

Injury-related Emergency Dept. Visits among MA Residents

2020

In federal fiscal year (FFY) 2020¹ there were over 450,000 injuries treated in the emergency department (ED), a 21% decrease compared to FFY2019. Injury-related ED visits decreased by 1% in October 2019 - February 2020 compared to October 2018 - February 2019. However, there was a 34% decrease in March 2020 compared to March 2019, and a 33% decrease in April 2020 - September 2020 compared to April 2019 - September 2019. These declines were noted across all injury intents in MA and were similar in magnitude to those found nationally during the first several months of the pandemic.²

Key Indicators	INJURY INTENT					Missing ⁴	Totals
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal/Other ³		
Total Counts by Intent	422,618	4,929	17,402	1,182	363	6,972	453,466
Percent by Intent	93.2%	1.1%	3.8%	0.3%	0.1%	1.5%	100.0%
Rate per 100,000 population ⁵	6,011.7	70.1	247.5	16.8	5.2	99.2	6,450.5

Injury Mechanism	INJURY INTENT					Subtotal Counts	Percent of Total Count ⁶	Rate per 100,000 ⁵
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal/Other ³			
Cut/pierce	35,752	2,029	950	--	<11	38,865	8.6%	552.9
Drowning/submersion	86	<11	0	--		111	<0.1%	1.6
Fall	139,960	--	<11	58		140,058	30.9%	1,992.3
Fire/burn	4,865	40	--	--	0	4,965	1.1%	70.6
<i>Fire/flame</i>	922	11	11	15		959	0.2%	13.6
<i>Burns/hot objects & substances</i>	3,943	29	<11	--	0	4,006	0.9%	57.0
Firearm	265	<11	132	33	<11	439	0.1%	6.2
Machinery	2,714					2,714	0.6%	38.6
Natural/environmental ^{7,†}	16,987-17,024	<11	<11	--		16,987-17,024	--	--
<i>Bites and stings, nonvenomous</i>	12,489					12,489	2.8%	177.7
<i>Bites and stings, venomous</i>	1,890	0	<11	--		1,905	0.4%	27.1
<i>Natural/environmental, other[‡]</i>	2,610-2,630	<11	0	0		2,610-2,630	--	--
Overexertion	31,637					31,637	7.0%	450.0
Poisoning	11,602	1,742	--	453	<11	13,849	3.1%	197.0
<i>Drug poisoning</i>	10,210	1,658	16	388		12,272	2.7%	174.6
<i>Non-drug poisoning</i>	1,392	84	--	65	<11	1,577	0.3%	22.4
Struck by or against object	47,769	78	13,105	274	189	61,415	13.5%	873.6
Suffocation ⁸	67	29	<11	<11	0	105	<0.1%	1.5
Transportation:	56,024	24	--	<11	0	56,068	12.4%	797.6
<i>Motor vehicle -- Traffic (MVT)</i>	47,157	--	--	<11		47,199	10.4%	671.4
<i>MVT - Occupant⁹</i>	41,356	<11	<11	0		41,369	9.1%	588.5
<i>MVT - Motorcyclist</i>	2,295					2,295	0.5%	32.6
<i>MVT - Pedal cyclist[‡]</i>	1,650-1,670					1,650-1,670	--	--
<i>MVT - Pedestrian</i>	1,844		15	0		1,859	0.4%	26.4
<i>MVT - Other person-type</i>	<11	--				14	<0.1%	0.2
<i>MVT - Undetermined intent</i>				<11		<11	--	--
<i>Motor vehicle -- Nontraffic¹⁰</i>	2,696					2,696	0.6%	38.4
<i>Pedal cyclist, other¹¹</i>	4,241					4,241	0.9%	60.3
<i>Pedestrian, other¹¹</i>	617					617	0.1%	8.8
<i>Other land transport[‡]</i>	1,056-1,078	<11	0			1,056-1,078	--	--
<i>Other transport</i>	247	0	0		0	247	<0.1%	3.5
Other specified & classifiable	10,326	<11	1,461	<11	24	11,823	2.6%	168.2
<i>Child and adult abuse</i>			933			933	0.2%	13.3
<i>Foreign body</i>	2,306					2,306	0.5%	32.8
<i>Other specified & classifiable</i>	8,020	<11	528	<11	24	8,584	1.9%	122.1
Other specified, not classifiable		814	778	147	87	1,826	0.4%	26.0
Unspecified	64,554	122	876		53	65,605	14.5%	933.2

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, 2019 - September 30, 2020). 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.
 - 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 "--").
- ‡ 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 FFY2020 (October 1, 2019 - September 30, 2020) 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) Adjemian J, Hartnett KP, Kite-Powell A, et al. Update: COVID-19 Pandemic–Associated Changes in Emergency Department Visits — United States, December 2020–January 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:552–556. <https://www.cdc.gov/mmwr/volumes/70/wr/mm7015a3.htm#>
- 3) Includes injuries resulting from police actions and war.
- 4) Includes injuries with no external cause code.
- 5) Crude rates per 100,000 MA residents are based on the 2020 MA population estimate of 7,029,917 developed by the University of MA Donahue Institute (UMDI) in partnership with the MA Department of Public Health, Bureau of Environmental Health.
- 6) Totals may not sum to 100% due to rounding.
- 7) 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.
- 8) Includes asphyxiation and hanging.
- 9) Includes motor vehicle drivers, passengers, and unspecified persons.
- 10) 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.).
- 11) 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).