

Emergency department visits for work-related injuries among 18- to 24-year-olds

Table 1. Summary of All ED Visits

N = Number of Visit
% = Percent of Visits

		All Visits			
		N	%	Visits per 10,000 FTEs	95% CI
Total		39,925	100	297.3	294-300
Age	18	2,944	7.4	338.7	327-351
	19	4,634	11.6	422.2	410-434
	20	5,496	13.8	350.1	341-359
	21	6,002	15.0	334.8	326-343
	22	6,751	16.9	308.7	301-316
	23	6,963	17.4	237.5	232-243
	24	7,135	17.9	239.5	234-245
Gender⁺	Male	25,969	65.0	412.9	408-418
	Female	13,955	35.0	195.5	192-199
Race & Ethnicity^{**}	White only, non-Hispanic	30,257	75.8	250.5	248-253
	Hispanic	5,201	13.0	266.1	259-273
	Black only, non-Hispanic	2,338	5.9	225.1	216-234
	Asian only, non-Hispanic	523	1.3	75.5	69-82
	Multi-racial	314	0.8	101.4	90-113
Year of Hospital Visit	2008	9,734	24.4	342.8	336-350
	2009	7,795	19.5	278.1	272-284
	2010	7,724	19.3	313.3	306-320
	2011	7,545	18.9	292.5	286-299
	2012	7,127	17.9	260.1	254-266

(continued on next page)

Source: Emergency Discharge Data, for 1 Jan 2008 through 31 Dec 2012, Massachusetts Center for Health Information and Analysis.

Counts not shown and rates not calculated for cells with less than 11 cases based on the CHIA rules pertaining to confidentiality.

Numbers may not add to total due to missing information. Percentages may not add to 100 due to rounding error.

An ED visit for an injury is defined as any case having an ICD-9-CM Nature of Injury Code of 800-999 in the primary diagnosis field.

Attribution of work-relatedness is based on designation of Workers' Compensation Insurance as expected payer.

Injuries per 10,000 FTE calculated as number of injury / FTE*10,000; FTEs=total hours per year / 2000.

Total hours worked for Massachusetts residents obtained from Current Population Survey, Bureau of Labor Statistics, Jan 2008 through Dec 2012.

⁺Difference is significant based on 95% confidence intervals; however, the standard error of the denominator was not taken into account when calculating confidence intervals.

[#]Methods used to calculate race/ethnicity have changed to include a new multi-racial category. These data are not comparable with previous years.

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Table 1. Summary of All ED Visits

(continued from previous page)

		All Visits			
		N	%	Visits per 10,000 FTEs	95% CI
Nature of Injury	Open wounds	15,641	39.2	116.5	114-118
	Sprains	7,979	20.0	59.4	58-61
	Superficial/Contusions	7,294	18.3	54.3	53-56
	Burns	2,109	5.3	15.7	15-16
	Fractures	1,613	4.0	12.0	11-13
	Crushing	504	1.3	3.8	3-4
	Internal organ	522	1.3	3.9	3-4
	Dislocations	277	0.7	2.1	1-2
	Amputations	177	0.4	1.3	1-2
	Other ^a	1,471	3.7	11.0	10-11
	Unspecified & Missing	2,338	5.9	17.4	16-18
External Cause of Injury	Cut/pierce	11,870	29.7	88.4	87-90
	Struck by/against	6,691	16.8	49.8	49-51
	Overexertion	5,088	12.7	37.9	37-39
	Falls	3,839	9.6	28.6	28-30
	Fire/burn	2,099	5.3	15.6	15-16
	Machinery	1,305	3.3	9.7	9-10
	Motor vehicle	935	2.3	7.0	6-7
	Natural/environmental	930	2.3	6.9	6-7
	Poisoning	189	0.5	1.4	1.2-1.6
	Other transportation	132	0.3	0.7	0.6-0.9
	Other ^b	4,599	11.5	34.3	33-35
	Unspecified & Missing	2,248	5.6	16.7	16-17

(a) Other includes blood vessel injuries, nerve injuries, and system wide and late effect injuries.

(b) Other includes drowning, suffocation, firearm, other specified, and not elsewhere specified.

Nature of Injury and Body Region groupings are based on Barell Injury Matrix, Barell et al., *Inj Prev*, 2002 Jun;8(2):91-96.

External Cause of Injury groupings are based on 'ICD-9 Framework for Presenting Injury Mortality Data,' MMWR Recommendations and Reports, August 29, 1997, Volume 46/NORR-14.

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Table 2. Nature of Injury by Gender and Race & Ethnicity

N = Number of Visits
% = Percent of Visits

	Total	Gender				Race & Ethnicity							
		Males		Females		White non-Hispanic		Hispanic		Black non-Hispanic		Other	
		N	%	N	%	N	%	N	%	N	%	N	%
	25,969	65.0	13,955	35.0	31,047	77.8	4,501	11.3	2,395	6.0	1,487	2.3	
Nature of Injury	Open wounds	11,322	43.6	4,319	30.9	12,319	39.7	1,769	39.3	752	31.4	600	40.3
	Sprains	4,517	17.4	3,462	24.8	6,097	19.6	938	20.8	608	25.4	270	18.2
	Superficial/contusions	4,331	16.7	2,962	21.2	5,623	18.1	748	16.6	537	22.4	280	18.8
	Burns	1,137	4.4	972	7.0	1,584	5.1	303	6.7	111	4.6	83	5.6
	Fractures	1,209	4.7	404	2.9	1,257	4.0	210	4.7	69	2.9	57	3.8
	Crushing	398	1.5	106	0.8	381	1.2	68	1.5	29	1.2	21	1.4
	Internal organ	300	1.2	222	1.6	445	1.4	39	0.9	19	0.8	12	0.8
	Dislocations	199	0.8	78	0.6	216	0.7	21	0.5	22	0.9	13	0.9
	Amputations	155	0.6	22	0.2	108	0.3	40	0.9	15	0.6	14	0.9
	Other ^a	1,106	4.3	365	2.6	1,222	3.9	119	2.6	57	2.4	49	3.3
	Unspecified & Missing	1,295	5.0	1,043	7.5	1,795	5.8	246	5.5	176	7.3	88	5.9

Source: Emergency Discharge Data, for 1 Jan 2008 through 31 Dec 2012, Massachusetts Center for Health Information and Analysis.

(a) Other includes blood vessel injuries, nerve injuries, and system wide and late effect injuries.

Counts not shown for cells with less than 11 cases based on the CHIA rules pertaining to confidentiality. Numbers may not add to total due to missing information.

An ED visit for an injury is defined as any case having an ICD-9-CM Nature of Injury Code of 800-999 in the primary diagnosis field.

Attribution of work-relatedness is based on designation of Workers' Compensation Insurance as expected payer.

Nature of Injury and Body Region groupings are based on Barell Injury Matrix, Barell et al., *Inj Prev*, 2002 Jun;8(2):91-96.

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Table 3. Nature of Injury by Age

N = Number of Visits
% = Percent of Visits

		Age													
		18		19		20		21		22		23		24	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total		2,944	7.4	4,634	11.6	5,496	13.8	6,002	15.0	6,751	16.9	6,963	17.4	7,135	17.9
Nature of Injury	Open Wounds	1,437	48.8	2,073	44.7	2,282	41.5	2,290	38.2	2,526	37.4	2,496	35.8	2,537	35.6
	Sprains	381	12.9	766	16.5	1,039	18.9	1,228	20.5	1,417	21.0	1,543	22.2	1,605	22.5
	Superficial/Contusions	468	15.9	758	16.4	964	17.5	1,131	18.8	1,250	18.5	1,355	19.5	1,368	19.2
	Burns	235	8.0	345	7.4	311	5.7	303	5.0	349	5.2	289	4.2	277	3.9
	Fractures	99	3.4	169	3.6	219	4.0	235	3.9	277	4.1	304	4.4	310	4.3
	Crushing	29	1.0	58	1.3	80	1.5	73	1.2	98	1.5	81	1.2	85	1.2
	Internal Organ	50	1.7	58	1.3	71	1.3	73	1.2	94	1.4	88	1.3	88	1.2
	Dislocations	16	0.5	29	0.6	34	0.6	48	0.8	48	0.7	45	0.6	57	0.8
	Amputations	22	0.7	15	0.3	26	0.5	31	0.5	31	0.5	26	0.4	26	0.4
	Other^a	84	2.9	143	3.1	173	3.1	232	3.9	246	3.6	291	4.2	302	4.2
	Unspecified & Missing	123	4.2	220	4.7	297	5.4	358	6.0	415	6.1	445	6.4	480	6.7

Source: Emergency Discharge Data, for 1 Jan 2008 through 31 Dec 2012, Massachusetts Center for Health Information and Analysis.

(a) Other includes blood vessel injuries, nerve injuries, and system wide and late effect injuries.

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Table 4. Nature of Injury by Body Part

N = Number of Visits
% = Percent of Visits

	Total	Visits	
		N	%
	39,925	100	
Open Wounds	15,641	39.2	
Extremities	14,300	91.4	
Head & neck	1,270	8.1	
Sprains	7,979	20.0	
Extremities	4,472	56.0	
Spine & Back	2,501	31.3	
Torso	803	10.1	
Superficial/contusions	7,294	18.3	
Extremities	4,779	65.5	
Head & neck	1,703	23.3	
Torso	698	9.6	
Burns	2,109	5.3	
Extremities	1,729	82.0	
Head & neck	294	13.9	
Torso	72	3.4	
Fractures	1,613	4.0	
Extremities	1,460	90.5	
Head & neck	96	6.0	
Other^a	1,471	3.7	
Crushing	504	1.3	
Extremities	503	99.8	
Internal Organ	522	1.3	
Head & neck*	515	98.7	
Dislocations	277	0.7	
Extremities	274	98.9	
Amputations	177	0.4	
Extremities	177	100	
Unspecified & Missing	2,338	5.9	
Extremities	1,026	43.9	
Head & neck	1,002	42.9	
Torso	141	6.0	

Source: Emergency Discharge Data, for 1 Jan 2008 through 31 Dec 2012, Massachusetts Center for Health Information and Analysis

(a) Other includes blood vessel injuries and nerve injuries, system wide and late effect injuries.

* 499 of these injuries are concussions.

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Table 5. External Cause of Injury

N = Number of Visits
% = Percent of Visits

		Visits	
		N	%
Total		39,925	100
External Cause of Injury	Cut/pierce	11,870	29.7
	Struck by/against	6,691	16.8
	Overexertion	5,088	12.7
	Falls	3,839	9.6
	Fall to same level	1,723	44.9
	Fall from stairs	359	9.4
	Fall to lower level	303	7.9
	Fall from ladder	294	7.7
	Fall into opening	29	0.8
	Fall from building	24	0.6
	Fall to same level w/person	11	0.3
	Other falls	1,096	28.5
	Fire/burn	2,099	5.3
	Burn	1,968	93.8
	Fire	131	6.2
	Machinery	1,305	3.3
	Motor vehicle	935	2.3
	Driver/passenger motor vehicle	760	81.3
	Pedestrian	77	8.2
	Unspecified Person	71	7.6
	Natural/environmental	930	2.3
	Sting, non-poisonous	679	73.0
	Sting, poisonous	139	14.9
	Poisoning	189	0.5
	Other Transportation	132	0.3
	Other transportation	98	74.2
	Pedestrian, non motor vehicle	21	15.9
	Pedal cyclist, non motor vehicle	13	9.8
Other^a	4,599	11.5	
Unspecified & Missing	2,248	5.6	

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(a) Other includes drowning, suffocation, firearm other specified, and not elsewhere specified

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Table 6. Visits Distributed by Month

N = Number of Visits
% = Percent of Visits

		Visits	
		N	%
Month of Injury	January	2,992	7.5
	February	2,679	6.7
	March	2,931	7.3
	April	3,033	7.6
	May	3,362	8.4
	June	3,987	10.0
	July	4,331	10.8
	August	4,094	10.3
	September	3,401	8.5
	October	3,428	8.6
	November	2,944	7.4
	December	2,743	6.9

Source: Emergency Discharge Data, for 1 Jan 2008 through 31 Dec 2012, Massachusetts Center for Health Information and Analysis. Counts not shown for cells with less than 11 cases based on the CHIA rules pertaining to confidentiality.

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