

Injury-related Emergency Dept. Visits among MA Residents

2019

Injuries are a leading cause of emergency department (ED) visits among Massachusetts residents. In fiscal year 2019, there were 571,247 injury-related ED visits¹. The leading injury mechanisms contributing to ED visits were unintentional falls, struck by or against an object, and motor vehicle traffic-related crashes.

Key Indicators	INJURY INTENT					Missing ³	Totals
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal/Other ²		
Total Counts by Intent	522,734	5,693	20,263	1,399	469	20,689	571,247
Percent by Intent	91.5%	1.0%	3.5%	0.2%	0.1%	3.6%	100.0%
Rate per 100,000 population ⁴	7,505.8	81.7	291.0	20.1	6.7	297.1	8,202.4

Injury Mechanism	INJURY INTENT					Subtotal Counts	Percent of Total Count ⁵	Rate per 100,000 ⁴
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal/Other ²			
Cut/pierce	39,603	2,232	1,041	--	--	43,050	7.5%	618.1
Drowning/submersion	104	16	0	21	--	141	<0.0%	2.0
Fall	167,120	22	19	60	--	167,221	29.3%	2,401.1
Fire/burn	5,768	48	17	52	0	5,885	1.0%	84.5
<i>Fire/flame</i>	971	20	--	--	--	1,013	0.2%	14.5
<i>Burns/hot objects & substances</i>	4,797	28	--	--	0	4,872	0.9%	70.0
Firearm	192	--	119	15	--	335	0.1%	4.8
Machinery	2,839	--	--	--	--	2,839	0.5%	40.8
Natural/environmental ⁶	22,778	--	--	34	--	22,815	4.0%	327.6
<i>Bites and stings, nonvenomous</i>	17,082	--	--	--	--	17,082	3.0%	245.3
<i>Bites and stings, venomous</i>	2,353	0	--	--	--	2,388	0.4%	34.3
<i>Natural/environmental, other</i>	3,343	--	0	--	--	3,345	0.6%	48.0
Overexertion	41,649	--	--	--	--	41,649	7.3%	598.0
Poisoning	12,848	2,001	--	524	--	15,411	2.7%	221.3
<i>Drug poisoning</i>	10,883	1,896	17	464	--	13,260	2.3%	190.4
<i>Non-drug poisoning</i>	1,965	105	--	60	--	2,151	0.4%	30.9
Struck by or against object	64,415	96	15,356	288	244	80,399	14.1%	1,154.4
Suffocation ⁷	79	29	--	--	0	115	<0.0%	1.7
Transportation:	73,389	30	--	--	0	73,451	12.9%	1,054.7
<i>Motor vehicle -- Traffic (MVT)⁸</i>	64,422	30	--	--	--	64,484	11.3%	925.9
<i>MVT - Occupant⁹</i>	58,106	--	--	--	--	58,123	10.2%	834.6
<i>MVT - Motorcyclist</i>	2,060	--	--	--	--	2,060	0.4%	29.6
<i>MVT - Pedal cyclist¹⁰</i>	1,727-1,749	--	--	--	--	1,727-1,749	--	--
<i>MVT - Pedestrian</i>	2,515	--	--	--	--	2,535	0.4%	36.4
<i>MVT - Other</i>	--	--	--	--	--	21	<0.0%	0.3
<i>MVT - Undetermined</i>	--	--	--	--	--	--	--	--
<i>Motor vehicle -- Nontraffic¹¹</i>	2,988	--	--	--	--	2,988	0.5%	42.9
<i>Pedal cyclist, other</i>	3,806	--	--	--	--	3,806	0.7%	54.6
<i>Pedestrian, other</i>	840	--	--	--	--	840	0.1%	12.1
<i>Other land transport</i>	1,089	0	0	--	--	1,089	0.2%	15.6
<i>Other transport</i>	244	0	0	--	0	244	<0.0%	3.5
Other specified & classifiable	12,957	--	1,613	--	0	14,588	2.6%	209.5
<i>Child and adult abuse</i>	--	--	1,016	--	--	1,016	0.2%	14.6
<i>Foreign body</i>	3,149	--	--	--	--	3,149	0.6%	45.2
<i>Other specified & classifiable</i>	9,808	--	597	--	0	10,423	1.8%	149.7
Other specified, not classifiable	--	1,030	995	219	148	2,392	0.4%	34.3
Unspecified	78,993	175	1,037	--	62	80,267	14.1%	1,152.5

Data Source: Massachusetts Outpatient Emergency Department Discharge Database, Center for Health Information and Analysis (CHIA). Data are collected and reported by fiscal year (Oct. 1, 2018 - Sept. 30, 2019). Due to the implementation of the International Classification of Diseases, Version 10, Clinical Modification (ICD-10-CM) in October 2015, counts and rates presented here should not be compared to prior data that were based on ICD-9-CM codes. Refer to page 2 for general notes, references, and footnotes.

(Continued)

General Notes:

- The injury case definition is based on the Council of State and Territorial Epidemiologists (CSTE) document: *Nonfatal Emergency Department Visits for All Injuries* and includes selected ICD-10-CM codes from diagnosis and external cause code (E-Code) fields. Only visits for active treatment of injuries are included.
- Injury mechanism and intent categories are based on the Center for Disease Control and Prevention's (CDC) *External Cause-of-injury Framework for Categorizing Mechanism and Intent of Injury* and are categorized based on the first external cause code or diagnosis code providing injury mechanism and intent. The search order for our analysis is principal E-code field, primary diagnosis field, then associated diagnosis fields. This search order may underestimate the number of injuries in some categories as some cases are assigned more than one ICD-10-CM injury code.
- Gray cells indicate that there are no ICD-10-CM codes assigned to the category. Subcategories within transportation are also suppressed, with the exception of unintentional injuries, to ensure patient confidentiality.
- All injury subcategories are shown in italics. For example, poisoning includes two subcategories – drug poisoning and non-drug poisoning.
- Per data confidentiality guidelines, counts less than 11, and complementary cells that allow calculation of totals are suppressed (indicated by "--").

References:

Council of State and Territorial Epidemiologists (CSTE). *Nonfatal Emergency Department Visits for All Injuries*. Refer to the CSTE's on-line ICD-10-CM Injury Surveillance Toolkit.

National Health Statistics Report. *The International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM): External Cause-of-injury Framework for Categorizing Mechanism and Intent of Injury*; #136, 12/30/2019.

Footnotes:

- 1) Includes MA residents treated at a MA acute care hospital emergency department in FY2019 (Oct. 1, 2018 - Sept. 30, 2019); deaths occurring prior to or during the ED visit are excluded. Counts represent the number of injury-related emergency department visits rather than the number of individuals treated.
- 2) Includes injuries resulting from police actions and war.
- 3) Includes injuries with no external cause code.
- 4) Crude rates per 100,000 MA residents are based on 2019 population estimates (6,964,383) developed by the University of Massachusetts Donahue Institute (UMDI) in partnership with the Massachusetts Department of Public Health, Bureau of Environmental Health.
- 5) Totals may not sum to 100% due to rounding.
- 6) Natural/Environmental (N/E) injuries includes bites and stings from animals and insects. The other N/E category includes injuries from forces of nature (e.g., flood, storm, cold weather), animal injuries other than bites, etc.
- 7) Includes asphyxiation and hanging.
- 8) Due to small counts, certain MVT subcategories (e.g., other, undetermined) are not presented separately.
- 9) Includes motor vehicle drivers, passengers, and persons unspecified.
- 10) Providing an exact count would allow calculation of other suppressed cells. A range is provided to show the approximate size for this category, but without allowing the calculation of suppressed cells.
- 11) Includes motor vehicle drivers, passengers, and persons unspecified, injured in a crash that does not occur on a public roadway (e.g. driveway, parking lot, private road, etc.).