Maine Injury Prevention Program

Your link to training, data and resources

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

John E. Baldacci, Governor Brenda M. Harvey, Commissioner

2007 Maine Injury Report




Table of Contents

Introduction

Injuries are an important, and preventable, public health problem. Reducing injuries and the resulting disabilities and deaths is one of the Healthy Maine 2010 goals.[1] Effective injury prevention and control efforts range from preventing the injury from happening in the first place, to early diagnosis and management, to improving the final outcome by preventing further complications such as more severe injury, disability, or death.[2] The 2007 Maine Injury Report uses surveillance data to describe the burden of injury in the state and highlights key injury prevention efforts.

An injury can be described by its nature (e.g., fracture, concussion) and its cause. The cause of an injury is classified in terms of both intent and mechanism. Intent refers to whether the injury is deliberately inflicted and is categorized as unintentional, intentional self-injury/suicide, assault/homicide, legal intervention, operation of war, or undetermined. Mechanism refers to the external cause of injury, such as fall, firearm, motor vehicle traffic incident, or poisoning.

Unintentional injuries were the leading cause of death among 1-44 year old Maine residents in 2002-2006, and the fifth leading cause of death among all ages combined. Suicide was the second leading cause of death among 15-34 year old Mainers and the tenth leading cause among all ages combined. Homicides were less common, but were still one of the 10 leading causes of death among certain age groups.[3]

Injuries continued to be a significant cause of mortality and morbidity in 2007, when every day, on average, there were two deaths due to injury and 23 hospital discharges with an injury principal diagnosis. This includes all intents ... unintentional, intentional, undetermined, legal intervention, operations of war, other (adverse effects), and unknown. In 2007, 6.5% of deaths of Maine residents were due to injury, and 5.4% of hospital discharges of Maine residents had an injury principal diagnosis. These percentages varied considerably by age and sex, with the greatest impact seen in 15-24 year old males, among whom 85.4% of deaths were due to injury and 21.7% of hospital discharges had an injury principal diagnosis.

This report provides 2007 Maine resident data on more than 20 injury indicators defined by the federal Centers for Disease Control and Prevention. Most of the indicators describe deaths or hospital discharges due to a particular intent and/or mechanism. Data are presented for the following indicators:

- All injury deaths and hospital discharges
- Injury deaths and hospital discharges, by intent
    - Unintentional
    - Suicide and suicide attempt / self-inflicted
    - Homicide and assault

- Injury deaths and hospital discharges, by mechanism
    - Unintentional drowning and nonfatal near-drowning
    - Unintentional fall
    - Unintentional fire
    - Unintentional motor vehicle traffic
    - Firearm
    - Poisoning
- Injury deaths and/or hospital discharges, by type of injury
    - Traumatic brain injury
    - Hip fracture, among residents aged 65 years and older

Data presented for each indicator include counts (overall and by age and sex), as well as crude, age-adjusted, age-specific, and sex-specific rates. It is important to note that crude rates and age-adjusted rates serve two different purposes. Crude rates (or the actual number of events) are used to measure or compare the absolute magnitude of injury indicators. Age-adjusted rates are used only for comparison purposes to control for age composition differences (e.g., to compare Maine with another state that has a much younger population or to look at Maine data for two years and control for the aging of the population over time). The calculated numeric value of an age-adjusted rate depends on the standard population used and therefore has no intrinsic meaning.[4] The age-adjusted rates presented in this report can only be compared with other age-adjusted rates that are adjusted to the same 2000 U.S. standard population. For the purpose of this report, where the focus is one the absolute burden of injury, comparisons between males and females or between various age groups are based on 95% confidence intervals placed around the crude rates.

All data presented in this report are from 2007, unless otherwise noted. The data primarily come from two surveillance data sources: (1) the 2007 Maine death certificate statistical dataset, maintained by the Office of Data, Research and Vital Statistics of the Maine Center for Disease Control and Prevention, and (2) the 2007 inpatient (hospital discharge) dataset, maintained by the Maine Health Data Organization. In keeping with the indicator definitions provided by the federal Centers for Disease Control and Prevention, the hospital discharge analysis was limited to discharges from general hospitals that had an injury (including poisoning) principal diagnosis. Supplemental data for select indicators was obtained from the 2007 Youth Risk Behavior Survey and the 2008 Behavioral Risk Factor Surveillance System survey.

The report concludes with technical notes and appendices describing data sources, case definitions for each injury indicator, methods used to calculate rates, and limitations of the report.

All Injury

All Injury Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	815	61.9	58.3	8,360	634.7	576.0
By sex:						
Male	563	87.6	86.9	3,736	581.2	581.4
Female	252	37.4	32.4	4,624	685.6	552.3
By age:						
<1 year	5	*	---	58	416.5	---
1-4 years	7	*	---	131	230.6	---
5-14 years	8	*	---	251	163.5	---
15-24 years	109	65.0	---	789	470.6	---
25-34 years	115	76.9	---	604	404.0	---
35-44 years	107	56.6	---	772	408.7	---
45-54 years	125	57.1	---	915	418.2	---
55-64 years	90	52.0	---	895	516.9	---
65-74 years	58	58.4	---	922	928.2	---
75-84 years	95	140.3	---	1,552	2,291.6	---
85+ years	96	343.8	---	1,471	5,267.3	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- There were 815 injury deaths and 8,360 injury hospital discharges among Maine residents in 2007. Every day, on average, there were two deaths and 23 hospital discharges that were injury related.
- Overall, 6.5% of deaths of Maine residents were due to injury and 5.4% of hospital discharges had an injury principal diagnosis. These percentages varied by sex and age; the greatest impact was seen in 15-24 year old males, among whom 85.4% of deaths were due to injury and 21.7% of hospital discharges had an injury principal diagnosis. (See Appendix A for complete sex- and age-specific percentages.)
- The leading causes of injury deaths were unintentional motor vehicle traffic incidents (22.0%), unintentional poisoning (16.6%), and suicide firearm (10.8%). The most common causes of injury hospital discharges were unintentional falls (50.4%), unintentional motor vehicle traffic incidents (10.5%), and self-inflicted poisoning (8.0%).
- Males were at significantly higher risk than females of injury death, while females were at significantly higher risk than males of injury hospital discharges.
- 85+ year olds were at significantly higher risk than other age groups of both injury deaths and hospital discharges.
- 65+ year olds represented only 14.8% of the Maine population in 2007, but they accounted for almost a third (30.6%) of injury deaths and almost half (47.2%) of injury hospital discharges. Three-fourths (77.5%) of the injury hospital discharges among 65+ year old women were due to unintentional falls.

Injury Prevention Highlights: 2007-2009

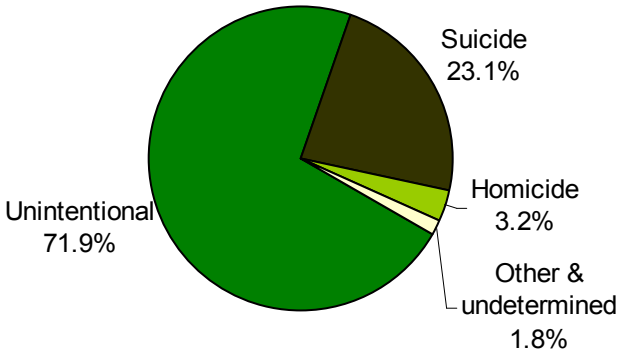
- A statewide mapping project of intentional and unintentional injury prevention activities, initiatives and programs was conducted to a diverse group of stakeholders and partners.
- Local, state and national research was conducted to identify intentional and unintentional injury prevention toolkits including evidence based and/or promising practices programs. Results of both these projects will be distributed to MIPP partners and stakeholders.
- The 2008 Maine Injury Prevention Symposium was convened to: enhance awareness of the public health burden of injury, increase the knowledge of the linkages to injury prevention training, data, and resources, and to learn more about the structure and function of the newly formed Office of Local Public Health, Public Health Districts and the Healthy Maine Partnerships. A symposium report was disseminated to participants.
- Injury profiles were created and sent to each newly formed Public Health District.
- Additional injury prevention activities specific to particular injury topics are highlighted in their respective sections later in this report.

Injury Intent

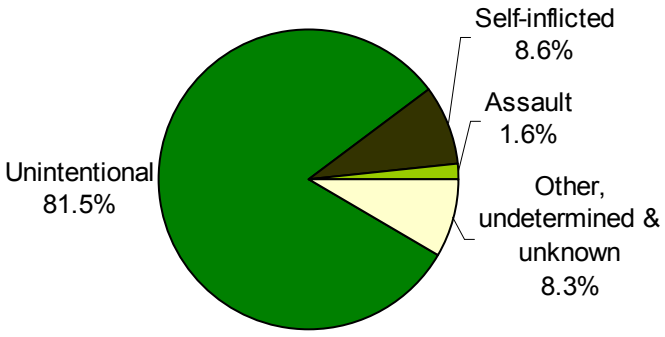
Most injury deaths and hospital discharges among Maine residents in 2007 were due to unintentional causes. Seven out of every 10 injury deaths (71.9%) and eight out of every 10 injury hospital discharges (81.5%) were unintentional. The second most common intent was suicide or self-inflicted injury, which represented 23.1% of injury deaths and 8.6% of injury hospital discharges. Homicide and assault injuries were less common, accounting for 3.2% of injury deaths and 1.6% of injury hospital discharges.

Injury Intent, Deaths and Hospital Discharges, Maine Residents, 2007

Deaths



Hospital Discharges



The following sections present information for these indicators:

- Unintentional
- Suicide and suicide attempt
- Homicide and assault

Unintentional Injury Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	586	44.5	41.7	6,817	517.5	462.4
By sex:						
Male	381	59.3	59.5	3,038	472.6	473.2
Female	205	30.4	25.5	3,779	560.3	435.9
By age:						
<1 year	3	*	---	38	272.9	---
1-4 years	6	*	---	123	216.5	---
5-14 years	8	*	---	233	151.8	---
15-24 years	72	42.9	---	531	316.7	---
25-34 years	82	54.8	---	385	257.5	---
35-44 years	68	36.0	---	519	274.8	---
45-54 years	83	37.9	---	662	302.6	---
55-64 years	55	31.8	---	756	436.7	---
65-74 years	40	40.3	---	819	824.5	---
75-84 years	80	118.1	---	1,400	2067.2	---
85+ years	89	318.7	---	1,351	4837.6	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- Unintentional injury refers to an incident where there was no intent to injure or harm oneself or another person.
- There were 586 unintentional injury deaths and 6,817 unintentional injury hospital discharges among Maine residents in 2007. Every day, on average, there were two deaths and 19 hospital discharges due to unintentional injury.
- Males were at significantly higher risk than females for unintentional injury deaths. A different pattern was seen among unintentional injury hospital discharges, where females were at significantly higher risk than males.
- 85+ year olds were at significantly higher risk than other age groups for both unintentional injury deaths and hospital discharges.
- 65+ year olds represented only 14.8% of the Maine population in 2007, but they accounted for 35.7% of unintentional injury deaths and 52.4% of unintentional injury hospital discharges.
- Falls, motor vehicle traffic incidents, and poisoning were the most common mechanisms involved in unintentional injury deaths and hospital discharges, though the actual rank order differed between the two. Specifically, the three leading mechanisms involved in unintentional injury deaths were motor vehicle traffic incidents (30.6%), poisoning (23.0%), and falls (14.3%). The three leading mechanisms involved in unintentional injury hospital discharges were falls (61.8%), motor vehicle traffic incidents (12.9%), and poisoning (5.7%).
- Maine has met the Healthy Maine 2010 target to reduce the rate of nonfatal unintentional injuries (as measured by nonfatal hospital discharges) to no more than 615.0 per 100,000 (age-adjusted), but has not yet met the target of reducing deaths caused by unintentional injury to no more than 27.0 per 100,000 (age-adjusted).[1]

Injury Prevention Highlights: 2007-2009

- Injury prevention activities specific to a particular unintentional injury topic are highlighted in their respective sections later in this report.

Suicide and Suicide Attempt Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	188	14.3	13.5	718	54.5	56.0
By sex:						
Male	154	24.0	23.1	305	47.4	47.5
Female	34	5.0	4.8	413	61.2	64.4
By age:						
<1 year	0	*	---	0	*	---
1-4 years	0	*	---	0	*	---
5-14 years	0	*	---	10	*	---
15-24 years	30	17.9	---	161	96.0	---
25-34 years	24	16.1	---	156	104.3	---
35-44 years	32	16.9	---	167	88.4	---
45-54 years	36	16.5	---	144	65.8	---
55-64 years	29	16.8	---	58	33.5	---
65-74 years	16	*	---	13	*	---
75-84 years	14	*	---	6	*	---
85+ years	7	*	---	3	*	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- Suicide refers to completed suicides; self-inflicted injury hospital discharges include completed suicides in which the person lived long enough to be hospitalized, suicide attempts, and other intentional self-injurious behavior like cutting or burning oneself.
- There were 188 suicide deaths and 718 self-inflicted injury hospital discharges among Maine residents in 2007. Every week, on average, there were four suicide deaths and 14 self-inflicted injury hospital discharges.
- Males were at significantly higher risk than females for suicide deaths. The death rate for males was nearly 5 times higher than that for females. Conversely, females were at significantly higher risk than males for self-inflicted injury hospital discharges.
- 15-44 year olds were at significantly higher risk than most other age groups for self-inflicted injury hospital discharges. Suicide risk did not differ significantly by age among 15+ year olds; there were no suicide deaths among Mainers under 15 years of age.
- The most common mechanisms used in suicide deaths were firearms (46.8%), hanging, strangulation, and suffocation (23.4%), and poisoning (22.3%). In contrast, nine out of every 10 self-inflicted injury hospital discharges (93.5%) were due to poisoning. The next most common mechanism was cutting and piercing instruments, which accounted for 2.9% of self-inflicted injury discharges.
- Maine has met the Healthy Maine 2010 target of reducing suicide attempts (as measured by self-inflicted injury hospital discharges) to no more than 62.3 per 100,000 (age-adjusted), but has not yet met the target of reducing suicide deaths to no more than 12.7 per 100,000 (age-adjusted).[1]

Injury Prevention Highlights: 2007-2009

- A variety of youth suicide prevention forums, conferences and trainings were conducted annually. Topics included media reporting of suicide, the understanding and treatment of non-suicidal self-injury, suicide assessment for clinicians, gatekeeper training, training-of-trainers, protocol development, and Lifelines Student lessons for teachers. The statewide *Beyond the Basics of Suicide Conference,* now in its 6th year, includes tracks addressing grief, and clinical intervention. The Annual
- Time Warner Cares selected the Maine Youth Suicide Prevention Program (MYSPP) as its recipient of in-kind services to create a youth suicide prevention public service announcement which aired for three months.
- The *Maine Youth Suicide Prevention, Intervention, Postvention Guidelines for Schools* were accepted for inclusion in the Suicide Prevention Resource Center's Adherence to Standards registry.

- Maine was awarded its second Garrett Lee Smith (Substance Abuse Mental Health Services Administration SAMHSA) grant. *Caring About Lives in Maine* supports a strategic expansion of key priorities included in the Maine Youth Suicide Prevention Plan. It builds on collaborations and linkages to enhance the capacity of 11 schools and service providers to provide a culturally competent, sustainable system of prevention, early identification, intervention and referral for families and youth in selected areas of the state.
- Hazeldon Publishing Company entered into an agreement with the Maine Youth Suicide Prevention Program for national dissemination of the Lifelines student lessons. These student lessons were submitted for review to the National Registry of Evidence Based Programs and Practices (NREPP).
- The Maine Youth Suicide Prevention Program Director received the *Alex Kelter Vision Award* presented by the State and Territorial Injury Prevention Directors Association (STIPDA).
- Maine, and two other states, were selected to receive SAMHSA funding to conduct enhanced evaluation of its suicide prevention programs.
- A planning group was conveyed to address suicide across the lifespan. This is the topic for the 2010 Injury Prevention Symposium.

(This page intentionally left blank)

Homicide and Assault-Related Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	26	2.0	2.0	131	9.9	10.5
By sex:						
Male	17	*	*	111	17.3	17.7
Female	9	*	*	20	3.0	3.3
By age:						
<1 year	2	*	---	4	*	---
1-4 years	1	*	---	2	*	---
5-14 years	0	*	---	1	*	---
15-24 years	6	*	---	38	22.7	---
25-34 years	5	*	---	24	16.1	---
35-44 years	4	*	---	30	15.9	---
45-54 years	2	*	---	22	10.1	---
55-64 years	4	*	---	9	*	---
65-74 years	1	*	---	0	*	---
75-84 years	1	*	---	0	*	---
85+ years	0	*	---	1	*	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- Homicide and assault injury refer to an injury purposefully inflicted by a person against another person, excluding those that are the result of legal intervention or war.
- There were 26 homicide deaths and 131 assault related hospital discharges among Maine residents in 2007. Every month, on average, there were two homicide deaths and 11 assault related hospital discharges.
- Males were at significantly higher risk than females of having an assault related hospital discharge. 84.7% of assault related hospital discharges and 65.4% of homicides occurred among males.
- Almost two-thirds (65.4%) of the homicides and 87.0% of the assault related hospital discharges occurred among 15-54 year olds.
- The two most common known mechanisms used in homicides were firearms (57.7%) and cutting or piercing instruments (15.4%); mechanism was not reported for 19.2% of homicides. The two most common known mechanisms associated with assault related hospital discharges were "struck by or against" (51.2%; includes unarmed fight/brawl or being struck by a blunt or thrown object) and cutting or piercing instruments (16.8%); mechanism was not reported for 20.6% of assault related hospital discharges.
- Maine has met the national Healthy People 2010 goal of reducing homicides to no more than 3.0 per 100,000 (age-adjusted) and could be described as meeting the Healthy Maine 2010 target of a "slight decrease in the homicide rate" below 2.2 per 100,000 (age-adjusted). Maine has not yet met the Healthy Maine 2010 target of reducing physical assaults (as measured by nonfatal assault related hospital discharges) to no more than 9.9 per 100,000 population (age-adjusted).[1, 5]

Injury Prevention Highlights: 2007-2009

- Maine health care providers and children's advocates launched *The Period of Purple Crying* campaign at the state's 31 birthing centers, with follow-up support by the state's visiting and public health nurses. This program educates new parents about infant crying and provides strategies for coping with it before they lose control.
- *An Act to Require School Bus Drivers and School Bus Attendants to Report Suspected Child Abuse* added these individuals to the list of mandatory reporters of child abuse.
- The Maine Coalition to End Domestic Violence, the Maine Coalition Against Sexual Assault and the Office of the Attorney General distributed 1000 Stalking Safety Kits for Stalking Victims.
- Ten Maine Wal-Marts began printing two toll free numbers for domestic and sexual abuse victims at the bottom of the store receipts.

(This page intentionally left blank)

Injury Mechanism

The following sections present information for these indicators:

- Unintentional drowning and near drowning
- Unintentional fall
- Unintentional fire
- Firearm (all intents)
- Unintentional motor vehicle traffic
- Poisoning (all intents)

Unintentional Drowning and Near-Drowning Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	26	2.0	1.9	16	*	*
By sex:						
Male	23	3.6	3.5	10	*	*
Female	3	*	*	6	*	*
By age:						
<1 year	0	*	---	1	*	---
1-4 years	2	*	---	2	*	---
5-14 years	2	*	---	4	*	---
15-24 years	3	*	---	3	*	---
25-34 years	1	*	---	0	*	---
35-44 years	4	*	---	2	*	---
45-54 years	6	*	---	1	*	---
55-64 years	3	*	---	3	*	---
65-74 years	2	*	---	0	*	---
75-84 years	2	*	---	0	*	---
85+ years	1	*	---	0	*	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- There were 26 deaths and 16 hospital discharges due to unintentional drowning or near drowning among Maine residents in 2007. Every month, on average, there were two unintentional drowning deaths and one unintentional drowning or near-drowning hospital discharge.
- Nearly 9 of every 10 unintentional drowning deaths (88.5%) were males, as were 62.5% of unintentional drowning / near drowning hospital discharges.
- There is no drowning objective in Healthy Maine 2010.[1] Maine has not yet met the national Healthy People 2010 objective of no more than 0.9 drowning fatalities per 100,000 (age-adjusted).[5]

Injury Prevention Highlights: 2007-2009

- Maine native Ian Crocker, Olympic gold medalist, visited UMaine Orono…The primary non-profit organization Crocker's business, *Ian Crocker Swim School,* donates to is Colin's Hope, which "creates and supports programs that aid in preventing children from drowning." "Drowning is the No. 1 cause of accidental death in kids under four, and No. 2 cause in kids under 14," Crocker said. "So it's a really important safety issue to get drowning prevention awareness out there."
- *The Virginia Graeme Baker Pool and Spa Safety Act* became effective on December 19, 2008. This law required installation of anti-entrapment drain covers and other systems as outlined in the Act. Information regarding this Act was sent to all Maine municipalities.

Unintentional Fall-Related Injury Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	84	6.4	5.2	4,212	319.8	268.9
By sex:						
Male	45	7.0	6.9	1,508	234.6	232.2
Female	39	5.8	4.1	2,704	400.9	289.5
By age:						
<1 year	0	*	---	14	*	---
1-4 years	0	*	---	31	54.6	---
5-14 years	0	*	---	89	58.0	---
15-24 years	2	*	---	108	64.4	---
25-34 years	1	*	---	94	62.9	---
35-44 years	2	*	---	175	92.6	---
45-54 years	3	*	---	290	132.5	---
55-64 years	10	*	---	468	270.3	---
65-74 years	11	*	---	589	592.9	---
75-84 years	27	39.9	---	1,146	1,692.1	---
85+ years	28	100.3	---	1,208	4,325.6	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- There were 84 deaths due to unintentional falls and 4,212 unintentional fall related hospital discharges among Maine residents in 2007. Every week, on average, there were two deaths and 81 hospital discharges that were due to unintentional falls.
- Females were at significantly higher risk than males of unintentional fall related hospital discharges; there were no significant differences by sex for deaths.
- 85+ year olds were at significantly higher risk than other age groups of both unintentional fall related deaths and hospital discharges.
- 65+ year olds represented only 14.8% of the Maine population in 2007, but they accounted for 78.6% of unintentional fall related deaths and 69.9% of unintentional fall related hospital discharges.
- Three-fourths (77.5%) of the injury hospital discharges among 65+ year old women were due to unintentional falls.
- Seven of every 10 deaths due to unintentional falls (73.8%) and one of every 10 unintentional fall related hospital discharges (11.8%) involved a traumatic brain injury.
- One of every three unintentional fall related hospital discharges (33.4%) involved a hip fracture; this percentage increased to 42.9% among 65+ year olds.
- The 2008 Behavioral Risk Factor Surveillance System survey found that one in five (20.3%) Maine adults aged 45 and older had fallen at least once in the past 3 months. Nearly a third (29.9%) of those who fell said at least one fall had caused an injury that made them limit their regular activities for at least 1 day or see a doctor.
- Maine has met the Healthy Maine 2010 target of no more than 366 nonfatal unintentional fall related hospital discharges per 100,000 (age-adjusted), but has not yet met the target of no more than 4.0 deaths due to falls per 100,000 residents (age-adjusted)**.**[1]

Injury Prevention Highlights: 2007-2009

- The Maine Falls Prevention Coalition report on falls prevention among older adults was formally presented to Maine's Legislature in March 2007.
- The Office of Elder Services, in partnership with the Maine Center for Disease Control and Prevention, the MaineHealth's partnership for Healthy Aging, Maine Nutrition Network convened the *Healthy Aging Strategic Planning Meeting* to define the programs and services that are most important to the participating organizations and communities, as well as the strategies and resources needed to successfully implement and/or expand them. Maine's efforts have been supported by grants from the Administration on Aging, Atlantic Philanthropies, and the National Council on Aging.

Unintentional Fire-Related Injury Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	6	*	*	49	3.7	3.6
By sex:						
Male	5	*	*	38	5.9	5.5
Female	1	*	*	11	*	*
By age:						
<1 year	0	*	---	0	*	---
1-4 years	1	*	---	2	*	---
5-14 years	0	*	---	4	*	---
15-24 years	0	*	---	5	*	---
25-34 years	0	*	---	2	*	---
35-44 years	1	*	---	9	*	---
45-54 years	1	*	---	12	*	---
55-64 years	0	*	---	8	*	---
65-74 years	2	*	---	6	*	---
75-84 years	1	*	---	1	*	---
85+ years	0	*	---	0	*	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- Unintentional fire-related (exposure to fire, smoke, and flames) injuries accounted for six deaths and 49 hospital discharges among Maine residents in 2007. On average, there was one unintentional fire related death every other month and four unintentional fire related hospital discharges every month.
- About eight of every 10 unintentional fire-related deaths (83.3%) and hospital discharges (77.6%) were among males.

Injury Prevention Highlights: 2007-2009

- Maine became the first state the in union to enact legislation banning the sale or distribution of toy or novelty lighters. Persons found in violation of the law face a fine of up to $500.
- Governor John E. Baldacci signed an executive order meant to combat the growing problem of fires set by juveniles. The executive order created the Maine Juvenile Fire Safety Collaborative, which focuses on the prevention of injuries, loss of life and loss of property caused by fires set by young people. In addition, the State Fire Marshal's Office received a $152,356 Fire Prevention and Safety grant from the Federal Emergency Management Agency for its juvenile fire setters initiative. The grant supports the objectives of the Collaborative, with a focus on training educators, the judiciary, juvenile probation and parole and mental health providers.
- Discussions between the State Fire Marshal's Office and Departments of Education, and Health and Human Services were conducted to identify strategies to integrate *Risk Watch* into the K-2 school levels.
- *Play Safe, Be Safe* a fire prevention was broadcasted at three sites and provided an overview of the Play Safe, Be Safe lessons and activities geared to pre-school and kindergarten age children.

Firearm-Related Injury Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	105	8.0	7.5	29	2.2	2.3
By sex:						
Male	94	14.6	13.9	22	3.4	3.5
Female	17	*	*	7	*	*
By age:						
<1 year	0	*	---	0	*	---
1-4 years	0	*	---	0	*	---
5-14 years	0	*	---	1	*	---
15-24 years	14	*	---	7	*	---
25-34 years	16	*	---	7	*	---
35-44 years	14	*	---	5	*	---
45-54 years	19	*	---	7	*	---
55-64 years	15	*	---	0	*	---
65-74 years	14	*	---	1	*	---
75-84 years	11	*	---	0	*	---
85+ years	2	*	---	1	*	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- There were 105 firearm related deaths and 29 hospital discharges among Maine residents in 2007. Every month, on average, there were nine firearm related deaths and two firearm related hospital discharges.
- Nine out of 10 firearm related deaths (89.5%) and nearly eight out of 10 firearm-related hospital discharges (75.9%) occurred among males.
- There were no firearm related deaths and only one firearm related hospital discharge among Mainers under 15 years of age.
- Most (83.8%) of the firearm related deaths were suicides; 14.3% were homicides, 1.0% were unintentional, and 1.0% were of undetermined intent. A different intent pattern was seen among firearm related hospital discharges, where half (51.7%) were unintentional, 20.7% were self-inflicted, 17.2% were assaults, and 10.3% were of undetermined intent.
- There is no firearm injury objective in Healthy Maine 2010.[1] Maine has not yet met the national Healthy People 2010 objective of no more than 4.1 firearm related deaths per 100,000 (age-adjusted).[5]

Injury Prevention Highlights: 2007-2009

- The following laws were enacted.
    - *An Act Regarding the Sale of Firearms to Minors*. This law prohibits the sale of a firearm to a person 16 years of age and under 18 years of age. There is an exception for a sale by a parent, foster parent, or guardian or a sale approved by a parent, foster parent or guardian.
    - A provision of *An Act to Implement the Recommendations of the Ad Hoc Task Force on the Use of Deadly Force by Law Enforcement Officers Against Individuals Suffering From Mental Illness.* A licensed mental health professional must breach confidentiality and notify law enforcement when the licensed mental professional has reason to believe that a person committed to a state mental health institute has access to firearms.
    - *An Act Authorizing Colleges and Universities to Regulate Public Safety Campuses* makes it clear that colleges and universities have the power to regulate the possession of firearms on their campuses.
- *There Ought to Be a Law,* a documentary film premiered. This film followed the work of a Maine mother whose teenage son died by suicide in 2004, with a shotgun purchased at Wal-Mart. She submitted a bill that would require a waiting period before young people could buy shotguns or rifles. The bill did not pass.

Unintentional Motor Vehicle Traffic Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	179	13.6	13.3	877	66.6	65.6
By sex:						
Male	125	19.4	19.1	543	84.5	84.8
Female	54	8.0	7.9	334	49.5	46.9
By age:						
<1 year	0	*	---	1	*	---
1-4 years	0	*	---	7	*	---
5-14 years	2	*	---	29	18.9	---
15-24 years	39	23.3	---	207	123.5	---
25-34 years	30	20.1	---	128	85.6	---
35-44 years	27	14.3	---	115	60.9	---
45-54 years	30	13.7	---	130	59.4	---
55-64 years	17	*	---	99	57.2	---
65-74 years	10	*	---	54	54.4	---
75-84 years	16	*	---	84	124.0	---
85+ years	8	*	---	23	82.4	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- "Motor vehicle traffic" refers to incidents that take place on a public highway or street and includes drivers and passengers, as well as pedestrians, pedal cyclists, and animal riders injured in these incidents.[6]
- There were 179 deaths and 877 hospital discharges related to unintentional motor vehicle traffic incidents among Maine residents in 2007. Every week, on average, there were three deaths and 17 hospital discharges that were due to unintentional motor vehicle traffic incidents.
- Males were at significantly higher risk than females of both unintentional motor vehicle traffic deaths and hospital discharges. Males accounted for 69.8% of the unintentional motor vehicle traffic deaths and 61.9% of the unintentional motor vehicle traffic hospital discharges.
- 15-24 year olds and 75-84 year olds were at significantly higher risk than most other age groups for unintentional motor vehicle traffic hospital discharges. Two of every 10 unintentional motor vehicle traffic deaths (21.8%) and hospital discharges (23.6%) occurred among 15-24 year olds.
- 40.2% of unintentional motor vehicle traffic deaths and 33.5% of unintentional motor vehicle traffic hospital discharges involved a traumatic brain injury.
- On the 2007 Youth Risk Behavior Survey, only 60.7% of Maine middle school students said they always wore a seat belt when riding in a car; 7.7% reported they rarely or never wore a seat belt. Only half (51.5%) of high school students reported they always wore a seat belt when riding in a car driven by someone else *in the past 30 day* and 11.2% said they rarely or never wore a seat belt during that time period. (The survey did not ask high school students how often they wore a seat belt when they were driving.) Nearly a third (30.5%) of middle school students reported that they had ever ridden in a car driven by someone who had been drinking alcohol. 8.8% of high school students said they had driven a car or other vehicle *in the last 30 days* after drinking alcohol, 21.8% said they had ridden in a car or other vehicle driven by someone who had been drinking alcohol, and 22.8% said they had ridden in a car or other vehicle driven by someone who had been taking illegal drugs such as marijuana during this time period.[7, 8]
- On the 2008 Behavioral Risk Factor Surveillance System survey, 81.5% of Maine 18+ year olds reported they always used a seat belt when driving or riding in a car. 3.4% of 18+ year olds who drank alcohol *in the past 30 days* reported that there had been one or more occasions during that time period when they drove after having perhaps too much to drink.[9]
- Maine has met the Healthy Maine 2010 target of reducing nonfatal injuries caused by motor vehicle crashes (as measured by hospital discharges) to no more than 82 per 100,000 (age-adjusted), but has not yet met the target of reducing deaths caused by motor vehicle crashes to no more than 10.6 per 100,000 (age-adjusted).[1]

Injury Prevention Highlights: 2007-2009

- The following laws were enacted.
  - Maine passes Primary Seat Belt Law. When a person 18 years of age or older is an operator or a passenger of a vehicle that is required by the US DOT to be equipped with seatbelts, that operator or passenger must be properly secured in a seat belt.
  - A person under 18 years of age who has been issued a drivers license is prohibited from operating a motor vehicle while using a hand-held device including a cell phone for a period of 180 days from passing the road test.
  - *An Act to Establish a Distracted Driver Law* making it a traffic violation to fail to maintain control of a motor vehicle if the person either a) commits a traffic violation, or b) gets into a reportable accident, while distracted at the time of the violation / accident. The violator can be cited for both this offense and any other traffic violation committed while distracted.
  - *An Act to Require a Person Under 18 to Wear a Helmet While on a Motorcycle* increased the current age from 15 to 18.
  - *An Act to Improve the Health of Maine Citizens and the Safety of Pedestrians* requires that motor vehicle drivers give pedestrians at least three feet of clearance where it is safe to do so.
  - *An Act Regarding the Passing of School Buses by Bicyclists* obliging bicyclists to stop for the flashing red lights of a school bus and cannot continue until the bus resumes motion or the bicyclist is signaled to proceed by the driver.
- Two injury prevention symposia addressed motor vehicle safety:
  - *Child Passenger Safety in Maine – The Road to a Safe Ride* focused on increasing awareness and knowledge of: 1) Child Passenger Safety (CPS); 2) current CPS activities; 3) promising practices and/or evidenced-based CPS programs; and 4) identifying strategies and initial steps to create and/or enhance CPS partnerships in Maine.
  - *Teens, Licenses, and Driving, OH MY* focused on increasing awareness and creating strategies to decrease motor vehicle injuries among teen drivers in Maine.
- The Bureau of Highway Safety, University of Southern Maine, and the Children's Safety Network, and Maine Injury Prevention Program developed and distributed Maine's first web based Child Passenger Safety survey. The purpose was to gather baseline data on knowledge and retention, level of participation among Maine's 192 CPS Technicians statewide. The preliminary findings were presented at the CPS Symposium in June 2009.

(This page intentionally left blank)

Poisoning

Poisoning Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	185	14.0	14.0	1,158	87.9	88.3
By sex:						
Male	125	19.4	19.9	501	77.9	78.0
Female	60	8.9	8.4	657	97.4	98.8
By age:						
<1 year	0	*	---	7	*	---
1-4 years	0	*	---	30	52.8	---
5-14 years	0	*	---	15	*	---
15-24 years	25	14.9	---	217	129.4	---
25-34 years	46	30.8	---	211	141.1	---
35-44 years	39	20.6	---	226	119.6	---
45-54 years	39	17.8	---	224	102.4	---
55-64 years	23	13.3	---	119	68.7	---
65-74 years	6	*	---	51	51.3	---
75-84 years	5	*	---	33	48.7	---
85+ years	2	*	---	25	89.5	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- There were 185 poisoning deaths and 1,158 poisoning hospital discharges among Maine residents in 2007. Every week, on average, there were four deaths and 22 hospital discharges due to poisoning.
- Males were at significantly higher risk than females for poisoning deaths. Conversely, females were at significantly higher risk than males for poisoning hospital discharges.
- Poisoning deaths and hospital discharges were less common at the younger and older ends of the age spectrum. About 9 of every 10 poisoning deaths (93.0%) and hospital discharges (86.1%) occurred among 15-64 year olds.
- Three of every four poisoning deaths (73.0%) were unintentional; another 22.7% were suicides. A different pattern was seen among poisoning hospital discharges, where 57.9% were self-inflicted and 33.8% were unintentional.
- Healthy Maine 2010 does not include any poisoning objectives.[1] Maine has not yet met the national Healthy People 2010 objective of reducing deaths caused by poisoning to no more than 1.5 per 100,000 (age-adjusted).[5] The 2007 Maine rate was 9 times greater than this target.

Injury Prevention Highlights: 2007-2009

- The 2007 injury prevention symposium focused on prescription drug misuse. The expected outcomes of the day were to identify 1) challenges to reducing misuse of prescription drugs, 2) potential solutions to those challenges and 3) strategies to engage appropriate stakeholders and partners to effectively use resources to achieve these solutions. A report summarizing the recommendations was created and distributed to participants.
- *An Act to Ensure Continued Operation of the Poison Hotline* This bill appropriates $170,000 in 2007-08 and $680,000 in 2008-09 to the Department of Health and Human Services for grants to the Northern New England Poison Center to continue operation of the poison hotline. An amendment replaced the bill with a resolve that requires the Department of Health and Human Services to meet with interested parties to develop options for long-term funding of the Northern New England Poison Center.
- The Maine Office of Substance Abuse, in partnership with the New England Inhalant Abuse Prevention Coalition, continue to provide information and resources through website links, fact sheets, videos etc. and made available to parents, educators and youth.
- Northern New England Poison Center in partnership with the New Hampshire State Committee on Aging created the *Medication: What You Need to Know* booklet. This comprehensive resource is intended to assist older adult to manage their medication. The

booklet contains medicine management tools such as medication calendar, medication list, poison center magnet, medication wallet card and order postcard.

- The Safe Medicine Disposal for ME program provides Maine's residents with a safe disposal option for unused and unwanted medicine. Free medicine mailback envelopes are available at participating sites. The program is funded through a grant from the United States Environmental Protection Agency's Aging Initiative and an allocation from the Fund for Healthy Maine administered by the Maine Drug Enforcement Agency.

Injury Type

The following sections present information for these indicators:

- Hip fracture, in residents aged 65 years and older
- Traumatic brain injury

Hip Fracture

Hip Fracture Injury Hospitalizations in Persons Aged 65 and Older, 2007

	#	Crude Rate
Overall	1,429	732.9
By sex:		
Male	387	463.6
Female	1,042	934.5
By age:		
65-74 years	189	190.3
75-84 years	587	866.7
85+ years	653	2,338.2

Rates are per 100,000.

Data Highlights: 2007

- Hip fractures can cause serious health problems and can result in premature death or reduced quality of life.[10]
- There were 1,429 hip fracture hospital discharges among Maine residents aged 65 and older in 2007. Every day, on average, there were four hip fracture hospital discharges in this age group.
- Females were at significantly higher risk than males of having a hip fracture hospital discharge. The hospital discharge rate for females was twice that of males. Nearly three-fourths (72.9%) of the hip fracture discharges among 65+ year old Mainers were for women.
- The risk of hip fracture hospital discharge increased significantly with increasing age among older Mainers. The risk among 85+ year olds was 12 times greater than the risk among 65-74 year olds.
- Nearly nine of every 10 hip fracture hospital discharges (88.3%) among 65+ year olds were known to be due to unintentional falls. (The cause of another 9.4% of hip fracture hospital discharges was not reported, so it is likely that the true percent that are due to unintentional falls was more than 88.3%.)
- There are no hip fracture objectives in Healthy Maine 2010.[1] Maine has met the national Healthy People 2010 goal of reducing the hip fracture rate among 65+ year old males to no more than 474 per 100,000, has not yet met the objective of reducing the rate among 65+ year old females to no more than 416 per 100,000.[5]

Injury Prevention Highlights: 2007-2009

- See Falls Section for prevention highlights.

Traumatic Brain Injury (TBI) Deaths and Hospitalizations, 2007

	Deaths			Hospitalizations		
	#	Crude Rate	Age-Adjusted Rate	#	Crude Rate	Age-Adjusted Rate
Overall	265	20.1	18.6	1,049	79.6	75.0
By sex:						
Male	195	30.3	29.3	627	97.5	97.9
Female	70	10.4	9.1	422	62.6	53.2
By age:						
<1 year	2	*	---	25	179.5	---
1-4 years	2	*	---	19	*	---
5-14 years	1	*	---	51	33.2	---
15-24 years	36	21.5	---	151	90.1	---
25-34 years	30	20.1	---	75	50.2	---
35-44 years	30	15.9	---	97	51.4	---
45-54 years	35	16.0	---	102	46.6	---
55-64 years	33	19.1	---	117	67.6	---
65-74 years	28	28.2	---	115	115.8	---
75-84 years	37	54.6	---	176	259.9	---
85+ years	31	111.0	---	121	433.3	---

Rates are per 100,000. Age-adjusted rates are adjusted to the 2000 U.S. standard population.
*Rates are not calculated when the number of events is <20.

Data Highlights: 2007

- Traumatic brain injury (TBI) occurs when sudden trauma results in injury to the brain. TBIs can result "when the head suddenly and violently hits an object, or when an object pierces the skull and enters brain tissue."[11]
- There were 265 TBI related deaths and 1,049 TBI related hospital discharges among Maine residents in 2007. Every week, on average, there were five deaths and 20 hospital discharges that were TBI related.
- Males were at significantly higher risk than females for both TBI related deaths and hospital discharges.
- 85+ year olds were at significantly higher risk than other age groups for both TBI related deaths and hospital discharges.
- 65+ year olds represented only 14.8% of the Maine population in 2007, but they accounted for more than a third of TBI related deaths (36.2%) and hospital discharges (39.3%).
- Almost two-thirds of the TBI related deaths (64.2%) were unintentional, 29.8% were suicide, and 4.5% were homicide. The remaining 1.5% were of other or undetermined intent. A different pattern was seen among TBI related hospital discharges, nearly all of which (90.6%) were unintentional; 4.5% were assault, and 0.6% were self-inflicted. The remaining 4.4% were of other, undetermined, or unknown intent.
- The three leading causes of TBI related deaths were self-inflicted firearm injury (29.1%), unintentional motor vehicle traffic incidents (27.2%), and unintentional falls (23.8%). The three leading causes of TBI related hospital discharges were unintentional falls (47.5%), unintentional motor vehicle traffic incidents (28.0%), and other unintentional transport incidents (5.3%; includes rail, water, and air transport, motor vehicle non-traffic incidents, and other road vehicle incidents).
- There is no TBI objective in Healthy Maine 2010.[1] Maine has not yet met the national Healthy People 2010 objective to reduce nonfatal head injury hospitalizations to no more than 45 per 100,000 (age-adjusted).[5]

Injury Prevention Highlights: 2007-2009

- *Resolve to Promote Community Integration for Individuals with Brain Injury* enacted directing the DHHS to complete a comprehensive plan to address the needs of persons with disabilities due to brain injuries, with a report presented to the legislature on how the plan is to be implemented.
- *An Act to Require a person Under 18 to Wear a Helmet While on a Motorcycle* was enacted; increasing the age from 15.

- *An Act to Improve Road Safety and Update Bicycling Laws* requires an operator of motor vehicle that is passing a bicycle to leave a distance of three feet between the motor vehicle and the bicycle, included operating a bicycle in the operating under the influence laws, added a fine of $25 for a person under 16 years of age operating a bicycle without a helmet (which can be waived if the person can provide proof of purchase of a bicycle helmet.)
- The Brain Injury Association of Maine partnered with the Bureau of Highway Safety to conduct 'Save a Brain - Wear a Helmet' This campaign provided 5,000 Maine children with a new, fitted bicycle helmet as well as school based prevention workshops.
- The Maine Concussion Initiative (MCMI) was founded in 2009, through a grant from the Goldfarb Center for Public Affairs and Civic Engagement at Colby College. The goal of the program is to enhance the health and safety of Maine high school athletes by educating medical practitioners and school administrators about the dangers of traumatic brain injury and the importance of consistent concussion management. The Maine Concussion Management Initiative is committed to making computerized cognitive testing available to all high schools in Maine.
- Dartmouth Medical School and the Maine Army National Guard announced a strategic collaboration to launch a two-tiered Mild Traumatic Brain Injury (mTBI) Program involving both state-of the-art screening and a system of integrated care to meet the needs of returning soldiers through collaboration between private and public community-based providers. One of the key features of the program centers on the pre- and post-deployment screening for mTBI, which is accomplished through the use of ImPACTTM, a computer program that can be administered by non-clinical personnel with minimal training. ImPACTTM is a validated instrument that is widely used among professional sports teams to manage sports-related concussions. In November 2007, all Maine National Guard troops began the process of receiving ImPACTTM screening before and after deployment to war zones.

Technical Notes

1. Data sources

Deaths. The 2007 death certificate statistical dataset was used to describe injury deaths. The dataset includes deaths of all Maine residents, regardless of where the death occurred. It is a multiple cause of death file that includes not only the underlying cause of death, but also any contributing causes. All injury fatality indicators in this report, except traumatic brain injury, were calculated by searching the underlying cause of death field. The traumatic brain injury fatality indicator was calculated by searching both underlying and contributing cause fields. We used the Centers for Disease Control and Prevention's (CDC) guidelines and definitions of injury indicators[12] whenever possible. Where CDC definitions were not available (i.e., unintentional injury fatalities), we followed the *External Cause of Injury Mortality Matrix for ICD-10*.[13] Appendix B lists the specific ICD-10 codes used in defining the injury fatality indicators.

Hospital Discharges. The 2007 inpatient (hospital discharge) dataset from the Maine Health Data Organization was used to describe injury hospital discharges. The dataset includes discharges from all nonfederal hospitals in Maine. Following CDC guidelines, we limited our analysis to hospital discharges on which the principal diagnosis was an injury (i.e., ICD-9-CM code 800-909.2, 909.4, 909.9, 910-994.9, 995.5-995.59, or 995.80-995.85) and excluded discharges from psychiatric and rehabilitation hospitals. (Discharges from psychiatric and rehabilitation units in general hospitals are included in the analysis.) All injury hospital discharge indicators in this report, except traumatic brain injury and near-drowning, were calculated based on the first-listed external cause of injury code (E-code) that was not E849, E967, E869.4, E870-E879, or E930-E949. The E-code selection process followed CDC guidelines. The traumatic brain injury hospital discharge indicator was coded using nature of disease codes (N-codes). The near-drowning indicator was coded using a combination of E-codes and N-codes. We used CDC's guidelines and definitions of injury indicators[12] whenever possible. Where CDC definitions were not available (i.e., unintentional injury hospital discharges), we followed the *Recommended Framework of E-Code Groupings for Presenting Injury Mortality and Morbidity Data*.[14] Appendix C lists the specific ICD-9 codes used in defining the hospital discharge injury indicators.

Youth Risk Behavior Survey. The Maine 2007 Youth Risk Behavior Survey was used to provide supplemental information for the motor vehicle traffic indicator. This written survey monitors select health conditions and health risk behaviors among Maine middle and high school students.

Behavioral Risk Factor Surveillance System. The Maine 2008 Behavioral Risk Factor Surveillance System survey was used to provide supplemental information for the unintentional falls and unintentional motor vehicle traffic indicators. The survey is administered by phone and tracks health conditions and risk behaviors among Mainers aged 18 years and older.

2. Rates

Population data. 2007 population estimates used in calculating rates were obtained from the U.S. Census Bureau.[15]

Crude rates. Crude rates were calculated by dividing the number of events for a particular indicator by the 2007 population. Rates are expressed per 100,000 population. Crude rates were calculated for the population as a whole, by sex, and by age.

Age-adjusted rates. The direct method (applying age-specific Maine rates to the 2000 U.S. standard population) was used to calculate age-adjusted rates. Rates are expressed per 100,000 population. Age-adjusted rates were calculated for the population as a whole, and by sex.

Suppression of rates. Rates based on small numbers tend not to be reliable or precise, so following CDC practice,[12] rates were not calculated if the number of events was less than 20.

Using rates.[4] The choice of a crude rate versus an age-adjusted rate depends on the purpose for which a rate will be used. Crude rates (or the number of events) should be used to measure or compare the absolute magnitude of injury indicators. Age-adjusted rates should only be used for comparison purposes, when you want to control for differences due only to differences in age composition (e.g., to compare Maine with another state that has a much younger population or to look at Maine data for two different years and control for the aging of the population over time). The numeric value of an age-adjusted rate depends on the standard population used and therefore has no intrinsic meaning. The age-adjusted rates presented in this report can only be compared with other age-adjusted rates that were adjusted to the same 2000 U.S. standard population.

Comparing rates. Age- or sex-specific comparisons were done by placing 95% confidence intervals (not shown) around the crude rates. If the intervals did not overlap, the rates were considered to be statistically significantly different.

3. Limitations

This report is subject to several limitations:

- Maine residents who were hospitalized for injuries in another state or at a federal hospital in Maine are not included.
- External cause of injury was not available for 6.9 percent of injury hospital discharges. As such, the counts and rates reported here for particular injury indicators (e.g., unintentional fall, poisoning) should be treated as minimum estimates.

- The deaths and hospital discharges reported here for a given injury indicator are not mutually exclusive; individuals who died in the hospital are included in both figures.
- A given person might appear more than once in the hospitalization counts and rates for a given indicator. This can occur if a person was hospitalized more than once at the same hospital for the same injury or was transferred from one hospital to another. Hence, the number of unique individuals who were hospitalized for a particular indicator will be less than the number of hospital discharges reported here for that indicator.
- The use of death and hospital discharge data means that this report reflects the more severe end of the injury spectrum and, as such, underestimates the overall burden of injury in Maine. A more complete picture of injury in the state would require information on individuals with injuries who (1) are treated and released from hospital emergency departments; (2) are treated in non-hospital outpatient settings (e.g., primary care physician's office), or (3) do not seek any treatment.
- Survey data reported here are based on self-report and may be subject to recall errors or to people giving the response they feel is expected or acceptable, rather than the response that most accurately reflects their behavior.

4. Comparisons with Other Reports

Care should be taken when comparing the data presented here with data in other reports. Comparisons should only be made if the methodologies are similar. For example, the CDC methodology used in this report limits hospitalization analyses to discharges from general hospitals for which the principal diagnosis was an injury. The results obtained using this method will differ from analyses that include all hospitals or all discharges, regardless of what the principal diagnosis was.

The indicator definitions used in this report are the same as those used in the 2005 and 2006 injury reports; however, some of the indicator definitions used here differ from those used in the 2004 injury report. Specifically:

- Non-traffic codes have been removed from the unintentional motor vehicle hospital discharge indicator.
- Additional diagnosis codes have been added to both the traumatic brain injury fatality indicator (i.e., ICD-10 S04.0) and hospital discharge indicator (i.e., ICD-9-CM 950.1-950.3 and 995.55).
- Terrorism codes (i.e., ICD-9-CM E979 and E999, ICD-10 U01-U03) have been added to indicator definitions where appropriate.

See Appendices B and C for complete indicator definitions used in this report.

Percent of All Deaths and Hospital Discharges that were Injury Related, By Age and Sex, Maine Residents, 2007

	Percent of Deaths that were Injury-Related			Percent of Hospital Discharges that were Injury-Related		
Age	Overall	Male	Female	Overall	Male	Female
All Ages	6.5%	9.1%	4.0%	5.4%	5.6%	5.3%
< 1 yr	5.8%	5.9%	5.6%	0.4%	0.4%	0.4%
1-4	50.0%	66.7%	20.0%	10.0%	11.0%	8.7%
5-14	40.0%	40.0%	40.0%	12.1%	15.3%	7.9%
15-24	79.6%	85.4%	65.9%	7.9%	21.7%	3.5%
25-34	75.2%	80.0%	60.5%	4.4%	12.4%	2.2%
35-44	39.9%	40.5%	38.9%	6.0%	9.0%	4.1%
45-54	16.5%	20.0%	10.7%	5.5%	5.9%	5.0%
55-64	6.3%	7.7%	4.3%	4.5%	4.1%	5.0%
65-74	2.9%	3.6%	1.9%	4.1%	3.2%	5.0%
75-84	2.7%	3.4%	2.0%	6.2%	4.3%	7.8%
85+	2.4%	2.8%	2.1%	10.5%	7.3%	12.2%

Appendix B. International Classification of Disease Codes Used to Define Injury Death Indicators

Mechanism (Intent)	ICD-10 Codes	Description
All injury (all intents)	V01-X59	Accidents
	X60-X84	Intentional self-harm
	X85-Y09	Assault
	Y10-Y34	Event of undetermined intent
	Y35-Y36	Legal intervention and operations of war
	Y85-Y86	Sequelae of accidents
	Y87	Sequelae of intentional self-harm, assault and events of undetermined intent
	Y89	Sequelae of other external causes (legal intervention, war operations, unspecified)
	U01	Terrorism-assault
	U02	Sequelae of terrorism-assault
	U03	Terrorism-intentional self-harm
Drowning (unintentional)	W65-W74	Accidental drowning and submersion
	V90	Accident to watercraft causing drowning and submersion
	V92	Water-transport-related drowning and submersion without accident to watercraft
Fall-related (unintentional)	W00-W19	Falls (accident)
Fire-related (unintentional)	X00-X09	Exposure to smoke, fire, and flames
Firearm-related (all intents)	W32-W34	Handgun, rifle, shotgun, larger firearm, and other and unspecified firearms discharge (accident)
	X72-X74	Handgun, rifle, shotgun, larger firearm, and other and unspecified firearms discharge (intentional self-harm)
	X93-X95	Handgun, rifle, shotgun, larger firearm, and other and unspecified firearms discharge (assault)
	Y22-Y24	Handgun, rifle, shotgun, larger firearm, and other and unspecified firearms discharge (undetermined intent)
	Y35.0	Legal intervention involving firearm discharge
	U01.4	Terrorism involving firearms

Mechanism (Intent)	ICD-10 Codes	Description
Homicide	X85-Y09	Assault
	Y87.1	Sequelae of assault
	U01	Terrorism-assault
	U02	Sequelae of terrorism-assault
Motor vehicle traffic (unintentional)	V02-V04 (.1, .9), V09.2	Pedestrian injured in transport accident (traffic)
	V12-V14 (.3-.9), V19 (.4-.6)	Pedal cyclist injured in transport accident (traffic)
	V20-V28 (.3-.9), V29 (.4-.9)	Motorcycle rider injured in transport accident (traffic)
	V30-V39 (.4-.9)	Occupant of three-wheeled motor vehicle injured in transport accident (traffic)
	V40-V49 (.4-.9)	Car occupant injured in transport accident (traffic)
	V50-V59 (.4-.9)	Occupant of pick-up truck or van injured in transport accident (traffic)
	V60-V69 (.4-.9)	Occupant of heavy transport vehicle injured in transport accident (traffic)
	V70-V79 (.4-.9)	Bus occupant injured in transport accident (traffic)
	V80 (.3-.5), V81.1, V82.1, V83-V86 (.0-.3), V87 (.0-.8), V89.2	Other land transport accidents (traffic)
Poisoning (all intents)	X40-X49	Accidental poisoning by and exposure to noxious substances
	X60-X69	Intentional self-poisoning
	X85-X90	Assault by poisoning
	Y10-Y19	Poisoning, undetermined intent
	Y35.2	Legal intervention involving gas
	U01 (.6-.7)	Terrorism involving biological or chemical weapons
Suicide (self-inflicted)	X60-X84	Intentional self-harm
	Y87.0	Sequelae of intentional self-harm
	U03	Terrorism-intentional self-harm

Mechanism (Intent)	ICD-10 Codes	Description
Traumatic brain injury (all intents)	S01.0-S01.9	Open wound of head
	S02.0, S02.1, S02.3, S02.7-S02.9	Fracture of skull and certain facial bones
	S04.0	Injury of optic nerve and pathways
	S06.0-S06.9	Intracranial injury
	S07.0, S07.1, S07.8, S07.9	Crushing injury of head
	S09.7-S09.9	Other and unspecified injuries of head
	T01.0	Open wounds involving head with neck
	T02.0	Fractures involving head with neck
	T04.0	Crushing injuries involving head with neck
	T06.0	Injuries of brain and cranial nerves with injuries of nerves and spinal cord at neck level
	T90.1, T90.2, T90.4, T90.5, T90.8, T90.9	Sequelae of injuries of head
Unintentional injury	V01-X59	Accidents
	Y85-Y86	Sequelae of accidents

Appendix C. International Classification of Disease Codes Used to Define Injury Hospitalization Indicators

Mechanism (Intent)	ICD-9 Codes	Description
All injury (all intents)	N-codes: 800-909.2, 909.4, 909.9-994.9, 995.5-995.59, 995.80-995.85	Injury and poisoning
Drowning and near-drowning (unintentional)	N-codes: 994.1 and/or E-codes: E830 E832 E910 E954 E964 E984	Drowning and nonfatal submersion Accident to watercraft causing submersion Other accidental submersion or drowning in water transport accident Accidental drowning and submersion Suicide and self-inflicted injury by submersion [drowning] Assault by submersion [drowning] Submersion [drowning], undetermined whether accidentally or purposely inflicted
Fall (unintentional)	E-codes: E880-E886, E888	Accidental falls
Fire-related (unintentional)	E-codes: E890-E899	Accident caused by fire and flames
Firearm-related (all intents)	E-codes: E922.0-E922.3, E922.8, E922.9 E955.0-E955.4 E965.0-E965.4 E985.0-E985.4 E970 E979.4	Accident caused by firearm Suicide and self-inflicted injury by firearms Assault by firearms Injury by firearms, undetermined whether accidentally or purposely inflicted Injury due to legal intervention by firearms Terrorism involving firearms

Mechanism (Intent)	ICD-9 Codes	Description
Homicide / assault	E-codes:	
	E960-E969	Injury purposely inflicted by other persons
	E979	Terrorism
	E999.1	Late effect of injury due to terrorism
Motor vehicle traffic (unintentional)	E810-E819	Motor vehicle traffic accidents
Poisoning (all intents)	E-codes:	
	E850-E858	Accidental poisoning by drugs, medicinal substances, and biologicals
	E860-E869	Accidental poisonings by other solid and liquid substances, gases, and vapors
	E950-E952	Suicide and self-inflicted injury by solid or liquid substances, gases in domestic use, or other gases and vapors
	E962	Assault by poisoning
	E972	Injury due to legal intervention by gas
	E980-E982	Poisoning by solid or liquid substances, gases in domestic use, or other gases, undetermined whether accidentally or purposely inflicted
	E979 (.6-.7)	Terrorism involving biological or chemical weapons
Suicide-attempt (self-inflicted)	E-codes:	
	E950-E959	Suicide and self-inflicted injury

Mechanism (Intent)	ICD-9 Codes	Description
Traumatic brain injury (all intents)	N-codes:	
	800.0-800.9	Fracture of vault of skull
	801.0-801.9	Fracture of base of skull
	803.0-803.9	Other and unqualified skull fractures
	804.0-804.9	Multiple fractures involving skull or face with other bones
	850.0-850.9	Concussion
	851.0-851.9	Cerebral laceration and contusion
	852.0-852.5	Subarachnoid, subdural, and extradural hemorrhage, following injury
	853.0-853.1	Other and unspecified intracranial hemorrhage following injury
	854.0-854.1	Intracranial injury of other unspecified nature
	950.1-950.3	Injury to the optic chiasm, optic pathways, or visual cortex
	959.01	Head injury, unspecified
	995.55	Shaken infant syndrome
Unintentional injury	E-codes: E800-E869, E880-E929	Railway accidents; motor vehicle traffic accidents; motor vehicle non-traffic accidents; other road vehicle accidents; water transport accidents; air and space transport accidents; vehicle accidents not elsewhere classifiable; accidental poisoning by drugs, medicinal substances, and biologicals; accidental poisoning by other solid and liquid substances, gases, and vapors; accidental falls; accidents caused by fire and flames; accidents due to natural and environmental factors; accidents caused by submersion, suffocation, and foreign bodies; other accidents; late effects of accidental injury

References

1. Bureau of Health, Maine Department of Health and Human Services. Healthy Maine 2010: Longer and Healthier Lives. Augusta, ME. Available at: http://www.maine.gov/dhhs/boh/healthyme2k/hm2010a.htm.

2. Holder Y, Peden M, Krug E, Lund J, Gururaj G, Kobusingye O, eds. Injury Surveillance Guidelines. Geneva: World Health Organization; 2001.

3. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS). Available at: http://www.cdc.gov/injury/wisqars/. Accessed 10/19/2009.

4. U.S. Department of Health and Human Services. Tracking Healthy People 2010. U.S. Government Printing Office. Available at: http://www.healthypeople.gov/Document/html/tracking/THP_PartA.htm#Age Adjustment. Accessed 7/14/2006.

5. U.S. Department of Health and Human Services. Healthy People 2010: Objectives for Improving Health. 2nd ed. Washington, DC: U.S. Government Printing Office. Available at: http://www.healthypeople.gov/Document/tableofcontents.htm. Accessed 10/15/2009.

6. ICD-9-CM for Hospitals, Volumes 1, 2 & 3. Supplementary Classification of External Causes of Injury and Poisoning: Ingenix, Inc.; 2003.

7. 2007 Youth Risk Behavior Survey Results, Maine Middle School Survey, Summary and Detail Tables.

8. 2007 Youth Risk Behavior Survey Results, Maine High School Survey, Summary and Detail Tables.

9. 2008 Behavioral Risk Factor Surveillance System, Maine Core Questions Data Report.

10. Centers for Disease Control and Prevention. Hip Fractures Among Older Adults. Available at: http://www.cdc.gov/HomeandRecreationalSafety/Falls/adulthipfx.html. Accessed 10/15/2009.

11. National Institute of Neurological Disorders and Stroke -- National Institutes of Health. NINDS Traumatic Brain Injury Information Page (updated 7/8/05). Available at: http://www.ninds.nih.gov/disorders/tbi/tbi.htm. Accessed 10/4/2005.

12. Johnson RL, Thomas KE, Sarmiento K. State Injury Indicators: Instructions for Preparing 2005 Data. Centers for Disease Control and Prevention, National Center for Injury

Prevention and Control. Available at: http://www.cdc.gov/ncipc/dir/State_Injury_Indicators_05.pdf. Accessed 7/7/2009.

13. Centers for Disease Control and Prevention. External Cause of Injury Mortality Matrix for ICD-10 (12/10/2002). Available at: http://www.cdc.gov/nchs/data/ice/icd10_transcode.pdf. Accessed 8/2/2005.

14. Centers for Disease Control and Prevention. Recommended Framework of E-Code Groupings for Presenting Injury Mortality and Morbidity Data (December 1, 2008). Available at: http://www.cdc.gov/ncipc/osp/matrix2.htm. Accessed 7/28/2009.

15. U.S. Census Bureau. State Single Year of Age and Sex Population Estimates: April 1, 2000 to July 1, 2007 - RESIDENT Available at: http://www.census.gov/popest/states/asrh/files/SC-EST2007-AGESEX-RES.csv. Accessed 10/15/2008.

This report, produced in October 2009, is part of the Public Health Injury Surveillance and Prevention Program cooperative agreement (funding opportunity number 5U17CE124819-04) between the Centers for Disease Control and Prevention (CDC) and the Maine Center for Disease Control and Prevention.

Caring..Responsive..Well-Managed..We are DHHS.