

Injury-related Hospital Stays among MA Residents

2022

INJURIES are a leading cause of hospitalization among Massachusetts residents of all ages. In Federal Fiscal Year 2022 (Oct. 1, 2021 - Sep. 30, 2022), there were **44,912** injury-related hospital stays.¹ Unintentional injuries account for the vast majority of these hospital stays (**88%**). 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 Intervention/Other ² | | |
| Total Counts by Intent[‡] | 39,575 | 2,562 | 890 | 150-160 | <11 | 1,721 | 44,912 |
| Percent by Intent | 88.1% | 5.7% | 2.0% | -- | -- | 3.8% | 100.0% |
| Rate per 100,000 population ⁴ | 563.0 | 36.4 | 12.7 | -- | -- | 24.5 | 638.9 |

| Injury Mechanism | INJURY INTENT | | | | | Subtotal Counts | Percent of Total Count ⁵ | Rate per 100,000 MA Residents ⁴ |
|--|---------------|----------------|---------|--------------|---------------------------------------|-----------------|-------------------------------------|--|
| | Unintentional | Self-Inflicted | Assault | Undetermined | Legal Intervention/Other ² | | | |
| Cut/pierce | 291 | 225 | 201 | <11 | <11 | 720 | 1.6% | 10.2 |
| Drowning/submersion | 23 | <11 | 0 | <11 | | 33 | 0.1% | 0.5 |
| Fall | 26,205 | 29 | <11 | <11 | | 26,238 | 58.4% | 373.2 |
| Fire/burn | 365 | 28 | <11 | -- | <11 | 406 | 0.9% | 5.8 |
| <i>Fire/flare</i> | 155 | <11 | <11 | <11 | | 165 | 0.4% | 2.3 |
| <i>Burns/hot objects & substances</i> | 210 | -- | <11 | <11 | | 241 | 0.5% | 3.4 |
| Firearm | 124 | <11 | 116 | <11 | 0 | 256 | 0.6% | 3.6 |
| Machinery | 114 | | | | | 114 | 0.3% | 1.6 |
| Natural/environmental ⁶ | 465 | 0 | | 0 | | 465 | 1.0% | 6.6 |
| <i>Nonvenomous animal bites/stings</i> | 224 | | | | | 224 | 0.5% | 3.2 |
| <i>Venomous animal bites/stings</i> | 33 | | | 0 | | 33 | 0.1% | 0.5 |
| <i>Forces of nature</i> | 141 | | | 0 | | 141 | 0.3% | 2.0 |
| <i>Natural/environmental, other</i> | 67 | 0 | | 0 | | 67 | 0.1% | 1.0 |
| Overexertion | 354 | | | | | 354 | 0.8% | 5.0 |
| Poisoning/overdose [‡] | 3,268 | 2,103 | <11 | 110-120 | 0 | 5,485 | 12.2% | 78.0 |
| <i>Drug poisoning[†]</i> | 3,058 | 2,061 | <11 | 100-110 | | 5,227 | 11.6% | 74.4 |
| <i>Non-drug poisoning</i> | 147 | -- | 0 | <11 | 0 | 175 | 0.4% | 2.5 |
| <i>Alcohol poisoning</i> | 63 | -- | 0 | <11 | 0 | 83 | 0.2% | 1.2 |
| Struck by or against object | 909 | <11 | 362 | <11 | <11 | 1,284 | 2.9% | 18.3 |
| Suffocation ⁷ | 55 | <11 | 0 | 0 | <11 | 63 | 0.1% | 0.9 |
| Transportation: | 4,425 | -- | <11 | <11 | <11 | 4,447 | 9.9% | 63.3 |
| <i>Motor vehicle -- Traffic (MVT)</i> | 3,508 | -- | <11 | 0 | | 3,530 | 7.9% | 50.2 |
| <i>MVT - Occupant⁸</i> | 2,236 | 11 | 0 | | | 2,247 | 5.0% | 32.0 |
| <i>MVT - Motorcyclist</i> | 653 | | | | | 653 | 1.5% | 9.3 |
| <i>MVT - Pedal cyclist</i> | 199 | | | | | 199 | 0.4% | 2.8 |
| <i>MVT - Pedestrian</i> | 420 | <11 | <11 | 0 | | 431 | 1.0% | 6.1 |
| <i>MVT - Other person-type</i> | 0 | | | | | 0 | 0.0% | 0.0 |
| <i>Motor vehicle -- Nontraffic⁹</i> | 384 | | | | | 384 | 0.9% | 5.5 |
| <i>Pedal cyclist, other¹⁰</i> | 247 | | | | | 247 | 0.5% | 3.5 |
| <i>Pedestrian, other¹⁰</i> | 105 | | | | | 105 | 0.2% | 1.5 |
| <i>Other land transport</i> | 146 | 0 | 0 | | | 146 | 0.3% | 2.1 |
| <i>Other transport</i> | 35 | 0 | 0 | | 0 | 35 | 0.1% | 0.5 |
| Other specified & classifiable | 446 | <11 | 97 | 0 | <11 | 547 | 1.2% | 7.8 |
| <i>Child and adult abuse</i> | | | 69 | | | 69 | 0.2% | 1.0 |
| <i>Foreign body</i> | 274 | | | | | 274 | 0.6% | 3.9 |
| <i>Other specified & classifiable</i> | 172 | <11 | 28 | 0 | <11 | 204 | 0.5% | 2.9 |
| Other specified, not classifiable | | 115 | 49 | <11 | <11 | 175 | 0.4% | 2.5 |
| Unspecified | 2,531 | -- | 56 | 0 | <11 | 2,604 | 5.8% | 37.0 |

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, 2021 - September 30, 2022). "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.
- 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 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 FFY2022 (October 1, 2021 - September 30, 2022); 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) 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).