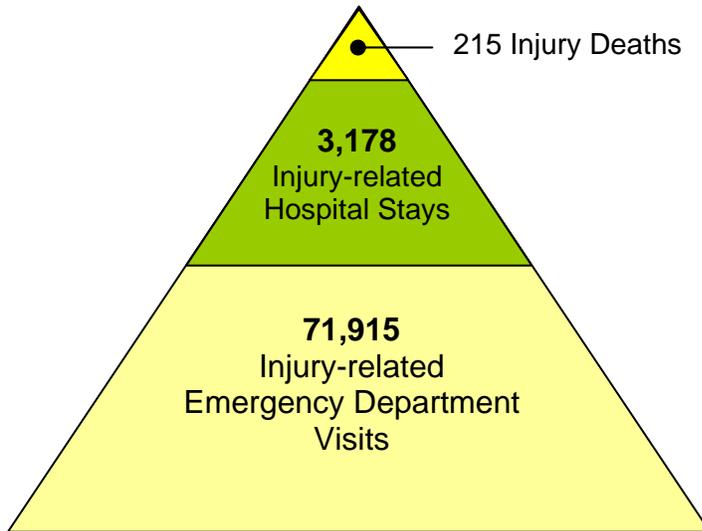
Class of Agent	Unintentional	Self-inflicted	Total*
	(N=133)	(N=413)	(N=594)
Analgesics, antipyretics and antirheumatics (includes opioid-based drugs)	35	181	224
Sedatives and other hypnotics (includes barbituates)	0	4	5
Psychotropic agents (e.g., antidepressants, psychostimulants, psychodysleptics) (includes benzodiazepine-based drugs)	39	134	187
Alcohol	18	0	18
Other drugs acting on central and autonomic nervous system	5	0	5
Other specified drugs and medicinal substances	27	82	126
Unspecified drugs and medicinal substances	0	8	5
Non-drugs/other unspecified substances	9	4	24

Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.  
\*Total includes all poisonings including those of assault-related or undetermined intent.

- The majority of poisoning/drug overdose hospital stays among adolescents, ages 15-19 years old were the result of drugs/medication (96.0%).
- Poisoning/drug overdose hospital stays among this age group were more likely to be self-inflicted (69.5%) than unintentional (22.4%).

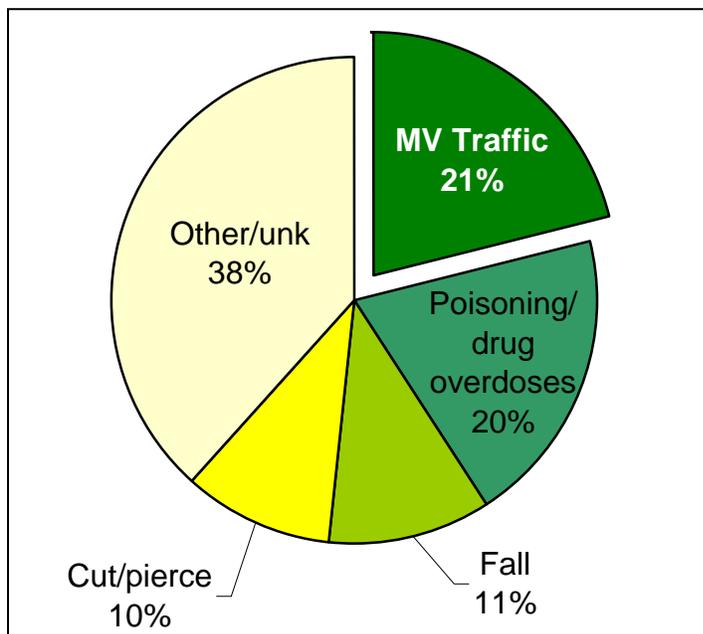
# Agers 20-24

**Figure 39. The Magnitude of Injuries to Massachusetts Residents Ages 20-24, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 40. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Residents Ages 20-24**

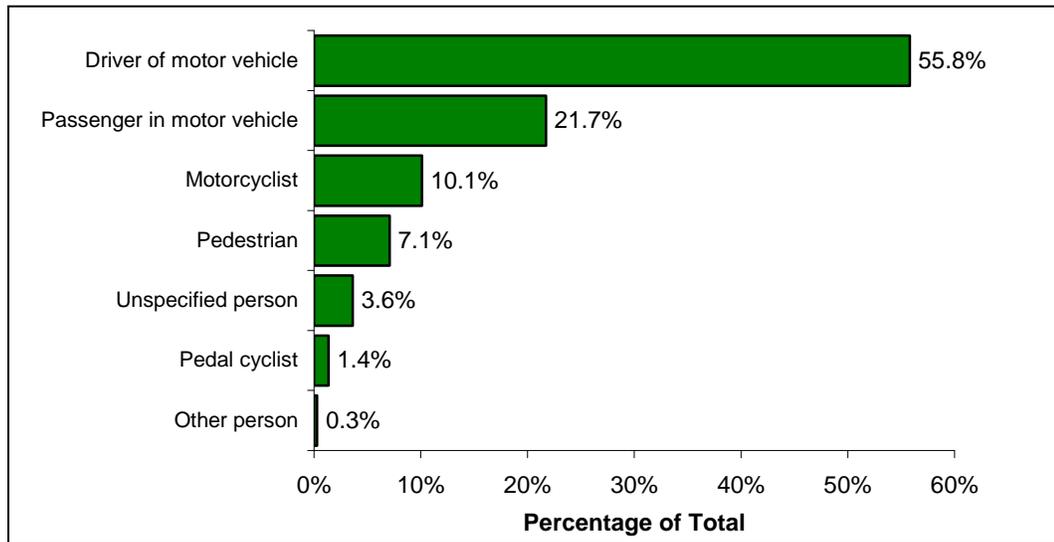


Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 215 Massachusetts residents between the ages of 20 and 24 died as a result of injuries. There were more than 75,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause of injury death for this age group was motor vehicle traffic crashes (32.1%, N=69), followed by poisoning/drug overdoses (26.9%, N=58).
- Motor vehicle traffic crashes (21%, N=667) were also the leading cause of nonfatal injuries requiring a hospital stay, followed by poisoning/drug overdoses (20%, N=634).
- Motor vehicle traffic crashes were the leading cause among ED visits (17.5%, N=12,607) for this age group.
- This age group had the second highest rate of nonfatal injury-related ED visits (16,020.4 per 100,000).

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

**Figure 41. Nonfatal Motor Vehicle Traffic-related Injury Acute Care Hospital Stays by Person Injured, MA Residents Ages 20-24, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Among motor vehicle traffic-related injuries to persons ages 20-24, 55.8% (N=370) of those injured were driving a vehicle, and 21.7% (N=144) were motor vehicle passengers.
- 10.1% of those injured were motorcyclists struck-by a motor vehicle, and 7% were pedestrians.

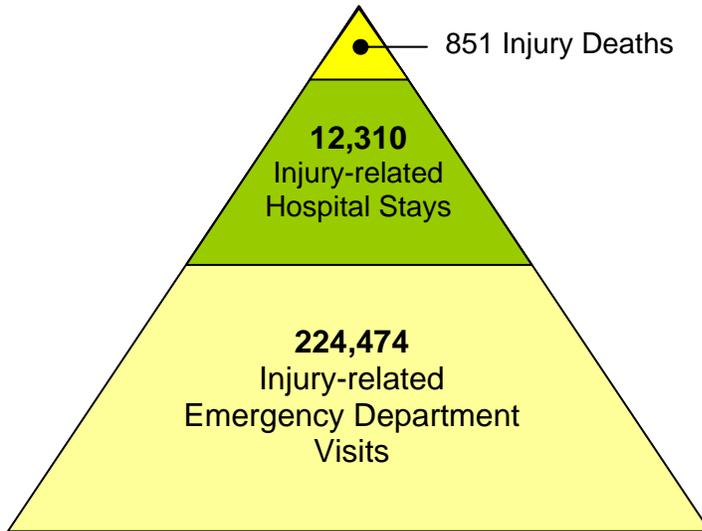
**Table 13. Nonfatal Poisoning/Drug Overdose Acute Care Hospital Stays by Class of Agent, MA Residents Ages 20-24, 2006**

Class of Agent	Unintentional	Self-inflicted	Un-determined
	(N=190)	(N=370)	(N=71)
Analgesics, antipyretics and antirheumatics (includes opioid-based drugs)	73	129	25
Sedatives and other hypnotics (includes barbituates)	2	5	0
Psychotropic agents (e.g., antidepressants, psychostimulants, psychodysleptics) (includes benzodiazepine-based drugs)	62	147	22
Alcohol	10	0	0
Other drugs acting on central and autonomic nervous system	17	0	0
Other specified drugs and medicinal substances	12	72	12
Unspecified drugs and medicinal substances	0	0	4
Non-drugs/other unspecified substances	14	17	8

Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

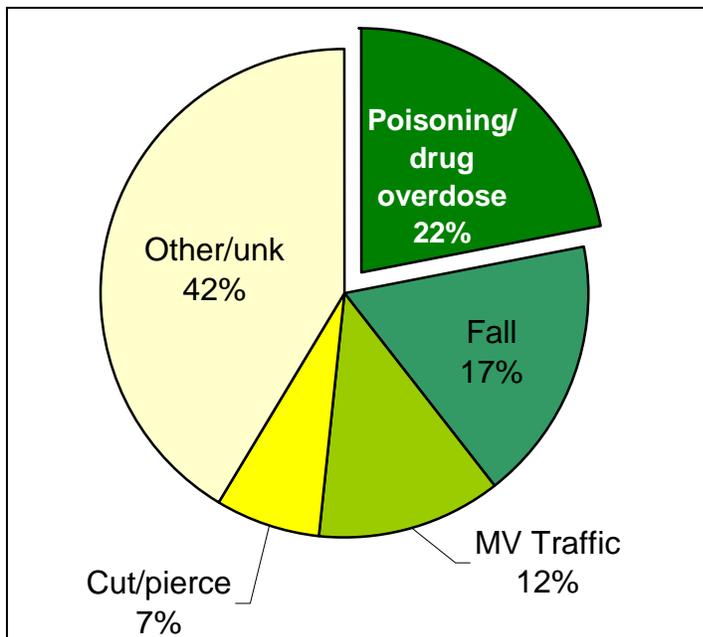
- Poisoning/drug overdose hospital stays for this age group were as likely to be the result of psychotropic agents (36.4%), as analgesics, antipyretics and antirheumatics (35.8%).
- Poisoning/drug overdose hospital stays among this age group were more likely to be self-inflicted (58.4%) than unintentional (30.1%).

**Figure 42. The Magnitude of Injuries to Massachusetts Residents Ages 25-44, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 43. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Residents Ages 25-44**



Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 851 Massachusetts residents between the ages of 25 and 44 died as a result of injuries. There were more than 236,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause of injury death for this age group was poisoning/drug overdose (53.3%, N=454).
- Poisoning/drug overdose (22%, N=2,716) was the leading cause of nonfatal injuries requiring a hospital stay. Most poisoning/drug overdoses were self-inflicted (58.4%).
- Fall was the leading cause of injury-related ED visit (16.8%, N=37,604) for this age group, followed by overexertion (15.4%, N=34,489).
- This age group had more injury-related ED visits than any other age group examined.

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

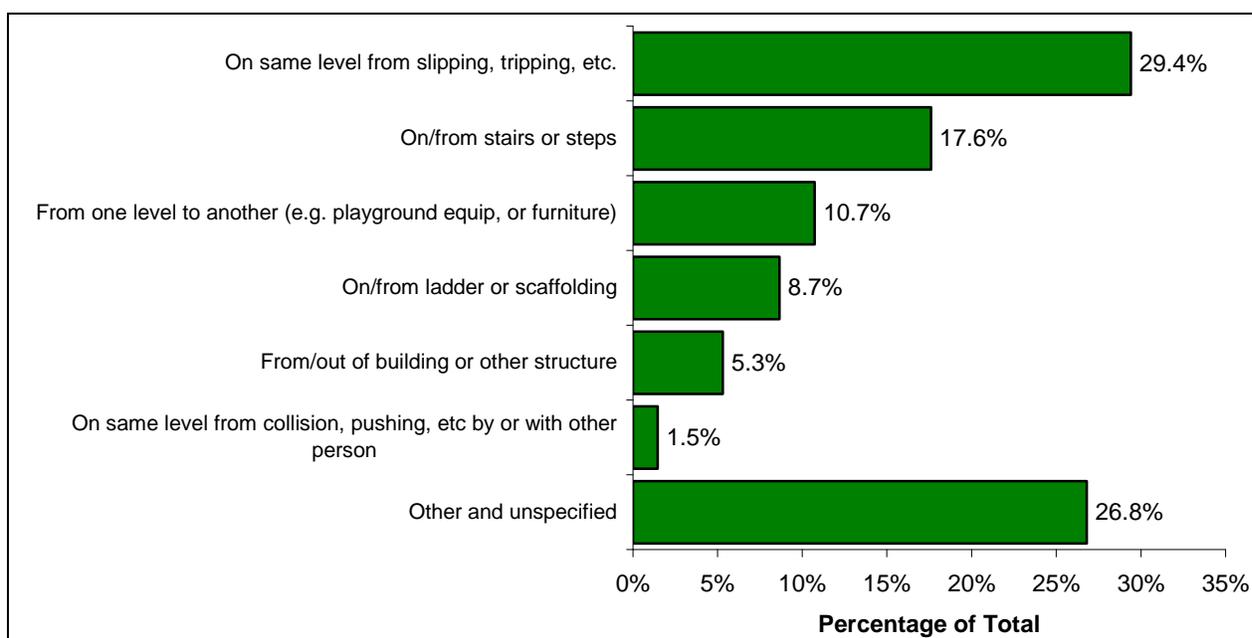
**Table 14. Nonfatal Poisoning/Drug Overdose Acute Care Hospital Stays by Class of Agent, MA Residents Ages 25-44, 2006**

Class of Agent	Unintentional	Self-inflicted	Un-determined
	(N=485)	(N=1586)	(N=284)
Analgesics, antipyretics and antirheumatics <i>(includes opioid-based drugs)</i>	273	365	91
Sedatives and other hypnotics <i>(includes barbituates)</i>	20	32	4
Psychotropic agents (e.g., antidepressants, psychostimulants, psychodysleptics) <i>(includes benzodiazepine-based drugs)</i>	320	751	76
Alcohol	63	0	0
Other drugs acting on central and autonomic nervous system	62	0	0
Other specified drugs and medicinal substances	67	350	90
Unspecified drugs and medicinal substances	0	16	3
Non-drugs/other unspecified substances	40	72	20

Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Poisoning/drug overdose hospital stays for this age group were most likely to be the result of psychotropic agents (42.2%), followed by analgesics, antipyretics and antirheumatics (26.8%).
- Most poisoning/drug overdoses for this age group were self-inflicted (58.4%).

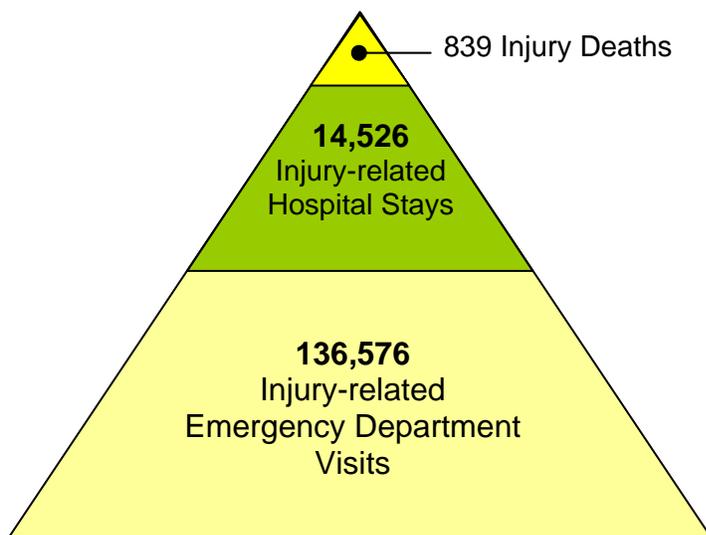
**Figure 44. Nonfatal Fall-related Injury Acute Care Hospital Stays by Circumstance, MA Residents Ages 25-44, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- 29.4% (N=625) of fall-related hospital stays, among persons ages 25-44, were the result of slipping, tripping, or stumbling on the same level, and 17.6% were the result of a fall on or from stairs and steps.

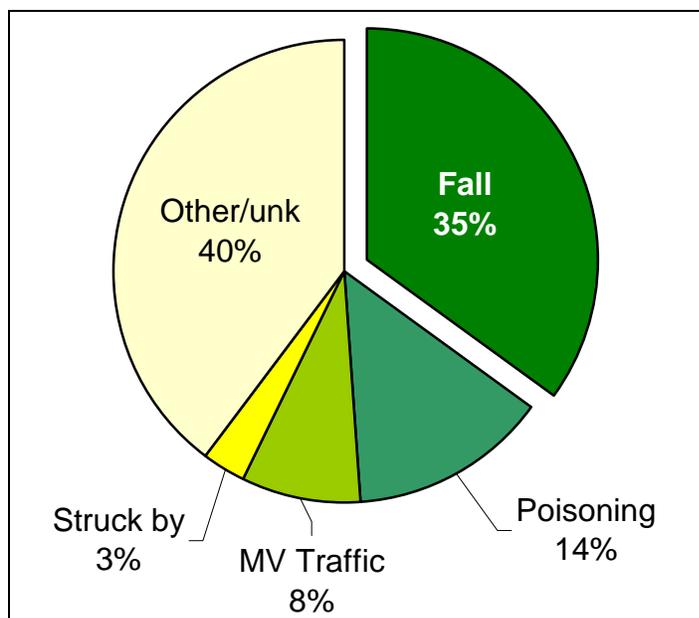
**Figure 45. The Magnitude of Injuries to Massachusetts Residents Ages 45-64, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

# Ages 45-64

**Figure 46. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Residents Ages 45-64**

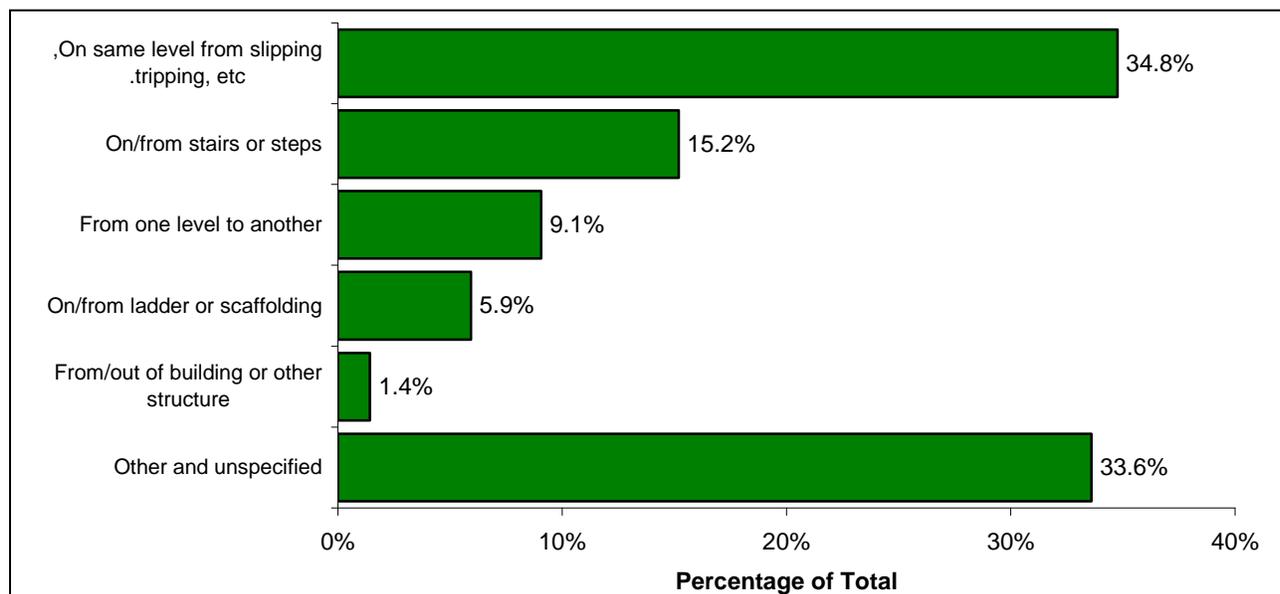


Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 839 Massachusetts residents between the ages of 45 and 64 died as a result of injuries. There were more than 150,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause of injury death for this age group was poisoning/drug overdose (51.7%, N=434), followed by motor vehicle traffic crashes (13.9%, N=117).
- Fall (35%, N=5,069) was the leading cause of nonfatal injuries requiring a hospital stay, followed by poisoning/drug overdoses (14%, N=2,036).
- Fall was the leading cause of injury-related ED visit (26.3%, N=35,938) for this age group, followed by overexertion (12.9%, N=17,632).

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

**Figure 47. Nonfatal Fall-related Injury Acute Care Hospital Stays by Circumstance, MA Residents Ages 45-64, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- 34.8% of fall-related hospital stays, among persons ages 45-64, were the result of slipping, tripping, or stumbling on the same level, and 15.2% were the result of a fall on or from stairs or steps.

**Table 15. Nonfatal Poisoning/Drug Overdose Acute Care Hospital Stays by Class of Agent, MA Residents Ages 45-64, 2006**

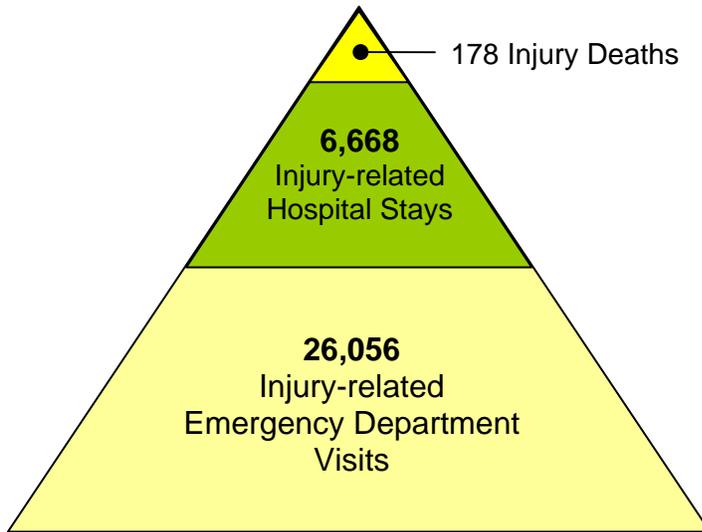
Class of Agent	Unintentional	Self-inflicted	Un-determined
	(N=866)	(N=948)	(N=232)
Analgesics, antipyretics and antirheumatics (includes opioid-based drugs)	245	166	67
Sedatives and other hypnotics (includes barbituates)	25	43	8
Psychotropic agents (e.g., antidepressants, psychostimulants, psychodysleptics) (includes benzodiazepine-based drugs)	244	478	71
Alcohol	88	0	0
Other drugs acting on central and autonomic nervous system	63	0	0
Other specified drugs and medicinal substances	150	182	63
Unspecified drugs and medicinal substances	0	11	4
Non-drugs/other unspecified substances	51	68	19

Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- Poisoning/drug overdose hospital stays for this age group were most likely to be the result of psychotropic agents (38.9%), followed by analgesics, antipyretics and antirheumatics (23.5%).
- Poisoning/drug overdose hospital stays for this age group were almost as likely to be of unintentional intent (42.5%) as self-inflicted (46.6%).

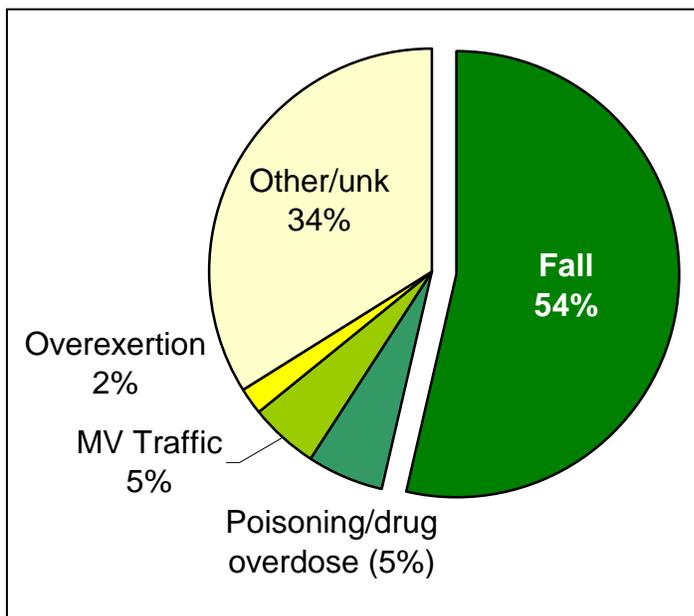
# Agers 65-74

**Figure 48. The Magnitude of Injuries to Massachusetts Residents Ages 65-74, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 49. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Residents Ages 65-74**

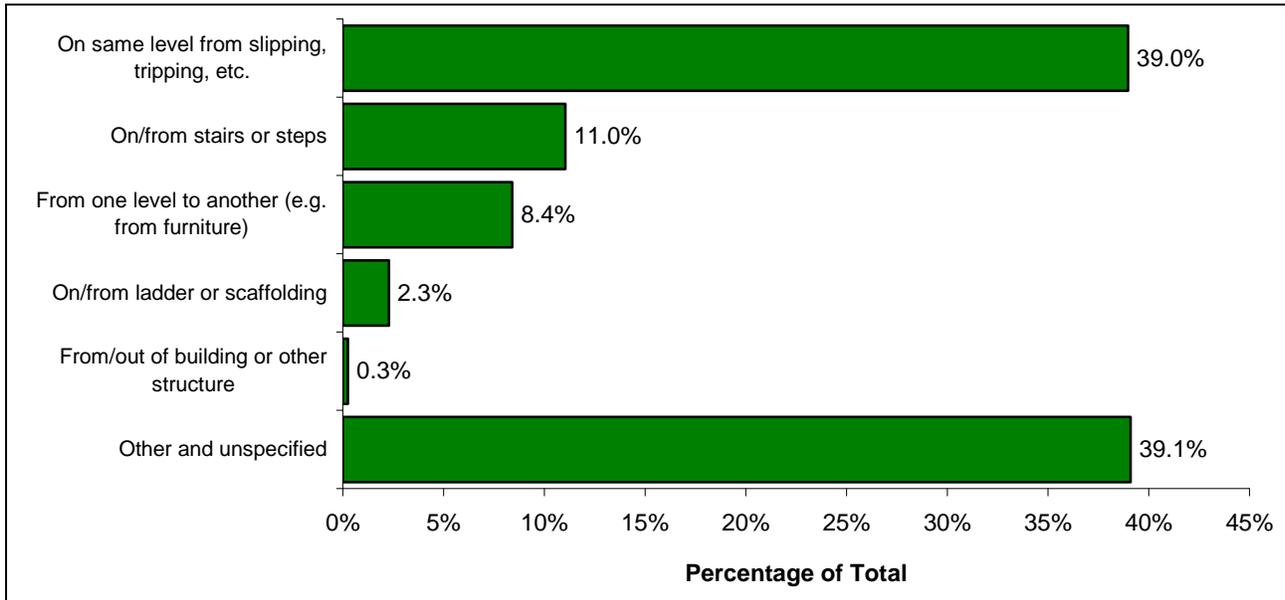


Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 178 Massachusetts residents between the ages of 65 and 74 died as a result of injuries. There were more than 32,000 injury-related acute care hospital stays and ED visits for this age group.
- The leading cause (31.5%) of injury death for this age group was fall (N=56), followed by motor vehicle traffic crashes (18.0%, N=32).
- Fall (54%, N=3,579) was the leading cause of nonfatal injuries requiring a hospital stay.
- This age group had the second highest rate of nonfatal injury-related hospital stays (1,627.6 per 100,000) of all age groups examined.
- Fall was the leading cause of injury-related ED visit (41.4%, N=10,787) for this age group, followed by cut/pierce injuries (9.1%, N=2,376).

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

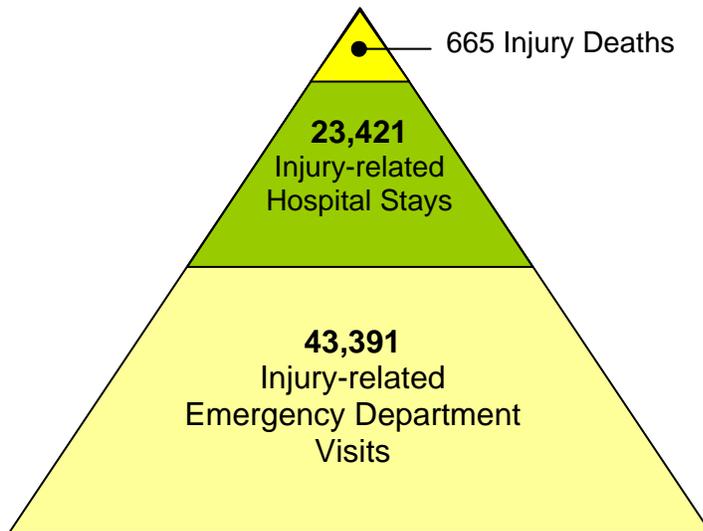
**Figure 50. Nonfatal Fall-related Injury Acute Care Hospital Stays by Circumstance, MA Residents Ages 65-74, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

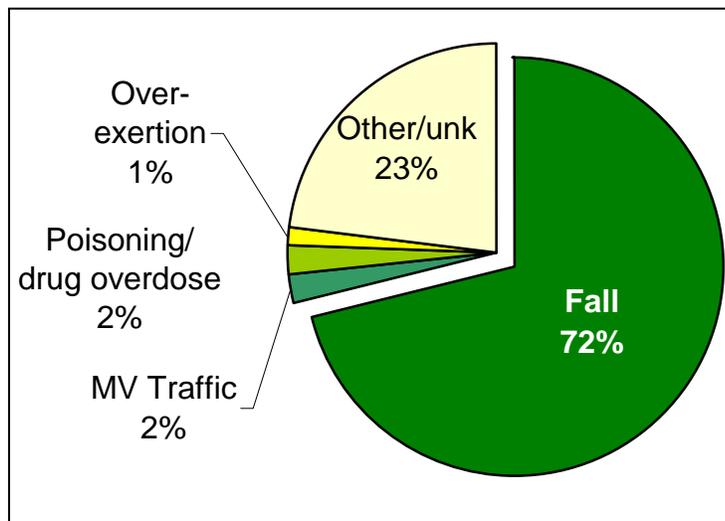
- 39% (N=1,395) of fall-related hospital stays, among persons ages 65-74, were the result of slipping, tripping, or stumbling on the same level, and 11% were the result of a fall on or from stairs or steps, and 8.4% were from one level to another.
- 8.4% were the result of a fall from one level to another; 34.2% (N=103) of these were falls from a bed; 20.9% (N=63) were from a chair, and 16.6% (N=50) were from a wheelchair.
- Among the “other and unspecified” category, most (80.0%) were unspecified.

**Figure 51. The Magnitude of Injuries to Massachusetts Residents Ages 75 and Older, 2006**



\* These numbers represent only a portion of total injuries as they do not include injuries treated in a physician's office, a health care center, or injuries treated at home.

**Figure 52. Leading Causes of Nonfatal Injury-related Acute Care Hospital Stays among MA Residents Ages 75 and Older**

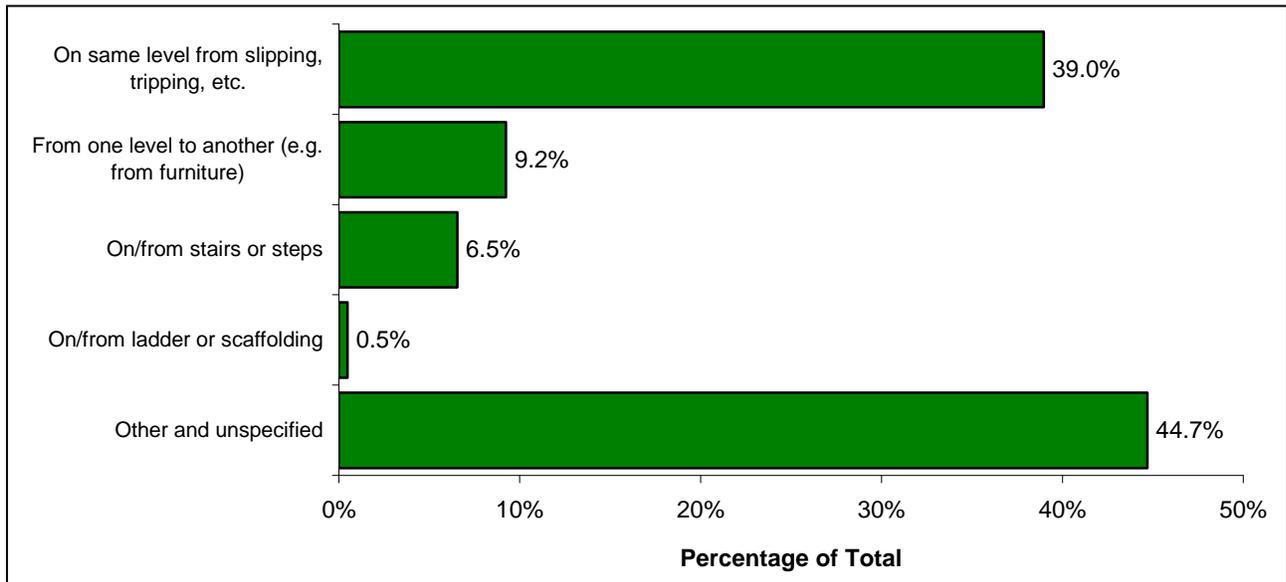


Source: MA Inpatient Hospital Discharge Database and MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- In 2006, 665 Massachusetts residents ages 75 and older died as a result of injuries. There were more than 66,000 injury-related acute care hospital stays and ED visits for this age group.
- Falls were the leading cause of injury death, injury-related hospital stays, and injury-related ED visits among persons ages 75 and older.
- Among this age group there were 285 fall deaths, 16,631 fall-related nonfatal injury hospital stays, and 25,964 ED visits.
- This age group had the highest rate of nonfatal injury-related hospital stays (5,248.0 per 100,000) of all age groups examined, with more than 3 times the number of fall-related injury hospital stays than the next highest age group (ages 45-64 years).

Appendix B (Tables 22-24) includes the leading cause of injuries for death, hospital stays, and ED visits, for all age groups.

**Figure 53. Nonfatal Fall-related Injury Acute Care Hospital Stays by Circumstance, MA Residents Ages 75 and Older, 2006**



Source: MA Inpatient Hospital Discharge Database; MA Outpatient Emergency Department Database, MA Division of Health Care, Finance, and Policy.

- 39% (N=6,481) of fall-related hospital stays, among persons 75 years and older, were the result of slipping, tripping, or stumbling on the same level
- 9.2% were the result of a fall from one level to another; 44.6% (N=685) of these were falls from a bed; 21.9% (N=336) were from a chair, and 14.6% (N=224) were from a wheelchair.
- Among the “other and unspecified” category, most (96.2%) were unspecified.

## **Regional and Community Level Data, MA Residents, 2006**

Data spreadsheets for Appendices A-C are located on-line @

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

Click on: Injury Statistics; then click on Injuries to Massachusetts Residents

Location for regional and community level data is based on the patient's city or town of residence. Most rates provided by region and local community are crude rates (number of injuries per 100,000 population), but rates for maps have been age-adjusted for comparison purposes. Counts are provided for total injury deaths and nonfatal injuries and for selected causes. Total injury deaths are provided as death data are public record. Databases that capture nonfatal injuries are not public record and therefore counts less than seven are suppressed for patient confidentiality.

### MASSACHUSETTS COUNTIES:

There are fourteen counties in Massachusetts: Barnstable, Berkshire, Bristol, Dukes, Essex, Franklin, Hampden, Hampshire, Middlesex, Nantucket, Norfolk, Plymouth, Worcester, and Suffolk.

### HEALTH AND HUMAN SERVICES REGIONS:

The Executive Office of Health and Human Services (EOHHS) uses six geographical regions to provide coordination of care and administrative services throughout the Commonwealth. The regions include: Western, Central, Northeast, Metro West, Boston, and Southeast. A listing of cities and towns within each region is located on pages 83-84.

### COMMUNITY HEALTH NETWORK AREA:

A Community Health Network Area (CHNA) is a coalition of members from public, non-profit, and private sectors working to improve public health within their community. The 351 individual cities and towns in Massachusetts are grouped into 27 regions (CHNAs). These coalitions mobilize around key health issues that impact their community, promote prevention efforts, enhance access to care, and provide opportunities for more collaboration among agencies. A listing of cities and towns within each CHNA is provided on pages 86-87.

### REGIONAL PLANNING AGENCIES:

There are thirteen Regional Planning Agencies (RPA) in Massachusetts. These groups were developed to help communities plan and implement improvements for transportation, public transit, the environment, and land use, as well as economic and community development. A listing of cities and towns within each region is located on pages 88-89.

### MASSACHUSETTS CITIES AND TOWNS:

Crude rates are provided by all 351 cities and towns for overall fatal and nonfatal injuries combined.

**Table 16. Injury-related Deaths and Nonfatal Hospital Cases by Selected Cause and Intent by County, MA Residents, 2006**

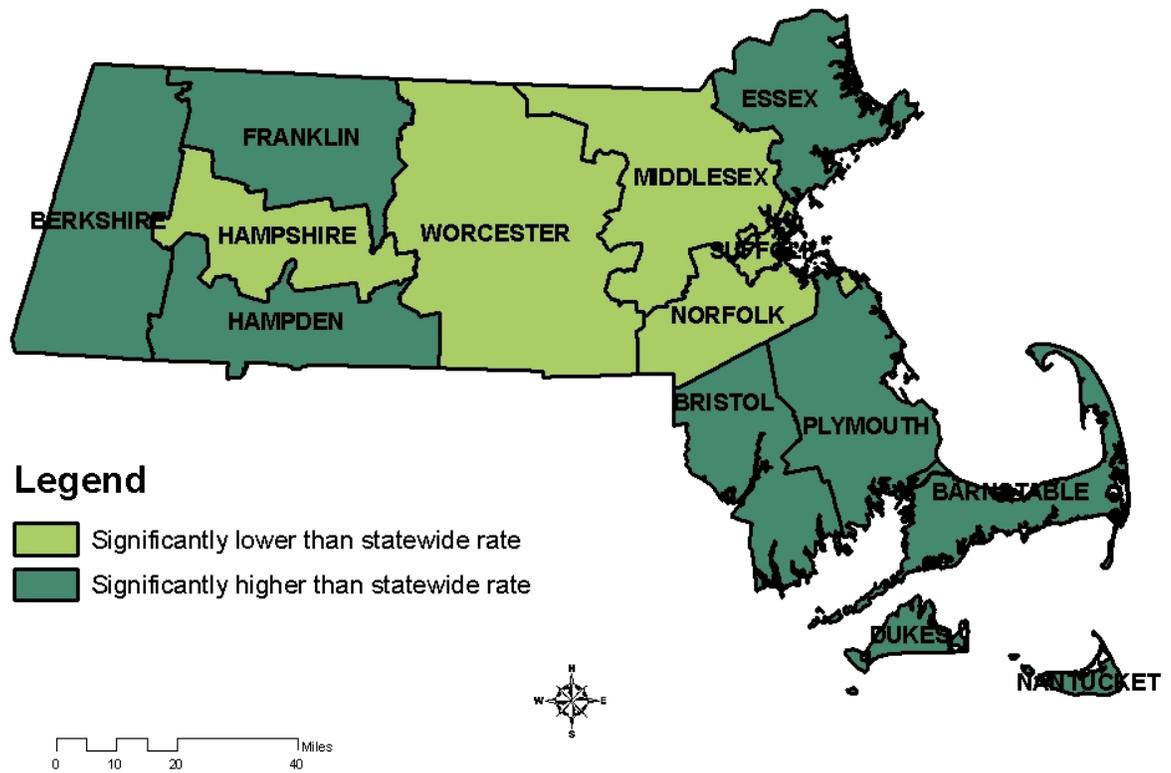
	Total Injuries				Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Crude Rate <sup>1</sup>	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
	2,910	777,705	780,615	12.126.6	444	81,508	340	56,960	875	13,587	183	26,864	437	11,423
Massachusetts	132	33,116	33,248	14,678.7	19	2,961	28	3,536	29	401	3	906	20	412
Barnstable	68	23,286	23,354	17,697.1	19	1,634	9	1,858	5	313	1	607	12	429
Berkshire	298	80,838	81,136	14,813.7	59	8,544	26	4,864	103	1,163	15	2,805	41	1,309
Bristol	8	3,178	3,186	20,416.5	0	150	3	262	2	45	0	46	2	29
Dukes	334	92,874	93,208	12,420.1	45	9,134	40	7,020	113	1,402	16	2,792	53	1,185
Essex	37	9,120	9,157	12,645.2	7	633	7	557	9	141	1	195	5	111
Franklin	209	63,148	63,357	13,574.4	35	8,771	7	4,074	58	1,566	21	2,901	33	1,050
Hampden	57	14,596	14,653	9,516.1	12	1,328	2	1,192	16	244	0	359	8	300
Hampshire	556	151,279	151,835	10,370.0	75	14,716	102	12,531	146	2,174	28	3,829	90	1,975
Middlesex	4	2,481	2,485	24,616.1	0	76	0	130	1	25	0	44	2	7
Nantucket	262	69,091	69,353	10,564.5	39	6,499	34	6,339	71	1,112	8	1,820	51	951
Norfolk	215	64,488	64,703	13,000.7	41	7,968	15	3,992	64	1,021	15	1,977	32	747
Plymouth	376	77,210	77,586	11,842.0	34	10,547	33	4,412	152	2,128	62	5,699	35	1,065
Suffolk	354	93,000	93,354	11,847.8	59	8,547	34	6,193	106	1,852	13	2,884	53	1,854
Worcester														

<sup>1</sup>. Crude rates are per 100,000 residents.

<sup>3</sup>. Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Map 1. Age-adjusted Rate for Injury-related Deaths and Hospital Cases by County of Residence, 2006**



**Table 17. Injury-related Deaths and Nonfatal Hospital Cases by Selected Cause and Intent by EOHHS Regions, MA Residents, 2006**

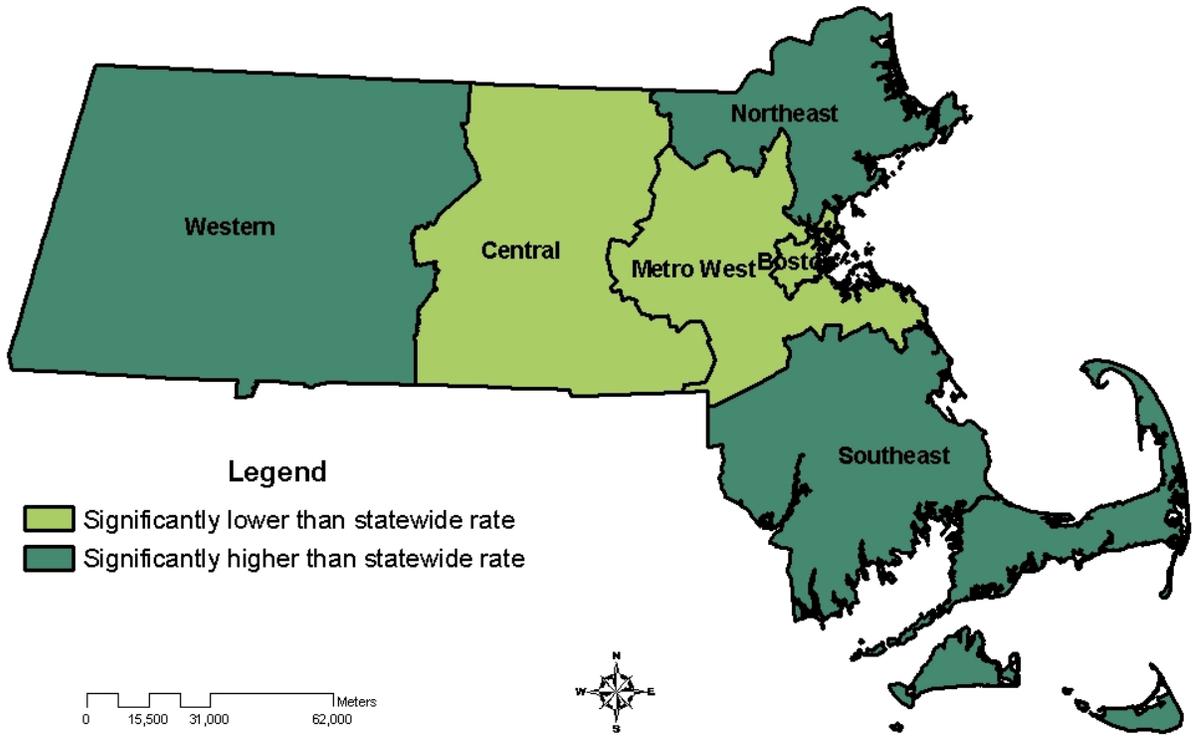
	Total Injuries				Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Crude Rate <sup>1</sup>	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
	<b>Massachusetts</b>	<b>2,910</b>	<b>777,705</b>	<b>780,615</b>	<b>12.126.6</b>	<b>444</b>	<b>81,508</b>	<b>340</b>	<b>56,960</b>	<b>875</b>	<b>13,587</b>	<b>183</b>	<b>26,864</b>	<b>437</b>
1) Western Region	370	111,774	112,144	13,459.2	72	12,368	25	7,696	87	2,258	23	4,055	59	1,886
2) Central Region	380	98,922	99,302	11,755.9	70	9,194	36	6,484	109	1,941	13	2,999	58	1,977
3) Northeast Region	553	156,295	156,848	12,248.1	71	16,388	67	11,529	191	2,303	33	4,564	77	2,044
4) Metro West Region	560	145,366	145,926	9,803.0	77	12,821	106	13,720	135	2,260	18	3,637	106	1,890
5) Southeast Region	659	184,282	184,941	14,468.4	119	19,945	73	12,620	196	2,652	33	5,821	99	2,501
6) Boston Region	388	81,066	81,454	11,446.6	35	10,792	33	4,911	157	2,173	63	5,788	38	1,125

<sup>1</sup>. Crude rates are per 100,000 residents.

<sup>3</sup>. Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

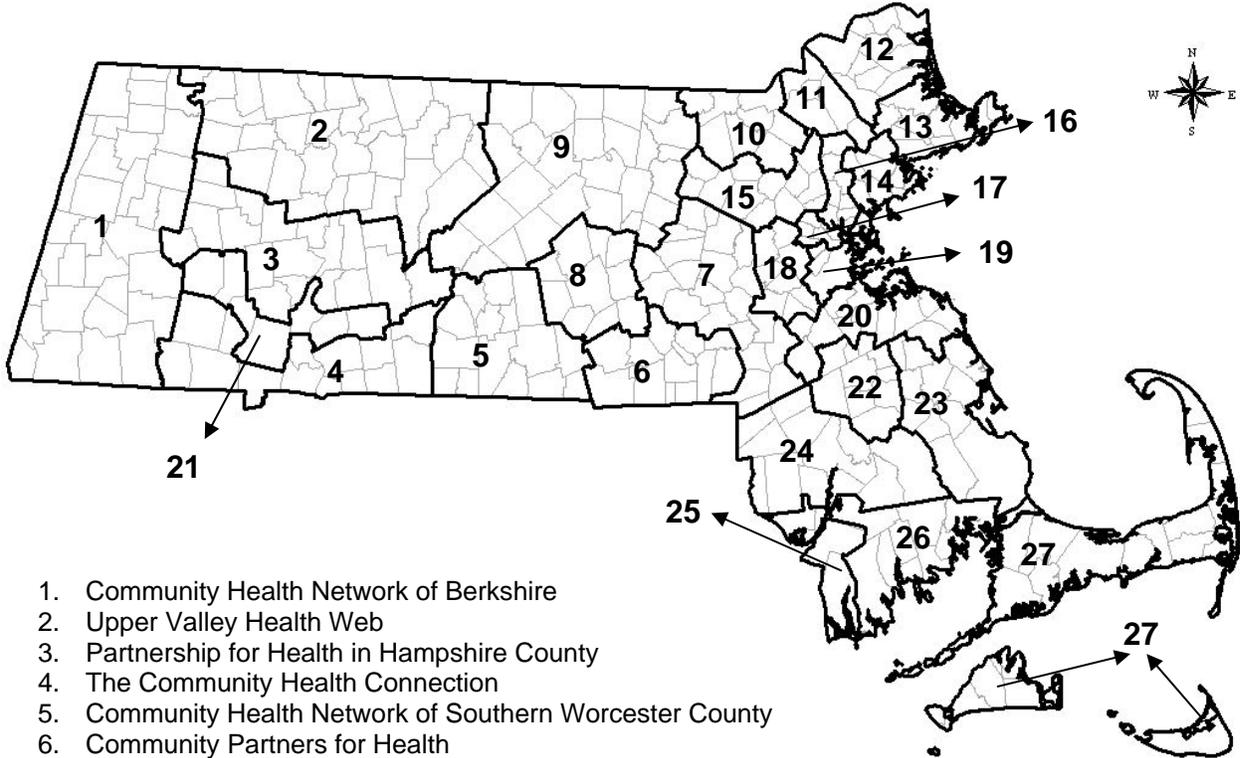
<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Map 2. Age-adjusted Rate for Injury-related Deaths and Hospital Cases by EOHHS Region of Residence, 2005**



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## Location of Community Health Network Areas (CHNAs) in Massachusetts



1. Community Health Network of Berkshire
2. Upper Valley Health Web
3. Partnership for Health in Hampshire County
4. The Community Health Connection
5. Community Health Network of Southern Worcester County
6. Community Partners for Health
7. Community Health Network of Greater Metro West
8. Common Pathways
9. Community Health Network of Central Massachusetts
10. Greater Lowell Community Health Network
11. Greater Lawrence Community Health Network
12. Greater Haverhill Community Health Network
13. Greater Beverly/Gloucester Community Health Network
14. North Shore Community Health Network
15. Northwest Suburban Health Alliance
16. North Suburban Health Alliance
17. Greater Cambridge/Somerville Community Health Network
18. West Suburban Health Network
19. Alliance for Community Health
20. Blue Hills Community Health Alliance
21. Community Health Network of Chicopee-Holyoke-Ludlow-Westfield
22. Greater Brockton Community Health Network
23. South Shore Community Health Network
24. Greater Attleboro-Taunton Health Education
25. Partners for Healthier Communities
26. Greater New Bedford Community Health Network
27. Cape Cod and Islands Community Health Network

City/town listings are provided by CHNA region on pages 82-84.

**Table 18. Injury-related Deaths and Nonfatal Hospital Cases by Selected Cause and Intent by Community Health Network Area, MA Residents, 2006**

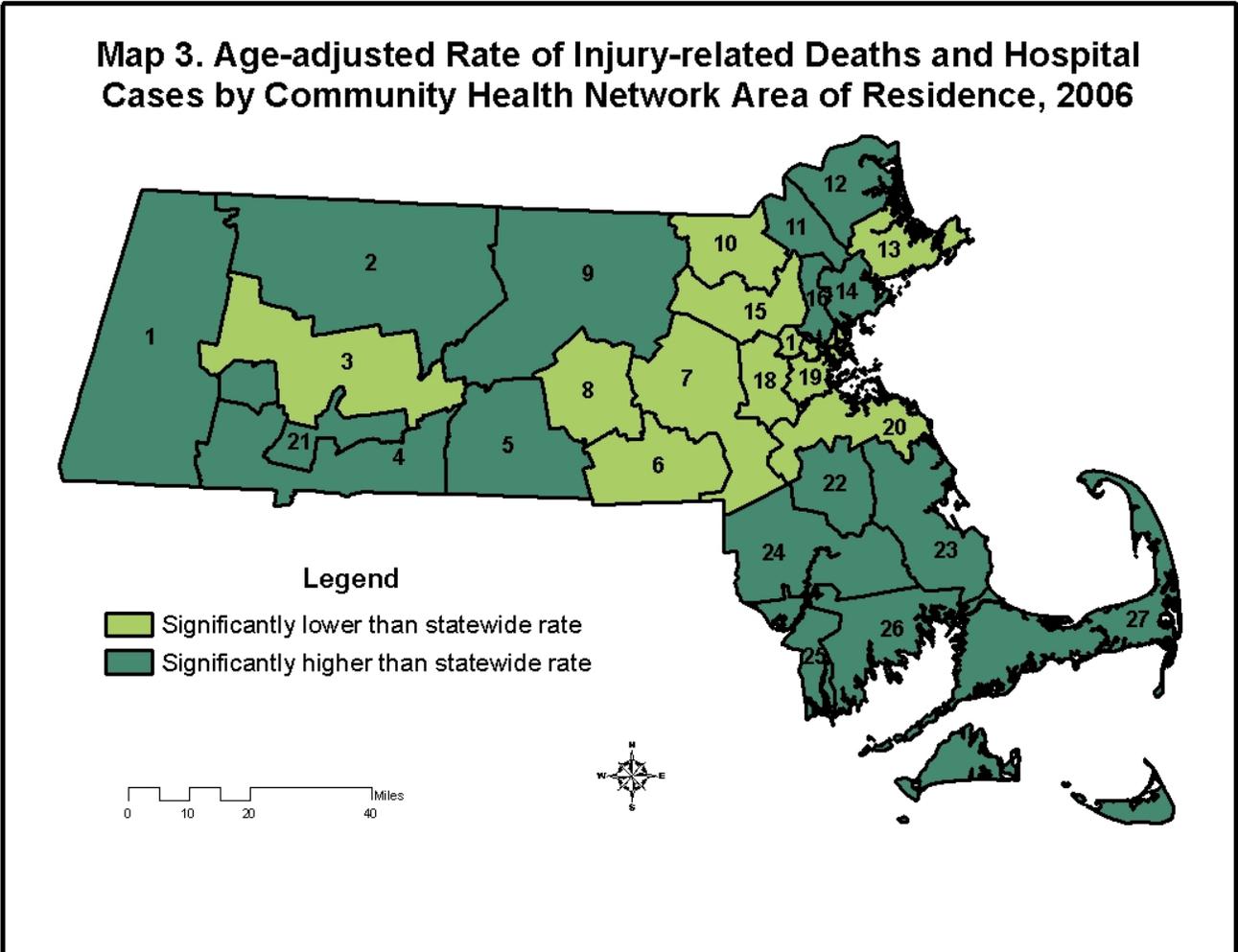
	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted		
	Deaths	Nonfatal	Total	Crude Rate <sup>1</sup>	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
	2,910	777,705	780,615	12,126.6	444	81,508	340	56,960	875	13,587	183	26,864	437	11,423
Massachusetts	68	23,286	23,354	17,697.1	19	1,634	9	1,858	5	313	1	607	12	429
Community Health Network of Berkshire (1)	40	11,783	11,823	13,358.4	8	732	7	619	9	148	1	217	6	130
Upper Valley Health Web (Franklin County) (2)	57	14,260	14,317	9,431.4	12	1,298	2	1,180	16	241	0	355	8	295
Partnership for Health in Hampshire County (Northampton) (3)	140	40,356	40,496	13,521.7	23	5,924	5	2,494	42	1,091	15	2,033	21	634
The Community Health Connection (Springfield) (4)	46	16,129	16,175	13,576.4	8	1,360	6	799	12	256	1	344	6	277
Community Health Network of Southern Worcester County (5)	59	16,843	16,902	10,529.5	15	1,336	5	962	12	223	2	317	12	292
Community Partners for Health (Milford) (6)	137	40,616	40,753	10,734.1	16	3,311	24	3,106	31	550	6	841	27	676
Community Health Network of Greater Metro West (Frammingham) (7)	140	33,370	33,510	11,035.0	21	3,617	15	2,333	41	918	7	1,470	18	704
Community Wellness Coalition (Worcester) (8)	135	32,580	32,715	12,516.8	26	2,881	10	2,390	44	544	3	868	22	704
Fitchburg/Gardner Community Health Network (9)	108	31,988	32,096	11,761.4	16	3,748	13	1,868	33	385	14	883	11	505
Greater Lowell Community Health Network (10)	76	24,433	24,509	12,557.4	13	2,650	12	1,372	22	285	6	930	11	300
Greater Lawrence Community Health Network (11)	58	18,655	18,713	12,596.5	9	1,495	6	1,288	18	259	3	482	9	324
Greater Haverhill Community Health Network (12)	42	13,819	13,861	11,611.0	2	808	5	1,295	13	214	0	286	5	151
Community Health Network North (Beverly/Gloucester) (13)	158	35,967	36,125	12,571.7	21	4,181	17	3,065	60	644	7	1,094	28	410
North Shore Community Health Network (14)	64	19,586	19,650	9,375.1	13	1,446	16	2,030	10	247	0	369	8	211
Greater Woburn/Concord/Littleton Community Health Network (15)	111	31,433	31,544	12,262.7	10	3,506	14	2,641	45	516	3	889	13	354
North Suburban Health Alliance (Medford/Malden/Metrose) (16)	107	23,431	23,538	8,594.2	10	2,214	24	2,028	27	420	4	760	25	273
Greater Cambridge/Somerville Community Health Network (17)	96	20,684	20,780	8,208.9	17	1,529	21	2,598	17	284	1	368	19	198
West Suburban Health Network (Newton/Waltham) (18)	388	81,066	81,454	11,446.6	35	10,792	33	4,911	157	2,173	63	5,788	38	1,125
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop) (19)	156	41,049	41,205	11,067.4	21	4,321	21	3,958	50	759	7	1,299	27	532
Blue Hills Community Health Alliance (Greater Quincy) (20)	65	22,089	22,154	13,721.5	10	2,780	2	1,545	15	465	6	843	12	398
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield) (21)	108	32,321	32,429	13,378.1	15	5,008	8	1,786	38	583	12	1,228	15	415
Greater Brockton Community Health Network (22)	80	23,906	23,986	12,705.3	18	2,373	6	1,611	16	352	0	578	15	238
South Shore Community Partners in Prevention (Plymouth) (23)	125	33,500	33,625	13,294.8	32	3,298	13	1,749	25	413	5	967	20	570
Greater Attleboro-Taunton Health & Education Response (24)	92	26,290	26,382	18,581.9	12	2,632	10	1,740	34	367	4	928	15	390
Partners for a Healthier Community (Fall River) (25)	110	29,490	29,600	14,803.3	23	3,447	5	1,806	51	466	9	1,124	10	440
Greater New Bedford Health & Human Services Coalition (26)	144	38,775	38,919	15,431.6	19	3,187	31	3,928	32	471	3	996	24	448
Cape Cod & Islands Community Health Network (27)														

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Map 3. Age-adjusted Rate of Injury-related Deaths and Hospital Cases by Community Health Network Area of Residence, 2006**



**Table 19. Motor Vehicle Traffic-related Deaths and Nonfatal Hospital Cases by Selected Causes and Intents by Regional Planning Agencies, MA**

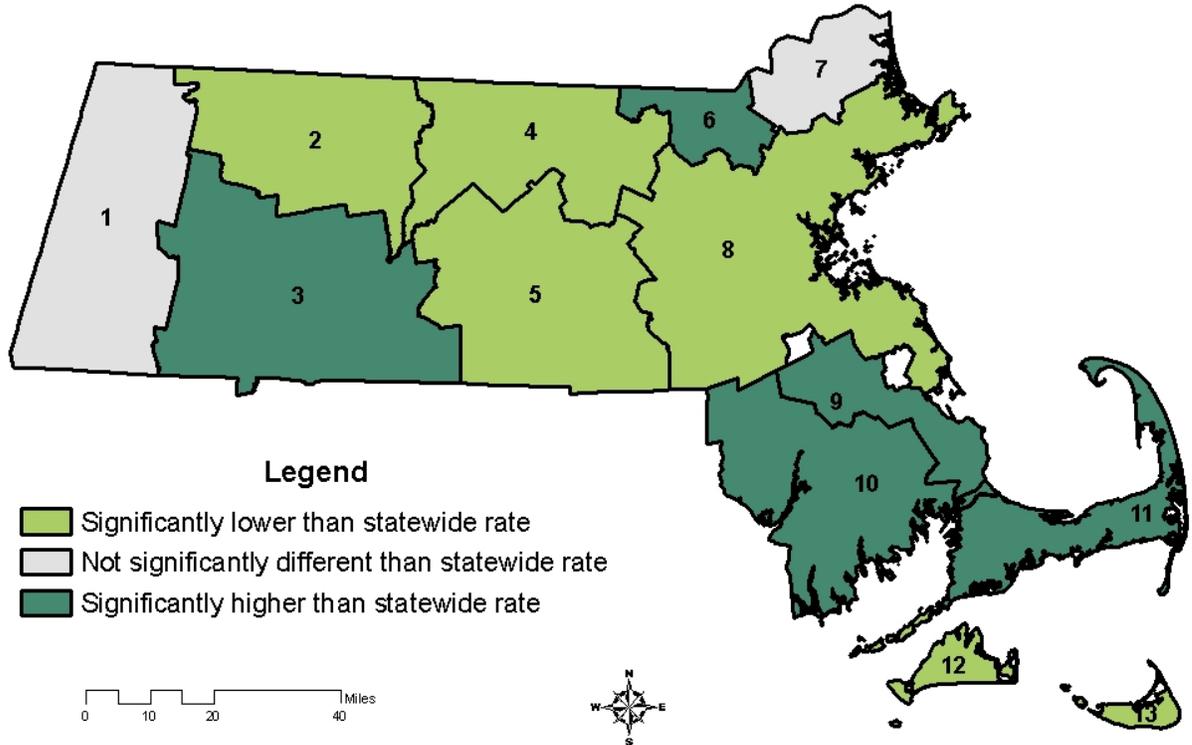
	Total Injuries			Unintentional Motor Vehicle Traffic (MVT)		Unintentional MVT Occupant		Unintentional MVT Motorcyclist		Pedestrian <sup>2</sup>		Pedal Cyclist <sup>3</sup>	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
	Crude Rate <sup>1</sup>												
<b>Massachusetts</b>	<b>2,910</b>	<b>777,705</b>	<b>780,615</b>	<b>444</b>	<b>81,508</b>	<b>312</b>	<b>73,176</b>	<b>54</b>	<b>2,826</b>	<b>80</b>	<b>4,551</b>	<b>7</b>	<b>8,675</b>
Berkshire (1)	68	23,286	23,354	19	1,634	13	1,452	3	98	3	79	0	310
Cape Cod (11)	132	33,116	33,248	19	2,961	15	2,693	4	119	0	107	0	457
Central MA (5)	230	61,443	61,673	38	5,859	30	5,273	3	238	5	301	0	621
Franklin (2)	37	9,120	9,157	7	633	6	541	1	57	0	29	0	111
Metro Area (8)	1,330	328,551	329,881	160	34,166	101	30,222	16	1,000	44	2,446	4	3,778
Martha's Vineyard (12)	8	3,178	3,186	0	150	0	131	0	8	0	16	0	38
Merrimack Valley (7)	128	42,314	42,442	20	4,100	15	3,726	2	117	3	206	0	432
Montachusett (4)	126	31,227	31,353	22	2,637	18	2,374	2	129	1	111	1	367
Nantucket (13)	4	2,481	2,485	0	76	0	55	0	7	0	8	0	44
Northern Middlesex (6)	112	33,140	33,252	17	3,870	11	3,472	4	154	3	214	0	348
Old Colony (10)	139	45,431	45,570	24	6,257	17	5,752	4	238	3	221	0	374
Pioneer Valley (3)	266	77,744	78,010	47	10,099	34	9,255	6	278	8	431	2	1,040
Southeast (9)	343	92,053	92,396	72	9,666	53	8,779	9	408	10	404	0	798

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Map 4. Age-adjusted Rates of Motor Vehicle Traffic-related Injury Deaths and Hospital Cases by Regional Planning Agency of Residence, 2006**



**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006**

COMMUNITY	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
			Crude Rate <sup>1</sup>										
Abington	7	1814	1821	0	193	1	110	3	33	0	43	0	28
Acton	4	1638	1642	0	92	1	138	0	13	0	27	1	21
Acushnet	5	1112	1117	3	127	1	63	0	20	1	38	0	18
Adams	4	1506	1510	1	121	0	105	0	18	0	42	0	38
Agawam	12	2958	2970	0	302	0	375	5	70	0	81	4	42
Alford	0	85	85	0	<7	0	8	0	<7	0	<7	0	<7
Amesbury	7	1991	1998	1	107	0	152	3	27	0	38	2	38
Amherst	4	1347	1351	2	168	0	128	0	29	0	39	1	40
Andover	10	2588	2598	1	168	2	273	1	26	0	35	4	29
Arlington	25	3347	3372	2	262	7	393	8	58	0	47	5	65
Ashburnham	3	709	712	0	69	0	34	2	11	0	15	1	11
Ashby	2	288	290	1	30	0	19	1	<7	0	8	0	12
Ashfield	0	140	140	0	<7	0	10	0	<7	0	0	0	0
Ashland	7	1564	1571	1	163	3	80	1	21	0	24	1	23
Athol	2	2063	2065	0	76	0	43	0	<7	0	17	1	14
Attleboro	21	5852	5873	6	500	1	387	2	68	1	169	3	112
Auburn	5	1576	1581	0	147	2	160	1	24	0	31	0	19
Avon	4	570	574	0	69	1	37	2	9	0	20	1	<7
Ayer	5	1115	1120	2	87	0	111	1	14	0	26	1	15
Barnstable	36	8356	8392	8	746	4	725	8	107	0	312	6	108
Barre	3	577	580	1	53	0	31	1	11	0	19	1	17
Becket	1	215	216	0	18	0	12	1	<7	0	<7	0	<7
Bedford	3	1369	1372	2	96	0	128	1	27	0	25	0	10
Belchertown	4	1390	1394	2	133	1	96	0	20	0	27	1	22
Bellingham	5	1684	1689	0	129	1	84	1	26	0	30	1	45
Belmont	5	1815	1820	1	123	3	246	0	22	0	32	1	16
Berkley	4	830	834	3	92	0	21	1	<7	0	15	0	13
Berlin	0	252	252	0	18	0	20	0	0	0	<7	0	0
Bernardston	1	253	254	0	17	1	12	0	<7	0	<7	0	<7
Beverly	14	4991	5005	1	319	2	461	4	71	0	134	5	52
Billerica	13	4293	4306	2	378	1	239	4	46	0	96	1	50
Blackstone	3	703	706	0	62	0	24	0	10	0	17	2	11
Blandford	0	163	163	0	16	0	11	0	<7	0	<7	0	<7
Bolton	0	405	405	0	28	0	13	0	<7	0	<7	0	<7
Boston	321	66312	66633	28	9225	27	3493	126	1841	59	5082	31	904
Bourne	14	3209	3223	0	296	6	255	3	39	1	80	0	51

<sup>1</sup>. Crude rates are per 100,000 residents.

<sup>3</sup>. Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006 (continued)**

COMMUNITY	Total Injuries			Crude Rate <sup>1</sup>	Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted			
	Deaths	Nonfatal	Total		Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
Boxborough	1	372	373	7412.6	1	28	0	10	0	<7	0	<7	0	<7		
Boxford	4	654	658	8061.7	1	34	1	57	0	<7	1	8	1	<7		
Boylston	0	364	364	8558.7	0	29	0	27	0	<7	0	<7	0	<7		
Braintree	17	3687	3704	11004.8	0	345	2	405	4	66	1	134	6	39		
Brewster	6	944	950	9275.5	2	67	1	141	2	11	0	13	0	19		
Bridgewater	6	2315	2321	9006.9	1	266	0	119	0	48	0	65	4	50		
Brimfield	3	483	486	13399.5	2	46	0	33	0	8	0	7	0	<7		
Brockton	54	16511	16565	16504.6	6	3202	4	727	19	304	11	843	5	189		
Brookfield	2	418	420	13565.9	0	40	0	28	0	9	0	<7	1	11		
Brookline	12	3856	3868	6855.0	1	245	0	499	5	45	1	89	3	61		
Buckland	0	28	28	1403.5	0	<7	0	<7	0	<7	0	0	0	<7		
Burlington	12	2114	2126	9138.2	1	175	4	210	1	34	0	44	3	33		
Cambridge	38	7350	7388	7276.7	3	712	5	580	10	138	3	277	9	97		
Canton	7	2335	2342	10902.7	1	235	1	242	3	31	0	72	1	37		
Carlisle	3	411	414	8583.9	1	34	1	23	0	<7	0	<7	0	<7		
Carver	11	1769	1780	15408.6	4	194	1	102	2	20	0	47	1	16		
Charlemont	1	130	131	9470.1	0	13	0	<7	0	<7	0	<7	1	0		
Charlton	4	1385	1389	11159.3	1	132	1	62	1	20	0	22	0	29		
Chatham	2	640	642	9395.6	0	57	1	129	0	13	0	13	0	<7		
Chelmsford	14	2907	2921	8660.5	2	237	4	316	1	23	1	31	3	35		
Chelsea	14	3420	3434	10062.1	1	427	0	302	5	72	3	273	1	42		
Cheshire	0	437	437	13021.5	0	36	0	27	0	<7	0	<7	0	8		
Chester	0	187	187	14166.7	0	26	0	7	0	<7	0	<7	0	<7		
Chesterfield	0	100	100	7867.8	0	7	0	<7	0	<7	0	0	0	0		
Chicopee	22	7001	7023	12862.9	2	928	1	530	6	163	1	240	7	164		
Chilmark	0	157	157	16631.4	0	<7	0	11	0	<7	0	<7	0	0		
Clarksburg	1	412	413	24839.4	0	26	0	26	0	<7	0	13	0	15		
Clinton	12	2274	2286	16332.1	4	191	1	158	6	32	0	55	1	47		
Cohasset	1	566	567	7854.3	0	33	0	77	0	<7	0	13	0	<7		
Colrain	0	237	237	12755.7	0	19	0	12	0	<7	0	<7	0	<7		
Concord	5	1663	1668	9894.4	1	65	1	255	2	22	0	25	0	29		
Conway	0	155	155	8149.3	0	10	0	10	0	<7	0	<7	0	0		
Cummington	0	107	107	10851.9	0	12	0	9	0	<7	0	0	0	<7		
Dalton	4	1015	1019	15215.8	1	76	0	83	1	21	0	16	1	7		
Danvers	11	3046	3057	11758.1	0	244	3	402	6	47	1	58	1	19		

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006 (continued)**

COMMUNITY	Total Injuries			Crude Rate <sup>1</sup>	Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total		Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
Dartmouth	11	3096	3107	9904.1	3	351	1	281	3	36	0	100	2	33
Dedham	7	2537	2544	10742.8	0	235	1	321	5	39	0	76	1	24
Deerfield	3	543	546	11408.3	1	59	0	52	1	10	0	14	0	<7
Dennis	5	2390	2395	15049.6	0	198	0	292	3	24	0	76	0	26
Dighton	4	909	913	13733.5	1	101	1	38	0	9	0	20	0	9
Douglas	3	856	859	10927.4	1	64	0	34	2	10	0	13	0	10
Dover	3	493	496	8803.7	1	26	0	45	0	<7	0	<7	1	<7
Dracut	11	3548	3559	12355.5	1	397	1	194	7	41	1	89	1	59
Dudley	2	1236	1238	11476.8	0	79	0	56	1	13	0	11	0	10
Dunstable	0	194	194	6174.4	0	9	0	11	0	<7	0	<7	0	<7
Duxbury	5	1469	1474	10058.0	1	93	1	196	1	21	0	29	1	16
East Bridgewater	2	1436	1438	10396.2	1	149	0	88	1	28	0	27	0	23
East Brookfield	3	238	241	11416.4	1	21	0	10	1	10	0	<7	1	<7
East Longmeadow	5	1056	1061	7147.2	3	120	0	160	1	25	0	24	0	14
Eastham	2	449	451	8126.1	0	43	0	62	2	<7	0	11	0	<7
Easthampton	8	1814	1822	11389.5	1	178	0	133	3	25	0	58	0	21
Easton	5	2212	2217	9641.2	1	244	0	148	4	27	0	37	0	27
Edgartown	3	889	892	22674.1	0	46	1	73	1	11	0	11	1	<7
Egremont	0	108	108	7996.3	0	<7	0	8	0	<7	0	<7	0	<7
Erving	1	233	234	15175.1	0	11	0	16	0	<7	0	<7	0	<7
Essex	0	333	333	9964.1	0	22	0	24	0	<7	0	<7	0	<7
Everett	16	5998	6014	16210.2	1	834	1	316	7	121	0	217	3	50
Fairhaven	8	1892	1900	11711.8	2	221	0	207	4	28	1	46	0	24
Fall River	61	20081	20142	21865.7	10	1986	6	1193	25	298	1	787	9	335
Falmouth	14	5944	5958	17721.6	2	484	2	631	5	65	1	125	2	65
Fitchburg	20	5268	5288	13052.3	1	503	0	449	9	108	1	224	2	185
Florida	0	186	186	27882.9	0	11	0	11	0	<7	0	<7	0	<7
Foxborough	8	1711	1719	10553.8	2	145	0	117	3	26	0	22	1	19
Framingham	33	8201	8234	12542.1	5	838	6	657	6	122	3	261	4	172
Franklin	9	2754	2763	8986.0	4	194	0	158	2	26	0	56	0	48
Freetown	4	1224	1228	13700.8	2	142	0	31	1	10	0	27	1	12
Gardner	18	3290	3308	15786.2	3	268	2	246	4	48	1	122	4	63
Gay Head/Aquinnah	0	49	49	13535.9	0	<7	0	<7	0	0	0	<7	0	0
Georgetown	2	772	774	9647.3	0	52	0	46	0	9	0	15	0	8
Gill	0	242	242	17367.1	0	14	0	17	0	<7	0	7	0	<7
Gloucester	15	4203	4218	13752.4	1	232	1	354	6	87	0	110	0	66

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)**

COMMUNITY	Total Injuries			Crude Rate <sup>1</sup>	Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted			
	Deaths	Nonfatal	Total		Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
Goshen	0	65	65	6799.2	0	<7	0	<7	0	0	0	0	0	0		
Gosnold	0	5	5	5814.0	0	0	0	0	0	0	0	0	0	0		
Grafton	5	1557	1562	9307.0	0	134	1	69	1	39	0	2	30	30		
Granby	0	557	557	8796.6	0	70	0	35	0	8	0	0	<7	<7		
Granville	0	162	162	9851.0	0	17	0	11	0	0	0	0	<7	<7		
Great Barrington	7	1303	1310	17610.5	3	87	1	124	1	15	0	1	16	16		
Greenfield	12	2842	2854	15954.8	1	206	3	203	3	59	0	2	49	49		
Groton	2	1126	1128	10850.3	1	62	0	74	0	11	0	1	18	18		
Groveland	2	709	711	10787.4	1	57	1	48	0	10	0	0	10	10		
Hadley	3	458	461	9564.3	1	35	0	92	0	8	0	1	7	7		
Halifax	1	966	967	12389.5	0	103	0	53	0	17	0	0	12	12		
Hamilton	1	685	686	8231.3	0	45	0	45	0	<7	0	0	<7	<7		
Hampden	3	353	356	6701.8	0	41	0	36	1	7	0	0	<7	<7		
Hancock	0	83	83	8151.3	0	<7	0	<7	0	<7	0	0	<7	<7		
Hanover	7	1181	1188	8439.3	0	94	1	78	2	15	0	1	<7	<7		
Hanson	4	1109	1113	11225.4	1	123	0	35	1	23	0	1	19	19		
Hardwick	1	359	360	13559.3	1	29	0	19	0	9	0	0	7	7		
Harvard	5	527	532	8698.5	1	33	2	42	0	<7	0	1	<7	<7		
Harwich	11	1543	1554	12262.3	1	159	3	222	0	21	0	3	24	24		
Hatfield	0	341	341	10396.3	0	26	0	36	0	<7	0	0	<7	<7		
Haverhill	30	8923	8953	14913.7	4	905	3	564	10	125	0	5	180	180		
Hawley	0	35	35	10043.5	0	<7	0	<7	0	0	0	0	0	0		
Heath	0	36	36	4472.0	0	<7	0	<7	0	0	0	0	0	0		
Hingham	4	1783	1787	8323.2	1	114	0	235	2	22	0	0	18	18		
Hinsdale	1	277	278	15345.1	0	22	0	18	0	<7	0	0	8	8		
Holbrook	5	1494	1499	13924.8	1	198	0	93	1	28	0	0	22	22		
Holden	2	1360	1362	8219.2	1	134	0	107	0	18	0	0	15	15		
Holland	0	361	361	14274.4	0	39	0	<7	0	<7	0	0	12	12		
Holliston	2	1291	1293	9349.2	0	88	0	77	0	13	0	1	20	20		
Holyoke	17	6575	6592	16043.2	3	1011	1	429	2	133	4	1	135	135		
Hopedale	1	723	724	11613.7	0	43	1	87	0	<7	0	0	15	15		
Hopkinton	6	1276	1282	9125.9	3	64	0	101	0	9	2	1	15	15		
Hubbardston	2	486	488	11244.2	0	43	0	18	1	<7	0	0	<7	<7		
Hudson	1	2214	2215	11752.5	0	191	0	132	1	37	0	0	22	22		
Hull	7	1216	1223	10843.2	0	129	0	72	5	22	1	0	25	25		
Huntington	0	336	336	15412.8	0	30	0	12	0	<7	0	0	<7	<7		

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)

COMMUNITY	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
			Crude Rate <sup>1</sup>										
Ipswich	3	1322	1325	0	77	0	127	0	18	0	15	0	13
Kingston	3	1596	1599	1	150	0	136	0	15	0	37	0	7
Lakeville	5	1017	1022	3	111	0	53	1	<7	0	18	0	8
Lancaster	1	928	929	0	69	0	61	0	18	0	9	0	<7
Lanesborough	1	369	370	0	22	0	23	0	<7	0	<7	0	8
Lawrence	38	12482	12520	5	1572	7	443	12	168	5	694	3	158
Lee	3	827	830	1	53	1	88	0	9	0	13	1	7
Leicester	5	1125	1130	0	116	1	65	2	20	0	34	1	15
Lenox	3	766	769	0	39	2	153	0	12	0	<7	0	13
Leominster	25	5582	5607	6	574	1	595	7	105	0	166	2	137
Leverett	0	125	125	0	<7	0	<7	0	<7	0	<7	0	<7
Lexington	9	1994	2003	1	122	4	318	0	23	0	23	1	23
Leyden	0	116	116	0	8	0	8	0	<7	0	<7	0	<7
Lincoln	1	488	489	0	26	1	49	0	<7	0	<7	0	<7
Littleton	2	858	860	2	68	0	84	0	9	0	13	0	11
Longmeadow	6	1065	1071	1	65	0	200	0	16	0	23	3	17
Lowell	59	15066	15125	11	2229	4	734	20	211	12	571	3	275
Ludlow	8	2030	2038	2	222	0	141	0	38	0	92	2	32
Lunenburg	5	1128	1133	0	107	0	98	2	23	0	18	1	15
Lynn	60	13383	13443	9	2013	6	730	28	253	2	596	7	182
Lynnfield	2	1126	1128	0	88	1	124	0	15	0	19	1	<7
Malden	18	6986	7004	1	990	0	452	11	123	0	260	3	114
Manchester	2	458	460	0	27	0	63	2	9	0	<7	0	<7
Mansfield	4	2246	2250	0	171	1	96	2	44	0	52	1	46
Marblehead	1	1635	1636	0	134	0	180	0	28	0	22	0	13
Marion	2	661	663	2	56	0	67	0	<7	0	<7	0	7
Marlborough	8	4898	4906	0	459	1	385	2	74	1	128	1	89
Marshfield	10	2547	2557	2	259	0	155	2	48	0	65	3	33
Mashpee	8	2031	2039	2	210	0	172	1	36	0	48	3	16
Mattapoisett	0	646	646	0	58	0	40	0	7	0	19	0	<7
Maynard	5	1203	1208	0	92	2	98	1	14	0	23	1	10
Medfield	3	1027	1030	0	81	1	65	0	12	0	9	1	8
Medford	24	6929	6953	1	773	5	727	8	106	1	194	2	63
Medway	4	1269	1273	1	87	1	61	0	20	0	13	0	18
Melrose	13	2853	2866	1	222	1	322	6	52	0	68	2	33
Mendon	5	602	607	0	61	0	23	1	<7	1	13	2	7

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)**

COMMUNITY	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
			Crude Rate <sup>1</sup>										
Merrimac	0	737	737	0	51	42	0	0	10	0	22	0	20
Methuen	16	6015	6031	2	664	378	3	5	60	1	127	3	75
Middleborough	13	3309	3322	2	368	168	1	4	34	1	101	3	45
Middlefield	0	33	33	0	<7	0	0	0	<7	0	0	0	0
Middleton	6	774	780	2	45	37	0	2	8	0	23	0	10
Milford	12	3497	3509	4	316	248	1	2	56	1	77	2	61
Millbury	8	1288	1296	2	100	119	2	0	37	0	40	0	35
Millis	1	782	783	0	87	59	0	0	11	0	13	1	15
Millville	1	305	306	0	26	11	0	0	<7	0	<7	1	<7
Milton	8	2794	2802	3	288	316	0	0	31	1	76	2	21
Monroe	1	16	17	1	<7	<7	0	0	0	0	<7	0	0
Monson	3	1014	1017	1	79	48	0	1	12	0	21	0	12
Montague	5	1139	1144	0	81	70	1	2	17	1	29	0	11
Monterey	0	96	96	0	11	13	0	0	0	0	<7	0	<7
Montgomery	0	118	118	0	11	9	0	0	<7	0	<7	0	<7
Mount Washington	0	11	11	0	<7	<7	0	0	0	0	0	0	0
Nahant	5	310	315	0	21	44	1	2	9	0	<7	1	<7
Nantucket	4	2481	2485	0	76	130	0	1	25	0	44	2	7
Natick	12	3306	3318	1	249	303	4	3	40	0	53	2	32
Needham	15	2637	2652	5	116	401	4	0	36	0	19	2	26
New Ashford	0	32	32	0	<7	<7	0	0	0	0	0	0	<7
New Bedford	66	15838	15904	9	2008	866	2	37	302	5	781	6	288
New Braintree	0	115	115	0	<7	<7	0	0	<7	0	<7	0	7
New Marlborough	2	214	216	2	9	26	0	0	<7	0	<7	0	<7
New Salem	1	93	94	0	0	<7	1	0	0	0	0	0	<7
Newbury	2	721	723	0	31	52	0	1	11	0	12	0	<7
Newburyport	3	1870	1873	0	90	<7	0	0	29	1	27	1	33
Newton	26	6682	6708	4	454	952	8	6	81	0	108	3	58
Norfolk	2	948	950	1	57	34	0	1	16	0	18	0	24
North Adams	9	2850	2859	2	183	177	2	1	42	0	90	2	104
North Andover	6	2574	2580	3	201	241	0	2	23	0	51	1	28
North Attleboro	8	3172	3180	2	238	164	1	4	51	1	73	0	62
North Brookfield	2	530	532	0	55	32	0	0	7	1	14	1	<7
North Reading	3	1449	1452	1	119	102	0	1	10	0	15	0	11
Northampton	13	3058	3071	0	221	311	1	6	61	0	82	0	106
Northborough	8	1186	1194	0	88	80	1	5	18	0	16	2	18

<sup>1</sup>. Crude rates are per 100,000 residents.

<sup>3</sup>. Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)**

COMMUNITY	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
			Crude Rate <sup>1</sup>										
Northbridge	5	1715	1720	1	146	1	109	2	27	0	31	1	34
Northfield	2	406	408	1	26	0	23	0	9	0	<7	1	9
Norton	5	2167	2172	0	190	0	110	3	25	0	45	2	38
Norwell	3	880	883	0	77	1	86	2	14	0	12	0	7
Norwood	7	4011	4018	1	406	1	390	4	68	0	89	1	43
Oak Bluffs	2	578	580	0	24	1	51	1	12	0	11	0	<7
Oakham	1	179	180	0	21	0	<7	1	<7	0	<7	0	<7
Orange	6	1219	1225	0	44	1	22	3	8	0	13	1	<7
Orleans	6	619	625	0	52	2	125	2	8	0	11	1	10
Otis	0	217	217	0	18	0	13	0	<7	0	<7	0	<7
Oxford	2	1542	1544	0	118	1	65	1	15	0	31	0	24
Palmer	4	2456	2460	0	196	0	143	3	48	0	67	0	38
Paxton	0	372	372	0	25	0	37	0	<7	0	10	0	<7
Peabody	32	6422	6454	4	646	2	768	5	114	2	119	13	72
Pelham	0	97	97	0	12	0	9	0	<7	0	<7	0	<7
Pembroke	3	1910	1913	1	165	0	72	1	29	0	40	0	19
Pepperell	4	1152	1156	1	122	1	43	1	19	0	12	1	14
Peru	0	113	113	0	9	0	8	0	<7	0	<7	0	<7
Petersham	0	135	135	0	7	0	<7	0	0	0	<7	0	<7
Phillipston	1	316	317	1	12	0	7	0	<7	0	<7	0	<7
Pittsfield	23	10064	10087	6	742	3	710	1	138	1	348	6	160
Plainfield	2	58	60	2	<7	0	7	0	<7	0	0	0	0
Plainville	5	1004	1009	1	95	1	50	1	12	0	32	0	12
Plymouth	22	8694	8716	6	868	1	606	2	113	0	207	6	83
Plympton	3	329	332	1	38	0	12	0	<7	0	12	1	<7
Princeton	1	300	301	1	16	0	15	0	<7	0	<7	0	<7
Provincetown	2	265	267	0	33	0	39	0	<7	0	8	1	<7
Quincy	51	10432	10483	8	1011	9	1114	15	250	2	448	8	132
Randolph	18	3531	3549	3	683	1	200	5	48	2	122	2	39
Raynham	9	1597	1606	3	165	0	105	1	15	1	34	1	22
Reading	9	2110	2119	3	150	2	212	1	22	0	32	2	17
Rehoboth	10	773	783	2	66	2	45	0	<7	0	16	2	10
Revere	28	5885	5913	5	733	3	479	14	150	0	274	3	88
Richmond	1	145	146	0	12	0	<7	0	0	0	<7	0	<7
Rochester	0	585	585	0	64	0	26	0	<7	0	11	0	<7
Rockland	11	2336	2347	1	286	2	166	5	47	0	70	1	27

<sup>1</sup>. Crude rates are per 100,000 residents.

<sup>3</sup>. Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)**

COMMUNITY	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
		Crude Rate <sup>1</sup>											
Rockport	4	888	892	0	50	1	130	0	10	0	9	0	<7
Rowe	0	58	58	0	<7	0	<7	0	<7	0	<7	0	0
Rowley	2	623	625	0	48	1	34	0	8	1	11	0	7
Royalston	0	150	150	0	<7	0	7	0	0	0	<7	0	0
Russell	1	232	233	1	13	0	11	0	<7	0	<7	0	0
Rutland	2	677	679	1	54	0	27	0	20	0	18	0	21
Salem	24	5371	5395	6	577	0	380	12	90	0	164	2	75
Salisbury	6	1272	1278	2	102	0	60	4	21	0	29	0	15
Sandisfield	0	66	66	0	<7	0	<7	0	<7	0	0	0	0
Sandwich	7	2237	2244	1	226	2	156	2	19	0	42	0	26
Saugus	13	3401	3414	2	343	1	286	6	62	1	87	1	32
Savoy	0	77	77	0	<7	0	7	0	0	0	0	0	<7
Scituate	3	1473	1476	0	136	0	164	1	32	0	35	1	23
Seekonk	10	566	576	3	41	4	39	0	<7	0	16	1	<7
Sharon	6	1595	1601	0	133	2	114	0	23	0	30	3	13
Sheffield	3	512	515	0	27	0	22	0	<7	0	8	1	<7
Shelburne	1	409	410	1	35	0	46	0	<7	0	<7	0	<7
Sherborn	1	410	411	0	21	0	27	0	<7	0	<7	0	<7
Shirley	3	731	734	1	52	0	24	0	<7	0	24	2	15
Shrewsbury	12	2783	2795	4	237	2	244	2	44	1	37	2	28
Shutesbury	1	113	114	1	10	0	<7	0	<7	0	<7	0	<7
Somerset	6	2428	2434	0	245	3	272	1	31	1	53	0	21
Somerville	23	8265	8288	1	855	5	524	7	162	1	337	5	78
South Hadley	11	1452	1463	0	154	0	158	5	30	0	41	3	26
Southampton	0	537	537	0	47	0	34	0	9	0	8	0	<7
Southborough	3	711	714	0	41	0	52	2	<7	0	7	0	10
Southbridge	7	3266	3273	1	349	1	152	2	65	0	93	2	72
Southwick	4	1197	1201	0	124	1	99	1	15	0	23	1	<7
Spencer	6	1379	1385	2	124	0	61	2	29	0	41	0	30
Springfield	79	24983	25062	13	4390	3	955	24	796	14	1607	6	434
Sterling	3	855	858	1	58	1	82	1	9	0	16	0	8
Stockbridge	2	196	198	1	13	0	17	0	<7	0	<7	0	10
Stoneham	10	2525	2535	0	222	3	280	4	37	0	58	1	29
Stoughton	10	3469	3479	0	435	1	263	4	50	1	99	2	42
Stow	4	549	553	0	34	0	50	0	<7	0	<7	2	14
Sturbridge	2	1015	1017	0	108	0	68	1	16	0	21	0	24

<sup>1</sup>. Crude rates are per 100,000 residents.

<sup>3</sup>. Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

**Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)**

COMMUNITY	Total Injuries			Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
			Crude Rate <sup>1</sup>										
Sudbury	3	1634	9609.6	0	83	1	140	0	10	0	22	1	12
Sunderland	1	255	6644.2	0	24	0	18	0	<7	0	<7	0	<7
Sutton	1	638	7120.6	0	50	0	21	0	11	0	11	1	<7
Swampscott	10	1273	8982.7	0	115	3	151	1	26	1	23	2	11
Swansea	15	1878	11654.3	1	208	1	157	5	21	2	52	4	18
Taunton	32	11062	19688.4	7	1255	2	523	7	150	1	408	7	200
Templeton	5	1014	13633.9	0	74	0	66	0	16	1	19	1	16
Tewksbury	4	3302	11403.9	0	288	0	250	1	35	0	60	0	59
Tisbury	2	1231	32285.9	0	60	1	106	0	17	0	18	1	22
Tolland	0	43	9652.5	0	<7	0	<7	0	0	0	0	0	0
Topsfield	1	545	8837.8	0	20	0	45	0	<7	0	<7	0	8
Townsend	5	1023	11085.9	0	103	0	35	3	18	0	12	2	22
Truro	2	153	7169.3	0	13	1	11	0	<7	0	<7	1	<7
Tyngsborough	3	981	8710.3	0	91	1	34	0	12	0	20	2	9
Tyringham	1	23	6818.2	0	<7	0	<7	0	0	0	0	0	0
Upton	3	651	10260.4	1	33	0	29	0	<7	0	13	1	9
Uxbridge	7	1447	11743.6	3	126	0	74	2	17	0	33	1	27
Wakefield	18	2583	10593.4	2	196	2	230	7	45	2	45	0	37
Wales	1	195	10781.1	0	12	0	8	1	<7	0	7	0	<7
Walpole	15	2671	11644.3	1	194	2	198	3	32	0	55	5	80
Waltham	29	4130	6982.4	6	503	4	410	5	87	1	124	7	59
Ware	6	2219	22276.7	1	163	0	88	1	35	0	62	2	45
Wareham	14	4436	20917.6	2	420	1	225	6	53	2	99	1	50
Warren	2	838	16666.7	0	79	0	36	1	23	0	27	1	7
Warwick	0	88	11574.0	0	7	0	<7	0	<7	0	<7	0	<7
Washington	1	68	12622.7	1	<7	0	<7	0	<7	0	<7	0	0
Watertown	16	2654	8277.8	3	262	4	285	2	40	0	67	5	17
Wayland	3	1175	9051.1	0	72	2	140	0	13	0	11	1	9
Webster	8	2688	15997.2	1	122	2	111	0	29	0	33	0	31
Wellesley	6	1958	7280.8	1	79	1	206	0	15	0	15	2	16
Wellfleet	0	243	8614.0	0	23	0	33	0	<7	0	7	0	0
Wendell	0	107	10338.2	0	11	0	<7	0	0	0	<7	0	0
Wenham	2	394	8529.0	0	16	1	46	1	7	0	<7	0	<7
West Boylston	3	707	9211.2	1	60	0	48	0	15	0	35	0	15
West Bridgewater	6	775	11453.3	2	66	0	112	2	10	0	13	1	7
West Brookfield	2	555	14296.7	0	36	1	71	1	7	0	12	0	9

<sup>1</sup>. Crude rates are per 100,000 residents.

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<sup>4</sup>. Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

Table 20. Injury-related Deaths and Nonfatal Hospital Cases by Selected Injury Cause and Intent by City/Town, MA Residents, 2006, (continued)

COMMUNITY	Total Injuries			Crude Rate <sup>1</sup>	Unintentional Motor Vehicle Traffic <sup>3</sup>		Unintentional Falls Among Elders (Ages 65+)		Unintentional and Undetermined Poisonings <sup>4</sup>		Homicide/Assault		Suicide/Self-Inflicted	
	Deaths	Nonfatal	Total		Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal	Deaths	Nonfatal
West Newbury	0	383	383	8904.9	0	18	0	22	0	<7	0	<7	0	<7
West Springfield	16	3373	3389	12130.4	3	443	0	249	5	76	0	142	5	40
West Stockbridge	1	142	143	9859.3	1	12	0	11	0	<7	0	<7	0	<7
West Tisbury	1	269	270	10127.5	0	12	0	17	0	<7	0	<7	0	<7
Westborough	3	1699	1702	9062.4	1	88	0	171	0	39	0	59	0	60
Westfield	18	5960	5978	14784.9	3	563	0	426	7	124	1	167	2	60
Westford	4	1697	1701	7960.1	0	119	2	90	0	13	0	15	1	16
Westhampton	2	179	181	11581.7	1	18	0	13	0	<7	0	<7	0	<7
Westminster	3	792	795	10804.6	0	95	0	47	2	15	0	11	1	15
Weston	5	873	878	7574.8	0	35	3	106	0	<7	0	8	1	0
Westport	10	1903	1913	12708.4	1	193	0	118	3	17	0	36	2	16
Westwood	5	1374	1379	9919.4	0	81	0	157	1	18	0	15	2	12
Weymouth	24	6746	6770	12605.2	4	731	4	543	9	150	0	198	3	129
Whately	1	102	103	6502.5	1	12	0	7	0	0	0	<7	0	<7
Whitman	9	1725	1734	12021.6	3	186	1	89	2	46	0	40	2	21
Wilbraham	7	1183	1190	8524.4	1	102	1	184	1	20	1	17	2	20
Williamsburg	3	329	332	13645.7	1	27	0	20	1	<7	0	<7	0	8
Williamstown	0	782	782	9449.0	0	43	0	141	0	11	0	7	0	<7
Wilmington	7	2339	2346	10946.8	0	205	1	161	2	24	0	52	0	21
Winchendon	4	1428	1432	14199.3	0	120	2	53	2	25	0	47	0	25
Winchester	9	1972	1981	9371.3	3	128	1	252	1	20	0	28	3	10
Windsor	0	89	89	10373.0	0	9	0	<7	0	<7	0	0	0	0
Winthrop	13	1593	1606	9410.0	0	162	3	138	7	65	0	70	0	31
Woburn	8	4368	4376	11803.4	1	407	2	402	3	63	0	120	0	42
Worcester	100	22238	22338	12421.1	13	2635	7	1457	35	711	6	1206	13	543
Worthington	1	119	120	9295.1	1	13	0	<7	0	<7	0	<7	0	0
Wrentham	4	1156	1160	10482.6	0	81	0	90	2	19	0	13	2	11
Yarmouth	17	4093	4110	16664.6	3	354	6	543	1	39	1	112	3	50

<sup>1</sup> Crude rates are per 100,000 residents.

<sup>3</sup> Motor vehicle traffic-related injuries include: motor vehicle occupants (i.e., drivers and passengers of cars and light trucks), pedestrians and pedal cyclists injured by a motor vehicle, and motorcyclists.

<sup>4</sup> Poisonings can include prescription medicines, household cleaners, carbon monoxide poisoning, toxic effects of legal or illegal drugs, etc.

## Executive Office of Health and Human Services Regions

### Western Region

ADAMS  
AGAWAM  
ALFORD  
AMHERST  
ASHFIELD  
ATHOL  
BECKET  
BELCHERTOWN  
BERNARDSTON  
BLANDFORD  
BUCKLAND  
CHARLEMONT  
CHESHIRE  
CHESTER  
CHESTERFIELD  
CHICOPEE  
CLARKSBURG  
COLRAIN  
CONWAY  
CUMMINGTON  
DALTON  
DEERFIELD  
EAST LONGMEADOW  
EASTHAMPTON  
EGREMONT  
ERVING  
FLORIDA  
GILL  
GOSHEN  
GRANBY  
GRANVILLE  
GREAT BARRINGTON  
GREENFIELD  
HADLEY  
HAMPDEN  
HANCOCK  
HATFIELD  
HAWLEY  
HEATH  
HINSDALE  
HOLYOKE  
HUNTINGTON  
LANESBOROUGH  
LEE  
LENOX  
LEVERETT  
LEYDEN  
LONGMEADOW  
LUDLOW  
MIDDLEFIELD  
MONROE  
MONSON  
MONTAGUE  
MONTEREY  
MONTGOMERY  
MOUNT WASHINGTON  
NEW ASHFORD  
NEW MARLBOROUGH  
NEW SALEM  
NORTH ADAMS

### Western Region (CONT)

NORTHAMPTON  
NORTHFIELD  
ORANGE  
OTIS  
PALMER  
PELHAM  
PERU  
PETERSHAM  
PHILLIPSTON  
PITTSFIELD  
PLAINFIELD  
RICHMOND  
ROWE  
ROYALSTON  
RUSSELL  
SANDISFIELD  
SAVOY  
SHEFFIELD  
SHELBURNE  
SHUTESBURY  
SOUTH HADLEY  
SOUTHAMPTON  
SOUTHWICK  
SPRINGFIELD  
STOCKBRIDGE  
SUNDERLAND  
TOLLAND  
TYRINGHAM  
WARE  
WARWICK  
WASHINGTON  
WENDELL  
WEST SPRINGFIELD  
WEST STOCKBRIDGE  
WESTFIELD  
WESTHAMPTON  
WHATELY  
WILBRAHAM  
WILLIAMSBURG  
WILLIAMSTOWN  
WINDSOR  
WORTHINGTON

### Central Region

ASHBURNHAM  
ASHBY  
AUBURN  
AYER  
BARRE  
BELLINGHAM  
BERLIN  
BLACKSTONE  
BOLTON  
BOYLESTON  
BRIMFIELD  
BROOKFIELD  
CHARLTON  
CLINTON  
DOUGLAS

### Central Region (CONT)

DUDLEY  
EAST BROOKFIELD  
FITCHBURG  
FRANKLIN  
GARDNER  
GRAFTON  
GROTON  
HARDWICK  
HARVARD  
HOLDEN  
HOLLAND  
HOPEDALE  
HUBBARDSTON  
LANCASTER  
LEICESTER  
LEOMINSTER  
LUNENBURG  
MEDWAY  
MENDON  
MILFORD  
MILLBURY  
MILLVILLE  
NEW BRAINTREE  
NORTH BROOKFIELD  
NORTHBRIDGE  
OAKHAM  
OXFORD  
PAXTON  
PEPPERELL  
PRINCETON  
RUTLAND  
SHIRLEY  
SHREWSBURY  
SOUTHBRIDGE  
SPENCER  
STERLING  
STURBRIDGE  
SUTTON  
TEMPLETON  
TOWNSEND  
UPTON  
UXBRIDGE  
WALES  
WARREN  
WEBSTER  
WEST BOYLSTON  
WEST BROOKFIELD  
WESTMINSTER  
WINCHENDON  
WORCESTER

### Northeast Region

AMESBURY  
ANDOVER  
BEVERLY  
BILLERICA  
BOXFORD  
CHELMSFORD  
DANVER  
DRACUT  
DUNSTABLE  
ESSEX  
EVERETT  
GEORGETOWN  
GLOUCESTER  
GROVELAND  
HAMILTON  
HAVERHILL  
IPSWICH  
LAWRENCE  
LOWELL  
LYNN  
LYNNFIELD  
MALDEN  
MANCHESTER  
MARBLEHEAD  
MEDFORD  
MELROSE  
MERRIMAC  
METHUEN  
MIDDLETON  
NAHANT  
NEWBURY  
NEWBURYPORT  
NORTH ANDOVER  
NORTH READING  
PEABODY  
READING  
ROCKPORT  
ROWLEY  
SALEM  
SALISBURY  
SAUGUS  
STONEHAM  
SWAMPSCOTT  
TEWKSBURY  
TOPSFIELD  
TYNGSBOROUGH  
WAKEFIELD  
WENHAM  
WEST NEWBURY  
WESTFORD

## Executive Office of Health and Human Services Regions (cont.)

### Metro West Region

ACTON  
ARLINGTON  
ASHLAND  
BEDFORD  
BELMONT  
BOXBOROUGH  
BRAINTREE  
BURLINGTON  
CAMBRIDGE  
CANTON  
CARLISLE  
COHASSET  
CONCORD  
DEDHAM  
DOVER  
FOXBOROUGH  
FRAMINGHAM  
HINGHAM  
HOLLISTON  
HOPKINTON  
HUDSON  
HULL  
LEXINGTON  
LINCOLN  
LITTLETON  
MARLBOROUGH  
MAYNARD  
MEDFIELD  
MILLIS  
MILTON  
NATICK  
NEEDHAM  
NEWTON  
NORFOLK  
NORTHBOROUGH  
NORWELL  
NORWOOD  
PLAINVILLE  
QUINCY  
RANDOLPH  
SCITUATE  
SHARON  
SHERBORN  
SOMERVILLE  
SOUTHBOROUGH  
STOW  
SUDBURY  
WALPOLE  
WALTHAM  
WATERTOWN  
WAYLAND  
WELLESLEY  
WESTBOROUGH

### Metro West Region (CONT)

WESTON  
WESTWOOD  
WEYMOUTH  
WILMINGTON  
WINCHESTER  
WOBURN  
WRENTHAM

### Southeast Region

ABINGTON  
ACUSHNET  
ATTLEBORO  
AVON  
BARNSTABLE  
BERKLEY  
BOURNE  
BREWSTER  
BRIDGEWATER  
BROCKTON  
CARVER  
CHATHAM  
CHILMARK  
DARTMOUTH  
DENNIS  
DIGHTON  
DUXBURY  
EAST BRIDGEWATER  
EASTHAM  
EASTON  
EDGARTOWN  
FAIRHAVEN  
FALL RIVER  
FALMOUTH  
FREETOWN  
GAY HEAD  
GOSNOLD  
HALIFAX  
HANOVER  
HANSON  
HARWICH  
HOLBROOK  
KINGSTON  
LAKEVILLE  
MANSFIELD  
MARION  
MARSHFIELD  
MASHPEE  
MATTAPOISETT  
MIDDLEBOROUGH  
NANTUCKET  
NEW BEDFORD  
NORTH ATTLEBORO  
NORTON

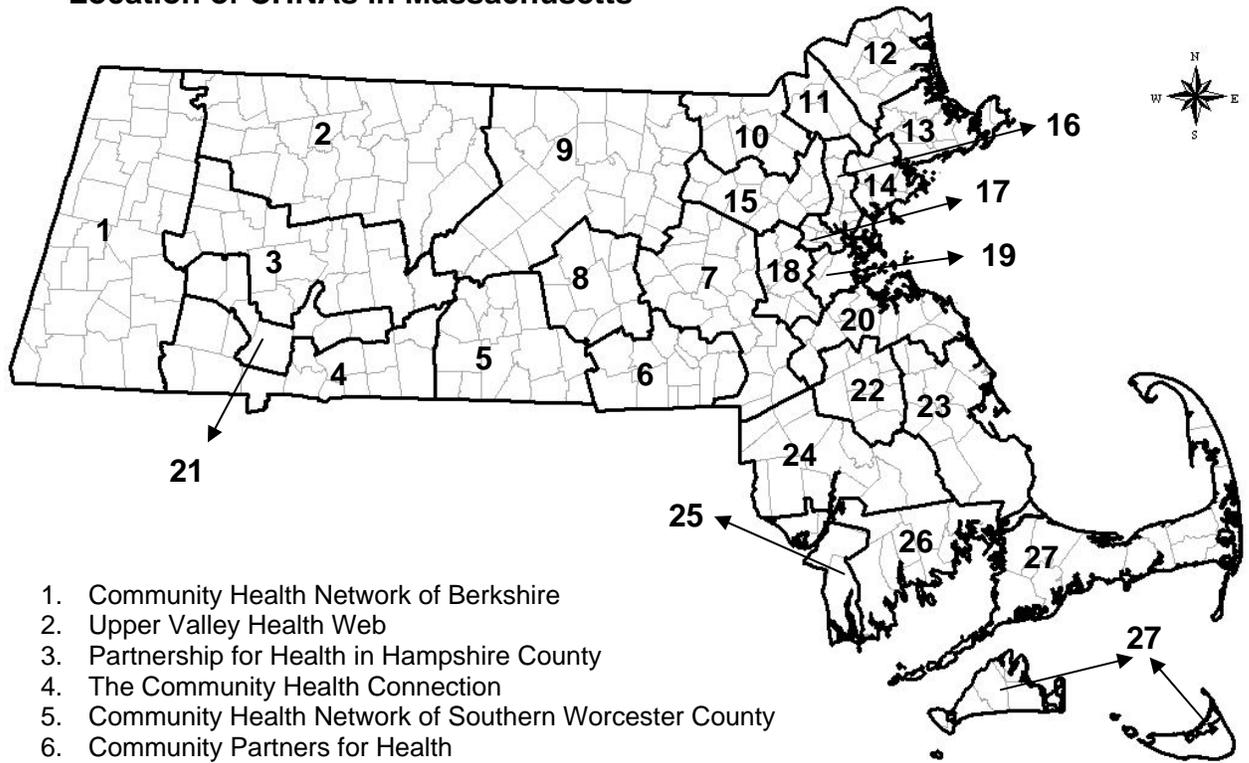
### Southeast Region (CONT)

OAK BLUFFS  
ORLEANS  
PEMBROKE  
PLYMOUTH  
PLYMPTON  
PROVINCETOWN  
RAYNHAM  
REHOBOTH  
ROCHESTER  
ROCKLAND  
SANDWICH  
SEEKONK  
SOMERSET  
STOUGHTON  
SWANSEA  
TAUNTON  
TISBURY  
TRURO  
WAREHAM  
WELLFLEET  
WEST BRIDGEWATER  
WEST TISBURY  
WESTPORT  
WHITMAN  
YARMOUTH

### Boston Region

BOSTON  
BROOKLINE  
CHELSEA  
REVERE  
WINTHROP

## Location of CHNAs in Massachusetts



1. Community Health Network of Berkshire
2. Upper Valley Health Web
3. Partnership for Health in Hampshire County
4. The Community Health Connection
5. Community Health Network of Southern Worcester County
6. Community Partners for Health
7. Community Health Network of Greater Metro West
8. Common Pathways
9. Community Health Network of Central Massachusetts
10. Greater Lowell Community Health Network
11. Greater Lawrence Community Health Network
12. Greater Haverhill Community Health Network
13. Greater Beverly/Gloucester Community Health Network
14. North Shore Community Health Network
15. Northwest Suburban Health Alliance
16. North Suburban Health Alliance
17. Greater Cambridge/Somerville Community Health Network
18. West Suburban Health Network
19. Alliance for Community Health
20. Blue Hills Community Health Alliance
21. Community Health Network of Chicopee-Holyoke-Ludlow-Westfield
22. Greater Brockton Community Health Network
23. South Shore Community Health Network
24. Greater Attleboro-Taunton Health Education
25. Partners for Healthier Communities
26. Greater New Bedford Community Health Network
27. Cape Cod and Islands Community Health Network

CHNA 1

ADAMS  
ALFORD  
BECKET  
CHESHIRE  
CLARKSBURG  
DALTON  
EGREMONT  
FLORIDA  
GREAT BARRINGTON  
HANCOCK  
HINSDALE  
LANESBOROUGH  
LEE  
LENOX  
MONTEREY  
MOUNT WASHINGTON  
NEW ASHFORD  
NEW MARLBOROUGH  
NORTH ADAMS  
OTIS  
PERU  
PITTSFIELD  
RICHMOND  
SANDISFIELD  
SAVOY  
SHEFFIELD  
STOCKBRIDGE  
TYRINGHAM  
WASHINGTON  
WEST STOCKBRIDGE  
WILLIAMSTOWN  
WINDSOR

CHNA 2

ASHFIELD  
ATHOL  
BERNARDSTON  
BUCKLAND  
CHARLEMONT  
COLRAIN  
CONWAY  
DEERFIELD  
ERVING  
GILL  
GREENFIELD  
HAWLEY  
HEATH  
LEVERETT  
LEYDEN  
MONROE  
MONTAGUE  
NEW SALEM  
NORTHFIELD  
ORANGE  
PETERSHAM  
PHILLIPSTON  
ROWE  
ROYALSTON  
SHELBURNE

CHNA 2 (CONT.)

SHUTESBURY  
SUNDERLAND  
WARWICK  
WENDELL  
WHATELY

CHNA 3

AMHERST  
BELCHERTOWN  
CHESTERFIELD  
CUMMINGTON  
EASTHAMPTON  
GOSHEN  
GRANBY  
HADLEY  
HATFIELD  
MIDDLEFIELD  
NORTHHAMPTON  
PELHAM  
PLAINFIELD  
SOUTH HADLEY  
SOUTHAMPTON  
WARE  
WESTHAMPTON  
WILLIAMSBURG  
WORTHINGTON

CHNA 4

AGAWAM  
BLANDFORD  
EAST LONGMEADOW  
GRANVILLE  
HAMPDEN  
LONGMEADOW  
MONSON  
PALMER  
RUSSELL  
SOUTHWICK  
SPRINGFIELD  
TOLLAND  
WEST SPRINGFIELD  
WILBRAHAM

CHNA 5

BRIMFIELD  
BROOKFIELD  
CHARLTON  
DUDLEY  
EAST BROOKFIELD  
HOLLAND  
NORTH BROOKFIELD  
OXFORD  
SOUTHBRIDGE  
SPENCER  
STURBRIDGE  
WALES  
WARREN  
WEBSTER  
WEST BROOKFIELD

CHNA 6

BELLINGHAM  
BLACKSTONE  
DOUGLAS  
FRANKLIN  
HOPEDALE  
MEDWAY  
MENDON  
MILFORD  
MILLVILLE  
NORTHBRIDGE  
SUTTON  
UPTON  
UXBRIDGE

CHNA 7

ASHLAND  
FOXBOROUGH  
FRAMINGHAM  
HOLLISTON  
HOPKINTON  
HUDSON  
MARLBOROUGH  
MAYNARD  
MEDFIELD  
MILLIS  
NATICK  
NORFOLK  
NORTHBOROUGH  
PLAINVILLE  
SHERBORN  
SOUTHBOROUGH  
STOW  
SUDBURY  
WALPOLE  
WAYLAND  
WESTBOROUGH  
WRENTHAM

CHNA 8

AUBURN  
BOYLSTON  
GRAFTON  
HOLDEN  
LEICESTER  
MILLBURY  
PAXTON  
SHREWSBURY  
WEST BOYLSTON  
WORCESTER

CHNA 9

ASHBURNHAM  
ASHBY  
AYER  
BARRE  
BERLIN  
BOLTON

CHNA 9 (CONT.)

CLINTON  
FITCHBURG  
GARDNER  
GROTON  
HARDWICK  
HARVARD  
HUBBARDSTON  
LANCASTER  
LEOMINSTER  
LUNENBURG  
NEW BRAintree  
OAKHAM  
PEPPERELL  
PRINCETON  
RUTLAND  
SHIRLEY  
STERLING  
TEMPLETON  
TOWNSEND  
WESTMINSTER  
WINCHENDON

CHNA 10

BILLERICA  
CHELMSFORD  
DRACUT  
DUNSTABLE  
LOWELL  
TEWKSBURY  
TYNGSBOROUGH  
WESTFORD

CHNA 11

ANDOVER  
LAWRENCE  
METHUEN  
MIDDLETON  
NORTH ANDOVER

CHNA 12

AMESBURY  
BOXFORD  
GEORGETOWN  
GROVELAND  
HAVERHILL  
MERRIMAC  
NEWBURY  
NEWBURYPORT  
ROWLEY  
SALISBURY  
WEST NEWBURY

CHNA 13  
BEVERLY  
ESSEX  
GLOUCESTER  
HAMILTON  
IPSWICH  
MANCHESTER  
ROCKPORT  
TOPSFIELD  
WENHAM

CHNA 14  
DANVERS  
LYNN  
LYNNFIELD  
MARBLEHEAD  
NAHANT  
PEABODY  
SALEM  
SAUGUS  
SWAMPSCOTT

CHNA 15  
ACTON  
BEDFORD  
BOXBOROUGH  
BURLINGTON  
CARLISLE  
CONCORD  
LEXINGTON  
LINCOLN  
LITTLETON  
WILMINGTON  
WINCHESTER  
WOBURN

CHNA 16  
EVERETT  
MALDEN  
MEDFORD  
MELROSE  
NORTH READING  
READING  
STONEHAM  
WAKEFIELD

CHNA 17  
ARLINGTON  
BELMONT  
CAMBRIDGE  
SOMERVILLE  
WATERTOWN

CHNA 18  
DEDHAM  
DOVER  
NEEDHAM  
NEWTON  
WALTHAM  
WELLESLEY  
WESTON  
WESTWOOD

CHNA 19  
BOSTON  
BROOKLINE  
CHELSEA  
REVERE  
WINTHROP

CHNA 20  
BRAINTREE  
CANTON  
COHASSET  
HINGHAM  
HULL  
MILTON  
NORWELL  
NORWOOD  
QUINCY  
RANDOLPH  
SCITUATE  
SHARON  
WEYMOUTH

CHNA 21  
CHESTER  
CHICOPEE  
HOLYOKE  
HUNTINGTON  
LUDLOW  
MONTGOMERY  
WESTFIELD

CHNA 22  
ABINGTON  
AVON  
BRIDGEWATER  
BROCKTON  
EAST BRIDGEWATER  
EASTON  
HOLBROOK  
STOUGHTON  
WEST BRIDGEWATER  
WHITMAN

CHNA 23  
CARVER  
DUXBURY  
HALIFAX  
HANOVER  
HANSON  
KINGSTON  
MARSHFIELD  
PEMBROKE  
PLYMOUTH  
PLYMPTON  
ROCKLAND

CHNA 24  
ATTLEBORO  
BERKLEY  
DIGHTON  
LAKEVILLE  
MANSFIELD  
MIDDLEBOROUGH  
NORTH  
ATTLEBOROUGH  
NORTON  
RAYNHAM  
REHOBOTH  
SEEKONK  
TAUNTON

CHNA 25  
FALL RIVER  
SOMERSET  
SWANSEA  
WESTPORT

CHNA 26  
ACUSHNET  
DARTMOUTH  
FAIRHAVEN  
FREETOWN  
MARION  
MATTAPOISETT  
NEW BEDFORD  
ROCHESTER  
WAREHAM

CHNA 27  
AQUINNAH  
BARNSTABLE  
BOURNE  
BREWSTER  
CHATHAM  
CHILMARK  
DENNIS  
EASTHAM  
EDGARTOWN  
FALMOUTH  
GOSNOLD  
HARWICH  
MASHPEE  
NANTUCKET  
OAK BLUFFS  
ORLEANS  
PROVINCETOWN  
SANDWICH  
TISBURY  
TRURO  
WELLFLEET  
WEST TISBURY  
WARMOUTH

## Massachusetts Regional Planning Agencies

### FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS

ASHFIELD  
BERNARDSTON  
BUCKLAND  
CHARLEMONT  
COLRAIN  
CONWAY  
DEERFIELD  
ERVING  
GILL  
GREENFIELD  
HAWLEY  
HEATH  
LEVERETT  
LEYDEN  
MONROE  
MONTAGUE  
NEW SALEM  
NORTHFIELD  
ORANGE  
ROWE  
SHELBURNE  
SHUTESBURY  
SUNDERLAND  
WARWICK  
WENDELL  
WHATELY

### BERKSHIRE REGIONAL PLANNING COMMISSION

ADAMS  
ALFORD  
BECKET  
CHESHIRE  
CLARKSBURG  
DALTON  
EGREMONT  
FLORIDA  
GREAT BARRINGTON  
HANCOCK  
HINSDALE  
LANESBOROUGH  
LEE  
LENOX  
MONTEREY  
MOUNT WASHINGTON  
NEW ASHFORD  
NEW MARLBOROUGH  
NORTH ADAMS  
OTIS  
PERU  
PITTSFIELD  
RICHMOND  
SANDSFIELD  
SAVOY  
SHEFFIELD

### BERKSHIRE (CONT)

STOCKBRIDGE  
TYRINGHAM  
WASHINGTON  
WEST STOCKBRIDGE  
WILLIAMSTOWN  
WINDSOR

### OLD COLONY PLANNING COUNCIL

ABINGTON  
AVON  
BRIDGEWATER  
BROCKTON  
EAST BRIDGEWATER  
EASTON  
HALIFAX  
HANSON  
KINGSTON  
PEMBROKE  
PLYMOUTH  
PLYMPTON  
STOUGHTON  
WEST BRIDGEWATER  
WHITMAN

### SOUTHEAST REGIONAL PLANNING / ECONOMIC DEVELOPMENT DISTRICT

ACUSHNET  
ATTLEBORO  
BERKLEY  
CARVER  
DARTMOUTH  
DIGHTON  
FAIRHAVEN  
FALL RIVER  
FREETOWN  
LAKEVILLE  
MANSFIELD  
MARION  
MATTAPOISETT  
MIDDLEBOROUGH  
NEW BEDFORD  
NORTH ATTLEBORO  
NORTON  
PLAINVILLE  
RAYNHAM  
REHOBOTH  
ROCHESTER  
SEEKONK  
SOMERSET  
SWANSEA  
TAUNTON  
WAREHAM  
WESTPORT

### MERRIMACK VALLEY PLANNING COUNCIL

AMESBURY  
ANDOVER  
BOXFORD  
GEORGETOWN  
GROVELAND  
HAVERHILL  
LAWRENCE  
MERRIMAC  
METHUEN  
NEWBURY  
NEWBURYPORT  
NORTH ANDOVER  
ROWLEY  
SALISBURY  
WEST NEWBURY

### NORTHERN MIDDLESEX COUNCIL OF GOVERNMENTS

BILLERICA  
CHELMSFORD  
DRACUT  
DUNSTABLE  
LOWELL  
PEPPERELL  
TEWKSBURY  
TYNGSBOROUGH  
WESTFORD

### CENTRAL MA REGIONAL PLANNING COMMISSION

AUBURN  
BARRE  
BERLIN  
BLACKSTONE  
BOYLSTON  
BROOKFIELD  
CHARLTON  
DOUGLAS  
DUDLEY  
EAST BROOKFIELD  
GRAFTON  
HARDWICK  
HOLDEN  
HOPEDALE  
LEICESTER  
MENDON  
MILLBURY  
MILLVILLE  
NEW BRAINTREE  
NORTH BROOKFIELD  
NORTHBOROUGH  
NORTHBRIDGE  
OAKHAM  
OXFORD

### CENTRAL MA (CONT)

PAXTON  
PRINCETON  
RUTLAND  
SHREWSBURY  
SOUTHBRIDGE  
SPENCER  
STURBRIDGE  
SUTTON  
UPTON  
UXBRIDGE  
WARREN  
WEBSTER  
WEST BOYLSTON  
WEST BROOKFIELD  
WESTBOROUGH  
WORCESTER

### MONTAGUSETT REGIONAL PLANNING COMMISSION

ASHBURNHAM  
ASHBY  
ATHOL  
AYER  
CLINTON  
FITCHBURG  
GARDNER  
GROTON  
HARVARD  
HUBBARDSTON  
LANCASTER  
LEOMINSTER  
LUNENBURG  
PHILLIPSTON  
PETERSHAM  
ROYALSTON  
SHIRLEY  
STERLING  
TEMPLETON  
TOWNSEND  
WESTMINSTER  
WINCHENDON

### PIONEER VALLEY PLANNING COMMISSION

AGAWAM  
AMHERST  
BELCHERTOWN  
BLANDFORD  
BRIMFIELD  
CHESTER  
CHESTERFIELD  
CHICOPEE  
CUMMINGTON  
EAST LONGMEADOW  
EASTHAMPTON  
GOSHEN

## Massachusetts Regional Planning Agencies (cont.)

### PIONEER VALLEY

(CONT.)

GRANBY  
GRANVILLE  
HADLEY  
HAMPDEN  
HATFIELD  
HOLLAND  
HOLYOKE  
HUNTINGTON  
LONGMEADOW  
LUDLOW  
MIDDLEFIELD  
MONSON  
MONTGOMERY  
NORTHAMPTON  
PALMER  
PELHAM  
PLAINFIELD  
RUSSELL  
SOUTH HADLEY  
SOUTHAMPTON  
SOUTHWICK  
SPRINGFIELD  
TOLLAND  
WALES  
WARE  
WEST SPRINGFIELD  
WESTFIELD  
WESTHAMPTON  
WILBRAHAM  
WILLIAMSBURG  
WORTHINGTON

### METROPOLITAN AREA PLANNING COUNCIL

ACTON  
ARLINGTON  
ASHLAND  
BEDFORD  
BELLINGHAM  
BELMONT  
BEVERLY  
BOLTON  
BOSTON  
BOXBOROUGH  
BRAINTREE  
BROOKLINE  
BURLINGTON  
CAMBRIDGE  
CANTON  
CARLISLE  
CHELSEA  
COHASSET  
CONCORD  
DANVERS  
DEDHAM

DOVER  
DUXBURY  
ESSEX  
EVERETT  
FOXBOROUGH  
FRAMINGHAM  
FRANKLIN  
GLOUCESTER  
HAMILTON  
HANOVER  
HINGHAM  
HOLBROOK  
HOLLISTON  
HOPKINTON  
HUDSON  
HULL  
IPSWICH  
LEXINGTON  
LINCOLN  
LITTLETON  
LYNN  
LYNNFIELD  
MALDEN  
MANCHESTER  
MARBLEHEAD  
MARLBOROUGH  
MARSHFIELD  
MAYNARD  
MEDFIELD  
MEDFORD  
MEDWAY  
MELROSE  
MIDDLETON  
MILFORD  
MILLIS  
MILTON  
NAHANT  
NATICK  
NEEDHAM  
NEWTON  
NORFOLK  
NORTH READING  
NORWELL  
NORWOOD  
PEABODY  
PEMBROKE  
QUINCY  
RANDOLPH  
READING  
REVERE  
ROCKLAND  
ROCKPORT  
SALEM  
SAUGUS  
SCITUATE  
SHARON  
SHERBORN

### MAPC (CONT.)

SOMERVILLE  
SOUTHBOROUGH  
STONEHAM  
STOUGHTON  
STOW  
SUDBURY  
SWAMPSCOTT  
TOPSFIELD  
WAKEFIELD  
WALPOLE  
WALTHAM  
WATERTOWN  
WAYLAND  
WELLESLEY  
WENHAM  
WESTON  
WESTWOOD  
WEYMOUTH  
WILMINGTON  
WINCHESTER  
WINTHROP  
WOBURN  
WRENTHAM

### NANTUCKET PLANNING

& ECONOMIC  
DEVELOPMENT  
COMMISSION  
NANTUCKET

### MARTHA'S VINEYARD COMMISSION

AQUINNAH / GAY HEAD  
CHILMARK  
EDGARTOWN  
GOSNOLD  
OAK BLUFFS  
TISBURY  
WEST TISBURY

### CAPE COD COMMISSION

BARNSTABLE  
BOURNE  
BREWSTER  
CHATHAM  
DENNIS  
EASTHAM  
FALMOUTH  
HARWICH  
MASHPEE  
ORLEANS  
PROVINCETOWN  
SANDWICH  
TRURO  
WELLFLEET  
YARMOUTH

# **APPENDIX B. 2006 Reference Data**

**Table 21. Number and Rate of Injury Deaths and Nonfatal Injury-related Acute Care Hospital Cases, by Sex and Age Group, MA Residents, 2006**

	Injury Deaths		Hospital Stays		ED Visits		Total Injuries	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
<b>Males</b>	<b>1,874</b>	<b>60.1</b>	<b>31,637</b>	<b>1,014.9</b>	<b>392,251</b>	<b>12,583.4</b>	<b>425,762</b>	<b>13,658.5</b>
<1	7	17.9	271	693.1	2,567	6,564.9	2,845	7,275.8
1-14	30	5.3	1,877	330.9	76,574	13,497.8	78,481	13,833.9
15-24	261	58.1	3,959	881.4	87,445	19,468.1	91,665	20,407.6
25-44	649	71.9	7,770	860.3	129,841	14,376.7	138,260	15,308.9
45-64	553	68.2	8,082	996.9	70,672	8,717.6	79,307	9,782.7
65-74	107	57.6	2,779	1,495.7	11,122	5,986.1	14,008	7,539.4
75-84	136	111.6	4,198	3,443.9	9,639	7,907.6	13,973	11,463.1
85+	131	326.6	2,701	6,734.3	4,388	10,940.5	7,220	18,001.4
<b>Females</b>	<b>1,036</b>	<b>31.2</b>	<b>34,879</b>	<b>1,050.6</b>	<b>318,907</b>	<b>9,605.7</b>	<b>354,822</b>	<b>10,687.4</b>
<1	4	--	182	477.9	2,172	5,703.6	2,358	6,192.1
1-14	11	2.0	1,120	206.7	53,594	9,888.9	54,725	10,097.6
15-24	64	14.3	2,182	488.6	58,328	13,062.3	60,574	13,565.3
25-44	202	22.0	4,540	494.0	94,623	10,296.6	99,365	10,812.6
45-64	286	33.0	6,444	743.9	65,893	7,606.5	72,623	8,383.4
65-74	71	31.7	3,889	1,737.1	14,934	6,670.4	18,894	8,439.2
75-84	160	85.4	8,242	4,398.9	17,486	9,332.7	25,888	13,817.0
85+	238	245.6	8,280	8,543.7	11,874	12,252.1	20,392	21,041.3
<b>Total**</b>	<b>2,910</b>	<b>45.2</b>	<b>66,516</b>	<b>1,033.3</b>	<b>711,189</b>	<b>11,048.1</b>	<b>780,615</b>	<b>12,126.6</b>
<1	11	14.3	453	586.9	4,739	6,140.0	5,203	6,741.1
1-14	41	3.7	2,997	270.2	130,169	11,734.6	133,207	12,008.5
15-24	325	36.3	6,141	685.6	145,778	16,275.2	152,244	16,997.1
25-44	851	46.7	12,310	675.6	224,474	12,319.5	237,635	13,041.7
45-64	839	50.0	14,526	866.2	136,576	8,144.3	151,941	9,060.5
65-74	178	43.4	6,668	1,627.6	26,056	6,360.1	32,902	8,031.1
75-84	296	95.7	12,440	4,022.5	27,127	8,771.6	39,863	12,889.8
85+	369	269.3	10,981	8,014.0	16,264	11,869.6	27,614	20,153.0

\* Rates are age and sex-specific (number of cases per 100,000 persons within each sex/age group). Rates are not calculated on counts less than 5 (for deaths) or 7 (for nonfatal injuries). Rates based on counts less than 20 may be unstable and should be interpreted with caution.

\*\* Totals include cases for which age and/or sex was missing.

**Table 22. Total Number and Rate of Leading Causes of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury, by Age Groups**

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
< 1 year	Suffocation	6	7.8	Fall	167	216.4	Fall	2,481	3,214.4
	Struck by	2	--	Suffocation	25	32.4	Struck by	516	668.5
	Firearm	1	--	Poisoning/Drug overdose	25	32.4	Fire / burn	191	247.5
	Drowning	1	--	Struck by	17	22.0	Overexertion	163	211.2
	Other/unknown	1	--	Other/unknown	219	283.7	Other/unknown	1,388	1,798.3
	TOTAL	11	14.3	TOTAL	453	586.9	TOTAL	4,739	6,140.0

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
1-4 years	Drowning	5	1.6	Fall	348	112.0	Fall	15,963	5,138.1
	MV Traffic	2	--	Poisoning/Drug overdose	151	48.6	Struck by	6,317	2,033.3
	--	--	--	Natural/environ.	69	22.2	Overexertion	2,127	684.6
	--	--	--	Struck by	37	11.9	Cut / pierce	2,084	670.8
	Other/unknown	7	2.3	Other/unknown	287	92.4	Other/unknown	12,824	4,127.7
	TOTAL	14	4.5	TOTAL	892	287.1	TOTAL	39,315	12,654.5

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
5-9 years	Drowning	3	--	Fall	401	103.5	Fall	12,411	3,201.9
	Natural/environ.	1	--	MV Traffic	77	19.9	Struck by	8,076	2,083.5
	Other land transport	1	--	Struck by	61	15.7	Cut / pierce	2,842	733.2
	Adverse effects	1	--	Natural/environ.	47	12.1	Overexertion	1,933	498.7
	Other/unknown	0	0.0	Other/unknown	298	76.9	Other/unknown	11,114	2,867.3
	TOTAL	6	1.5	TOTAL	884	228.1	TOTAL	36,376	9,384.6

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
10-14 years	MV Traffic	9	2.2	Fall	340	82.7	Struck by	16,469	4,007.3
	Suffocation	5	1.2	Struck by	174	42.3	Fall	13,310	3,238.6
	Drowning	4	--	MV Traffic	136	33.1	Overexertion	6,414	1,560.7
	--	--	--	Poisoning/Drug overdose	92	22.4	Cut / pierce	3,997	972.6
	Other/unknown	3	--	Other/unknown	479	116.6	Other/unknown	14,288	3,476.6
	TOTAL	21	5.1	TOTAL	1,221	297.1	TOTAL	54,478	13,255.6

\* Rates are age specific (number of cases per 100,000 persons within each age group). Rates are not calculated on counts less than 5 (for deaths) or 7 (for nonfatal injuries). Rates based on counts less than 20 may be unstable and should be interpreted with caution.

\*\* Totals include cases for which age was missing.

**Table 23. Total Number and Rate of Leading Causes of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury, by Age Groups**

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
15-19 years	MV Traffic	43	9.6	MV Traffic	656	146.8	Struck by	19,650	4,397.8
	Firearm	22	4.9	Poisoning/Drug overdose	594	132.9	MV Traffic	10,664	2,386.7
	Poisoning/Drug overdose	12	2.7	Fall	341	76.3	Fall	10,285	2,301.9
	Suffocation	9	2.0	Struck by	318	71.2	Overexertion	8,934	1,999.5
	Other/unknown	24	5.4	Other/unknown	1054	235.9	Other/unknown	24,330	5,445.3
	TOTAL	110	24.6	TOTAL	2,963	663.1	TOTAL	73,863	16,531.2

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
20-24 years	MV Traffic	69	15.4	MV Traffic	667	148.6	MV Traffic	12,607	2,808.4
	Poisoning/Drug overdose	58	12.9	Poisoning/Drug overdose	634	141.2	Struck by	12,327	2,746.1
	Firearm	42	9.4	Fall	340	75.7	Fall	9,717	2,164.6
	Suffocation	19	4.2	Cut/pierce	319	71.1	Overexertion	9,138	2,035.7
	Other/unknown	27	6.0	Other/unknown	1217	271.1	Other/unknown	28,126	6,265.6
	TOTAL	215	47.9	TOTAL	3,178	708.0	TOTAL	71,915	16,020.4

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
25-44 years	Poisoning/Drug overdose	454	24.9	Poisoning/Drug overdose	2,716	149.1	Fall	37,604	2,063.8
	MV Traffic	112	6.1	Fall	2,139	117.4	Overexertion	34,489	1,892.8
	Suffocation	80	4.4	MV Traffic	1,506	82.7	Struck by	31,500	1,728.8
	Firearm	78	4.3	Cut/pierce	862	47.3	MV Traffic	30,128	1,653.5
	Other/unknown	127	7.0	Other/unknown	5,086	279.1	Other/unknown	90,753	4,980.7
	TOTAL	851	46.7	TOTAL	12,310	675.6	TOTAL	224,474	12,319.5

\* Rates are age specific (number of cases per 100,000 persons within each age group). Rates are not calculated on counts less than 5 (for deaths) or 7 (for nonfatal injuries). Rates based on counts less than 20 may be unstable and should be interpreted with caution.

\*\* Totals include cases for which age was missing.

**Table 24. Total Number and Rate of Leading Causes of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury, by Age Groups**

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
45-64 years	Poisoning/Drug overdose	434	25.9	Fall	5,069	302.3	Fall	35,938	2,143.0
	MV Traffic	117	7.0	Poisoning/Drug overdose	2,036	121.4	Overexertion	17,632	1,051.4
	Suffocation	73	4.4	MV Traffic	1,198	71.4	Cut / pierce	16,453	981.1
	Fall	58	3.5	Struck by	452	27.0	Struck by	14,717	877.6
	Other/unknown	157	9.4	Other/unknown	5,771	344.1	Other/unknown	51,836	3,091.1
	TOTAL	839	50.0	TOTAL	14,526	866.2	TOTAL	136,576	8,144.3

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
65-74 years	Fall	56	13.7	Fall	3,579	873.6	Fall	10,787	2,633.0
	MV Traffic	32	7.8	Poisoning/Drug overdose	364	88.8	Cut / pierce	2,376	580.0
	Suffocation	24	5.9	MV Traffic	329	80.3	Overexertion	2,275	555.3
	Poisoning/Drug overdose	14	3.4	Overexertion	139	33.9	MV Traffic	2,139	522.1
	Other/unknown	52	12.7	Other/unknown	2,257	550.9	Other/unknown	8,479	2,069.7
	TOTAL	178	43.4	TOTAL	6,668	1,627.6	TOTAL	26,056	6,360.1

Age	Injury Deaths			Injury-related Hospital Stays			Injury-related ED Visits		
	Cause	Number	Rate*	Cause	Number	Rate*	Cause	Number	Rate*
75+ years	Fall	285	63.9	Fall	16,631	3,726.6	Fall	25,964	5,817.9
	Suffocation	68	15.2	MV Traffic	544	121.9	Struck by	2,593	581.0
	MV Traffic	60	13.4	Poisoning/Drug overdose	514	115.2	Cut / pierce	2,193	491.4
	Adverse effects	19	4.3	Overexertion	325	72.8	Overexertion	2,074	464.7
	Other/unknown	233	52.2	Other/unknown	5,407	1,211.6	Other/unknown	10,567	2,367.8
	TOTAL	665	149.0	TOTAL	23,421	5,248.0	TOTAL	43,391	9,722.8

\* Rates are age specific (number of cases per 100,000 persons within each age group). Rates are not calculated on counts less than 5 (for deaths) or 7 (for nonfatal injuries). Rates based on counts less than 20 may be unstable and should be interpreted with caution.

\*\* Totals include cases for which age was missing.

**Table 25. Number and Rate of Injury Death and Nonfatal Injury-related Acute Care Cases by Cause, 2006**

Cause of Injury	Injury Deaths		Nonfatal Hospital Stays		Nonfatal ED Visits		Total Injuries	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
Cut or pierce	56	0.9	1,990	30.9	74,566	1,158.4	76,612	1,190.1
Drowning, near drowning/submersion	67	1.0	37	0.6	143	2.2	247	3.8
Fall	424	6.6	29,355	456.0	174,463	2,710.2	204,242	3,172.8
Fire/Burn:	34	0.5	615	9.6	10,150	157.7	10,799	167.8
Fire/flame	32	0.5	265	4.1	1,662	25.8	1,959	30.4
Burns, hot object/substance	2	--	350	5.4	8,488	131.9	8,840	137.3
Firearm	207	3.2	479	7.4	463	7.2	1,149	17.8
Hanging, strangulation, or suffocation	285	4.4	518	8.0	670	10.4	1,473	22.9
Machinery	5	0.1	260	4.0	3,982	61.9	4,247	66.0
Natural/Environmental:	17	0.3	1,279	19.9	26,124	405.8	27,420	426.0
Dog bites	1	--	178	2.8	6,211	96.5	6,390	99.3
Other bites & stings	2	--	633	9.8	17,077	265.3	17,712	275.2
All other (e.g., extreme cold)	14	0.2	468	7.3	2,836	44.1	3,318	51.5
Overexertion	0	0.0	1,364	21.2	85,179	1,323.2	86,543	1,344.4
Poisoning/drug overdose	989	15.4	7,153	111.1	13,396	208.1	21,538	334.6
Struck by/against	27	0.4	2,389	37.1	114,123	1,772.9	116,539	1,810.4
Transport Injuries:	493	7.7	6,350	98.6	88,064	1,368.0	94,907	1,474.4
Motor vehicle traffic-related*	444	6.9	5,149	80.0	76,398	1,186.8	81,991	1,273.7
Injury to occupant	85	1.3	3,502	54.4	65,136	1,011.9	68,723	1,067.6
Injury to motorcyclist	54	0.8	580	9.0	2,246	34.9	2,880	44.7
Injury to pedal cyclist	4	--	138	2.1	1,066	16.6	1,208	18.8
Injury to pedestrian	74	1.1	721	11.2	3,352	52.1	4,147	64.4
Injury to other	0	0.0	18	0.3	211	3.3	229	3.6
Injury to unspecified	227	3.5	175	2.7	4,363	67.8	4,765	74.0
Pedal cyclist, non-traffic	3	--	471	7.3	7,000	108.7	7,474	116.1
Pedestrian, non-traffic	6	0.1	66	1.0	412	6.4	484	7.5
Other land transport	33	0.5	--	--	--	--	33	0.5
Other transport	7	0.1	664	10.3	4,254	66.1	4,925	76.5
Other specified & classifiable:	32	0.5	2,993	46.5	39,116	607.7	42,141	654.6
Human bites	0	0.0	96	1.5	1,692	26.3	1,788	27.8
Non-powder gun (bb, pellet)	0	0.0	28	0.4	441	6.9	469	7.3
Other specified & classifiable	32	0.5	2,869	44.6	36,983	574.5	39,884	619.6
Other specified, not classifiable	31	0.5	1,531	23.8	13,361	207.6	14,923	231.8
Unspecified	206	3.2	3,687	57.3	52,699	818.7	56,592	879.1
Adverse effects	37	0.6	2,701	42.0	1,191	18.5	3,929	61.0
No valid cause code provided	0	0.0	3,815	59.3	13,499	209.7	17,314	269.0
<b>TOTAL</b>	<b>2,910</b>	<b>45.2</b>	<b>66,516</b>	<b>1,033.3</b>	<b>711,189</b>	<b>11,048.1</b>	<b>780,615</b>	<b>12,126.6</b>

\* Crude rate per 100,000 population. Rates are not calculated on counts less than 5 (for deaths) or 7 (for nonfatal injuries). Rates based on counts less than 20 may be unstable and should be interpreted with caution.

**Table 26. Number and Rate of Injury-related Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury by Intent and Selected Causes, MA Residents, 2006**

Intent and Cause	Injury Deaths	Nonfatal Hospital Stays	Nonfatal ED Visits	Totals <sup>1</sup>		
	Number	Number	Number	Total Injury Count	Rate*	Case Fatality Ratio
Unintentional	2,170	52,196	659,220	713,586	11,085.4	0.3
Drowning or near drowning/submersion	45	35	137	217	3.4	20.7
Fall	406	29,313	174,336	204,055	3,169.9	0.2
Firearm	1	47	155	203	3.2	0.5
Fire/burn total	30	565	10,013	10,608	164.8	0.3
Fire/flame	27	224	1,579	1,830	28.4	1.5
Burns, hot object/substance	3	341	8,434	8,778	136.4	0.0
Hanging, strangulation, or suffocation	109	480	511	1,100	17.1	9.9
Poisoning/Drug overdose	821	2,972	7,082	10,875	168.9	7.5
Transport Injuries:	493	6,335	88,039	94,867	1,473.7	0.5
Motor vehicle traffic-related	444	5,134	76,374	81,952	1,273.1	0.5
Injury to occupant <sup>2</sup>	312	3,677	69,499	73,488	1,141.6	0.4
Injury to motorcyclist	54	580	2,246	2,880	44.7	1.9
Injury to pedal cyclist	4	138	1,066	1,208	18.8	0.3
Injury to pedestrian	74	721	3,352	4,147	64.4	1.8
Injury to other person	0	18	211	229	3.6	0.0
Pedestrian, non-traffic	6	66	412	484	7.5	1.2
Pedal cyclist, non-traffic	3	471	7,000	7,474	116.1	0.0
Other transport	40	664	4,253	4,957	77.0	0.8
Other and unspecified injuries	265	12,449	378,947	391,661	6,084.3	0.1
Suicide/Self-inflicted	437	4,454	6,969	11,860	184.2	3.7
Firearm	98	<7	<7	109	1.7	89.9
Hanging, strangulation, or suffocation	166	34	116	316	4.9	52.5
Poisoning/Drug overdose	114	3,494	3,439	7,047	109.5	1.6
Other and unspecified injuries	59	921	3,408	4,388	68.2	1.3
Homicide/Assault	183	2,367	24,497	27,047	420.2	0.7
Cut or pierce	40	541	1,696	2,277	35.4	1.8
Firearm	105	392	250	747	11.6	14.1
Struck by or against an object	13	822	13,186	14,021	217.8	0.1
Other and unspecified injuries	25	612	9,365	10,002	155.4	0.2
Injuries of Undetermined Intent	80	943	5,263	6,286	97.7	1.3
Drowning or near drowning/submersion	9	<7	<7	12	0.2	75.0
Fall	2	14	72	88	1.4	2.3
Poisoning/Drug overdose	54	685	2,848	3,587	55.7	1.5
Other and unspecified injuries	15	243	2,341	2,599	40.4	0.6
All other intents/causes	40	2,760	1,744	4,544	70.6	0.9
No valid intent code provided	0	3,796	13,499	17,295	268.7	0.0
<b>TOTAL</b>	<b>2,910</b>	<b>66,516</b>	<b>711,189</b>	<b>780,615</b>	<b>12,126.6</b>	<b>0.4</b>

\*Crude rate per 100,000 population. Rates based on counts less than 20 may be unstable and should be interpreted with caution.  
<sup>1</sup>The total injury count includes the number of fatal and nonfatal injury among MA residents in 2006. The rate is based on those numbers. The case fatality ratio (number of fatal injury cases among the total number of injury deaths and hospital events) is based only on Massachusetts residents who died in Massachusetts and those treated within a MA acute care hospital for an injury in 2006. MA residents who died out of state were not included in this ratio. <sup>2</sup>Occupant includes drivers/passengers and unspecified persons injured in motor vehicles *except* motorcycles.

**Table 27. Total Number and Rate of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury by Intent, Sex and Age Groups, MA Residents, 2006**

	Unintentional						Suicide/Self-Inflicted						Homicide/Assaults						Undetermined Intent					
	Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
<b>Males</b>	<b>1,353</b>	<b>43.4</b>	<b>385,605</b>	<b>12,370.2</b>	<b>312</b>	<b>10.0</b>	<b>4,771</b>	<b>153.1</b>	<b>145</b>	<b>4.7</b>	<b>17,941</b>	<b>575.5</b>	<b>46</b>	<b>1.5</b>	<b>3,759</b>	<b>120.6</b>								
<1	6	15.3	2,723	6,963.8	0	0.0	0	0.0	1	--	17	43.5	0	0.0	14	35.8								
1-14	24	4.2	75,530	13,313.7	2	--	139	24.5	3	--	991	174.7	0	0.0	218	38.4								
15-24	159	35.4	79,748	17,754.5	35	7.8	1,419	315.9	62	13.8	7,213	1,605.9	3	--	881	196.1								
25-44	451	49.9	123,120	13,632.5	118	13.1	2,226	246.5	60	6.6	7,213	798.7	17	1.9	1,667	184.6								
45-64	384	47.4	72,028	8,884.8	128	15.8	902	111.3	16	2.0	2,386	294.3	22	2.7	853	105.2								
65-74	86	46.3	12,992	6,992.6	16	8.6	35	18.8	3	--	82	44.1	1	--	74	39.8								
75-84	118	96.8	12,855	10,545.9	9	7.4	30	24.6	0	0.0	29	23.8	3	--	35	28.7								
85+	125	311.7	6,607	16,473.0	4	--	20	49.9	0	0.0	10	24.9	0	0.0	17	42.4								
<b>Females</b>	<b>817</b>	<b>24.6</b>	<b>325,781</b>	<b>9,812.7</b>	<b>125</b>	<b>3.8</b>	<b>6,652</b>	<b>200.4</b>	<b>38</b>	<b>1.1</b>	<b>8,923</b>	<b>268.8</b>	<b>34</b>	<b>1.0</b>	<b>2,447</b>	<b>73.7</b>								
<1	3	--	2,245	5,895.3	0	0.0	0	0.0	1	--	26	68.3	0	0.0	13	34.1								
1-14	8	1.5	52,538	9,694.0	0	0.0	413	76.2	2	--	554	102.2	1	--	153	28.2								
15-24	47	10.5	52,904	11,847.6	8	1.8	2,293	513.5	8	1.8	3,256	729.2	0	0.0	677	151.6								
25-44	137	14.9	89,324	9,720.0	40	4.4	2,623	285.4	16	1.7	3,796	413.1	9	1.0	921	100.2								
45-64	194	22.4	67,394	7,779.8	61	7.0	1,186	136.9	7	0.8	1,160	133.9	17	2.0	533	61.5								
65-74	55	24.6	17,802	7,951.4	7	3.1	90	40.2	3	--	53	23.7	3	--	66	29.5								
75-84	142	75.8	24,348	12,995.1	6	3.2	36	19.2	0	0.0	49	26.2	4	--	58	31.0								
85+	231	238.4	19,224	19,836.1	3	--	11	11.4	1	--	29	29.9	0	0.0	26	26.8								
<b>Total**</b>	<b>2,170</b>	<b>33.7</b>	<b>711,416</b>	<b>11,051.6</b>	<b>437</b>	<b>6.8</b>	<b>11,423</b>	<b>177.5</b>	<b>183</b>	<b>2.8</b>	<b>26,864</b>	<b>417.3</b>	<b>80</b>	<b>1.2</b>	<b>6,206</b>	<b>96.4</b>								
<1	9	11.7	4,968	6,436.7	0	0.0	0	0.0	2	--	43	55.7	0	0.0	27	35.0								
1-14	32	2.9	128,069	11,545.3	2	--	552	49.8	5	0.5	1,545	139.3	1	--	371	33.4								
15-24	206	23.0	132,657	14,810.3	43	4.8	3,712	414.4	70	7.8	10,469	1,168.8	3	--	1,558	173.9								
25-44	588	32.3	212,454	11,659.8	158	8.7	4,849	266.1	76	4.2	11,009	604.2	26	1.4	2,588	142.0								
45-64	578	34.5	139,433	8,314.6	189	11.3	2,088	124.5	23	1.4	3,546	211.5	39	2.3	1,386	82.6								
65-74	141	34.4	30,794	7,516.6	23	5.6	125	30.5	6	1.5	135	33.0	4	--	140	34.2								
75-84	260	84.1	37,205	12,030.4	15	4.9	66	21.3	0	0.0	78	25.2	7	2.3	93	30.1								
85+	356	259.8	25,832	18,852.4	7	5.1	31	22.6	1	--	39	28.5	0	0.0	43	31.4								

\*Represents crude rates per 100,000 residents. Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than 5. \*\*Totals include cases for which sex and/or age was missing.

**Table 28. Total Number and Rate of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury by Sex and Age Groups for Selected Causes, MA Residents, 2006**

	Poisoning/Drug Overdose						Fall						Cut/pierce						Overexertion					
	Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
<b>Males</b>	<b>657</b>	<b>21.1</b>	<b>10,096</b>	<b>323.9</b>	<b>206</b>	<b>6.6</b>	<b>92,275</b>	<b>2,960.2</b>	<b>39</b>	<b>1.3</b>	<b>50,470</b>	<b>1,619.1</b>	<b>0</b>	<b>0.0</b>	<b>46,477</b>	<b>1,491.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>77</b>	<b>196.9</b>
<1	0	0.0	86	219.9	0	0.0	1,464	3,744.1	0	0.0	106	271.1	0	0.0	77	196.9	0	0.0	0	0.0	0	0.0	77	196.9
1-14	1	--	1,043	183.9	1	--	24,684	4,351.1	0	0.0	5,667	998.9	0	0.0	4,924	868.0	0	0.0	0	0.0	0	0.0	4,924	868.0
15-24	58	12.9	1,951	434.4	5	1.1	11,549	2,571.2	9	2.0	11,814	2,630.2	0	0.0	10,709	2,384.2	0	0.0	0	0.0	0	0.0	10,709	2,384.2
25-44	330	36.5	4,017	444.8	12	1.3	19,960	2,210.1	15	1.7	19,572	2,167.1	0	0.0	20,112	2,226.9	0	0.0	0	0.0	0	0.0	20,112	2,226.9
45-64	257	31.7	2,413	297.6	43	5.3	17,815	2,197.5	11	1.4	10,654	1,314.2	0	0.0	9,046	1,115.8	0	0.0	0	0.0	0	0.0	9,046	1,115.8
65-74	4	--	270	145.3	32	17.2	5,047	2,716.4	2	--	1,502	808.4	0	0.0	906	487.6	0	0.0	0	0.0	0	0.0	906	487.6
75-84	6	4.9	232	190.3	51	41.8	7,129	5,848.4	1	--	890	730.1	0	0.0	547	448.7	0	0.0	0	0.0	0	0.0	547	448.7
85+	1	--	84	209.4	62	154.6	4,626	11,533.9	1	--	265	660.7	0	0.0	156	388.9	0	0.0	0	0.0	0	0.0	156	388.9
<b>Females</b>	<b>332</b>	<b>10.0</b>	<b>10,453</b>	<b>314.9</b>	<b>218</b>	<b>6.6</b>	<b>111,536</b>	<b>3,359.5</b>	<b>17</b>	<b>0.5</b>	<b>26,082</b>	<b>785.6</b>	<b>0</b>	<b>0.0</b>	<b>40,064</b>	<b>1,206.8</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>88</b>	<b>231.1</b>
<1	0	0.0	81	212.7	0	0.0	1,184	3,109.2	0	0.0	62	162.8	0	0.0	88	231.1	0	0.0	0	0.0	0	0.0	88	231.1
1-14	0	0.0	1,099	202.8	0	0.0	18,088	3,337.5	0	0.0	3,330	614.4	0	0.0	5,595	1,032.4	0	0.0	0	0.0	0	0.0	5,595	1,032.4
15-24	12	2.7	2,500	559.9	2	--	9,132	2,045.1	1	--	5,151	1,153.5	0	0.0	7,512	1,682.3	0	0.0	0	0.0	0	0.0	7,512	1,682.3
25-44	124	13.5	3,647	396.9	5	0.5	19,782	2,152.6	6	0.7	9,317	1,013.8	0	0.0	14,698	1,599.4	0	0.0	0	0.0	0	0.0	14,698	1,599.4
45-64	177	20.4	2,205	254.5	15	1.7	23,190	2,677.0	7	0.8	6,198	715.5	0	0.0	8,968	1,035.2	0	0.0	0	0.0	0	0.0	8,968	1,035.2
65-74	10	4.5	384	171.5	24	10.7	9,319	4,162.4	3	--	925	413.2	0	0.0	1,508	673.6	0	0.0	0	0.0	0	0.0	1,508	673.6
75-84	8	4.3	352	187.9	65	34.7	16,068	8,575.9	0	0.0	764	407.8	0	0.0	1,208	644.7	0	0.0	0	0.0	0	0.0	1,208	644.7
85+	1	--	185	190.9	107	110.4	14,770	15,240.3	0	0.0	335	345.7	0	0.0	487	502.5	0	0.0	0	0.0	0	0.0	487	502.5
<b>Total**</b>	<b>989</b>	<b>15.4</b>	<b>20,551</b>	<b>319.3</b>	<b>424</b>	<b>6.6</b>	<b>203,818</b>	<b>3,166.3</b>	<b>56</b>	<b>0.9</b>	<b>76,556</b>	<b>1,189.3</b>	<b>0</b>	<b>0.0</b>	<b>86,543</b>	<b>1,344.4</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>165</b>	<b>213.8</b>
<1	0	0.0	167	216.4	0	0.0	2,648	3,430.8	0	0.0	168	217.7	0	0.0	165	213.8	0	0.0	0	0.0	0	0.0	165	213.8
1-14	1	--	2,142	193.1	1	--	42,773	3,856.0	0	0.0	8,997	811.1	0	0.0	10,519	948.3	0	0.0	0	0.0	0	0.0	10,519	948.3
15-24	70	7.8	4,451	496.9	7	0.8	20,682	2,309.0	10	1.1	16,965	1,894.0	0	0.0	18,221	2,034.3	0	0.0	0	0.0	0	0.0	18,221	2,034.3
25-44	454	24.9	7,664	420.6	17	0.9	39,743	2,181.2	21	1.2	28,890	1,585.5	0	0.0	34,811	1,910.5	0	0.0	0	0.0	0	0.0	34,811	1,910.5
45-64	434	25.9	4,618	275.4	58	3.5	41,007	2,445.3	18	1.1	16,855	1,005.1	0	0.0	18,014	1,074.2	0	0.0	0	0.0	0	0.0	18,014	1,074.2
65-74	14	3.4	654	159.6	56	13.7	14,366	3,506.6	5	1.2	2,427	592.4	0	0.0	2,414	589.2	0	0.0	0	0.0	0	0.0	2,414	589.2
75-84	14	4.5	584	188.8	116	37.5	23,198	7,501.2	1	--	1,654	534.8	0	0.0	1,756	567.8	0	0.0	0	0.0	0	0.0	1,756	567.8
85+	2	--	269	196.3	169	123.3	19,397	14,156.1	1	--	600	437.9	0	0.0	643	469.3	0	0.0	0	0.0	0	0.0	643	469.3

<sup>1</sup> Represents crude rates per 100,000 residents. Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than 5.  
**\*\*Totals include cases for which sex and/or age was missing.**

**Table 28. Total Number and Rate of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury by Sex and Age Groups for Selected Causes, MA Residents, 2006, (continued)**

	Natural/environmental						Motor Vehicle Occupant <sup>1</sup>						Pedestrian <sup>2</sup>						Pedal Cyclist <sup>2</sup>					
	Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
<b>Males</b>	<b>12</b>	<b>0.4</b>	<b>13,206</b>	<b>423.6</b>	<b>268</b>	<b>8.6</b>	<b>35,416</b>	<b>1,136.1</b>	<b>45</b>	<b>1.4</b>	<b>2,578</b>	<b>82.7</b>	<b>7</b>	<b>0.2</b>	<b>6,634</b>	<b>212.8</b>								
<1	0	0.0	63	161.1	0	0.0	33	84.4	0	0.0	<7	5.1	0	0.0	<7	--								
1-14	2	--	3,237	570.6	4	--	1,809	318.9	3	--	448	79.0	1	--	2,686	473.5								
15-24	0	0.0	1,699	378.3	75	16.7	10,609	2,361.9	6	1.3	547	121.8	0	0.0	1,558	346.9								
25-44	0	0.0	3,634	402.4	78	8.6	14,413	1,595.9	12	1.3	805	89.1	3	--	1,402	155.2								
45-64	2	--	3,125	385.5	66	8.1	6,749	832.5	18	2.2	554	68.3	1	--	872	107.6								
65-74	1	--	779	419.3	17	9.1	947	509.7	2	--	109	58.7	2	--	76	40.9								
75-84	6	4.9	544	446.3	16	13.1	643	527.5	4	--	84	68.9	0	0.0	33	27.1								
85+	1	--	125	311.7	12	29.9	213	531.1	0	0.0	28	69.8	0	0.0	<7	--								
<b>Females</b>	<b>5</b>	<b>0.2</b>	<b>14,196</b>	<b>427.6</b>	<b>98</b>	<b>3.0</b>	<b>40,581</b>	<b>1,222.3</b>	<b>35</b>	<b>1.1</b>	<b>1,972</b>	<b>59.4</b>	<b>0</b>	<b>0.0</b>	<b>2,040</b>	<b>61.4</b>								
<1	0	0.0	63	165.4	0	0.0	44	115.5	0	0.0	<7	5.3	0	0.0	0	0.0								
1-14	0	0.0	2,833	522.7	0	0.0	2,044	377.1	3	--	322	59.4	0	0.0	987	182.1								
15-24	1	--	1,919	429.8	31	6.9	12,632	2,828.9	2	--	462	103.5	0	0.0	300	67.2								
25-44	0	0.0	3,834	417.2	21	2.3	15,532	1,690.1	1	--	541	58.9	0	0.0	378	41.1								
45-64	1	--	3,632	419.3	22	2.5	7,747	894.3	14	1.6	419	48.4	0	0.0	324	37.4								
65-74	0	0.0	930	415.4	8	3.6	1,302	581.6	3	--	104	46.5	0	0.0	37	16.5								
75-84	2	--	707	377.3	8	4.3	975	520.4	11	5.9	92	49.1	0	0.0	11	5.9								
85+	1	--	278	286.9	8	8.3	305	314.7	1	--	30	31.0	0	0.0	<7	--								
<b>Total**</b>	<b>17</b>	<b>0.3</b>	<b>27,403</b>	<b>425.7</b>	<b>366</b>	<b>5.7</b>	<b>76,002</b>	<b>1,180.7</b>	<b>80</b>	<b>1.2</b>	<b>4,551</b>	<b>70.7</b>	<b>7</b>	<b>0.1</b>	<b>8,675</b>	<b>134.8</b>								
<1	0	0.0	126	163.2	0	0.0	77	99.8	0	0.0	<7	5.2	0	0.0	<7	--								
1-14	2	--	6,070	547.2	4	--	3,853	347.3	6	0.5	770	69.4	1	--	3,673	331.1								
15-24	1	--	3,618	403.9	106	11.8	23,242	2,594.8	8	0.9	1,010	112.8	0	0.0	1,859	207.5								
25-44	0	0.0	7,469	409.9	99	5.4	29,946	1,643.5	13	0.7	1,346	73.9	3	--	1,780	97.7								
45-64	3	--	6,757	402.9	88	5.2	14,499	864.6	32	1.9	973	58.0	1	--	1,196	71.3								
65-74	1	--	1,709	417.2	25	6.1	2,249	549.0	5	1.2	213	52.0	2	--	113	27.6								
75-84	8	2.6	1,251	404.5	24	7.8	1,618	523.2	15	4.9	176	56.9	0	0.0	44	14.2								
85+	2	--	403	294.1	20	14.6	518	378.0	1	--	58	42.3	0	0.0	9	6.6								

\* Represents crude rates per 100,000 residents. Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than 5.

\*\*Totals include cases for which sex and/or age was missing.

<sup>1</sup> Motor vehicle occupant includes drivers and passengers of motorcycles and other motor vehicles. Unspecified persons are assumed to be occupants in most cases and are also included in this category. <sup>2</sup> This category includes persons injured in traffic including by motor vehicles, as well as non-traffic incidents.

**Table 28. Total Number and Rate of Injury Deaths and Acute Care Hospital Cases Associated with Nonfatal Injury by Sex and Age Groups for Selected Causes, MA Residents, 2006, (continued)**

	Struck by/against						Fire / Burn						Machinery						Suffocation					
	Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries		Injury Deaths		Nonfatal Injuries					
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*				
<b>Males</b>	<b>19</b>	<b>0.6</b>	<b>77,027</b>	<b>2,471.0</b>	<b>19</b>	<b>0.6</b>	<b>5,763</b>	<b>184.9</b>	<b>5</b>	<b>0.2</b>	<b>3,655</b>	<b>117.3</b>	<b>200</b>	<b>6.4</b>	<b>670</b>	<b>21.5</b>								
<1	1	--	303	774.9	0	0.0	110	281.3	0	0.0	<7	--	4	--	46	117.6								
1-14	2	--	20,863	3,677.5	0	0.0	933	164.5	0	0.0	63	11.1	5	0.9	137	24.1								
15-24	1	--	23,268	5,180.2	1	--	1,160	258.3	0	0.0	589	131.1	21	4.7	50	11.1								
25-44	9	1.0	21,501	2,380.7	3	--	2,100	232.5	2	--	1,563	173.1	61	6.8	123	13.6								
45-64	3	--	9,110	1,123.7	7	0.9	1,199	147.9	1	--	1,133	139.8	58	7.2	120	14.8								
65-74	3	--	1,033	556.0	4	--	122	65.7	1	--	187	100.6	17	9.1	74	39.8								
75-84	0	0.0	690	566.1	0	0.0	112	91.9	1	--	102	83.7	16	13.1	74	60.7								
85+	0	0.0	259	645.8	4	--	27	67.3	0	0.0	17	42.4	18	44.9	46	114.7								
<b>Females</b>	<b>8</b>	<b>0.2</b>	<b>39,480</b>	<b>1,189.2</b>	<b>15</b>	<b>0.5</b>	<b>5,001</b>	<b>150.6</b>	<b>0</b>	<b>0.0</b>	<b>587</b>	<b>17.7</b>	<b>85</b>	<b>2.6</b>	<b>518</b>	<b>15.6</b>								
<1	1	--	230	604.0	0	0.0	87	228.5	0	0.0	<7	--	2	--	34	89.3								
1-14	0	0.0	10,271	1,895.1	1	--	710	131.0	0	0.0	31	5.7	1	--	113	20.9								
15-24	1	--	9,271	2,076.2	2	--	1,021	228.6	0	0.0	138	30.9	7	1.6	38	8.5								
25-44	3	--	10,713	1,165.8	3	--	1,666	181.3	0	0.0	220	23.9	19	2.1	59	6.4								
45-64	1	--	6,057	699.2	4	--	1,115	128.7	0	0.0	169	19.5	15	1.7	79	9.1								
65-74	0	0.0	1,026	458.3	2	--	165	73.7	0	0.0	17	7.6	7	3.1	50	22.3								
75-84	2	--	1,184	631.9	3	--	164	87.5	0	0.0	8	4.3	14	7.5	85	45.4								
85+	0	0.0	728	751.2	0	0.0	73	75.3	0	0.0	<7	--	20	20.6	60	61.9								
<b>Total**</b>	<b>27</b>	<b>0.4</b>	<b>116,512</b>	<b>1,810.0</b>	<b>34</b>	<b>0.5</b>	<b>10,765</b>	<b>167.2</b>	<b>5</b>	<b>0.1</b>	<b>4,242</b>	<b>65.9</b>	<b>285</b>	<b>4.4</b>	<b>1,188</b>	<b>18.5</b>								
<1	2	--	533	690.6	0	0.0	197	255.2	0	0.0	<7	--	6	7.8	80	103.6								
1-14	2	--	31,134	2,806.7	1	--	1,643	148.1	0	0.0	94	8.5	6	0.5	250	22.5								
15-24	2	--	32,540	3,632.9	3	--	2,181	243.5	0	0.0	727	81.2	28	3.1	88	9.8								
25-44	12	0.7	32,216	1,768.1	6	0.3	3,767	206.7	2	--	1,783	97.9	80	4.4	182	10.0								
45-64	4	--	15,169	904.6	11	0.7	2,314	138.0	1	--	1,302	77.6	73	4.4	199	11.9								
65-74	3	--	2,059	502.6	6	1.5	287	70.1	1	--	204	49.8	24	5.9	124	30.3								
75-84	2	--	1,874	606.0	3	--	276	89.2	1	--	110	35.6	30	9.7	159	51.4								
85+	0	0.0	987	720.3	4	--	100	73.0	0	0.0	20	14.6	38	27.7	106	77.4								

<sup>1</sup> Represents crude rates per 100,000 residents. Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than 5.  
**\*\*Totals include cases for which sex and/or age was missing.**

**Table 29. Charges for Nonfatal Injury-related Inpatient Hospital Discharges, MA Residents, 2006**

<b>Intent and Cause</b>	<b>Cases with Charges</b>	<b>Mean Charge</b>	<b>Total Charges</b>
<b>UNINTENTIONAL</b>			
Fall	26,530	\$20,062	\$532,250,702
Motor Vehicle Traffic	4217	\$38,912	\$164,092,473
Occupant	2829	\$36,994	\$104,655,067
Motorcyclist	507	\$46,731	\$23,692,725
Pedal cyclist	112	\$35,608	\$3,988,068
Pedestrian	626	\$45,791	\$28,665,252
Other person	13	\$21,775	\$283,079
Unspecified Person	130	\$21,602	\$2,808,282
Poisoning	2365	\$14,536	\$34,378,043
Struck by/against	1184	\$16,907	\$20,017,678
Overexertion	1038	\$14,528	\$15,080,232
Natural / environmental	1050	\$10,998	\$11,548,206
Dog bite	146	\$8,852	\$1,292,443
Other bite or sting	523	\$8,458	\$4,423,447
All other	381	\$15,308	\$5,832,316
Cut / pierce	628	\$13,630	\$8,559,658
Other transport	529	\$28,032	\$14,829,155
Fire / burn	496	\$36,258	\$17,983,723
Fire/flame	197	\$41,672	\$8,209,396
Hot object / substance burn	299	\$32,690	\$9,774,327
Pedal cyclist, other	378	\$18,195	\$6,877,674
Suffocation / hanging	444	\$32,761	\$14,545,806
Machinery	224	\$29,364	\$6,577,532
Pedestrian, other	57	\$37,191	\$2,119,915
Firearms	39	\$38,840	\$1,514,761
Near drowning / submersion	27	\$34,378	\$928,207
Other specified & classifiable	2500	\$23,583	\$58,957,022
Human bite	39	\$13,562	\$528,927
Non-powder gun	14	\$12,537	\$175,517
Other	2447	\$23,806	\$58,252,578
Other specified, not classifiable	918	\$18,394	\$16,885,661
Unspecified	2989	\$19,544	\$58,415,646
<b>SELF-INFLICTED</b>			
Poisoning	3075	\$12,593	\$38,723,452
Cut / pierce	632	\$12,617	\$7,973,644
Suffocation / hanging	28	\$16,634	\$465,759
Fire / burn	30	\$14,067	\$422,022
Fire/flame	28	\$14,148	\$396,136
Hot object / substance burn	2	\$12,943	\$25,886
Fall	22	\$61,001	\$1,342,032
Motor Vehicle Traffic	5	\$13,813	\$69,067
Firearm	5	\$75,557	\$377,784
Near drowning / submersion	1	\$3,053	\$3,053
Other specified & classifiable	7	\$145,180	\$1,016,259
Other specified, not classifiable	117	\$17,429	\$2,039,208
Unspecified	27	\$12,542	\$338,640

**Table 29. Charges for Nonfatal Injury-related Inpatient Hospital Discharges, MA Residents, 2006** (continued)

<b>Intent and Cause</b>	<b>Cases with Charges</b>	<b>Mean Charge</b>	<b>Total Charges</b>
<b>ASSAULT</b>			
Struck by / against	635	\$23,326	\$14,811,710
Cut / pierce	443	\$26,661	\$11,810,858
Firearm	322	\$54,953	\$17,694,848
Motor Vehicle Traffic	7	\$17,853	\$124,971
Fall	4	\$33,727	\$134,906
Fire / burn	12	\$30,481	\$365,776
Fire/flame	7	\$17,145	\$120,016
Hot object / substance burn	5	\$49,152	\$245,760
Poisoning	1	\$2,534	\$2,534
Other specified & classifiable	141	\$16,180	\$2,281,323
Human bite	45	\$10,711	\$481,993
Non-powder gun	3	\$13,593	\$40,779
Other	93	\$18,909	\$1,758,551
Other specified, not classifiable	196	\$21,899	\$4,292,266
Unspecified	151	\$20,154	\$3,043,216
<b>UNDETERMINED</b>			
Poisoning	565	\$14,330	\$8,096,477
Firearm	16	\$21,971	\$351,532
Fall	13	\$47,128	\$612,662
Cut / pierce	16	\$12,247	\$195,946
Fire / burn	6	\$7,829	\$46,973
Fire/flame	4	\$5,713	\$22,850
Hot object / substance burn	2	\$12,062	\$24,123
Near drowning / submersion	1	\$39,464	\$39,464
Natural / environmental	2	\$13,816	\$27,631
Other specified & classifiable	2	\$9,786	\$19,571
Other specified, not classifiable	138	\$16,851	\$2,325,446
Unspecified	37	\$13,084	\$484,121
<b>OTHER /LEGAL</b>			
Struck by / against	17	\$16,283	\$276,819
Firearm	7	\$103,631	\$725,420
Cut / pierce	1	\$4,482	\$4,482
Other specified & classifiable	1	\$42,561	\$42,561
Other specified, not classifiable	25	\$29,423	\$735,565
Unspecified	5	\$15,234	\$76,170
<b>TOTALS BY INTENT OF INJURY</b>			
UNINTENTIONAL	45,615	\$21,608	\$985,628,092
SELF-INFLICTED	3,949	\$13,363	\$52,770,920
ASSAULT	1,912	\$28,537	\$54,562,408
UNDETERMINED	796	\$15,326	\$12,199,823
OTHER /LEGAL	56	\$33,232	\$1,861,017
ADVERSE EFFECTS	2,594	\$29,992	\$77,798,708
CAUSE / INTENT NOT PROVIDED	2,396	\$39,719	\$95,166,075
<i>Injury cases with no charges listed</i>	21	<i>n/a</i>	<i>n/a</i>
<b>TOTAL (cases with charges)</b>	<b>57,318</b>	<b>\$22,331</b>	<b>\$1,279,987,043</b>

**Table 30. Length of Stay (in Days) for Nonfatal Injury-related Inpatient Hospital Discharges, MA Residents, 2006**

<b>Intent and Cause</b>	<b>Number</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
<b>UNINTENTIONAL</b>					
Fall	26,541	5.1	4.0	1	172
Motor Vehicle Traffic	4218	5.9	3.0	1	142
Occupant	2830	5.4	3.0	1	142
Motorcyclist	507	7.0	4.0	1	84
Pedal cyclist	112	5.2	3.0	1	41
Pedestrian	626	7.4	4.0	1	97
Other person	13	5.1	3.0	1	16
Unspecified Person	130	4.0	2.0	1	31
Poisoning	2366	3.8	2.0	1	98
Struck by/against	1184	4.1	3.0	1	63
Overexertion	1038	3.8	3.0	1	136
Natural / environmental	1051	3.8	3.0	1	59
Dog bite	146	2.8	2.0	1	19
Other bite or sting	524	3.1	2.0	1	35
All other	381	5.1	3.0	1	59
Cut / pierce	628	3.6	2.0	1	52
Other transport	529	4.5	3.0	1	39
Fire / burn	496	7.1	4.0	1	126
Fire/flare	197	7.2	4.0	1	98
Hot object / substance burn	299	7.0	4.0	1	126
Pedal cyclist, other	378	3.1	2.0	1	29
Suffocation / hanging	444	8.3	5.0	1	77
Machinery	224	4.1	2.0	1	29
Pedestrian, other	57	5.7	3.0	1	27
Firearms	39	6.1	3.0	1	37
Near drowning / submersion	27	5.0	2.0	1	30
Other specified & classifiable	2500	6.6	4.0	1	351
Human bite	39	5.2	3.0	1	29
Non-powder gun	14	2.5	1.5	1	6
Other	2447	6.6	4.0	1	351
Other specified, not classifiable	920	5.5	4.0	1	71
Unspecified	2990	6.2	4.0	1	195
<b>SELF-INFLICTED</b>					
Poisoning	3075	3.8	2.0	1	119
Cut / pierce	632	6.4	4.0	1	98
Suffocation / hanging	28	1.8	1.0	1	4
Fire / burn	30	8.7	7.0	1	30
Fire/flare	28	8.8	7.0	1	30
Hot object / substance burn	2	7.5	7.5	3	12
Fall	22	10.6	6.0	2	60
Motor Vehicle Traffic	5	1.8	1.0	1	4
Firearm	5	18.6	6.0	2	68
Near drowning / submersion	1	1.0	1.0	1	1
Other specified & classifiable	7	23.4	14.0	1	97
Other specified, not classifiable	117	7.9	4.0	1	67
Unspecified	27	6.5	5.0	1	25

**Table 30. Length of Stay (in Days) for Nonfatal Injury-related Inpatient Hospital Discharges, MA Residents, 2006** (continued)

<b>Intent and Cause</b>	<b>Number</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>
<b>ASSAULT</b>					
Struck by / against	635	4.3	2.0	1	137
Cut / pierce	443	3.7	2.0	1	65
Firearm	323	8.7	4.0	1	76
Motor Vehicle Traffic	7	3.6	3.0	2	6
Fall	4	6.0	4.0	2	14
Fire / burn	12	10.9	4.5	2	54
Fire/flame	7	5.0	4.0	2	12
Hot object / substance burn	5	19.2	7.0	2	54
Poisoning	1	2.0	2.0	2	2
Other specified & classifiable	141	6.6	3.0	1	108
Human bite	45	4.2	3.0	1	20
Non-powder gun	3	1.3	1.0	1	2
Other	93	7.9	4.0	1	108
Other specified, not classifiable	196	5.4	3.0	1	65
Unspecified	151	4.4	3.0	1	33
<b>UNDETERMINED</b>					
Poisoning	565	3.9	2.0	1	34
Firearm	16	3.8	3.5	1	8
Fall	13	8.3	5.0	2	23
Cut / pierce	16	4.3	2.0	1	20
Fire / burn	6	4.3	4.5	2	6
Fire/flame	4	3.5	3.5	2	5
Hot object / substance burn	2	6.0	6.0	6	6
Near drowning / submersion	1	2.0	2.0	2	2
Natural / environmental	2	7.0	7.0	1	13
Other specified & classifiable	2	1.5	1.5	1	2
Other specified, not classifiable	138	8.1	4.0	1	82
Unspecified	37	5.3	4.0	1	33
<b>OTHER /LEGAL</b>					
Struck by / against	17	10.8	4.0	1	92
Firearm	7	18.0	10.0	4	55
Cut / pierce	1	1.0	1.0	1	1
Other specified & classifiable	1	21.0	21.0	21	21
Other specified, not classifiable	25	7.8	5.0	1	38
Unspecified	5	7.2	4.0	2	22
<b>TOTALS BY INTENT OF INJURY</b>					
UNINTENTIONAL	45,632	5.2	4.0	1	351
SELF-INFLICTED	3,949	4.5	3.0	1	119
ASSAULT	1,913	5.2	3.0	1	137
UNDETERMINED	796	4.7	3.0	1	82
OTHER /LEGAL	56	10.1	5.0	1	92
ADVERSE EFFECTS	2,596	7.8	5.0	1	38
CAUSE / INTENT NOT PROVIDED	2,397	8.3	5.0	1	153
<b>TOTAL</b>	<b>57,339</b>	<b>5.4</b>	<b>4.0</b>	<b>1</b>	<b>351</b>

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# **APPENDIX C. Trend Data**

**Table 31. Total Number and Rate of Injury Deaths and Injury-related Acute Care Hospital Cases Due to Unintentional Motor Vehicle Traffic<sup>1</sup> Injuries, MA Residents, 2000-2006**

	2000		2001		2002		2003		2004		2005		2006	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
<b>Deaths</b>														
<1 year	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1-14 years	16	1.4	19	1.6	5	0.4	17	1.5	19	1.7	10	0.9	11	1.0
15-24 years	116	14.1	124	14.8	127	14.9	125	14.5	128	14.6	111	12.5	112	12.5
25-44 years	133	6.7	171	8.7	168	8.6	146	7.6	146	7.7	119	6.4	112	6.1
45-64 years	107	7.5	104	7.1	107	7.0	95	6.1	119	7.4	113	6.9	117	7.0
65-74 years	37	8.7	36	8.5	40	9.6	42	10.2	24	5.9	38	9.3	32	7.8
75-84 years	52	16.4	62	19.5	59	18.5	62	19.5	46	14.5	34	10.8	39	12.6
85+ years	12	10.2	19	15.7	16	13.0	19	15.0	26	20.1	21	15.7	21	15.3
Total	473	7.4	535	8.4	522	8.1	506	7.9	508	7.9	446	6.9	444	6.9
<b>Nonfatal Hospital Stays</b>														
<1 year	<7	--	<7	--	<7	--	8	10.1	7	8.9	10	12.9	<7	--
1-14 years	237	20.1	294	25.0	322	27.5	301	26.0	316	27.6	241	21.4	246	22.2
15-24 years	1,216	147.6	1,286	153.3	1,482	174.1	1,360	157.7	1,459	166.8	1,363	153.7	1,318	147.1
25-44 years	1,726	86.8	1,667	84.4	1,765	90.3	1,709	88.9	1,672	88.7	1,624	87.8	1,497	82.2
45-64 years	938	65.6	1,062	72.1	1,107	72.9	1,073	68.8	1,136	71.0	1,225	74.7	1,197	71.4
65-74 years	386	90.5	375	89.0	357	85.8	341	82.6	338	82.4	348	85.1	329	80.3
75-84 years	444	140.2	378	118.9	458	143.3	408	128.2	419	132.3	375	119.4	394	127.4
85+ years	132	112.1	112	92.8	165	134.2	154	121.3	138	106.8	152	114.0	150	109.5
Total**	5,181	81.4	5,177	80.8	5,662	88.0	5,354	83.1	5,486	85.2	5,338	83.0	5,134	79.8
<b>Nonfatal ED Visits</b>														
<1 year					67	83.8	79	99.5	78	99.3	84	108.0	78	101.1
1-14 years					6,519	557.1	6,288	543.0	5,514	482.4	5,048	449.0	4,571	412.1
15-24 years					32,167	3779.6	32,147	3728.1	29,060	3322.0	25,900	2920.2	23,266	2597.5
25-44 years					41,544	2126.6	41,814	2175.0	37,295	1979.5	33,675	1821.3	30,113	1652.6
45-64 years					15,757	1038.2	16,669	1069.1	15,547	972.0	14,973	913.5	14,392	858.2
65-74 years					2,396	575.7	2,496	604.4	2,438	594.4	2,211	540.7	2,139	522.1
75-84 years					1,749	547.4	1,758	552.3	1,681	530.7	1,435	457.0	1,390	449.5
85+ years					413	335.8	354	278.7	395	305.7	351	263.2	424	309.4
Total**					100,613	1564.4	101,608	1577.9	92,010	1429.6	83,677	1300.7	76,374	1186.4

\*Rates are age-specific (i.e., number of cases per 100,000 persons per age group). Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than five. \*\*Total includes cases for which age or sex was missing. <sup>1</sup>Includes any injury or death involving a motor vehicle including motorcycles (includes drivers, passengers, unspecified or other persons, pedestrians, and pedal cyclists). Please note that this table was recalculated in 2006 to reflect the exclusion of two hospitals with coding inconsistencies. Years 2003-2005 may be different than those included in previous reports.

**Table 32. Total Number and Rate of Injury Deaths and Injury-related Acute Care Hospital Cases Due to Unintentional Fall-related Injuries, MA Residents, 2000-2006**

Deaths	2000		2001		2002		2003		2004		2005		2006	
	Number	Rate*												
<1 year	0	0.0	1	--	1	--	0	--	1	--	0	0.0	0	0.0
1-14 years	1	--	2	--	3	--	2	--	3	--	1	--	1	--
15-24 years	3	--	2	--	5	0.6	4	--	3	--	7	0.8	5	0.6
25-44 years	12	0.6	17	0.9	14	0.7	19	1.0	15	0.8	10	0.5	12	0.7
45-64 years	30	2.1	35	2.4	37	2.4	35	2.2	50	3.1	43	2.6	48	2.9
65-74 years	28	6.6	34	8.1	28	6.7	19	4.6	33	8.0	27	6.6	56	13.7
75-84 years	60	18.9	77	24.2	65	20.3	72	22.6	80	25.3	84	26.8	115	37.2
85+ years	66	56.0	72	59.6	69	56.1	97	76.4	87	67.3	95	71.2	169	123.3
Total	200	3.1	240	3.7	222	3.5	248	3.9	272	4.2	267	4.2	406	6.3
<b>Nonfatal Hospital Stays</b>	<b>Number</b>	<b>Rate*</b>												
<1 year	126	159.9	157	193.5	149	186.4	152	191.4	170	216.3	190	244.3	167	216.4
1-14 years	1,227	103.9	1,269	107.9	1,207	103.1	1,248	107.8	1,182	103.4	1,110	98.7	1,088	98.1
15-24 years	647	78.5	753	89.7	699	82.1	728	84.4	700	80.0	682	76.9	673	75.1
25-44 years	2,344	117.9	2,456	124.3	2,075	106.2	2,473	128.6	2,268	120.4	2,179	117.8	2,125	116.6
45-64 years	3,740	261.5	4,081	276.9	3,855	254.0	4,753	304.8	4,720	295.1	5,025	306.6	5,051	301.2
65-74 years	3,426	802.9	3,527	836.6	3,399	816.7	3,547	858.9	3,529	860.4	3,571	873.3	3,579	873.6
75-84 years	7,518	2,373.8	7,475	2,351.6	7,453	2,332.5	7,918	2,487.6	7,983	2,520.5	7,944	2,530.0	8,286	2,679.3
85+ years	7,430	6,308.1	7,142	5,916.6	7,202	5,856.4	7,691	6,055.5	7,828	6,059.2	7,836	5,875.0	8,344	6,089.5
Total**	26,458	415.8	26,860	419.2	26,040	404.9	28,510	442.7	28,380	441.0	28,537	443.6	29,313	455.4
<b>Nonfatal ED Visits</b>	<b>Number</b>	<b>Rate*</b>												
<1 year														
1-14 years					2,291	2,865.9	2,298	2,893.2	2,353	2,994.2	2,295	2,950.4	2,480	3,213.1
15-24 years					46,173	3,945.5	44,825	3,871.0	42,008	3,674.9	40,099	3,566.3	41,667	3,756.2
25-44 years					20,045	2,355.3	21,125	2,449.9	19,410	2,218.9	19,439	2,191.8	19,961	2,228.5
45-64 years					39,320	2,012.8	43,044	2,239.0	38,691	2,053.6	38,144	2,063.0	37,550	2,060.8
65-74 years					29,605	1,950.6	35,025	2,246.4	34,045	2,128.6	34,676	2,115.7	35,924	2,142.2
75-84 years					10,372	2,492.1	11,334	2,744.5	11,003	2,682.7	10,656	2,605.8	10,787	2,633.0
85+ years					14,526	4,546.0	14,821	4,656.3	14,843	4,686.4	14,442	4,599.5	14,911	4,821.5
Total**					10,145	8,249.6	10,142	7,985.3	10,437	8,078.6	10,530	7,894.8	11,053	8,066.6
					172,477	2,681.9	182,619	2,835.9	172,792	2,684.8	170,282	2,646.9	174,336	2,708.3

\*Rates are age-specific (i.e., number of cases per 100,000 persons per age group). Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than five. \*\*Total includes cases for which age or sex was missing. Please note that this table was recalculated in 2006 to reflect the exclusion of two hospitals with coding inconsistencies. Years 2003-2005 may be different than those included in previous reports.

**Table 33. Total Number and Rate of Injury Deaths and Injury-related Acute Care Hospital Cases Due to Unintentional and Undetermined Poisonings, MA Residents, 2000-2006**

	2000		2001		2002		2003		2004		2005		2006	
	Number	Rate*												
<b>Deaths</b>														
<1 year	0	--	0	0.0	1	--	2	--	0	--	1	--	0	0.0
1-14 years	0	--	1	--	0	0.0	0	0.0	3	--	2	--	1	--
15-24 years	53	6.4	56	6.7	53	6.2	90	10.4	75	8.6	66	7.4	63	7.0
25-44 years	292	14.7	391	19.8	352	18.0	441	22.9	359	19.1	368	19.9	422	23.2
45-64 years	121	8.5	155	10.5	177	11.7	193	12.4	192	12.0	243	14.8	370	22.1
65-74 years	9	2.1	6	1.4	6	1.4	10	2.4	3	--	5	1.2	7	1.7
75-84 years	8	2.5	4	--	10	3.1	7	2.2	4	--	8	2.5	11	3.6
85+ years	2	1.7	7	5.8	3	--	6	4.7	3	--	2	--	1	--
Total	485	7.6	620	9.7	602	9.4	749	11.6	639	9.9	695	10.8	875	13.6
<b>Nonfatal Hospital Stays</b>														
<1 year	11	14.0	20	24.7	15	18.8	20	25.2	14	17.8	24	30.9	25	32.4
1-14 years	325	27.5	282	24.0	267	22.8	204	17.6	232	20.3	222	19.7	211	19.0
15-24 years	396	48.1	401	47.8	421	49.5	425	49.3	427	48.8	417	47.0	442	49.3
25-44 years	948	47.7	930	47.1	1,002	51.3	1,129	58.7	1,124	59.7	1,166	63.1	1,129	62.0
45-64 years	531	37.1	616	41.8	765	50.4	816	52.3	1,037	64.8	1,136	69.3	1,098	65.5
65-74 years	182	42.7	183	43.4	180	43.2	207	50.1	215	52.4	267	65.3	288	70.3
75-84 years	202	63.8	215	67.6	246	77.0	210	66.0	278	87.8	250	79.6	307	99.3
85+ years	84	71.3	80	66.3	96	78.1	110	86.6	116	89.8	124	93.0	157	114.6
Total**	2,679	42.1	2,727	42.6	2,992	46.5	3,121	48.5	3,443	53.5	3,606	56.1	3,657	56.8
<b>Nonfatal ED Visits</b>														
<1 year														
1-14 years					97	121.3	117	147.3	132	168.0	103	132.4	142	184.0
15-24 years					1,764	150.7	1,674	144.6	1,693	148.1	1,639	145.8	1,694	152.7
25-44 years					1,924	226.1	1,937	224.6	1,923	219.8	1,954	220.3	2,056	229.5
45-64 years					3,287	168.3	3,460	180.0	3,291	174.7	3,168	171.3	3,425	188.0
65-74 years					1,462	96.3	1,606	103.0	1,770	110.7	1,895	115.6	2,022	120.6
75-84 years					211	50.7	200	48.4	228	55.6	227	55.5	266	64.9
85+ years					167	52.3	131	41.2	171	54.0	189	60.2	229	74.0
Total**					58	47.2	70	55.1	66	51.1	102	76.5	96	70.1
					8,970	139.5	9,195	142.8	9,274	144.1	9,277	144.2	9,930	154.3

\*Rates are age-specific (i.e., number of cases per 100,000 persons per age group). Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than five. \*\*Total includes cases for which age or sex was missing. Please note that this table was recalculated in 2006 to reflect the exclusion of two hospitals with coding inconsistencies. Years 2003-2005 may be different than those included in previous reports.



**Table 35. Total Number and Rate of Injury Deaths and Injury-related Acute Care Hospital Cases Due to Suicide and Self-Inflicted Injury, MA Residents, 2000-2006**

	2000		2001		2002		2003		2004		2005		2006	
	Number	Rate*												
<b>Deaths</b>														
<1 year	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1-14 years	3	--	4	--	0	0.0	5	0.4	3	--	2	--	2	--
15-19 years	21	5.0	19	4.5	14	3.3	21	4.8	19	4.3	18	4.1	11	2.5
20-24 years	32	7.9	33	8.0	39	9.3	25	5.8	32	7.3	36	8.1	32	7.1
25-44 years	178	9.0	171	8.7	173	8.9	177	9.2	165	8.8	181	9.8	158	8.7
45-64 years	123	8.6	133	9.0	136	9.0	135	8.7	141	8.8	158	9.6	189	11.3
65-74 years	18	4.2	27	6.4	28	6.7	28	6.8	29	7.1	34	8.3	23	5.6
75-84 years	20	6.3	24	7.6	26	8.1	20	6.3	26	8.2	28	8.9	15	4.9
85+ years	6	5.1	9	7.5	9	7.3	12	9.4	14	10.8	12	9.0	7	5.1
Total	401	6.3	420	6.6	425	6.6	423	6.6	429	6.7	469	7.3	437	6.8
<b>Nonfatal Hospital Stays</b>														
<1 year	0	0.0	0	0.0	<7	--	0	0.0	0	0.0	0	0.0	0	0.0
1-14 years	139	11.8	119	10.1	104	8.9	131	11.3	130	11.4	110	9.8	68	6.1
15-19 years	609	146.1	586	138.1	551	128.3	569	131.1	465	106.1	513	115.6	514	115.0
20-24 years	530	130.2	480	115.7	504	119.6	518	120.9	538	123.3	488	110.1	523	116.5
25-44 years	2,124	106.8	2,067	104.6	1,987	101.7	2,100	109.2	2,035	108.0	2,000	108.2	2,051	112.6
45-64 years	774	54.1	787	53.4	825	54.4	908	58.2	973	60.8	1,065	65.0	1,140	68.0
65-74 years	92	21.6	70	16.6	70	16.8	79	19.1	60	14.6	80	19.6	88	21.5
75-84 years	48	15.2	55	17.3	40	12.5	52	16.3	45	14.2	74	23.6	48	15.5
85+ years	23	19.5	21	17.4	16	13.0	19	15.0	31	24.0	26	19.5	22	16.1
Total**	4,339	68.2	4,185	65.3	4,098	63.7	4,376	68.0	4,277	66.5	4,356	67.7	4,454	69.2
<b>Nonfatal ED Visits</b>														
<1 year					<7	--	<7	--	<7	--	<7	--	0	0.0
1-14 years					422	36.1	479	41.4	589	51.5	512	45.5	484	43.6
15-19 years					1,465	341.1	1,519	350.0	1,596	364.0	1,682	378.9	1,580	353.6
20-24 years					963	228.4	976	227.9	971	222.5	1,132	255.5	1,095	243.9
25-44 years					2,784	142.5	2,560	133.2	2,560	135.9	2,676	144.7	2,798	153.6
45-64 years					759	50.0	747	47.9	872	54.5	900	54.9	948	56.5
65-74 years					28	6.7	22	5.3	23	5.6	31	7.6	37	9.0
75-84 years					18	5.6	18	5.7	14	4.4	13	4.1	18	5.8
85+ years					<7	--	8	6.3	7	5.4	9	6.7	9	6.6
Total**					6,445	100.2	6,330	98.3	6,633	103.1	6,956	108.1	6,969	108.3

\*Rates are age-specific (i.e., number of cases per 100,000 persons per age group). Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than five. \*\*Total includes cases for which age or sex was missing. Please note that this table was recalculated in 2006 to reflect the exclusion of two hospitals with coding inconsistencies. Years 2003-2005 may be different than those included in previous reports.

**Table 36. Total Number and Rate of Injury Deaths and Injury-related Acute Care Hospital Cases Due to Homicide and Assault-related Injury, MA Residents, 2000-2006**

	2000		2001 <sup>1</sup>		2002		2003		2004		2005		2006	
	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*	Number	Rate*
<b>Deaths</b>														
<1 year	2	--	4	--	2	--	4	--	3	--	2	--	2	--
1-14 years	4	--	6	0.5	11	0.9	8	0.7	7	0.6	3	--	5	0.5
15-19 years	15	3.6	23	5.4	24	5.6	16	3.7	32	7.3	33	7.4	25	5.6
20-24 years	30	7.4	30	7.2	39	9.3	31	7.2	48	11.0	48	10.8	45	10.0
25-44 years	60	3.0	63	3.2	74	3.8	52	2.7	60	3.2	66	3.6	76	4.2
45-64 years	12	0.8	22	1.5	26	1.7	19	1.2	20	1.3	15	0.9	23	1.4
65-74 years	2	--	5	1.2	5	1.2	4	--	3	--	7	1.7	6	1.5
75-84 years	0	0.0	0	0.0	3	--	3	--	2	--	2	--	0	0.0
85+ years	0	0.0	0	0.0	1	--	2	--	0	0.0	1	--	1	--
Total	125	2.0	153	2.4	185	2.9	139	2.2	175	2.7	177	2.8	183	2.8
<b>Nonfatal Hospital Stays</b>														
<1 year	30	38.1	28	34.5	40	50.0	38	47.8	27	34.4	30	38.6	19	24.6
1-14 years	66	5.6	62	5.3	69	5.9	46	4.0	66	5.8	60	5.3	57	5.1
15-19 years	246	59.0	293	69.1	304	70.8	294	67.7	315	71.8	415	93.5	374	83.7
20-24 years	353	86.7	376	90.6	396	93.9	395	92.2	418	95.8	476	107.4	492	109.6
25-44 years	751	37.8	844	42.7	822	42.1	891	46.3	876	46.5	935	50.6	958	52.6
45-64 years	209	14.6	260	17.6	262	17.3	294	18.9	305	19.1	354	21.6	405	24.2
65-74 years	33	7.7	12	2.8	31	7.4	35	8.5	22	5.4	31	7.6	25	6.1
75-84 years	25	7.9	16	5.0	19	5.9	22	6.9	30	9.5	28	8.9	20	6.5
85+ years	10	8.5	10	8.3	19	15.5	10	7.9	8	6.2	<7	--	17	12.4
Total**	1,723	27.1	1,901	29.7	1,962	30.5	2,025	31.4	2,067	32.1	2,335	36.3	2,367	36.8
<b>Nonfatal ED Visits</b>														
<1 year														
1-14 years					17	21.3	30	37.8	19	24.2	16	20.6	24	31.1
15-19 years					1,633	139.5	1,590	137.3	1,506	131.7	1,411	125.5	1,488	134.1
20-24 years					4,394	1,023.0	4,486	1,033.6	4,267	973.3	4,156	936.3	4,464	999.1
25-44 years					5,137	1,218.6	4,994	1,166.1	5,047	1,156.7	4,815	1,086.8	5,139	1,144.8
45-64 years					10,748	550.2	10,520	547.2	10,023	532.0	9,897	535.3	10,051	551.6
65-74 years					2,760	181.8	2,775	178.0	2,810	175.7	2,819	172.0	3,141	187.3
75-84 years					153	36.8	155	37.5	127	31.0	141	34.5	110	26.9
85+ years					59	18.5	69	21.7	61	19.3	69	22.0	58	18.8
Total**					30	24.4	26	20.5	21	16.3	20	15.0	22	16.1
					24,931	387.7	24,645	382.7	23,881	371.1	23,344	362.9	24,497	380.6

\*Rates are age-specific (i.e., number of cases per 100,000 persons per age group). Rates based on counts less than 20 may be unstable and should be interpreted with caution. Rates are not calculated on counts less than five. \*\*Total includes cases for which age or sex was missing. <sup>1</sup> 2001 excludes 87 MA resident deaths resulting from the September 11, 2001 terrorist attacks. Please note that this table was recalculated in 2006 to reflect the exclusion of two hospitals with coding inconsistencies. Years 2003-2005 may be different from those included in previous reports.

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# **APPENDIX D. Technical Notes**

## Technical Notes

### Definitions:

Inpatient Hospital Discharges:	Individuals discharged from an acute care hospital.
Observation Stays:	Individuals discharged from an observation bed of an acute care hospital.
Hospital Stays:	Combines hospital discharges and observation bed stays into one category to assist in interpreting analysis.
ED Visits:	Individuals discharged from the emergency department of an acute care hospital.

### Injury Parameters:

Injuries are classified using multiple parameters. For example, an injury may be classified by a diagnosis (e.g., a fracture), or by the mechanism or external cause of the injury (e.g., a fall). Injuries are also classified by intent: unintentional ("accidents") or intentional (assaults/homicides or self-inflicted/suicides).

In this report injuries are classified by their external cause and intent according to the International Classification of Diseases (ICD) system. In 1999 a revised version, ICD-10, was implemented for classifying deaths. Certain injury categories may not be comparable between ICD-9 (the previous version) and ICD-10.

A modified version of the *Matrix of E-code Groupings for Presenting Injury Mortality and Morbidity Data*, developed by the Centers for Disease Control and Prevention, was used to group injury categories. This grouping of ICD-9 and ICD-10 external causes of injury codes can be found on pages 118 and 119.

### Data Sources and Inclusion Criteria:

#### Injury Deaths:

Source: Registry of Vital Records and Statistics, Mass. Dept. of Public Health.

An injury death is defined as any death with an ICD-10 code of V01-Y36, Y40-Y89, U01-U03 in the underlying cause field. This includes Adverse Effects of Medical Care and Drugs.

Massachusetts residents who died in or out-of-state are included in these analyses; out-of-state residents who died in Massachusetts are *not* included.

#### Injury-Related Hospitalizations:

Source: Massachusetts Inpatient Hospital Discharge Database, MA Division of Health Care Finance and Policy.

An injury-related hospital discharge case is defined as:

any case having an ICD9-CM Nature of Injury Code of: 800-908, 9090-9092, 9094, 9099, 910-994, 99550-99559, 99580-99585, assigned to any of the ICD9 diagnosis fields.

Injury-related hospital discharge cases transferred to another acute care hospital or subsequently dying in the hospital are excluded from these analyses.

Massachusetts residency is based on patient's ZIP code. Only cases having a valid Massachusetts ZIP code are included in these analyses.

#### Injury-Related Observation Stays:

Source: MA Outpatient Observation Bed Database, MA Division of Health Care Finance and Policy.

This database contains cases admitted to a hospital bed for observation. They are *not* included in the hospital discharge database.

An injury-related "observation" case is defined as:

any case having an ICD9-CM Nature of Injury Code of: 800-908, 9090-9092, 9094, 9099, 910-994, 99550-99559, 99580-99585, assigned to any of the ICD9 diagnosis fields.

Massachusetts residency is based on patient's ZIP code. Only cases having a valid Massachusetts ZIP code are included in these analyses.

Injury-related observation cases subsequently dying in the hospital are excluded from these analyses.

A general definition of Outpatient Observation services is defined for reporting purposes in the Case Mix Regulation 114.1 CMR 17.02 as:

*“Observation services are those furnished on a hospital’s premises which are reasonable and necessary to further evaluate a patient’s condition and provide treatment to determine the need for possible admission to the hospital. These services include the use of a bed and periodic monitoring by a hospital’s physician, nursing and other staff.”*

**Injury-Related Emergency Department Visits:**

Source: Massachusetts Emergency Department Discharge Database, MA Division of Health Care Finance and Policy.

This database contains individuals discharged from any acute care emergency department in Massachusetts. These cases are *not* included in the hospital discharge or observation bed stay databases.

An emergency department injury-related case is defined as:

any case having an ICD9-CM Nature of Injury Code of: 800-908, 9090-9092, 9094, 9099, 910-994, 99550-99559, 99580-99585, assigned to any of the ICD9 diagnosis fields.

Massachusetts residency is based on patient’s zip code. Only cases having a valid Massachusetts ZIP code are included in these analyses.

Injury-related emergency department cases subsequently dying in the hospital are excluded from these analyses.

**Population Source:**

National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2006, United States resident population from the Vintage 2006 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. August 16, 2006.

**Residency:**

Analyses for injury *deaths* include Massachusetts residents who died in or out-of-state. All other analyses include Massachusetts residents admitted and released from a Massachusetts acute care hospital or treated and discharged from an emergency department. Massachusetts residents treated at hospitals out of state are not included. Non-Massachusetts residents were excluded from *all* analyses presented in this report.

**External Cause (E-Code) Rates:**

Among hospital discharge data, 96% of cases for which there was an injury assigned to one of the diagnostic fields had an external cause code provided. Among observation bed stay data the percentage was 84.6% and among emergency department data, the percentage was 98.6%. Overall, external cause codes were assigned to 98.3% of all injury-related cases.

**Data Limitations and Exclusions:**

Limitations of Small Numbers: Cells in some tables contain small numbers. Rates and proportions based on fewer than five observations are suppressed, and trends based upon small numbers (<20) should be interpreted cautiously as rates can fluctuate greatly from year to year with even a small increase or decrease in the number of cases.

Exclusions: Due to data quality issues, the external cause of injury codes (E-Codes) for two hospitals, were excluded from all ED analysis. Total injury counts presented in this report include primary diagnostic codes for these hospitals, but associated diagnostic codes have been excluded.

**Rates:**

All rates reported are per 100,000 individuals.

**Crude Death Rate**

The crude death rate represents the “true” number of occurrences of a health event in a specified time and population per unit time. It is calculated as follows.

Formula:

$$\text{Crude Rate} = \frac{\text{\# of resident injury deaths (or injuries) in a year}}{\text{resident population for that year}} \times 100,000$$

**Age-Adjusted Rate**

A summary rate designed to minimize the distortions created by differences in age distribution when comparing rates for populations with different age compositions. Age-adjusted rates are useful when comparing death rates from different populations or in the same population over time. For example, if one wished to compare the 1998 death rates between Barnstable County (Cape Cod) and Hampshire County, the age-adjusted formula would account for the fact that 24% of the Barnstable County residents were 65 years of age or older, whereas only 11% of the Hampshire County residents were in this age group.

Age-adjusted rates are calculated by weighting the age-specific rates for a given year by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined.

**Age-Specific Rate**

A rate for a specified age group is calculated by dividing the actual number of cases in a given year for a specific age group by the population in that age group for that year. The numerator (number of cases) and the denominator (population) refer to the same age group.

Formula:

$$\text{Age-specific Rate (for ages 25-34)} = \frac{\text{\# of injury deaths (or injuries) among residents (ages 25-34) in a given year}}{\text{population of residents (ages 25-34) in that year}} \times 100,000$$

**YPLL** (Years of Potential Life Lost) was calculated by summing the difference between life expectancy and the age at death for each injury death. Maximum age for YPLL was adjusted to 75 years to exclude deaths beyond average life expectancy.

## Recommended Framework of E-code Groupings for Presenting Injury Morbidity Data\*

Mechanism/Cause	Manner/Intent				
	Unintentional	Self-inflicted	Assault	Undetermined	Other
Cut/pierce	E920.0-.9	E956	E966	E986	E974
Drowning/submersion	E830.0-.9, E832.0-.9 E910.0-.9	E954	E964	E984	
Fall	E880.0-E886.9, E888	E957.0-.9	E968.1	E987.0-.9	
Fire/burn: Fire/flare	E890.0-E899	E958.1	E968.0, E979.3	E988.1	
Fire/burn: Hot object/substance	E924.0-.9	E958.2,.7	E961, E968.3	E988.2,.7	
Firearm	E922.0-.3,.8,.9	E955.0-.4	E965.0-4, E979.4	E985.0-.4	E970
Machinery	E919 (.0-.9)				
Motor vehicle traffic	E810-E819 (.0-.9)	E958.5	E968.5	E988.5	
Occupant	E810-E819 (.0,.1)				
Motorcyclist	E810-E819 (.2,.3)				
Pedal cyclist	E810-E819 (.6)				
Pedestrian	E810-E819 (.7)				
Unspecified	E810-E819 (.9)				
Pedal cyclist, other	E800-E807 (.3) E820-E825 (.6), E826.1,.9 E827-E829(.1)				
Pedestrian, other	E800-807(.2) E820-E825(.7) E826-E829(.0)				
Transport, other	E800-E807 (.0,.1,.8,.9) E820-E825 (.0-.5,.8,.9) E826.2-8 E827-E829 (.2-.9), E831.0-.9, E833.0-E845.9	E958.6		E988.6	
Natural/environmental	E900.0-E909, E928.0-.2	E958.3		E988.3	
Dog bites	E906.0				
Overexertion	E927				
Poisoning	E850.0-E869.9	E950.0-E952.9	E962.0-.9	E980.0-E982.9	E972
Struck by, against	E916-E917.9		E960.0; E968.2		E973, E975
Suffocation	E911-E913.9	E953.0-.9	E963	E983.0-.9	
Other specified and classifiable	E846-E848, E914-E915, E918, E921(.0-.9), E922(.4, .5), E923(.0-.9), E925.0-E926.9, E928(.3-.5), E929(.0-.5)	E955(.5,.6,.7,.9), E958(.0,.4)	E960.1, E965(.5-.9), E967(.0-.9), E968(.4,.6,.7), E979(.0-.2), E979(.5-.9)	E985(.5,.6,.7), E988(.0,.4)	E971, E978, E990- E994, E996, E997(.0-.2)
Other specified, not elsewhere classifiable	E928.8, E929.8	E958.8, E959	E968.8, E969	E988.8, E989	E977, E995, E997.8, E998, E999
Unspecified	E887, E928.9, E929.9	E958.9	E968.9	E988.9	E976, E997.9
Adverse effects: Medical care					E870-E879
Adverse effects: Drugs					E930.0-E949.9
All injury by Intent	E800-E869, E880-E929	E950-E959	E960-E969, E979	E980-E989	E970-E978, E990-E999
All external causes	E800-E999				

\*Modified version of the CDC Recommended E-Code Groupings for Presenting Injury Morbidity, National center for Injury Prevention and Control, Centers for Disease Control and Prevention.

## Recommended Framework of E-Code Groupings for Presenting Injury Mortality Data\*

Mechanism/Cause	Manner/Intent				
	Unintentional	Self-inflicted	Assault	Undetermined	Other
Cut/pierce	W25-W29, W45	X78	X99	Y28	Y35.4
Drowning/submersion	W65-W74	X71	X92	X21	
Fall	W00-W19	X80	Y01	Y30	
Fire/burn: Fire/flame	X00-X09	X76	X97, U01.3	Y26	
Fire/burn: Hot object/substance	X10-X19	X77	X98	Y27	Y36.3
Firearm	W32-W34	X72-X74	X93-X95, U01.4	Y22-Y24	Y35.0
Machinery	W24, W30-W31				
Motor vehicle traffic:					
Occupant	V30-V79 (.4-.9), V83-V86 (0-.3)				
Motorcyclist	V20-V28 (.3-.9), V29 (.4-.9)				
Pedal cyclist	V12-V14 (.3-.9), V19 (.4-.6)				
Pedestrian	V02-V04 (.1, .9), V09.2				
Other	V80 (.3-.5), V81.1, V82.1				
Unspecified	V87 (0-.8), V89.2				
Pedal cyclist, other	V10-V11, V12-V14 (0-.2), V15-V18, V19 (0-.3, .8, .9)				
Pedestrian, other	V01, V02-V04 (0), V05, V06, V09 (0, .1, .3, .9)				
Land Transport, other	V20-V28 (0-.2), V29 (0-.3), V30-V79 (0-.3), V80 (0-.2, .6-.9), V81-V82 (0, .2-.9), V83-V86 (.4-.9), V87.9, V88 (0-.9), V89 (0, .1, .3, .9)	X82	Y03	Y32	
Transport, other	V90-V99		U01.1		Y36.1
Natural/environmental	W42-W43, W53-W64, W92-W99, X20-X39, X51-X57				
Overexertion	X50				
Poisoning	X40-X49	X60-X69	X85-X90, U01(.6, .7)	Y10-Y19	Y35.2
Struck by, against	W20-W22, W50-W52	X79	Y00, Y04	Y29	Y35.3
Suffocation	W75-W84	X70	X91	Y20	
Other specified and classifiable	W23, W35-W41, W44, W49, W85-W91, Y85	X75, X81, U03.0	X96, Y02, Y05-Y07, U01 (0, .2, .5)	Y25-Y31	Y35 (.1, .5), Y36 (0, .2, .4-.8)
Other specified, not elsewhere classifiable	X58, Y86	X83, Y87.0	Y08, Y87.1, U01.8, U02	Y33, Y87.2	Y35.6, Y89 (0, .1)
Unspecified	X59	X84, U03.9	Y09, U01.9	Y34, Y89.9	Y35.7, Y36.9
Adverse effects: Medical care					Y40-Y59, Y88.0
Adverse effects: Drugs					Y60-Y84, Y88 (1-.3)
All injury by Intent	V01-X59, Y85-Y86	X60-X84, Y87.0, U03	X85-Y09, Y87.1, U01, U02	Y10-Y34, Y87.2, Y89.9	Y35-Y36, Y89.0, Y89.1
All external causes	V01-Y36, Y85-Y87, Y89, U01-U03				

\*CDC Recommended E-Code Groupings for Presenting Injury Mortality, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

## Interpretation of Selected E Codes

The following list provides sample scenarios to assist with the interpretation of selected ICD9 External Cause of Injury codes. This is *not* a comprehensive listing.

<i>Injury Cause</i>	<b>Intent</b>	<b>ICD-9 E Codes</b>	<b>Sample</b>
Fall	Assault-Related	E968.1	Pushed down a flight of stairs.
	Self-Inflicted	E957.0-E957.9	Jumped off building with intent to harm self
	Unintentional	E880.0-E886.9 E888	Fell from bed. Tripped down stairs. Slipped on ice. Fell during football game.
Fire/Burn	Assault-Related	E961, E968.0, E968.3	Purposely burned by boiling water thrown by another person.
	Self-Inflicted	E958.1, E958.2, 958.7	Purposely burned oneself with cigarette.
	Unintentional	E890.0-E899 E924.0-E924.9	Spilled hot coffee. Burned on stove. Burned in bath water that was too hot.
Motor Vehicle Traffic -Motorcycle	Unintentional	E810-E819(.2, .3)	Rider injured in crash with truck. Motorcycle slid on gravel.
Motor Vehicle Traffic -Occupant	Self-Inflicted	E958.5	Driver purposely ran into telephone pole.
Motor Vehicle Traffic -Occupant	Unintentional	E810-E819(.0, .1)	Car rear-ended at stop sign. Head on collision with another car. .0 indicates driver, .1 indicates passenger
Motor Vehicle Traffic -Unspecified	Unintentional	E810-E819(.8, .9)	Injury to someone involved in motor vehicle crash but unknown if occupant, or other, etc.
Overexertion	Unintentional	E927	Pulled muscle during sports. Twisted ankle walking down stairs. Injured back lifting heavy boxes.
Pedal Cycle: motor vehicle & non-motor vehicle- related	Unintentional	E810-E819(.6) E800-E807(.3) E820-E825(.6) E826.1 E826.9 E827-E829(.1)	Hit by a car while riding bike in the street. Fell off bike on mountain trail. Ran into a pedestrian on the sidewalk. Ran into a dog with tricycle.
Pedestrian: motor vehicle & non-motor vehicle- related	Unintentional	E810-E819(.7) E800-E807(.2) E820-E825(.7) E826-E829(.0)	Hit by car while walking across street. Collision with bicycle courier. Run over by three-wheeler.
Poisoning	Assault-Related	E962.0-E962.9	Was served drink intentionally laced with pesticide.
	Self-Inflicted	E950.0-E952.9	Purposely breathed exhaust fumes from car. Intentional overdose of sleeping pills.
	Unintentional	E850.0-E869.9	Child drank cleanser from bottle under sink. Unknowingly ate poisonous mushroom.
Nature/Environment: (e.g., animal bites, insect stings, exposure to cold/heat, earthquake, etc.)	Unintentional	E905.0-E905.6 E905.9 E906.0-.5 E906.9	Bitten by any animal, including dog, cat, rat, or snake. Bitten or stung by an insect, including bee, wasp, spider, scorpion.
Struck by/against	Unintentional	E916-918	Struck by falling box. Crushed fingers in car door. Collided with another player during football game.
Suffocation/hanging	Assault-Related	E963	Person strangled.
	Self-Inflicted	E953.0-E953.9	Hanged self.
	Unintentional	E911-E913.9	Choked on piece of meat.

## Selected Class of Agents (drug/medication) for Poisoning/Overdose Cases

Class of Agent	Examples
Antibiotics	Penicillins, Chloramphenicol Group, Tetracycline Group, Cephalosporin Group, Antimycobacterial
Analgesics, Antipyretics, and Antirheumatics	Heroin, Methadone, Other Opiates and related Narcotics, Salicylates, Aromatic Analgesics-not elsewhere classified, Pyrazole Derivatives, Antirheumatics (antiphlogistics), Other Non-Narcotic Analgesics, Other and Unspecified Analgesics and Antipyretics
Sedatives and Hypnotics	Barbiturates, Chloral Hydrate Group, Paraldehyde, Bromine Compounds, Methaqualone Compounds, Glutethimide Group, Mixed Sedatives, Other and Unspecified Sedatives and Hypnotics
Other Central Nervous System Depressants and Anesthetics	Central Nervous System Muscle-Tone Depressants, Halothane, Other Gaseous Anesthetics, Intravenous Anesthetics, Other and Unspecified General Anesthetics, Peripheral Nerve- and Plexus-Blocking Anesthetics, Spinal Anesthetics, Other and Unspecified Local Anesthetics
Psychotropic Agents	Antidepressants, Phenothiazine-based Tranquilizers, Butyrophenone-based Tranquilizers, Other Antipsychotics, Neuroleptics, and Major Tranquilizers, Benzodiazepine-based Tranquilizers, Other Tranquilizers, Psychodysleptics (Hallucinogens), Psychostimulants, Other and Unspecified Psychotropic Agents
Central Nervous System Stimulants	Analeptics, Opiate Antagonists, Other Specified and Unspecified Central Nervous System Stimulants
Drugs Primarily Affecting the Autonomic Nervous System	Parasympathomimetics (Cholinergics), Parasympatholytics (Anticholinergics and Antimuscarinics) and Spasmolytics, Sympathommetics (Adrenergics), Sympatholytics (Antiadrenergics), Unspecified Drug Primarily Affecting the Autonomic Nervous System
Agents primarily affecting the cardiovascular system	Cardiac Rhythm Regulators, Cardiotonic Glycosides, Antilipemic and Antiartherosclerotic Drugs, Ganglion-blocking agents, Coronary Vasodilators, Other Antihypertensive Agents
Hormones and Synthetic Substitutes	Adrenal Cortical Steroids, Androgens and Anabolic Congeners, Ovarian Hormones and Synthetic Substitutes, Insulins and Antidiabetic Agents, Anterior Pituitary Hormones, Posterior Pituitary Hormones, Parathyroid and Parathyroid Derivatives, Thyroid and Thyroid Derivatives, Antithyroid Agents, Other and Unspecified Hormones and Synthetic Substitutes

## Resources

<b>MA Department of Public Health</b>	
Injury Surveillance Program Massachusetts Department of Public Health 250 Washington Street, 6th Floor Boston, MA 02108 Phone: (617) 624-5648 Fax: (617) 624-5099 <a href="http://www.mass.gov/dph/bhsre/isp/isp.htm">www.mass.gov/dph/bhsre/isp/isp.htm</a>	Injury Prevention and Control Program Massachusetts Department of Public Health 250 Washington Street, 4th Floor Boston, MA 02108 Phone: (617) 624-5544 <a href="http://www.mass.gov/dph/fch/injury">www.mass.gov/dph/fch/injury</a>
Occupational Health Surveillance Program Massachusetts Department of Public Health 250 Washington Street, 6th Floor Boston, MA 02108 Phone: (617) 624-5632 Fax: (617) 624-5676 <a href="http://www.mass.gov/dph/ohsp">www.mass.gov/dph/ohsp</a>	Bureau of Substance Abuse Services Massachusetts Department of Public Health 250 Washington Street, 3 <sup>rd</sup> Floor Boston, MA 02108 Phone: 1-800-327-5050 TTY: 1-617-536-5872 <a href="http://www.mass.gov/dph/bsas">www.mass.gov/dph/bsas</a>
Health Survey Program – Behavioral Risk Survey Massachusetts Department of Public Health 250 Washington Street, 6th Floor Boston, MA 02108 Phone: (617) 624-5623 Fax: (617) 624-5631 <a href="http://www.mass.gov/dph/hsp">www.mass.gov/dph/hsp</a>	Violence Prevention and Intervention Services Massachusetts Department of Public Health 250 Washington Street, 4th Floor Boston, MA 02108 Phone: (617) 624-5463 Fax: (617) 624-5075 <a href="http://www.mass.gov/dph/fch/injury">www.mass.gov/dph/fch/injury</a>
MassCHIP Massachusetts Department of Public Health 250 Washington Street, 6th Floor Boston, MA 02108 Phone: 888-MAS-CHIP (in Massachusetts) Phone: (617) 624-5629 (normal business hours) <a href="http://masschip.state.ma.us/">http://masschip.state.ma.us/</a>	Massachusetts Suicide Prevention Program Massachusetts Department of Public Health 250 Washington Street, 4th Floor Boston, MA 02108 Phone: (617) 624-5476 <a href="http://www.mass.gov/dph/fch/injury">www.mass.gov/dph/fch/injury</a>
<b>Other Massachusetts Organizations</b>	
Statewide Head Injury Program (SHIP) Massachusetts Rehabilitation Commission 27 Wormwood Street, Suite 600 Boston, MA 02210 Phone: (617) 204-3852 1-800-223-2559, extn. 2 (in MA) TTY: (617) 204-3817 <a href="http://www.mass.gov/mrc/ship">www.mass.gov/mrc/ship</a>	Brain Injury Association of Massachusetts 30 Lyman Street, Suite 10 Westborough, MA 01581 Phone: (508) 475-0032; 1-800-242-0030 - Brain Injury Info Line <a href="http://www.biama.org">www.biama.org</a>
MA Coalition for Suicide Prevention PO Box 400792 Cambridge, MA 02140 Phone: (617) 817-1977 <a href="http://www.masspreventsuicide.org">www.masspreventsuicide.org</a>	Regional Center for Poison Control and Prevention 300 Longwood Avenue, IC Smith Building Boston, MA 02115 Phone: (617) 355-6609 Fax: (617) 730-0521 Emergency: 1-800-222-1212 <a href="http://www.maripoisoncenter.com">www.maripoisoncenter.com</a>
<b>National Agencies</b>	
National Center for Health Statistics 3311 Toledo Road Hyattsville, MD 20782 Phone: 1-800-232-4636 <a href="mailto:cdcinfo@cdc.gov">cdcinfo@cdc.gov</a> <a href="http://www.cdc.gov/nchs/injury.htm">www.cdc.gov/nchs/injury.htm</a>	National Center for Injury Prevention and Control 4770 Buford Hwy, NE MS F-63 Atlanta, GA 30341-3717 Phone: 1 (800) CDC-INFO (232-4636) TTY: 1 (888) 232-6348 FAX: (770) 488-4760 <a href="http://www.cdc.gov/ncipc/">www.cdc.gov/ncipc/</a>
WISQARS – National and State Injury Statistics <a href="http://www.cdc.gov/ncipc/wisqars/">www.cdc.gov/ncipc/wisqars/</a>	

## INJURIES TO MASSACHUSETTS, 2006 – USER FEEDBACK FORM

To better serve our users, we invite you to provide feedback to ISP about this report.

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Are there other tables, charts, data that would better assist your prevention activities? If yes, please describe them in detail.
Do you have other comments or suggestions?
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Please return your comments to:  
Beth Hume  
Massachusetts Department of Public Health  
Injury Surveillance Program  
250 Washington Street, 6<sup>th</sup> Floor  
Boston, MA 02108  
FAX: (617) 624-5099

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To order a hard copy of any ISP publication, please contact ISP by phone, email, or fax, or fill out the form below and return to:

Beth Hume  
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Injury Surveillance Program  
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Boston, MA 02108  
PHONE: (617) 624-5648  
FAX: (617) 624-5099

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- Violent Deaths in Massachusetts (*annual report*)
- Injuries to Massachusetts Residents (*annual report*)
- Suicide and Self-Inflicted Injuries in Massachusetts: Data Summary (*bulletin*)
- Opioids:Trends and Current Status in Massachusetts: Fatal Overdoses, Hospital Discharges, Emergency Department Visits, and Trends in Treatment Services (*bulletin*)
- Fall-related Injuries: Deaths, Hospital Discharges, Observation Stays, and Emergency Department Visits (*bulletin*)
- Traumatic Brain Injuries in Massachusetts: Data Summary (*bulletin*)
- Hospital Injury Summaries (*4-page summary*)  
(acute care hospital discharge, observation stay, and emergency department injury data available by individual hospitals)
- Weapon Injuries (*data tables*)

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