Injury Data Update

A Publication of the Injury Surveillance Program (ISP) *January 2003*

Injury Surveillance Program

The Injury Surveillance Program (ISP) at the Massachusetts Department of Public Health seeks to reduce fatal and nonfatal injuries among Massachusetts residents by monitoring the incidence, trends, risk factors and circumstances of these injuries and disseminating this information to injury prevention advocates. These data may be used to inform decisions regarding the development and evaluation of injury prevention initiatives.

This update summarizes fatal and non-fatal injuries among Massachusetts residents for the year 2000. Data highlights are summarized in Figure 1. Injury deaths are summarized in Table 1, injury-related hospital discharges in Table 2, and estimated injury-related emergency department (ED) discharges are summarized in Table 3.

MA Injury Facts:

- Poisoning (including illicit drug overdose) was the leading cause of injury death in 2000, accounting for nearly 1 in 4 injury deaths.
- 62% of the poisoning deaths were associated with opiates or related narcotics.
- Over 50% of the injury-related hospital discharges were due to falls.
- The highest estimated rates of injury-related ED visits were among 15-19 year old males.

Injury Prevention:

Injuries are not "accidents." Nearly all injuries are preventable, and most follow a very predictable sequence of events. By identifying the risk factors for and circumstances of these injuries we can more effectively develop strategies and interventions for prevention. For more information on preventing injuries, contact the Injury Prevention and Control Program at 617-624-5424 or on-line at: www.state.ma.us/dph/uninj/inj.htm.

Other Injury Data and Resources

Most ISP publications are available on-line at: www.state.ma.us/dph/bhsre/isp/isp.htm or by contacting our office at 617-624-5691. Customized injury data reports are available by calling 617-624-5664.

WRISS Fast Track:

The Weapon Related Injury Surveillance System recently developed a new system to provide timely dissemination of WRISS data on gunshot and stabbing-related injuries treated in Massachusetts hospital emergency departments. If you are interested in receiving monthly WRISS Fast Track summaries, please email Beth Hume: beth.hume@state.ma.us.

MassCHIP:

Weapon-related injury data from ISP's Weapon Related Injury Surveillance System (WRISS) will soon be available through the Massachusetts Community Health Information Profile (MassCHIP). MassCHIP provides instant topics of interest, and a query-based interface for customizing data to meet individual user needs. Check out the MassCHIP web site at: www.state.ma.us/dph/ose/mchphome.htm.

Special Thanks

ISP would like to thank all hospital personnel whose documentation and/or coding of injuries contribute to our ability to quantify injuries in Massachusetts.

Figure 1. Data Highlights of Injuries Among Massachustts Residents, 2000

	Deaths	Hospitalizations	Estimated ED Visits
• Total Counts	2,386	44,980	721,396
• Rate per 100,000 MA residents	37.4	708.4	11362.2
• Highest rate: sex	Males	Females	Males
• Highest rate: age group (years)	85+	85+	15-19
• Leading injury cause	Poisonings	Falls	Falls

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Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Table 1. Injury Deaths, Massachusetts Residents, 2000

Cause Categories	INJURY INTENT					Total Number of Cases	Percent of Total Number	Rate per 100,000
	Uninten-tional	*Intentional*		Undeter-mined	Other & Legal			
		Suicide	Homicide					
Cut/pierce	0	9	29	1	0	39	1.6	0.6
Drowning/submersion	42	8	0	10	-	60	2.5	0.9
Fall	200	21	0	1	-	222	9.3	3.5
Fire/burn	59	1	0	1	-	61	2.6	1.0
Firearms	3	103	67	1	1	175	7.3	2.8
Machinery	4	-	-	-	-	4	0.2	*
Natural/environmental	36	-	-	-	-	36	1.5	0.6
Non-powder gun (eg., BB gun)	0	-	-	-	-	0	0.0	0.0
Overexertion	0	-	-	-	-	0	0.0	0.0
Poisoning	47	101	0	438	0	586	24.6	9.2
Struck by, against	5	0	4	1	0	10	0.4	0.2**
Suffocation/hanging	125	135	7	1	-	268	11.2	4.2
Transport-related Injuries:	516	3	0	0	0	519	21.8	8.2
Motor vehicle traffic -	*473*	*3*	*0*	*0*	*0*	*476*	*19.9*	*7.5*
• occupant	*76*	-	-	-	-	*76*	*3.2*	*1.2*
• motorcyclist	*30*	-	-	-	-	*30*	*1.3*	*0.5*
• pedal cyclist	*8*	-	-	-	-	*8*	*0.3*	*0.1***
• pedestrian	*77*	-	-	-	-	*77*	*3.2*	*1.2*
• unspecified	*282*	-	-	-	-	*282*	*11.8*	*4.4*
• other	*0*	-	-	-	-	*0*	*0.0*	*0.0*
Pedal cyclist, other	*7*	-	-	-	-	*7*	*0.3*	*0.1***
Pedestrian, other	*8*	-	-	-	-	*8*	*0.3*	*0.1***
Transport-related, other	*28*	-	-	-	-	*28*	*1.2*	*0.4*
Other-specified & classifiable	7	12	7	0	0	26	1.1	0.4
Other-not classifiable	18	6	2	5	0	31	1.3	0.5
Unspecified	299	2	9	7	0	317	13.3	5.0
Adverse Effects[+]	-	-	-	-	-	32	1.3	0.5
TOTALS	***1,361***	***404***	***125***	***466***	***1***	***2,386***	***100%***	***37.6***

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

[+] Adverse Effects can be related to medical and surgical care procedures, or to the use of therapeutic substances (including allergic reactions).
* Rates based on a cell count of less than 5 are not reported.
** Rates based on a cell count of less than 20 may be unstable. Data should be interpreted cautiously.
- (hyphen) See note #2.

Method Notes:
1) An injury death is defined as any death with an ICD-10 code of V01-Y89 in the underlying cause of death field.
2) A modified version of the Matrix of E-code Groupings for Presenting Injury Mortality and Morbidity Data, developed by the CDC, was used to group injury categories. A hyphen indicates that intentionality is not provided for this category.
3) Injury death analysis is based on calendar year (Jan 1 - Dec 31, 2000).
4) Massachusetts residents who died in or out-of-state are included in this analysis; non-Massachusetts residents are excluded from the analysis.
5) Population data used to calculate rates are based on the US Census Bureau, Census 2000 P.L. 94-171 Redistricting File. All rates are per 100,000 residents.
6) 'Other & Legal' includes injuries due to legal execution, police actions, and operations of war.
7) All data were extracted and compiled by the Injury Surveillance Program.

Table 2. Injury-Related Hospital Discharges, Massachusetts Residents, 2000

Cause Categories	INJURY INTENT					Total Number of Cases	Percent of Total Number	Rate per 100,000
	Uninten-tional	*Intentional*		Undeter-mined	Other & Legal			
		Self-Inflicted	Assault					
Cut/pierce	673	490	375	16	0	1,554	3.5	24.5
Drowning/submersion	33	5	0	2	-	40	0.1	0.6
Fall	23,602	38	3	17	-	23,660	52.6	372.7
Fire/burn	538	20	2	7	-	567	1.3	8.9
Firearms	32	10	142	35	1	220	0.5	3.5
Machinery	261	-	-	-	-	261	0.6	4.1
Natural/environmental	676	4	-	3	-	683	1.5	10.8
Non-powder gun (eg., BB gun)	5	1	2	0	-	8	< 0.1	0.1*
Overexertion	1,032	-	-	-	-	1,032	2.3	16.3
Poisoning	1,474	2,852	6	470	0	4,802	10.7	75.6
Struck by, against	1,099	-	525	-	7	1,631	3.6	25.7
Suffocation/hanging	293	37	2	1	-	333	0.7	5.2
Transport-related Injuries:	5,060	4	4	1	0	5,069	11.3	79.8
Motor vehicle traffic -	*4,240*	*4*	*4*	*1*	*0*	*4,249*	*9.4*	*66.9*
• occupant	*2859*	-	-	-	-	*2,859*	*6.4*	*45.0*
• motorcyclist	*436*	-	-	-	-	*436*	*1.0*	*6.9*
• pedal cyclist	*122*	-	-	-	-	*122*	*0.3*	*1.9*
• pedestrian	*654*	-	-	-	-	*654*	*1.5*	*10.3*
• unspecified	*144*	-	-	-	-	*144*	*0.3*	*2.3*
• other	*25*	-	-	-	-	*25*	*0.1*	*0.4*
Pedal cyclist, other	*357*	-	-	-	-	*357*	*0.8*	*5.6*
Pedestrian, other	*81*	-	-	-	-	*81*	*0.2*	*1.3*
Transport-related, other	*382*	-	-	-	-	*382*	*0.8*	*6.0*
Other-specified & classifiable	1,588	5	107	1	0	1,701	3.8	26.8
Other-not classifiable	583	101	133	86	12	915	2.0	14.4
Unspecified	2,314	52	118	18	2	2,504	5.6	39.4
TOTALS	***39,263***	***3,619***	***1,419***	***657***	***22***	***44,980***	***100%***	***708.4***

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

*Rates based on a cell count of less than 20 may be unstable. Data should be interpreted cautiously.
- (hyphen) See note #2.

Method Notes:
1) An injury-related case is defined as any case having an ICD9-CM Nature of Injury Code of 800-999 in any of the ICD9 diagnosis fields [excluding Certain Adverse Effects, Complications of Surgical & Medical Care, and certain late effects].
2) A modified version of the Matrix of E-code Groupings for Presenting Injury Mortality and Morbidity Data, developed by the CDC, was used to group injury categories. A hyphen indicates that intentionality is not provided for this category.
3) A total of 3,633 injury cases did not receive an External Cause of Injury Code (E-Code) and are therefore not included in this summary.
4) Data are based on fiscal year (Oct 1, 1999 – Sep 30, 2000). Only Massachusetts residents treated and released are included in these analyses.
5) Population data used to calculate rates are based on the US Census Bureau, Census 2000 P.L. 94-171 Redistricting File. All rates are per 100,000 residents.
6) 'Other & Legal' includes injuries due to legal execution, police actions, and operations of war.
7) All data were extracted and compiled by the Injury Surveillance Program.

Table 3. Estimated* Emergency Dept. Injury Discharges, Massachusetts Residents, 2000

Cause Categories	INJURY INTENT					Total Number of Cases	Percent of Total Number	Rate per 100,000
	Unintentional	*Intentional*		Undetermined	Other & Legal			
		Self-inflicted	Assault					
Cut/pierce	84,291	1,677	900	73	0	86,941	12.1	1,369.3
Drowning/submersion	92	6	0	0	-	98	0.0	1.5
Fall	179,340	24	18	73	-	179,455	24.9	2,826.5
Fire/burn	11,346	24	24	0	-	11,394	1.6	179.5
Gun-related Injuries:†	145	5	159	29	0	338	*< 0.1*	5.3
Firearm	*25*	*5*	*113*	*6*	*0*	*149*	*< 0.1*	*2.3*
Non-powder gun (BB, pellet)	*114*	*0*	*38*	*20*	*0*	*172*	*< 0.1*	*2.7*
Other gun	*6*	*0*	*8*	*3*	*0*	*17*	*< 0.1*	*0.3*
Machinery	3,831	-	-	-	-	3,831	0.5	60.3
Natural/Environmental	29,137	6	-	12	-	29,155	4.0	459.2
Overexertion	95,264	-	-	-	-	95,264	13.2	1,500.4
Poisoning	6,169	4,657	55	2,062	6	12,949	1.8	204.0
Struck by, against	101,482	-	10,673	-	330	112,485	15.6	1,771.7
Suffocation	643	67	24	18	-	752	0.1	11.8
Transport-related Injuries:	106,420	6	6	0	0	106,432	14.8	1,676.3
Motor vehicle traffic -	*88,740*	-	-	-	-	*88,740*	*12.3*	*1,397.7*
• occupant	*77,253*	-	-	-	-	*77,253*	*10.7*	*1,216.8*
• motorcyclist	*2,411*	-	-	-	-	*2,411*	*0.3*	*38.0*
• pedal cyclist	*1,181*	-	-	-	-	*1,181*	*0.2*	*18.6*
• pedestrian	*3,042*	-	-	-	-	*3,042*	*0.4*	*47.9*
• unspecified	*4,088*	-	-	-	-	*4,088*	*0.6*	*64.4*
• other	*765*	-	-	-	-	*765*	*0.1*	*12.0*
Pedal cyclist, other	*12,271*	-	-	-	-	*12,271*	*1.7*	*193.3*
Pedestrian, other	*300*	-	-	-	-	*300*	*< 0.1*	*4.7*
Transport-related, other	*5,110*	-	-	-	-	*5,110*	*0.7*	*80.5*
Other-specified & classifiable	35,998	6	1,077	12	0	37,093	5.1	584.2
Other-not classifiable	7,320	98	5,906	110	24	13,458	1.9	212.0
Unspecified	30,441	61	1,108	55	86	31,751	4.4	500.1
TOTALS	***691,919***	***6,637***	***19,950***	***2,444***	***446***	***721,396***	***100%***	***11,362.2***

Sources: Emergency Department Injury Surveillance System (EDISS), Massachusetts Department of Public Health.
Weapon Related Injury Surveillance System (WRISS), Massachusetts Department of Public Health.

*The above estimates, with the exception of gun-related injuries, are based on numbers from the Emergency Department Injury Surveillance System (EDISS). EDISS is a random sample of 11 Massachusetts hospitals that submit data for persons treated in the emergency department for an injury.

†Gun-related injury estimates are based on data from the Weapon Related Injury Surveillance System (WRISS). WRISS is an emergency department-based system in which *all* Massachusetts hospital emergency departments participate. This statewide system captures data on gun-related injuries and assault-related cut/pierce injuries.

- (hyphen) See note #2.

Method Notes:

1) An injury-related case is defined as any case having an ICD9-CM Nature of Injury Code of 800-999 in any of the ICD9 diagnosis fields [excluding Certain Adverse Effects, Complications of Surgical & Medical Care, and certain late effects].
2) A modified version of the Matrix of E-code Groupings for Presenting Injury Mortality and Morbidity Data, developed by the CDC, was used to group injury categories. A hyphen indicates that intentionality is not provided for this category.
3) An estimated total of 10,563 injury cases did not receive an External Cause of Injury Code (E-Code) and are therefore not included in this summary.
4) Data are based on fiscal year (Oct 1, 1999 – Sep 30, 2000). Only Massachusetts residents treated and released are included in these analyses.
5) Population data used to calculate rates are based on the US Census Bureau, Census 2000 P.L. 94-171 Redistricting File. All rates are per 100,000 residents.
6) 'Other & Legal' includes injuries due to legal police actions & operations of war.
7) All data were extracted and compiled by the Injury Surveillance Program.