

Injury-related Emergency Dept. Visits among MA Children Ages 0-17

2022

INJURIES are a leading cause of emergency department (ED) visits among Massachusetts children. In Federal Fiscal Year (FFY) 2022 (October 1, 2021- September 30, 2022) there were 100,358 injury-related ED visits,¹ an increase of 14% from FFY 2021. The leading injury mechanisms contributing to ED visits were unintentional falls, struck-by or against an object, overexertion, and transportation injuries. Self-inflicted injuries increased 12% and assault-related injuries increased 48% from FFY 2021 to FFY 2022.

Key Indicators	INJURY INTENT					Missing ³	Totals
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal/Other ²		
Total Counts by Intent	95,354	1,855	2,158	284	19	688	100,358
Percent by Intent	95.0%	1.8%	2.2%	0.3%	<0.1%	0.7%	100.0%
Rate per 100,000 population ⁴	7,454.9	145.0	168.7	22.2	1.5	53.8	7,846.1

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	4,718	902	56	39	0	5,715	5.7%	446.8
Drowning/Submersion	39	0	0	20		59	0.1%	4.6
Fall	33,740	<11	<11	55		33,800	33.7%	2,642.5
Fire/burn	1,086	<11	<11	--	0	1,106	1.1%	86.5
<i>Fire/flare</i>	104	<11	0	<11	0	107	0.1%	8.4
<i>Burns/hot objects & substances</i>	982	<11	<11	11		999	1.0%	78.1
Firearm	17	0	<11	<11	0	23	<0.1%	1.8
Machinery	81					81	0.1%	6.3
Natural/Environmental ⁶	3,645	0	<11	<11		3,649	3.6%	285.3
<i>Bites and stings, nonvenomous</i>	2,943					2,943	2.9%	230.1
<i>Bites and stings, venomous</i>	268	0	<11	<11		272	0.3%	21.3
<i>Natural/environmental, other</i>	434	0	0	0		434	0.4%	33.9
Overexertion	7,408					7,408	7.4%	579.2
Poisoning	1,207	681	<11	53	<11	1,948	1.9%	152.3
<i>Poisoning, Drug</i>	892	658	0	40		1,590	1.6%	124.3
<i>Poisoning, Non-Drug</i>	315	23	<11	13	<11	358	0.4%	28.0
Struck by or against object	18,821	--	1,489	54	<11	20,382	20.3%	1,593.5
Suffocation ⁷	19	<11	<11	0	0	32	<0.1%	2.5
Transport Injuries:	7,366	<11	<11	0		7,372	7.3%	576.3
<i>Motor vehicle -- Traffic (MVT)</i>	5,098	<11	<11	0		5,104	5.1%	399.0
<i>MVT - Occupant⁸</i>	4,208	0	0			4,208	4.2%	329.0
<i>MVT - Motorcyclist</i>	228					228	0.2%	17.8
<i>MVT - Pedal cyclist</i>	355					355	0.4%	27.8
<i>MVT - Pedestrian^f</i>	307	0	<11			308-318	--	--
<i>MVT - Other person-type</i>	0	<11				<11	--	--
<i>Motor vehicle -- Nontraffic⁹</i>	468					468	0.5%	36.6
<i>Pedal cyclist, other</i>	1,420					1,420	1.4%	111.0
<i>Pedestrian, other</i>	99					99	0.1%	7.7
<i>Other land transport</i>	257	0	0			257	0.3%	20.1
<i>Other transport</i>	24	0	0		0	24	<0.1%	1.9
Other-specified & classifiable	3,427	<11	467	<11	<11	3,900	3.9%	304.9
<i>Child and adult abuse</i>			322			322	0.3%	25.2
<i>Foreign bodies</i>	857					857	0.9%	67.0
<i>Other specified & classifiable</i>	2,570	<11	145	<11	<11	2,721	2.7%	212.7
Other specified, not classifiable		205	80	--	<11	337	0.3%	26.3
Unspecified	13,780	--	47		<11	13,858	13.8%	1,083.4

Data Source: Massachusetts Outpatient Emergency Department Discharge Database, Center for Health Information and Analysis (CHIA). Data are collected and reported by Federal Fiscal Year (Oct. 1, 2021- Sept. 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.

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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. 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 (including sometimes 0 if necessary) are suppressed and complementary cells that allow calculation of totals are suppressed (indicated by "--").
- * Please note that injury mechanisms are mutually exclusive. There may be some injuries that receive more than one mechanism code (e.g., a fall code and a struck by/against object code) but counts presented here are based on the *first listed* mechanism code.
- † 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 online 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 under the age of 18 treated at a MA acute care hospital emergency department in FFY2022 (Oct. 1, 2021 - Sept. 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 University of Massachusetts Donahue Institute (UMDI) in partnership with the Massachusetts Department of Public Health, Bureau of Environmental Health; 2020 MA population estimates for under 18 years (1,279,086) 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 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) Includes motor vehicle drivers, passengers, and unspecified persons.
- 9) Includes motor vehicle 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.).