

Injury-related Emergency Department Visits among MA Residents

2022

INJURIES are a leading cause of emergency department (ED) visits among Massachusetts residents of all ages. In Federal Fiscal Year 2022 (Oct. 1, 2021-Sep. 31, 2022) there were **487,772** injury-related ED visits among MA residents.¹ 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 Intervention/Other ²		
Total Counts by Intent	455,763	5,140	16,555	1,247	303	8,764	487,772
Percent by Intent	93.4%	1.1%	3.4%	0.3%	0.1%	1.8%	100.0%
Rate per 100,000 population ⁴	6,483.2	73.1	235.5	17.7	4.3	124.7	6,938.5

Injury Mechanism	INJURY INTENT					Subtotal Counts	Percent of Total Count ⁵	Rate per 100,000 ⁴
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal Intervention/Other ²			
Cut/pierce	34,669	2254	846	--	<11	37,951	7.8%	539.8
Drowning/submersion	86	<11	<11	32		124	<0.1%	1.8
Fall	160,014	--	<11	105		160,157	32.8%	2,278.2
Fire/burn	4,539	37	16	54	0	4,646	1.0%	66.1
<i>Fire/flame</i>	767	<11	<11	15	0	797	0.2%	11.3
<i>Burns/hot objects & substances</i>	3,772	--	--	39		3,849	0.8%	54.8
Firearm	278	<11	103	22	<11	412	0.1%	5.9
Machinery	2,271					2,271	0.5%	32.3
Natural/environmental ⁶	17,635	<11	<11	25		17,664	3.6%	251.3
<i>Nonvenomous animal bites/stings</i>	13,414					13,414	2.8%	190.8
<i>Venomous animal bites/stings</i>	1,507	0	<11	--		1,535	0.3%	21.8
<i>Forces of nature[‡]</i>	800-810					800-810	--	--
<i>Natural/environmental, other[‡]</i>	1,900-1,910	<11	0	0		1,900-1,910	--	--
Overexertion	34,698					34,698	7.1%	493.6
Poisoning	10,489	1,867	--	418	<11	12,811	2.6%	182.2
<i>Drug poisoning</i>	9,056	1,794	<11	--		11,223	2.3%	159.6
<i>Non-drug poisoning</i>	1,433	73	--	--	<11	1,588	0.3%	22.6
Struck by or against object	53,202	47	12,657	268	149	66,323	13.6%	943.4
Suffocation ⁷	66	29	19	<11	<11	119	<0.1%	1.7
Transportation:	59,529	24	--	<11	<11	59,578	12.2%	847.5
<i>Motor vehicle -- Traffic (MVT)</i>	51,239	--	--	<11		51,284	10.5%	729.5
<i>MVT - Occupant⁸</i>	45,466	<11	<11	<11		45,476	9.3%	646.9
<i>MVT - Motorcyclist</i>	2,484					2,484	0.5%	35.3
<i>MVT - Cyclist</i>	1,377					1,377	0.3%	19.6
<i>MVT - Pedestrian[‡]</i>	1,905-1,915	--	--	<11		1,943	0.4%	27.6
<i>MVT - Other person-type</i>	<11					<11	--	--
<i>MVT - Undetermined person-type</i>				<11		<11	--	--
<i>Motor vehicle -- Nontraffic⁹</i>	2,576					2,576	0.5%	36.6
<i>Cyclist, other¹⁰</i>	3,757					3,757	0.8%	53.4
<i>Pedestrian, other¹⁰</i>	643					643	0.1%	9.1
<i>Other land transport</i>	1,047	<11	<11			1,051	0.2%	15.0
<i>Other transport</i>	267	0	0		0	267	0.1%	3.8
Other specified & classifiable	10,901	<11	1,440	<11	28	12,382	2.5%	176.1
<i>Child and adult abuse</i>			871			871	0.2%	12.4
<i>Foreign body</i>	2,400					2,400	0.5%	34.1
<i>Other specified & classifiable</i>	8,501	<11	569	<11	28	9,111	1.9%	129.6
Other specified, not classifiable		723	693	130	76	1,622	0.3%	23.1
Unspecified	67,386	112	709		43	68,250	14.0%	970.9

Data Source: Massachusetts Outpatient Emergency Department Discharge Database, Center for Health Information and Analysis (CHIA). Data are collected and reported by federal fiscal year (October 1, 2021 - September 30, 2022). 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 patients 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.
 - All injury subcategories are shown in italics. For example, poisoning includes two subcategories – drug poisoning and non-drug poisoning.
 - Data are obtained from the Center for Health Information and Analysis (CHIA). Per CHIA confidentiality guidelines, counts 1-10 are suppressed and complementary cells that allow calculation of totals are also suppressed. We indicate complementary suppression with two dashes ("--"). While a count of zero is permitted, these are sometimes suppressed (indicated with two dashes: "--") to adhere to confidentiality rules.
- ≠ For certain categories, 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.

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 FFY2022 (October 1, 2021 - September 30, 2022) 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) Rates provided are crude rather than age-adjusted and may differ slightly from other department publications. Rates are not calculated on counts of less than 11, and rates based on counts less than twenty may be unstable. Data used to calculate rates are based on small area population estimates from the Donahue Institute, MDPH, Bureau of Environmental Health; 2020 MA population 7,029,917 was used as a proxy, as 2022 estimates were unavailable.
- 5) Totals may not sum to 100% due to rounding.
- 6) Natural/Environmental (N/E) injuries includes bites and stings from nonvenomous and venomous animals and insects. Forces of nature includes blizzard, extreme cold, hurricane, tornado, etc. Other N/E includes animal injuries other than bites (e.g., scratched by cat) and other external causes such as effects of vibration, effects of lightning, motion sickness, etc.
- 7) Includes asphyxiation and hanging.
- 8) Includes motor vehicle drivers, passengers, and unspecified persons.
- 9) Includes motor vehicle and motorcycle drivers, passengers, and unspecified persons injured in a crash that does not occur on a public roadway (e.g. driveway, parking lot, private road, etc.).
- 10) Includes other non-motor vehicle related injuries (e.g., pedal cyclist collision with other pedal cyclist, pedestrian in collision with non-motor vehicle, pedal cyclist/pedestrian in collision with fixed object).