



HEALTH
DEPARTMENT

Toxic Substances and Carbon Monoxide Injury Rates in Durham Region (2015–2024)



KEY STATISTICS

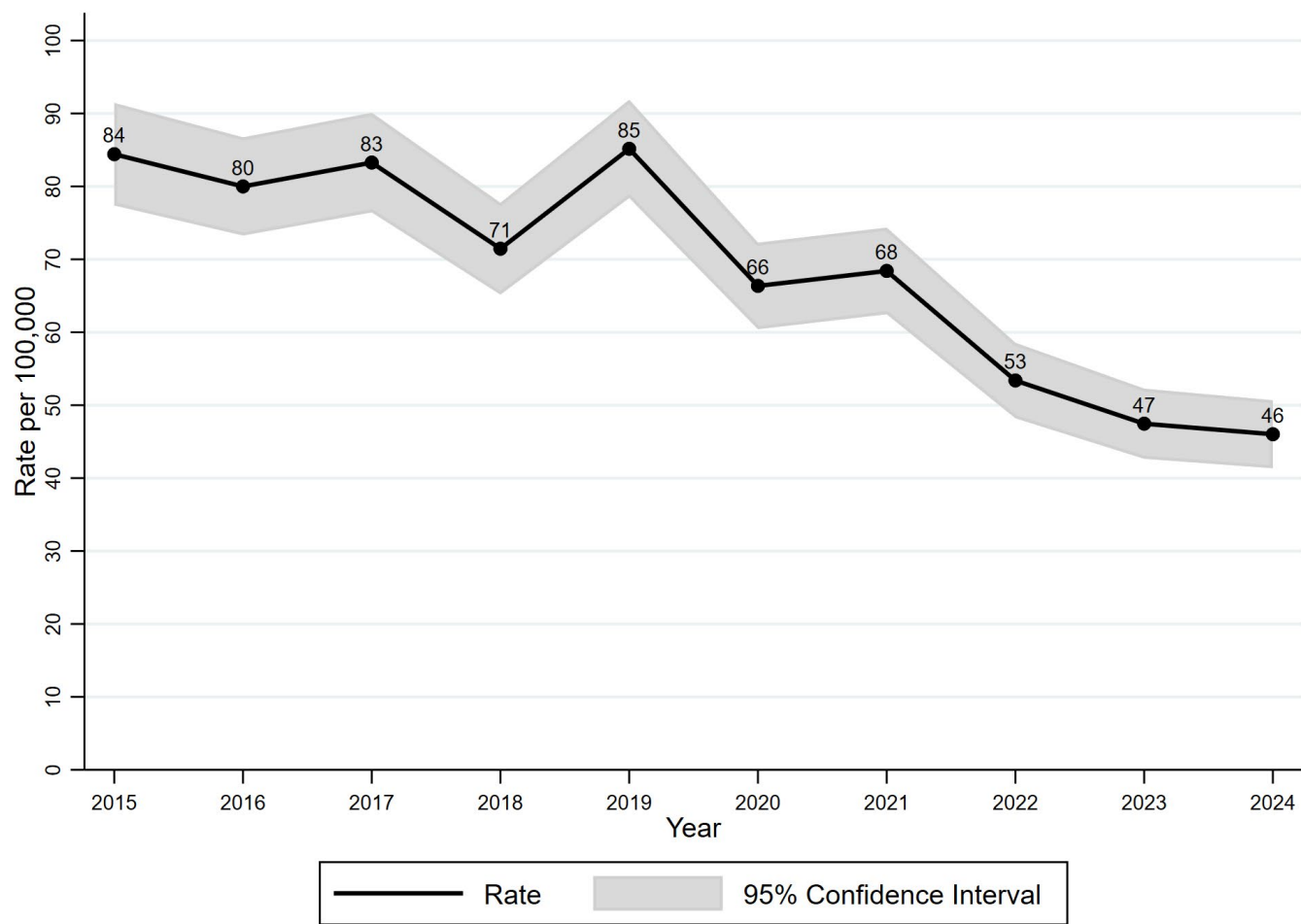
- Toxic substance-related injury emergency department visit rates reached a high of **85** per 100,000 people in 2019 and declined to **46** in 2024.
- Lowest toxic substance-related injury rate occurred in 2024 at **46** per 100,000 people.
- Carbon monoxide poisoning injury rates were highest in 2015 at **18** per 100,000 people.
- By 2024, the carbon monoxide poisoning rate was **7** per 100,000 people.



Toxic Substance-Related Injury Emergency Department Visits

Age-standardized rates ranged from 46 to 85 visits per 100,000 people between 2015 and 2024. The highest rate occurred in 2019, while the lowest rate occurred in 2024 at 46 per 100,000 people. Data from 2020 and 2021 should be interpreted with caution due to changes in the availability of health care and health seeking behaviour during the COVID-19 pandemic.

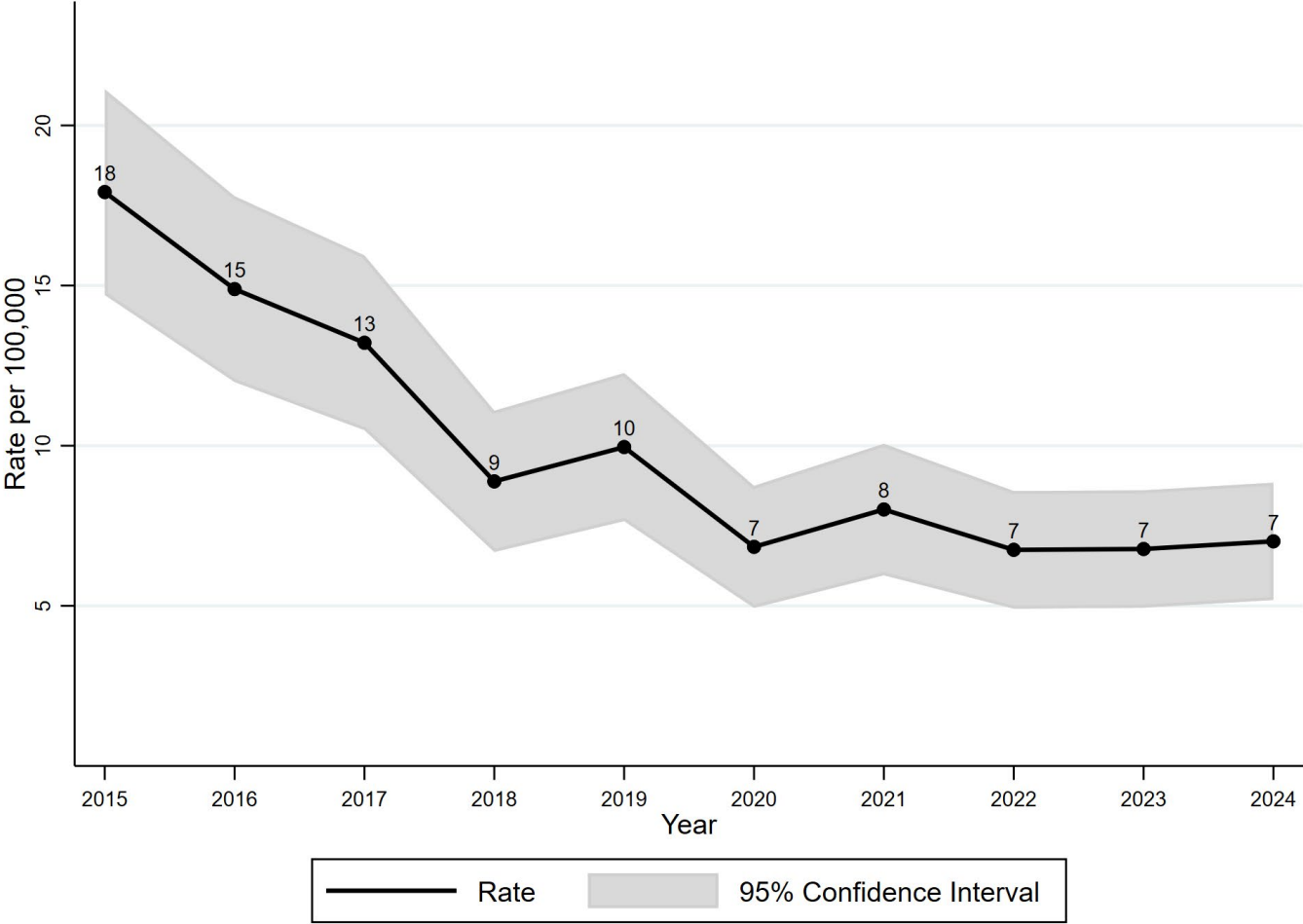
Age-standardized rate of toxic substance-related injury emergency department visits, Durham Region, 2015–2024.



Carbon Monoxide Poisoning Emergency Department Visits

Age-standardized rates ranged from 7 to 18 visits per 100,000 people between 2015 and 2024. The highest rate occurred in 2015, while the lowest rate occurred in 2022. In 2024, the rate was 7 per 100,000 people.

Age-standardized rate of carbon monoxide poisoning-related emergency department visits, Durham Region, 2015–2024.



DATA NOTES

Data Source

Emergency department (ED) visit data were obtained from the Canadian Institute for Health Information (CIHI) National Ambulatory Care Reporting System (NACRS) for Durham Region from 2015 to 2024. ED visit data are collected by CIHI on a fiscal year basis.

The primary diagnosis represents the patient's main problem (MP). External cause codes (e-codes) are used to classify the environmental events, circumstances, and conditions responsible for injuries but are not used as the main problem diagnosis. External cause and MP codes were used to identify injury mechanisms, including toxic substance-related and carbon monoxide poisoning injuries. Results are reported as counts and rates of ED visits.

Indicator Definitions

Injuries were identified using records containing both an injury diagnosis code and a corresponding external cause code.

International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA) code lists were informed by methodologies developed by APHEO and Public Health Ontario. Additional codes were included where appropriate to improve the capture of unintentional and undetermined injury events. Indicators were developed for:

- Toxic substance-related injuries: X45; X46; X48; X49 or T51-T59 (except T58) and T60 and T65 (except 65.2), X45 and T51
- Carbon monoxide poisoning injuries: X47 or T58

Data Processing and Analysis

Analyses were restricted to injury diagnosis codes S00–T79. Records with diagnoses coded as T80–T88 (complications of surgical and medical care) and T90–T98 (sequelae of injuries, poisoning, and other consequences of external causes) were excluded.

Population estimates were used to calculate annual rates. Age-standardized rates were calculated using the 2021 Canadian standard population to allow comparisons over time while minimizing the influence of changes in population age structure.

Interpretation Considerations

Rates are expressed per 100,000 people. Age-standardized ED visit rates represent the number of ED visits per 100,000 that would occur if the population had the same age distribution as the 2021 Canadian population.

Data represent emergency department visits only and do not capture injuries treated in other healthcare settings or injuries for which care was not sought.



Durham Health Connection Line 905-668-2020 or 1-800-841-2729
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