

Injury-related Hospital Stays among MA Residents

2019

Injuries are a leading cause of death and hospitalization among Massachusetts residents. In fiscal year 2019, there were 46,772 injury-related hospital stays, nearly 3,900 per month¹. The leading injury mechanisms contributing to hospital stays were unintentional falls, poisoning/overdoses 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	39,998	2,859	1,100	216	12	2,587	46,772
Percent by Intent	85.5%	6.1%	2.4%	0.5%	<0.0%	5.5%	100.0%
Rate per 100,000 population ⁴	574.3	41.1	15.8	3.1	0.2	37.1	671.6

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	315	200	239	--	--	761	1.6%	10.9
Drowning/submersion	23	--	0	--	--	32	0.1%	0.5
Fall	26,009	25	--	--	--	26,043	55.7%	373.9
Fire/burn	350	24	--	--	0	380	0.8%	5.5
<i>Fire/flare</i>	123	0	--	--	--	127	0.3%	1.8
<i>Burns/hot objects & substances</i>	227	24	--	--	--	253	0.5%	3.6
Firearm	101	--	136	--	--	256	0.5%	3.7
Machinery	122	--	--	--	--	122	0.3%	1.8
Natural/environmental ⁶	493	0	--	0	--	493	1.1%	7.1
<i>Bites and stings, nonvenomous</i>	252	--	--	--	--	252	0.5%	3.6
<i>Bites and stings, venomous</i>	49	--	--	--	--	49	0.1%	0.7
<i>Natural/environmental, other</i>	192	0	--	0	--	192	0.4%	2.8
Overexertion	489	--	--	--	--	489	1.0%	7.0
Poisoning/overdose	3,973	2,400	--	155	--	6,535	14.0%	93.8
<i>Drug poisoning</i>	3,635	2,306	--	--	--	6,088	13.0%	87.4
<i>Non-drug poisoning</i>	338	94	--	--	--	447	1.0%	6.4
Struck by or against object	1,025	13	506	--	--	1,551	3.3%	22.3
Suffocation ⁷	89	12	0	0	0	101	0.2%	1.5
Transportation:	4,154	18	--	--	0	4,177	8.9%	60.0
<i>Motor vehicle -- Traffic (MVT)⁸</i>	3,236	--	--	--	--	3,256	7.0%	46.8
<i>MVT - Occupant⁹</i>	2,083	--	--	--	--	2,092	4.5%	30.0
<i>MVT - Motorcyclist</i>	543	--	--	--	--	543	1.2%	7.8
<i>MVT - Pedal cyclist¹⁰</i>	163-174	--	--	--	--	163-174	--	--
<i>MVT - Pedestrian</i>	443	--	--	--	--	446	1.0%	6.4
<i>MVT - Other</i>	--	--	--	--	--	--	--	--
<i>MVT - Undetermined</i>	--	--	--	--	--	--	--	--
<i>Motor vehicle -- Nontraffic¹¹</i>	291	--	--	--	--	291	0.6%	4.2
<i>Pedal cyclist, other</i>	283	--	--	--	--	283	0.6%	4.1
<i>Pedestrian, other</i>	140	--	--	--	--	140	0.3%	2.0
<i>Other land transport</i>	174	--	--	--	--	177	0.4%	2.5
<i>Other transport</i>	30	0	0	--	0	30	0.1%	0.4
Other specified & classifiable	454	--	80	--	0	539	1.2%	7.7
<i>Child and adult abuse</i>	--	--	50	--	--	50	0.1%	0.7
<i>Foreign body</i>	259	--	--	--	--	259	0.6%	3.7
<i>Other specified & classifiable</i>	195	--	30	--	0	230	0.5%	3.3
Other specified, not classifiable	--	126	58	--	--	206	0.4%	3.0
Unspecified	2,401	31	66	--	--	2,500	5.3%	35.9

Data Sources: Massachusetts Inpatient Hospital Discharge and Outpatient Observation Stay Databases, Center for Health Information and Analysis (CHIA). Data are collected and reported by fiscal year (Oct. 1, 2018 - Sept. 30, 2019). "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.

(Continued)

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 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.
- 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 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 FY2019 (Oct. 1, 2018 - Sept. 30, 2019); 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) 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.).