

Hazardous Holidays? Injury Patterns in Urgent and Emergency Care Vary by Injury Type and Time of Year

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Key Findings:

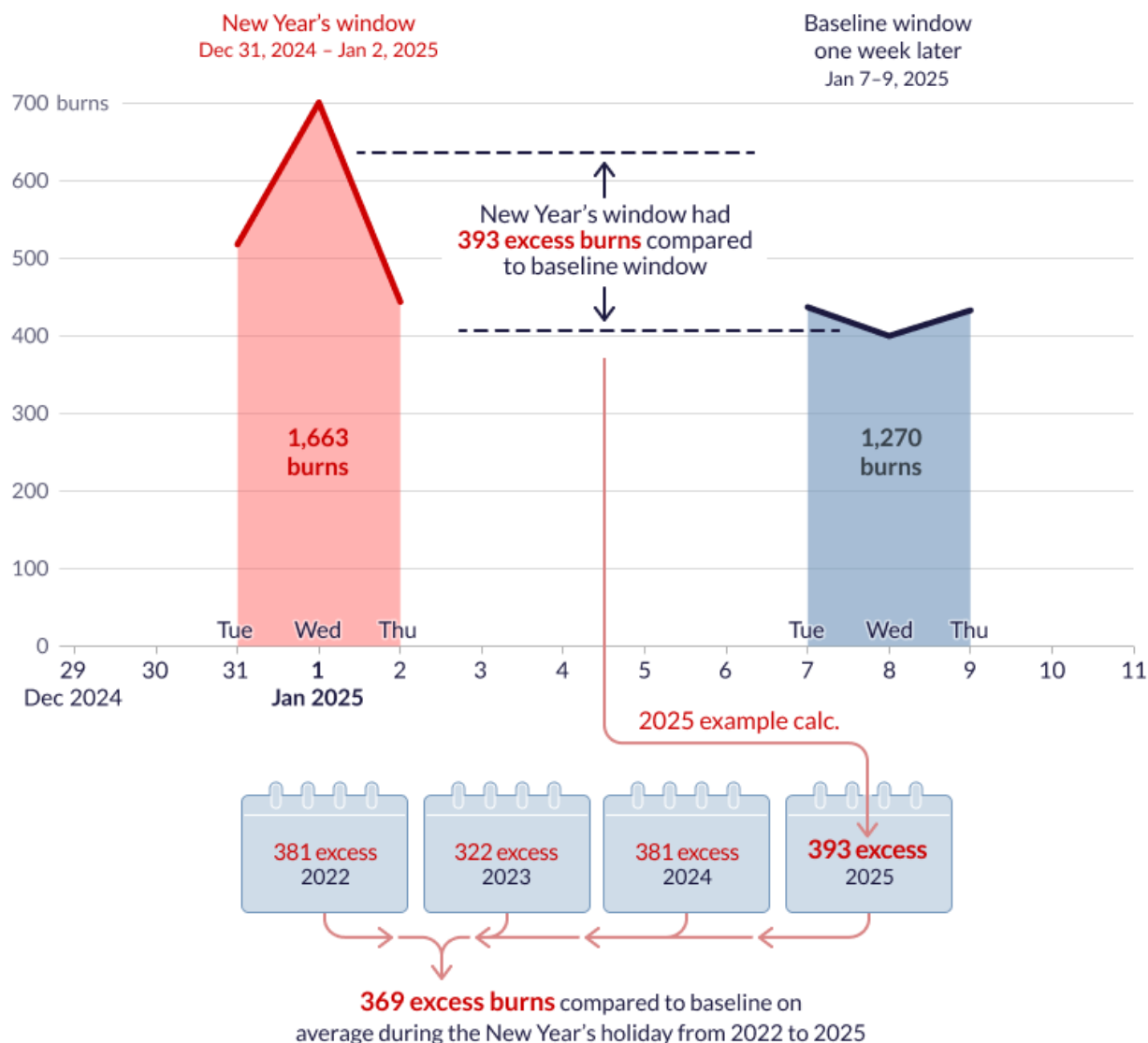
- Among the U.S. holidays studied, Independence Day had the largest overall increase in injuries, averaging 5,418 more injuries than baseline over the three-day holiday window. Fireworks/blast injuries rose to 22 times baseline (1,187 more cases), burns were 1.8 times baseline (1,267 more cases), and fire/smoke exposures were 2.3 times baseline (383 more cases).
- Burns, eye injuries, and firework/blast injuries peak near Independence Day, while lacerations cluster around Thanksgiving and Christmas, holidays that often involve preparing meals.
- Halloween 2026 falls on a Saturday. In 2025, when Halloween fell on a Friday, alcohol-related and assault visits peaked the following Saturday, well above a typical weekend. Halloween's effect is modest in most years, but it adds to the weekend surge when the two coincide.

Holidays reshape everyday activity in ways that can change the pattern of traumatic injuries seen in emergency departments (EDs) and urgent care clinics. Injuries related to fireworks, for example, are heavily concentrated around Independence Day: previous estimates suggest roughly two-thirds of the year's fireworks-related injuries occur in the weeks surrounding July 4.¹ Drownings also peak in summer due to recreational water exposure.² Other holidays can carry their own hazards like kitchen burns and lacerations from holiday cooking, alcohol-related injuries, or falls, but existing surveillance examines a single injury type or holiday at a time. A broader view across multiple injury types and holidays can help health systems anticipate which rates of injuries increase or decrease around specific dates.

We examined more than 56 million emergency department and urgent care injury encounters from 2022 to 2025 among U.S. patients and looked for diagnoses including burns, lacerations, fractures, firearm injuries, fireworks/blast injuries, falls, motor-vehicle injuries, drowning, and acute alcohol intoxication.

To better understand whether different injury volumes were associated with certain U.S. holidays, we counted injuries in a three-day window around the holiday (the day before, the day of, and the day after) and compared the rate with a matched window of the same length seven days removed from the holiday, established on the same days of the week and avoiding overlap with neighboring holidays. We then took the difference between the count of injuries during the holiday window and the reference window for each year between 2022 and 2025 and calculated an average change from baseline. Figure 1 illustrates an example calculation.

Study Design: Holiday Injury Windows and Matched Comparison Periods



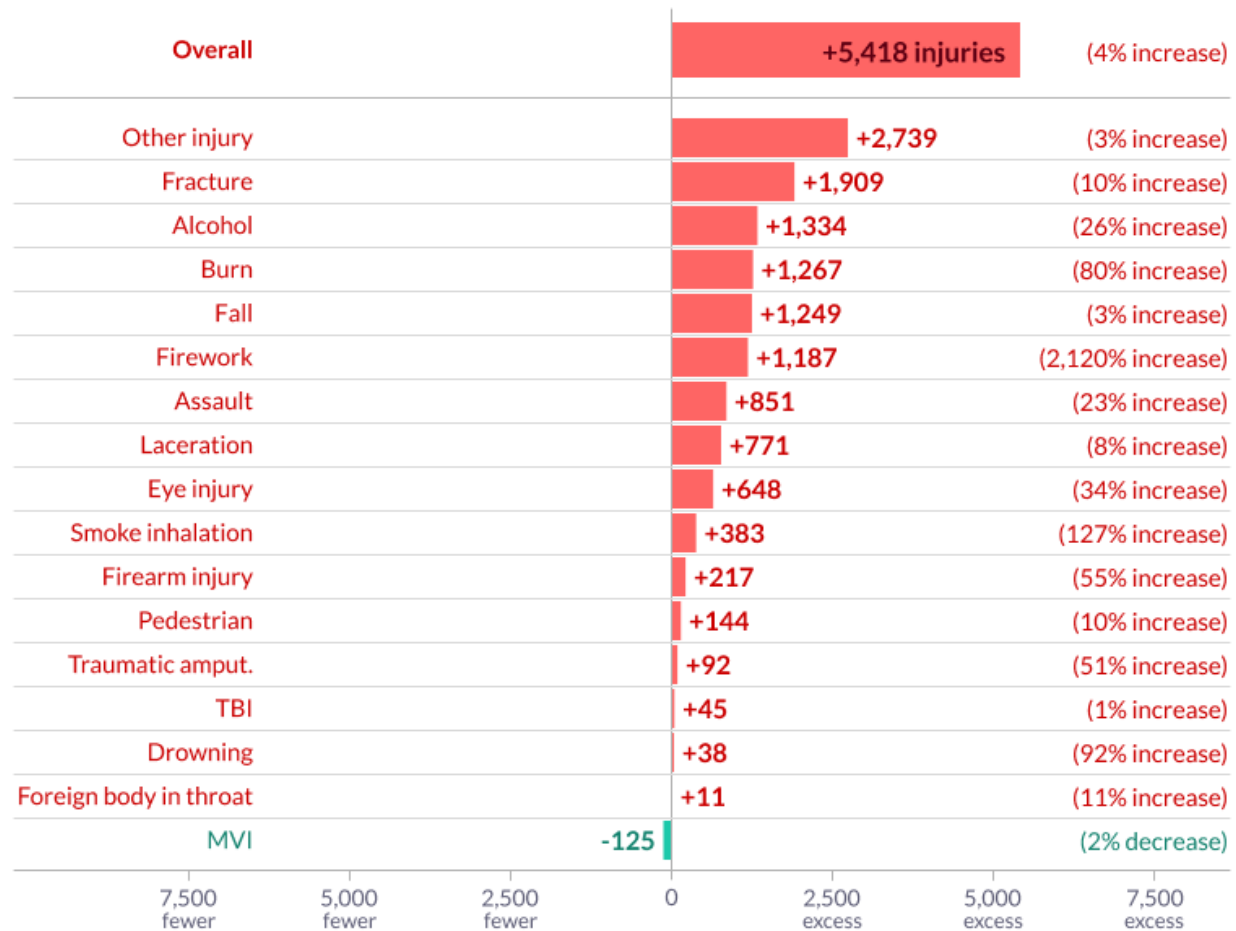
N=10,169 encounters

"Study Design: Holiday Injury Windows and Matched Comparison Periods," 2026. EpicResearch.org

Figure 1. Holiday exposure windows (± 1 day) and the matched non-holiday comparison window seven days removed, used to estimate excess injuries.

Independence Day had the greatest increase in injuries, with an average of 5,418 excess injuries compared to baseline. Many of these were firework-related (1,187 additional cases, about 22 times the baseline rate), accompanied by 1,267 additional burns (about 1.8 times baseline) and 383 additional fire/smoke exposures (about 2.3 times baseline). Labor Day and New Year's Day followed, with an average of 3,343 and 2,762 excess injuries. The three days around January 1 saw an average of 2,167 additional acute-alcohol visits (about 1.5 times baseline), 1,133 additional assaults (about 1.4 times baseline), and 1,029 additional lacerations (about 1.2 times baseline). Thanksgiving and Christmas, by contrast, saw a decrease in overall injuries from the baseline; both holidays had fewer falls, motor-vehicle injuries (MVIs), and traumatic brain injuries (TBIs) but an increase in lacerations compared to baseline.

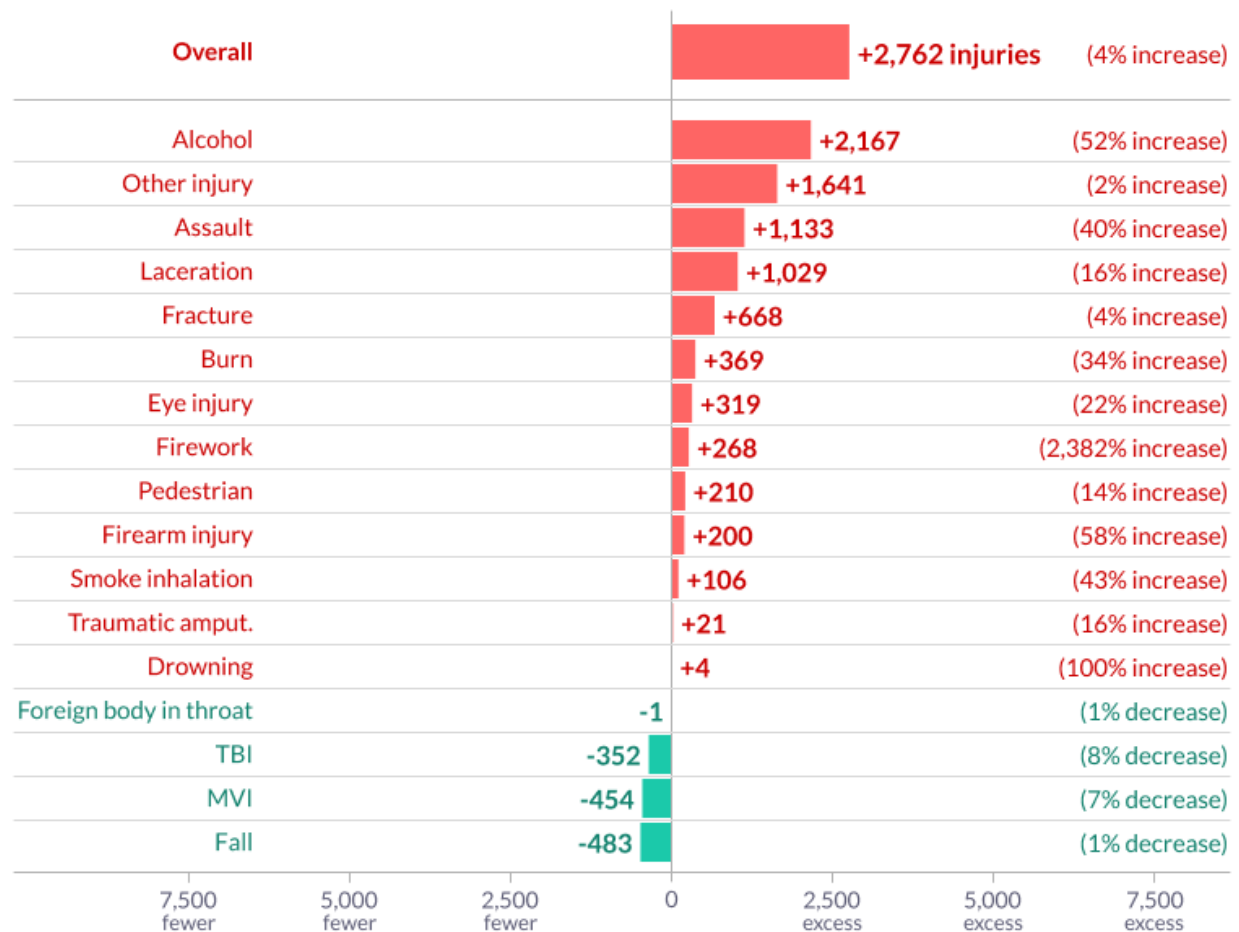
Change in Emergency and Urgent Care Injuries Around Independence Day by Injury Type



N=9,383,852 encounters "Change in Emergency and Urgent Care Injuries Around Independence Day by Injury Type," 2026. EpicResearch.org

Figure 2a. Average annual change in injuries during the three-day holiday window compared to the non-holiday baseline for Independence Day.

Change in Emergency and Urgent Care Injuries Around New Year's Day by Injury Type



N=9,383,852 encounters "Change in Emergency and Urgent Care Injuries Around New Year's Day by Injury Type," 2026. EpicResearch.org

Figure 2b. Average annual change in injuries during the three-day holiday window compared to the non-holiday baseline for New Year's Day.

Change in Emergency and Urgent Care Injuries Around Halloween by Injury Type

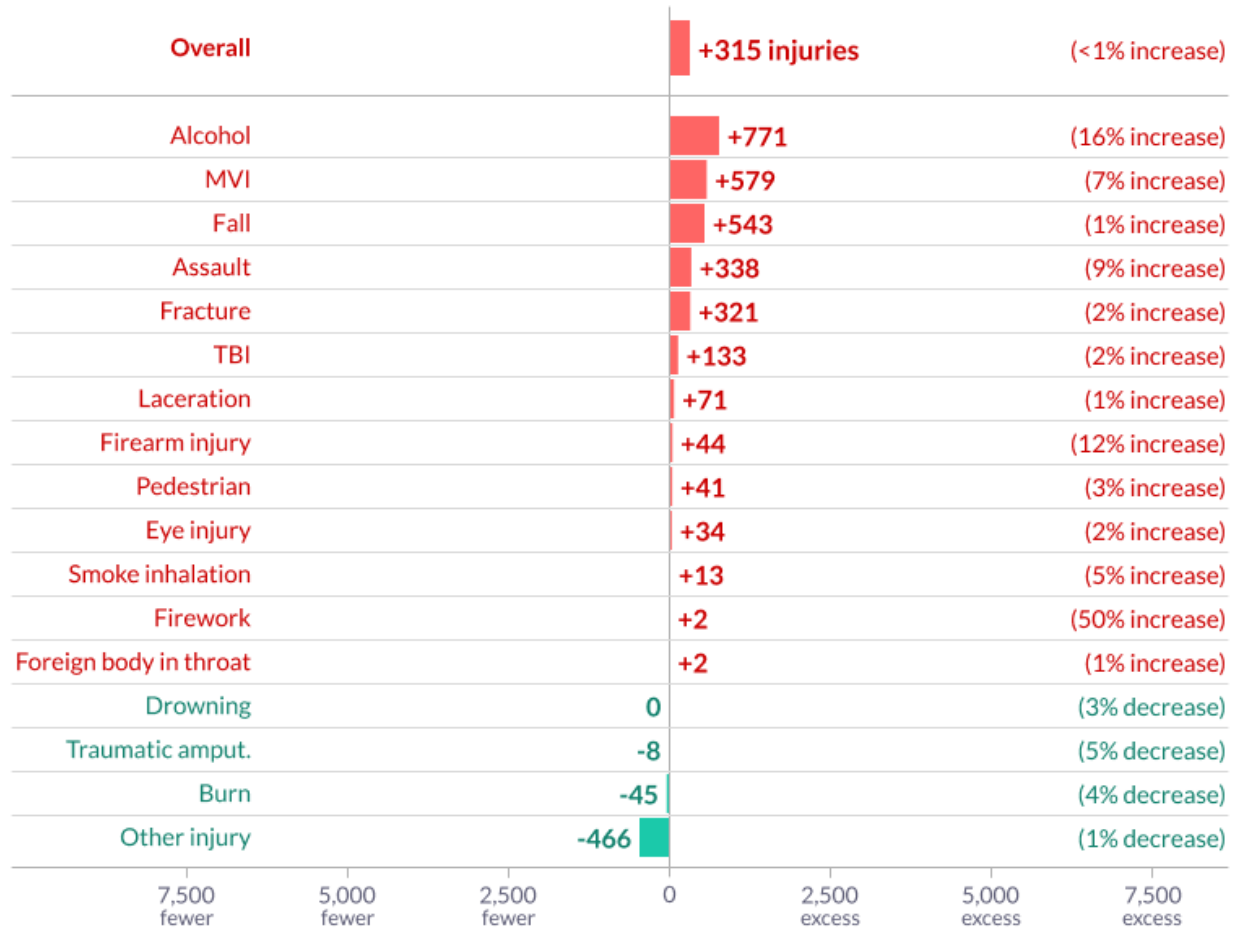


Figure 2c. Average annual change in injuries during the three-day holiday window compared to the non-holiday baseline for Halloween.

Change in Emergency and Urgent Care Injuries Around Thanksgiving by Injury Type

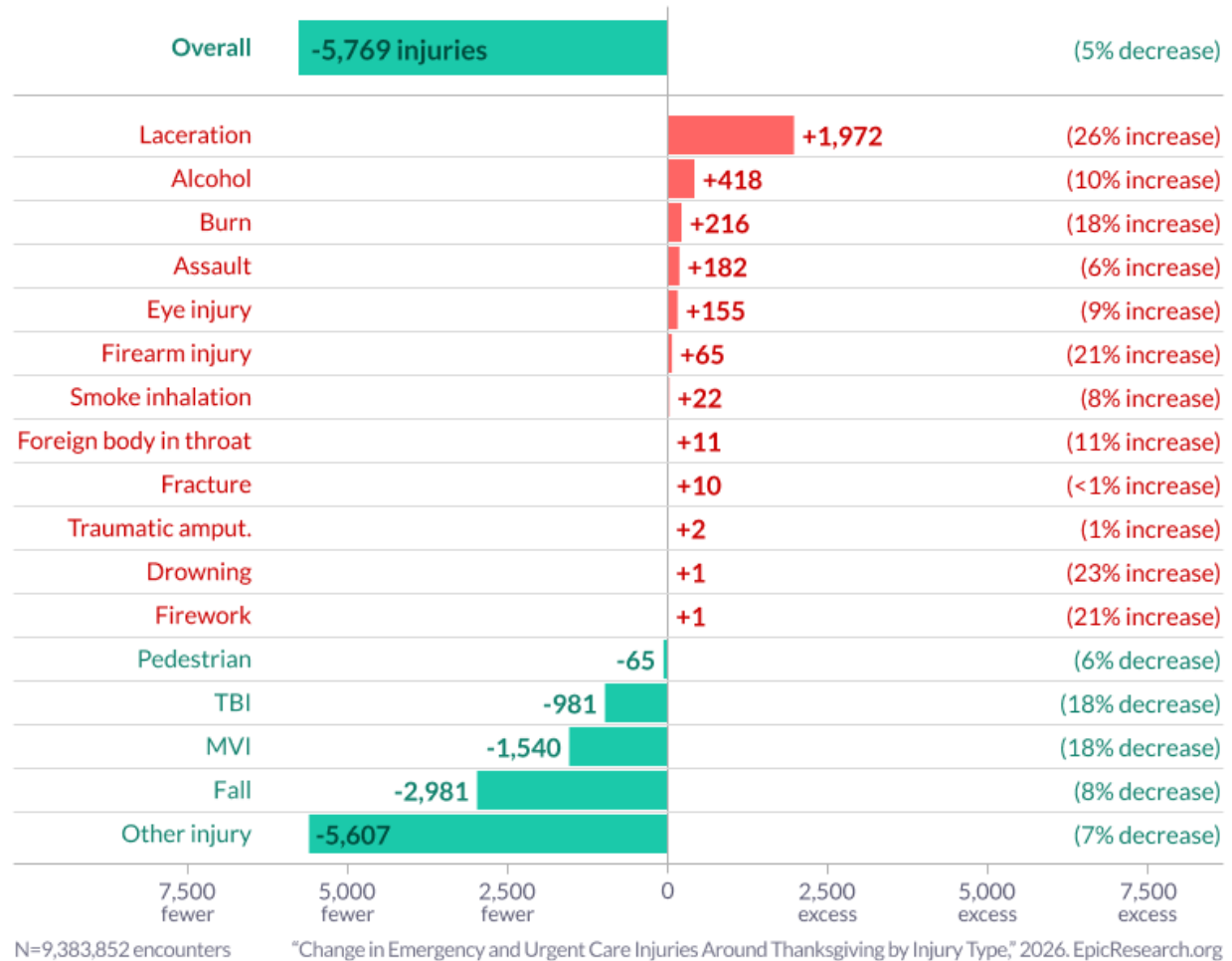


Figure 2d. Average annual change in injuries during the three-day holiday window compared to the non-holiday baseline for Thanksgiving.

Change in Emergency and Urgent Care Injuries Around Christmas by Injury Type

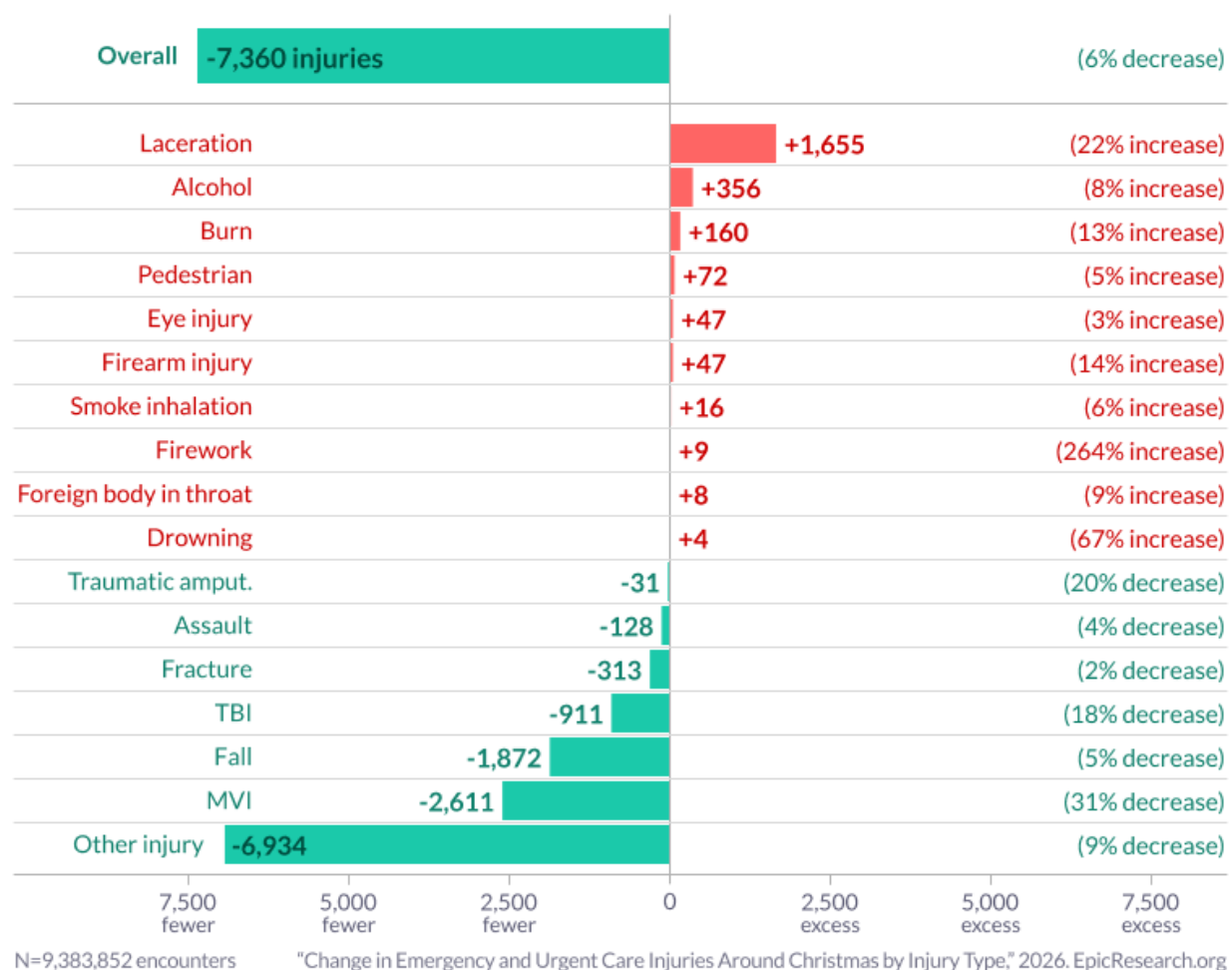


Figure 2e. Average annual change in injuries during the three-day holiday window compared to the non-holiday baseline for Christmas.

Daily counts show how each injury type fluctuates throughout the year. In 2025, injuries related to fireworks sat near zero for most of the year and appeared almost entirely as sharp holiday spikes, with 722 encounters on July 4 and 225 on New Year's Day. Burns, smoke inhalation, traumatic amputation, and eye injuries also peaked around Independence Day, as shown in Figure 3.

Acute-alcohol and assault visits, by contrast, followed a weekly rhythm: alcohol-related visits ran about a third higher on weekends than on weekdays and assaults about 18% higher. As a result, a holiday that falls on or next to a weekend starts from an already elevated baseline, and its effect stacks on top of the usual weekend surge. Halloween 2025 shows this. It fell on a Friday, and the largest counts came the next day, Saturday, November 1, when alcohol (3,436) and assault (1,955) visits were well above even a typical Saturday. Averaged over 2022 to 2025 and compared with the same days of the week, Halloween's increase was much smaller. For emergency departments and urgent care clinics, the practical takeaway is that the heaviest alcohol- and assault-related volumes are most likely when a holiday coincides with a weekend.

Daily Injury Volume in 2025 by Type

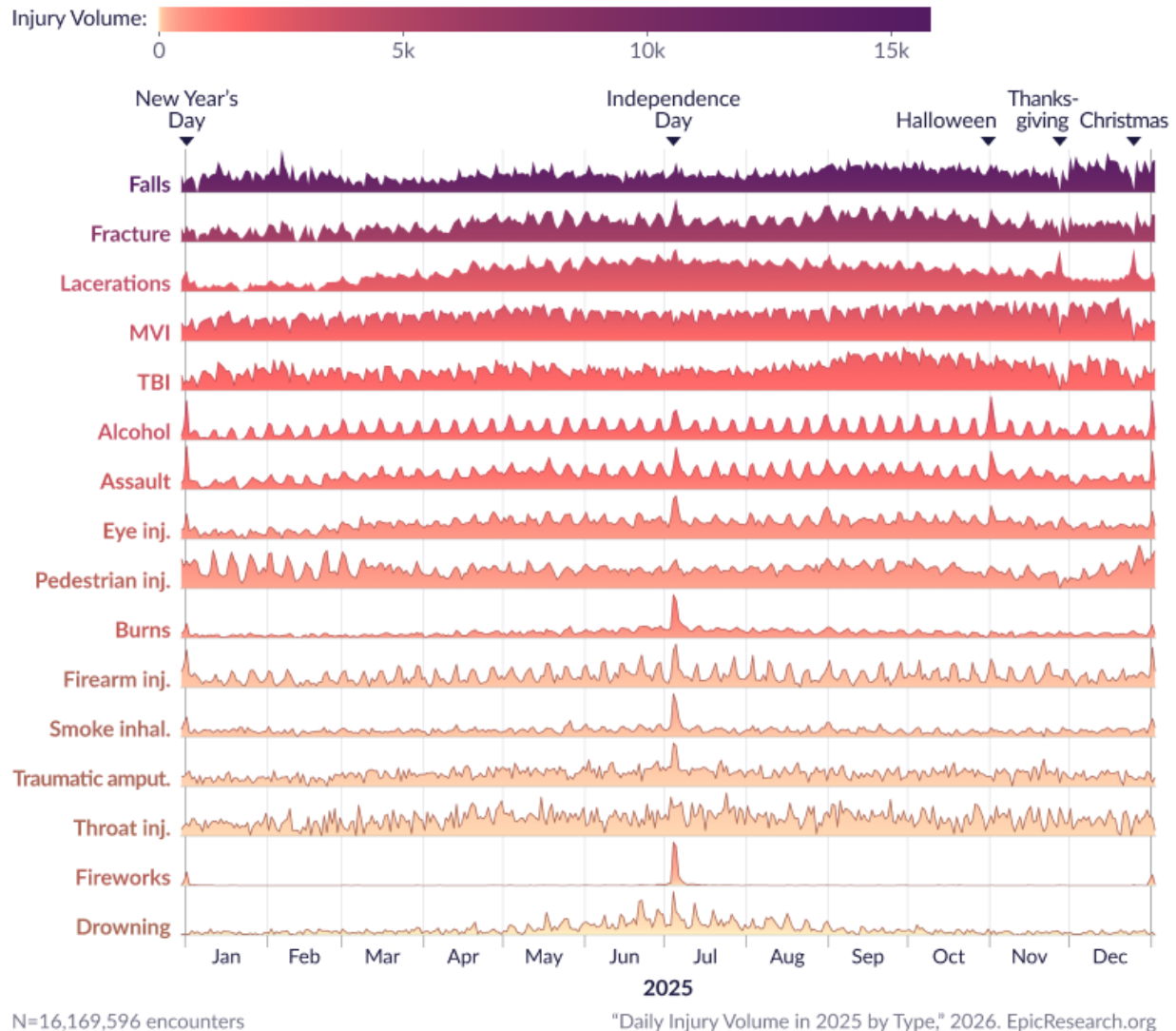


Figure 3. The daily injury volume across 2025 by injury type.

These data come from Cosmos, a dataset created in collaboration with a community of Epic health systems representing more than 300 million patient records from 2,200 hospitals and more than 50,000 clinics from all 50 U.S. states, Canada, Lebanon, and Saudi Arabia. This study was completed by two teams that worked independently, each composed of a clinician and research scientist. The two teams came to similar conclusions. Graphics by Brian Olson.

References

1. 2023 Fireworks Annual Report. U.S. Consumer Product Safety Commission; 2024. <https://www.cpsc.gov/s3fs-public/2023-Fireworks-Annual-Report.pdf>. Accessed August 14, 2026.
2. Clemens T, Moreland B, Mack KA, Thomas K, Bergen G, Lee R. Vital Signs: Drowning Death Rates, Self-Reported Swimming Skill, Swimming Lesson Participation, and Recreational Water Exposure - United States, 2019-2023. MMWR Morb Mortal Wkly Rep. 2024;73(20):467-473. doi:10.15585/mmwr.mm7320e1

Data Definitions

Term	Definition
Study period	12/31/2021 to 12/30/2025
Study population: inclusion	An emergency or urgent care encounter within the study period for patients with a current U.S. address
Comparison baseline	For each holiday three-day window, the in-window count is compared against a window of the same length seven days removed from the holiday period. The comparison window was seven days after for all holidays except for Christmas, which was compared to seven days prior to avoid contamination from the New Year's holiday. Shifting by seven days aligns the day-of-week effect seen in many of these injuries.
Exposures: holidays	New Year's, Halloween, Independence Day, Thanksgiving, Christmas, St. Patrick's Day, Mother's Day, Memorial Day, Father's Day, Labor Day
Exposure windows	The day prior to the holiday through the day after the holiday
Fireworks/blast injury	An encounter or billing diagnosis with ICD-10-CM code W39*, paired with a burn, eye injury, hand injury, or laceration diagnosis in the same encounter.
Burn	An encounter or billing diagnosis with ICD-10-CM code T20*-T32*
Laceration	An encounter or billing diagnosis with ICD-10-CM code S41*, S51*, S61*
Traumatic amputation (digits)	An encounter or billing diagnosis with ICD-10-CM code S68*
Eye injury	An encounter or billing diagnosis with ICD-10-CM code S05*
Hand injury	An encounter or billing diagnosis with ICD-10-CM code S60*-S69* with a 7th digit of "A"
Foreign body in throat	An encounter or billing diagnosis with ICD-10-CM code T17.2*
Fracture	An encounter or billing diagnosis with ICD-10-CM code S[0-9]2* or M80*, or SNOMED code 125605004
Firearm injury	An encounter or billing diagnosis with ICD-10-CM code W32*, W33*, W34*, X72*, X73*, X74*, X93*, X94*, X95*, Y22*, Y23*, Y24*, Y35.0*, or Y38.4*, all with a 7th digit of "A" to convey an initial encounter. Alternatively, an encounter or billing diagnosis with SNOMED CT code of 219257002, 219338008, or 219334005
Traumatic brain injury	An encounter or billing diagnosis with ICD-10-CM code S06* or SNOMED code 127295002
Pedestrian injury	An encounter or billing diagnosis with ICD-10-CM code V00*-V09*
Motor-vehicle occupant injury	An encounter or billing diagnosis with ICD-10-CM code V30*-V79*
Falls	An encounter or billing diagnosis with ICD-10-CM code W00*-W19*
Assault	An encounter or billing diagnosis with ICD-10-CM code X92-X99, Y00*-Y09*
Acute alcohol intoxication	An encounter or billing diagnosis with ICD-10-CM code F10.12*, F10.22*, F10.92*, T51.0X*
Submersion/drowning	An encounter or billing diagnosis with ICD-10-CM code W65*, W67*, W69*, W73*, W74*
Fire/smoke exposure	An encounter or billing diagnosis with ICD-10-CM code X00*-X08*
Overall	Any of the studied categories. Each encounter is counted once in overall even if it falls into more than one injury category, so changes in individual categories do not sum to the overall change.
Other injury	An acute injury diagnosis (ICD-10-CM codes S00*-T88* with an initial encounter ("A") 7th character) documented as an encounter or billing diagnosis excluding any included in other specific injury rows.

Confounder: day of week	Handled by design through the matched-weekday ± 7 -day comparison window (see Comparison baseline), which also accounts for holidays falling on different weekdays across years.
Stratification: age	Age groups: 0–4, 5–12, 13–17, 18–34, 35–49, 50–64, 65–79, 80+
Model specifications	Excess incidents (in-window minus baseline daily mean, $\times$ exposure days per year) Daily counts
Limitations	External-cause codes (fireworks W39, pedestrian, drowning) are inconsistently recorded, so those categories might be under-counted. The counts do not adjust for holiday-driven shifts in total ED/UC volume. ED/UC only: misses direct trauma admissions and on-scene fatalities, so this reflects ED and UC injury burden, not lethality.

Table 1. Injury Encounter Counts in the Study Population

Injury type	Encounters (N)	% of ED & UC encounters
Total ED & urgent care encounters for an injury	56,350,330	100.00
Burns	650,277	1.15
Lacerations	4,149,433	7.36
Traumatic amputation	80,790	0.14
Fireworks/blast	10,698	0.02
Eye injury	918,090	1.63
Foreign body in throat	46,262	0.08
Fracture	9,208,394	16.34
Firearm injury	190,901	0.34
Traumatic brain injury	2,489,956	4.42
Submersion/drowning	9,135	0.02
Fire/smoke exposure	131,053	0.23
Pedestrian injury	709,949	1.26
Motor-vehicle injury	3,648,065	6.47
Falls	17,244,902	30.60
Assault	1,808,619	3.21
Acute alcohol intoxication	2,442,390	4.33
Other injury	40,647,229	72.13

Table 2. Change in Emergency and Urgent Care Injuries by Holiday and Injury Type

Injury type	Total encounters, 2022–2025 (N)	New Year's	Independence Day	Halloween	Thanksgiving	Christmas
Overall	—	2,762 (+4%)	5,418 (+4%)	315 (0%)	–5,769 (–5%)	–7,360 (–6%)
Other injury	40,647,229	1,641 (+2%)	2,739 (+3%)	–466 (–1%)	–5,607 (–7%)	–6,934 (–9%)
Burns	650,277	369 (+34%)	1,267 (+80%)	–45 (–4%)	216 (+18%)	160 (+13%)
Lacerations	4,149,433	1,029 (+16%)	771 (+8%)	71 (+1%)	1,972 (+26%)	1,655 (+22%)

Traumatic amputation	80,790	21 (+16%)	92 (+51%)	-8 (-5%)	2 (+1%)	-31 (-20%)
Fireworks/ blast	10,698	268 (24.8× baseline)	1,187 (22.2× baseline)	2 (1.5× baseline)	1 (1.2× baseline)	9 (3.6× baseline)
Eye injury	918,090	319 (+22%)	648 (+34%)	34 (+2%)	155 (+9%)	47 (+3%)
Foreign body in throat	46,262	-1 (-1%)	11 (+11%)	2 (+1%)	11 (+11%)	8 (+9%)
Fracture	9,208,394	668 (+4%)	1,909 (+10%)	321 (+2%)	10 (0%)	-313 (-2%)
Firearm injury	190,901	200 (+58%)	217 (+55%)	44 (+12%)	65 (+21%)	47 (+14%)
Traumatic brain injury	2,489,956	-352 (-8%)	45 (+1%)	133 (+2%)	-981 (-18%)	-911 (-18%)
Submersion/ drowning	9,135	4 (+100%)	38 (+92%)	0 (-3%)	1 (+23%)	4 (+67%)
Fire/smoke exposure	131,053	106 (+43%)	383 (+127%)	13 (+5%)	22 (+8%)	16 (+6%)
Pedestrian injury	709,949	210 (+14%)	144 (+10%)	41 (+3%)	-65 (-6%)	72 (+5%)
Motor-vehicle injury	3,648,065	-454 (-7%)	-125 (-2%)	579 (+7%)	-1,540 (-18%)	-2,611 (-31%)
Falls	17,244,902	-483 (-1%)	1,249 (+3%)	543 (+1%)	-2,981 (-8%)	-1,872 (-5%)
Assault	1,808,619	1,133 (+40%)	851 (+23%)	338 (+9%)	182 (+6%)	-128 (-4%)
Acute alcohol intoxication	2,442,390	2,167 (+52%)	1,334 (+26%)	771 (+16%)	418 (+10%)	356 (+8%)

Table 3. Change in Emergency and Urgent Care Injuries by Holiday and Injury Type (Additional Holidays)

Injury type	Total encounters, 2022-2025 (N)	St. Patrick's Day	Mother's Day	Memorial Day	Father's Day	Labor Day
Overall	—	1,351 (+1%)	-4,299 (-3%)	1,736 (+1%)	-1,785 (-1%)	3,343 (+3%)
Other injury	40,647,229	702 (+1%)	-3,444 (-4%)	803 (+1%)	-1,809 (-2%)	2,508 (+3%)
Burns	650,277	64 (+6%)	-107 (-7%)	195 (+13%)	-36 (-2%)	230 (+16%)
Lacerations	4,149,433	37 (0%)	-307 (-3%)	333 (+3%)	80 (+1%)	642 (+7%)
Traumatic amputation	80,790	5 (+3%)	-8 (-4%)	-28 (-15%)	-3 (-2%)	9 (+6%)
Fireworks/ blast	10,698	1 (1.5× baseline)	1 (1.2× baseline)	8 (2.0× baseline)	-9 (0.7× baseline)	8 (2.8× baseline)
Eye injury	918,090	-30 (-2%)	-84 (-4%)	133 (+6%)	65 (+3%)	196 (+10%)
Foreign body in throat	46,262	4 (+4%)	5 (+5%)	5 (+5%)	8 (+8%)	5 (+5%)

Fracture	9,208,394	438 (+2%)	-647 (-3%)	859 (+4%)	232 (+1%)	925 (+5%)
Firearm injury	190,901	22 (+6%)	-17 (-3%)	73 (+17%)	4 (+1%)	105 (+28%)
Traumatic brain injury	2,489,956	184 (+4%)	-195 (-4%)	-153 (-3%)	-47 (-1%)	-276 (-5%)
Submersion / drowning	9,135	1 (+11%)	-13 (-33%)	26 (+78%)	-4 (-6%)	22 (+163%)
Fire/smoke exposure	131,053	17 (+7%)	-33 (-10%)	85 (+27%)	25 (+8%)	61 (+23%)
Pedestrian injury	709,949	208 (+15%)	-50 (-3%)	9 (+1%)	17 (+1%)	134 (+9%)
Motor-vehicle injury	3,648,065	100 (+1%)	76 (+1%)	-303 (-4%)	234 (+3%)	-370 (-5%)
Falls	17,244,902	667 (+2%)	-630 (-2%)	257 (+1%)	-288 (-1%)	266 (+1%)
Assault	1,808,619	95 (+3%)	-218 (-5%)	371 (+9%)	-63 (-1%)	385 (+9%)
Acute alcohol intoxication	2,442,390	533 (+11%)	-23 (0%)	192 (+4%)	8 (0%)	690 (+14%)

Table 4. Daily Injury Volume in 2025 by Type

Data available by request, please email info@epicresearch.org.