

Injury-related Hospital Stays among MA Residents

2020

In federal fiscal year (FFY) 2020¹ there were 43,897 injury-related hospital stays, a decrease of 6% from FFY 2019. Injury-related hospital stays increased 3% in October 2019 - February 2020 compared to October 2018 - February 2019. However, there was a 21% decrease in March 2020 compared to March 2019 and an 11% 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 in certain medical illness-related hospitalizations during the early pandemic period.²

Key Indicators	INJURY INTENT					Missing ⁴	Totals
	Unintentional	Self-Inflicted	Assault	Undetermined	Legal/Other ³		
Total Counts by Intent	38,480	2,502	1,044	209	11	1,651	43,897
Percent by Intent	87.7%	5.7%	2.4%	0.5%	<0.1%	3.8%	100.0%
Rate per 100,000 population ⁵	547.4	35.6	14.9	3.0	0.2	23.5	624.4

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	296	181	208	12	0	697	1.6%	9.9
Drowning/submersion	27	<11	0	<11		34	0.1%	0.5
Fall	24,987	--	0	<11		25,014	57.0%	355.8
Fire/burn	396	--	<11	<11	0	446	1.0%	6.3
<i>Fire/flare</i>	155	<11	<11	<11		165	0.4%	2.3
<i>Burns/hot objects & substances</i>	241	36	<11	<11		281	0.6%	4.0
Firearm	154	<11	128	13	<11	310	0.7%	4.4
Machinery	140					140	0.3%	2.0
Natural/environmental ⁷	455	<11		<11		457	1.0%	6.5
<i>Bites and stings, nonvenomous</i>	222					222	0.5%	3.2
<i>Bites and stings, venomous[‡]</i>	54-74			<11		54-74	--	--
<i>Natural/environmental, other[‡]</i>	161-181	<11		0		161-181	--	--
Overexertion	408					408	0.9%	5.8
Poisoning/overdose	3,696	2,058	<11	--	0	5,901	13.4%	83.9
<i>Drug poisoning</i>	3,454	2,004	<11	--		5,592	12.7%	79.5
<i>Non-drug poisoning</i>	242	54	<11	--	0	309	0.7%	4.4
Struck by or against object	915	<11	469	14	<11	1,402	3.2%	19.9
Suffocation ⁸	75	12	<11	<11	0	89	0.2%	1.3
Transportation:	4,190	13	<11	<11	0	4,210	9.6%	59.9
<i>Motor vehicle -- Traffic (MVT)</i>	3,224	13	<11	<11		3,244	7.4%	46.1
<i>MVT - Occupant^{9,‡}</i>	1,987-2,007	<11	0			1,987-2,007	--	--
<i>MVT - Motorcyclist</i>	626					626	1.4%	8.9
<i>MVT - Pedal cyclist</i>	222					222	0.5%	3.2
<i>MVT - Pedestrian[‡]</i>	382-402		<11	0		382-402	--	--
<i>MVT - Other person-type</i>	0	<11				<11	--	--
<i>MVT - Undetermined intent</i>				<11		<11	--	--
<i>Motor vehicle -- Nontraffic¹⁰</i>	316					316	0.7%	4.5
<i>Pedal cyclist, other¹¹</i>	345					345	0.8%	4.9
<i>Pedestrian, other¹¹</i>	109					109	0.2%	1.6
<i>Other land transport</i>	165	0	0			165	0.4%	2.3
<i>Other transport</i>	31	0	0		0	31	0.1%	0.4
Other specified & classifiable	453	<11	79	0	<11	536	1.2%	7.6
<i>Child and adult abuse</i>			52			52	0.1%	0.7
<i>Foreign body</i>	263					263	0.6%	3.7
<i>Other specified & classifiable</i>	190	<11	27	0	<11	221	0.5%	3.1
Other specified, not classifiable		135	70	--	<11	220	0.5%	3.1
Unspecified	2,288	--	69	0	<11	2,382	5.4%	33.9

Data Sources: Massachusetts Inpatient Hospital Discharge and Outpatient Observation Stay Databases, Center for Health Information and Analysis (CHIA). Data are collected and reported by federal fiscal year (October 1, 2019 - September 30, 2020). "Hospital Stays" combine hospital discharges and observation stays. 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 Hospitalizations 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 Hospitalizations 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 in FFY2020 (October 1, 2019 - September 30, 2020); deaths occurring during the hospital stay are excluded. Counts represent the number of injury-related hospital stays rather than the number of individuals treated.
- 2) John D. Birkmeyer, Amber Barnato, Nancy Birkmeyer, Robert Bessler, and Jonathan Skinner. The Impact of The COVID-19 Pandemic On Hospital Admissions In The United States. *Health Affairs* 2020 39:11, 2010-2017. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2020.00980>
- 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).