

Annual summary of opioid toxicity deaths in Toronto

Background

Toronto has been facing a drug toxicity crisis for the past decade, with an escalation seen after 2015. Starting May 2017, the Office of the Chief Coroner for Ontario (OCCO) made available preliminary additional detailed information on opioid toxicity deaths. This included socio-demographic characteristics of the deceased, circumstances surrounding their deaths, substances present following death and any resuscitation interventions performed.

This document is produced annually by Toronto Public Health as a part of the [Toronto Overdose Information System \(TOIS\)](#). It presents preliminary findings for confirmed accidental opioid-related deaths in Toronto in the most recent one-year period with available data (**January 1, 2023 to December 31, 2023**), with comparisons to earlier periods and the rest of Ontario where possible.

Please note, when the data on additional details are received, details might be missing on some of the confirmed deaths that are reported on [TOIS](#). Additionally, most details are only available for confirmed deaths that have been deemed to be accidental in nature.

Overall Summary and Key Findings

Based on preliminary data, there were 525 confirmed and probable opioid toxicity deaths among Toronto residents in 2023.¹ These include confirmed and probable deaths with an accidental or intentional manner of death, as well as deaths with undetermined intent. The preliminary number of opioid toxicity deaths in 2023 is comparable to 2022 (N=510) but remains high when compared to pre-pandemic years.

As of July 23, 2024, there were 497 confirmed opioid toxicity deaths among Toronto residents in 2023 and 506 deaths in 2022 for which detailed circumstantial information was available. This means additional information was not available on the remaining deaths, for all manners of death (accidental, intentional or deaths with undetermined intent).

There were 476 deaths with detailed circumstantial information that were deemed to be accidental in 2023 and they are the primary focus of this report (Table 1).¹ Accidental deaths represented 96% of Toronto's opioid toxicity deaths and are comparable to the percentage of accidental opioid deaths in the rest of Ontario (95%).

¹ Numbers are expected to change as the coroner completes their investigations.

Table 1: Confirmed opioid toxicity deaths with detailed circumstantial information by manner of death, Toronto and the rest of Ontario, 2022 and 2023¹

Year	Manner of death	Toronto	Rest of Ontario
2023	Accidental	476 (96%)	1,910 (95%)
	Intentional	13 (3%)	58 (3%)
	Undetermined Intent	8 (2%)	36 (2%)
2022	Accidental	478 (94%)	1,882 (94%)
	Intentional	18 (4%)	85 (4%)
	Undetermined Intent	10 (2%)	45 (2%)

Additional highlights include:

- Accidental opioid toxicity deaths in Toronto were higher among males (78% of all accidental deaths) in 2023.
- The highest proportion of accidental opioid toxicity deaths have been reported among individuals aged 25 to 44 years (48%), followed by 45 to 64 years (41%). This was comparable to the 2022 reports for these age groups.
- Private dwellings continued to be the most common living arrangement of those who died from an accidental opioid toxicity in Toronto in 2023, representing 55% of deaths.
 - The share of accidental opioid deaths among people experiencing homelessness in Toronto was 26% in 2023, which is comparable to the previous years.
 - Please note that some deaths with unknown living arrangements may include those experiencing homelessness or those with no otherwise indicated living arrangement.
- Private residences were the location of overdose incident with the highest proportion of accidental opioid toxicity deaths in Toronto (56%) and the rest of the province (69%) in 2023. When comparing the two regions, deaths with overdose incidents at private residences were higher in the rest of Ontario, while they were higher in Toronto at outdoor, shelter or public building locations.
 - Across Toronto, deaths with outdoors, congregate living and hospital/clinic incident locations also increased between 2022 and 2023, while private residences decreased.
- Fentanyl continued to be the highest direct contributor to accidental opioid toxicity deaths between 2019 and 2023 in Toronto, at 86% in the most recent year.
- Cocaine remained the highest direct contributing non-opioid, accounting for 56% of accidental deaths in 2023. This was a slight increase compared to 2022 (53%).
 - Benzodiazepines were the second highest contributor at 39% in 2023, an increase from 11% in 2022.

Detailed Breakdown for Accidental Opioid Toxicity Deaths

Socio-demographic characteristics

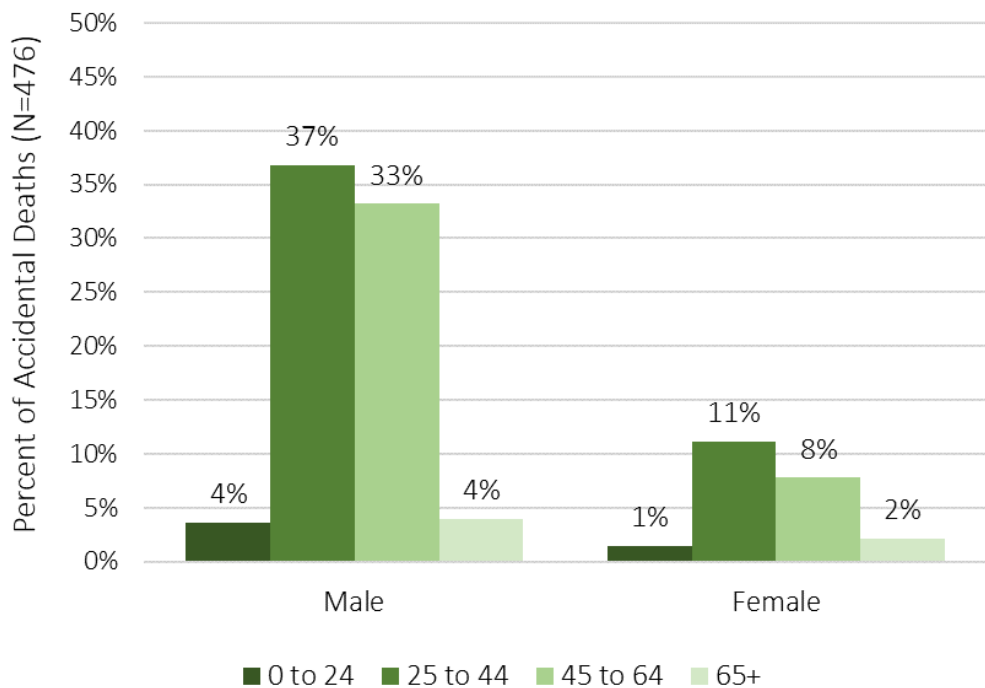
Forty-eight (48%) of all accidental deaths in 2023 occurred among individuals aged 25 to 44 years, followed by 41% in the 45 to 64 year age group (Table 2).¹ The age-specific distribution of opioid toxicity deaths in 2023 remains comparable to the distribution in 2022.

Table 2: Accidental opioid toxicity deaths by age group (years), Toronto, 2022 and 2023¹

Age group (Years)	2023 (N=476)	2022 (N=478)
0 to 24	24 (5%)	27 (6%)
25 to 44	228 (48%)	232 (49%)
45 to 64	195 (41%)	197 (41%)
65+	29 (6%)	22 (5%)

In 2023, 78% (N=369) of all accidental opioid toxicity deaths in Toronto occurred among males, while 22% (n=107) were among females (Figure 1).¹ The age distribution of opioid toxicity deaths among males and females were similar, with the highest proportion being among males aged 25 to 44 years at 37%, followed by males aged 45 to 64 years (33%).

Figure 1: Accidental opioid toxicity deaths by age group (years) and gender, Toronto, 2023^{1,2}



² Please note that the maximum value of the y-axis for this figure shown is not 100%.

Racial identity was unknown or missing in 35% of 2023 deaths, and in 51% of 2022 deaths. For accidental deaths due to opioid toxicity where information on racial identity was available in 2023, 73% of deaths occurred among White individuals in Toronto, followed by 10% in Black individuals (Table 3).^{1,3} This was comparable to 2022.

Table 3: Accidental opioid toxicity deaths by racial identity, Toronto, 2022 and 2023^{1,3,4}

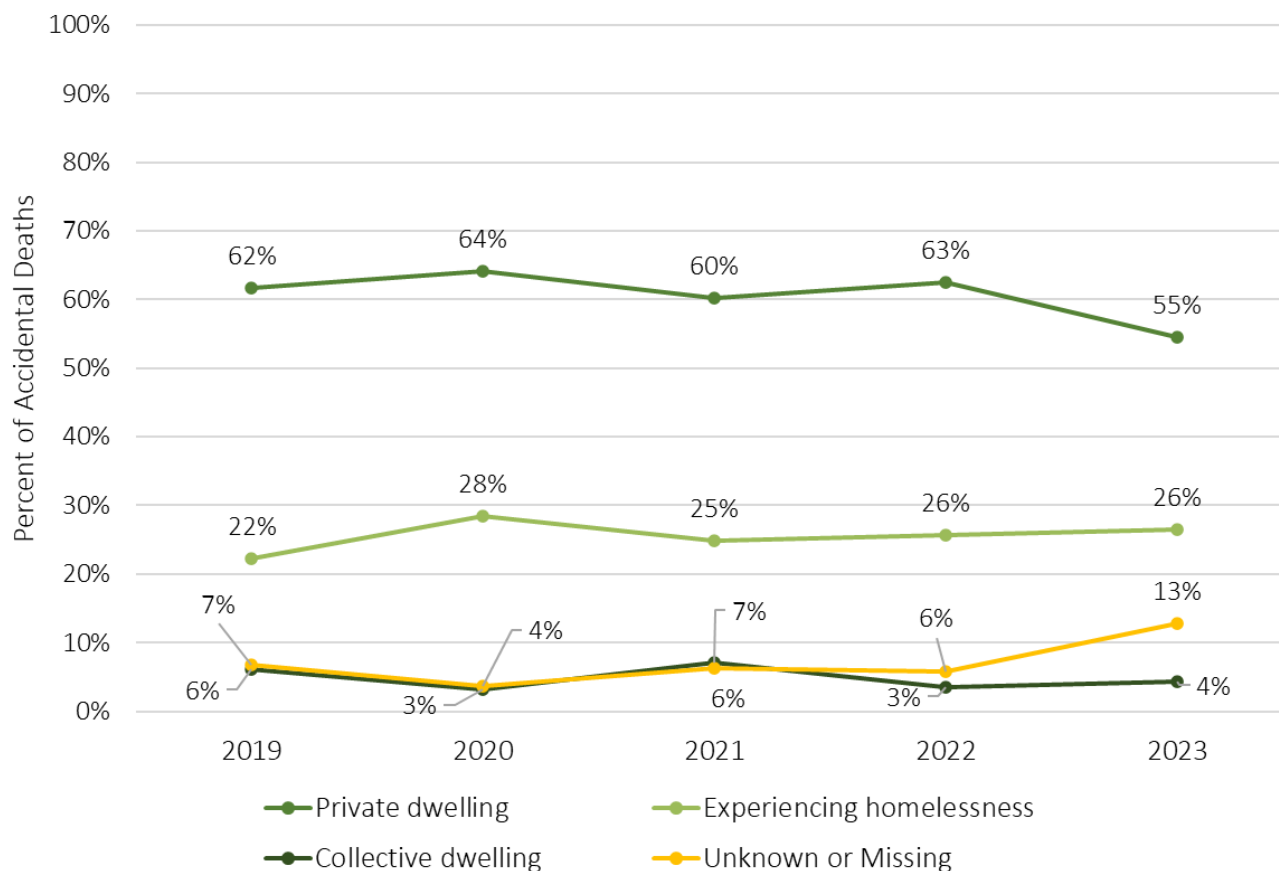
Race	2023 (N=311)	2022 (N=234)
White	73%	72%
Black	10%	13%
Middle Eastern	5%	4%
South Asian	5%	3%
Latin American	4%	4%
East or Southeast Asian	3%	5%

Note: Accidental deaths with unknown or missing racial identity were excluded from the denominator.

Living arrangement

Private dwellings have remained the most common living arrangement of those who died from accidental opioid toxicity in Toronto, representing 55% of deaths in 2023 and 63% in 2022 (Figure 2).^{1,5} The share of deaths due to accidental opioid toxicity among people experiencing homelessness have remained higher than 20% since 2019, accounting for 26% of the accidental deaths in 2023. In addition, collective dwellings have accounted for 4% of opioid toxicity deaths in 2023, which is comparable to the previous years as well. Information on living arrangement of the deceased at the time of death was unknown or missing in 13% of all accidental deaths for Toronto in 2023, and some unknown living arrangements may include those experiencing homelessness or those with no otherwise indicated living arrangement.

³ Accidental deaths with unknown or missing information on racial identity were excluded from the denominator.
⁴ Data for Indigenous identity continues to be unavailable as the OCC continues to consult with stakeholders.
⁵ Living arrangement of the deceased at the time of death may be different from the location of overdose incident or the location of death.

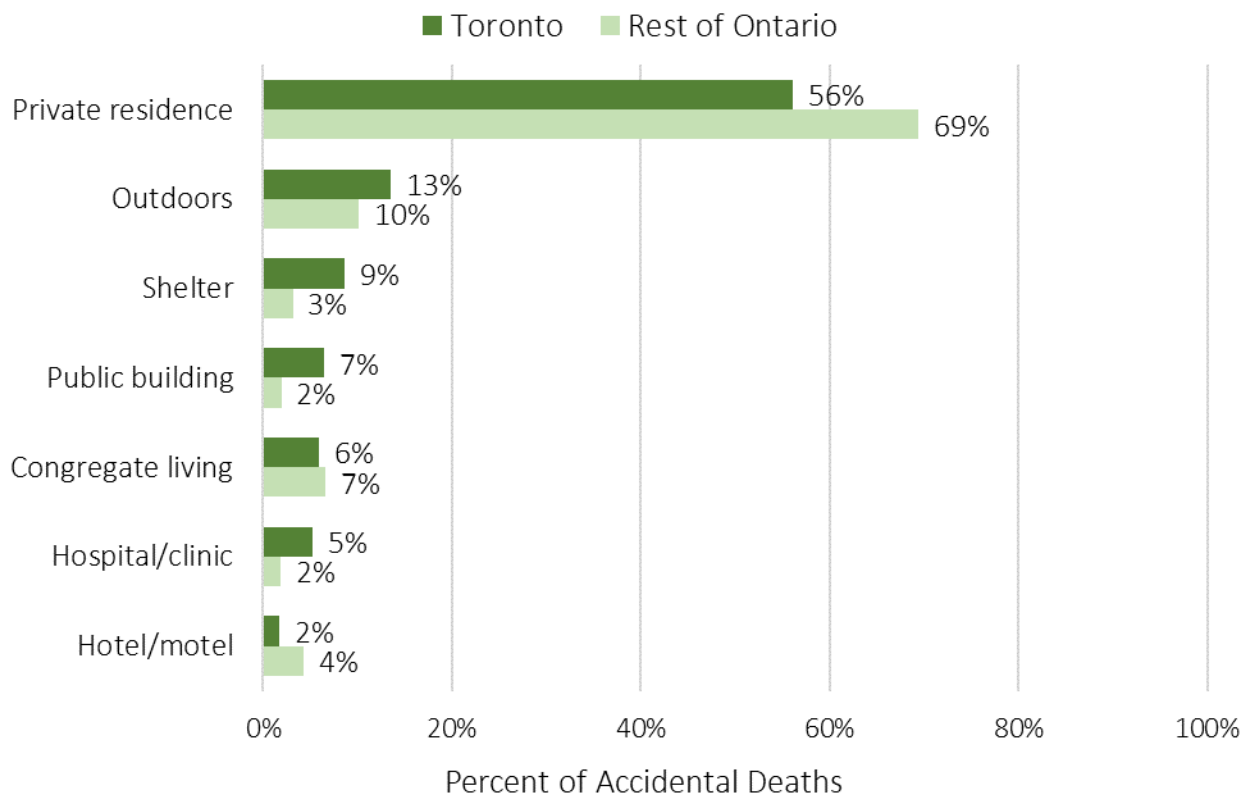
Figure 2: Accidental opioid toxicity deaths by select living arrangements of the deceased, Toronto, 2019 to 2023¹

Location of overdose incident

The overdose incident occurred indoors in a private residence for more than half of all accidental opioid toxicity deaths in Toronto (56%) and in the rest of the province (69%) (Figure 3).¹ A higher proportion of opioid toxicity deaths occurred in Toronto shelters (9%), public buildings (7%) and outdoors (13%) compared to the rest of Ontario (3%, 2% and 10%, respectively). In two percent (2%) of accidental opioid toxicity deaths in Toronto and four percent (4%) in the rest of Ontario, the incident occurred in a hotel or motel. For Toronto, hotels may also include temporary hotel shelters implemented for COVID-19 response. Please refer to the Definitions section of the report for more information on the different locations of the overdose incident.

The proportion of deaths where the overdose incident was a private residence was lower in 2023 compared to 2022 (64%). In contrast, incidents associated with opioid toxicity deaths were slightly higher at other locations such as outdoors, congregate living and hospital/clinic in 2023 compared to 2022 (10%, 3% and 2%, respectively). This indicates a possible shift in 2023 from private residences to other locations in the city.

Figure 3: Accidental opioid toxicity deaths by location of overdose incident leading to death, Toronto compared to the rest of Ontario, 2023¹



Conditions surrounding death

For 40% of all accidental opioid toxicity deaths in Toronto, the individual was reported to be at home in 2023, which is a decrease from 2022 at 48%.¹ Information on other indicators describing conditions surrounding opioid toxicity deaths in Toronto are provided below.

Recent release from a correctional facility

Information on whether the deceased was released from a correctional facility in the past four weeks was unknown or missing for a large number of accidental opioid toxicity deaths among Toronto residents in 2023 (N=399 out of 476).¹ The high number of deaths with unknown or missing information on recent incarceration is possibly because of the difficulty associated with tracking information on incarceration status of the affected individual.

In 2023, there were 11 opioid toxicity deaths where the individual was released from a correctional facility in the past four weeks (Table 4).¹ The number of opioid toxicity deaths where the deceased was not recently incarcerated was lower in 2023 compared to previous years.

Table 4: Number of accidental opioid toxicity deaths by recent release from a correctional facility, Toronto, 2019 to 2023¹

Recent release from correctional facility	2019 (N=278)	2020 (N=508)	2021 (N=557)	2022 (N=478)	2023 (N=476)
Yes	6	15	16	12	11
No	167	259	290	133	66
Unknown or Missing	105	234	251	333	399

Someone was Present During Time of Death Who Could Intervene

Information on whether someone else was present at the time of incident who could have intervened was unknown or missing for more than half of all accidental deaths in 2023. For deaths where this information was known, 78% occurred without the presence of another individual who could have intervened at the time of overdose in 2023 (Table 5).^{1,6} Additionally, there appears to be a slight increase in deaths in the recent years where the deceased was alone at the time the incident occurred.

Table 5: Accidental opioid toxicity deaths by presence of someone else who could intervene, Toronto, 2019 to 2023^{1,6}

Someone present during time of death	2019 (N=207)	2020 (N=341)	2021 (N=374)	2022 (N=290)	2023 (N=199)
Yes	26%	29%	27%	19%	22%
No	74%	71%	73%	81%	78%

Note: Accidental deaths with unknown or missing information on someone else being present were excluded from the denominator.

Attempt to resuscitate and naloxone administration

Information was unknown or missing on resuscitation attempt for almost half of all accidental opioid toxicity deaths in Toronto (48%) in 2023, and for 33% of all deaths when it came to naloxone use. Where known, there was an attempt to resuscitate the deceased individual in 47% (N=115) of accidental deaths in Toronto in 2023.^{1,7} For accidental opioid toxicity deaths where information on naloxone use was available, naloxone was administered in 32% (N=102) of deaths in 2023.⁸

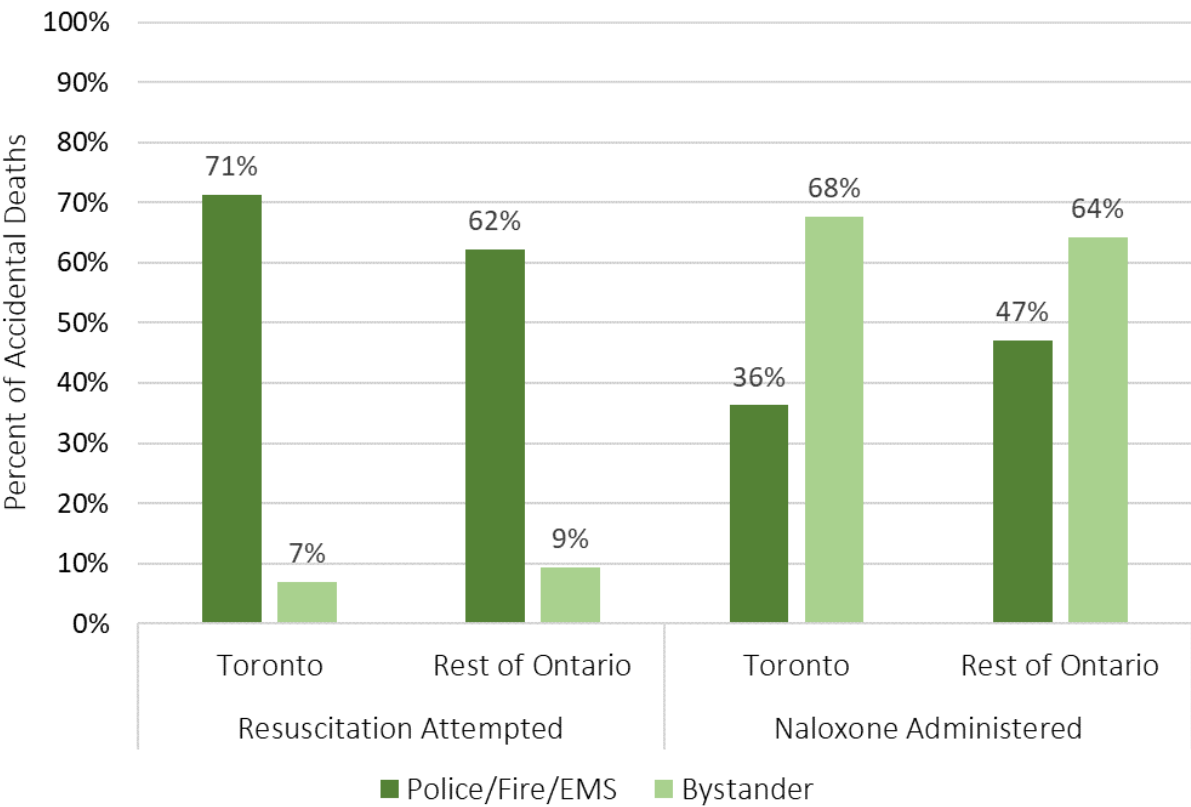
⁶ Accidental deaths with unknown or missing information on whether or not another individual was present at time of incident who could intervene were excluded from the denominator.

⁷ Accidental deaths with unknown or missing information on resuscitation attempt were excluded from the denominator. Data is shown for 246 deaths in 2023 for whether or not there was a resuscitation attempt in Toronto.

⁸ Accidental deaths with unknown or missing information naloxone administration were excluded from the denominator. Data is shown for 320 deaths in 2023 for whether or not naloxone use was reported in Toronto.

For opioid toxicity deaths where resuscitation was attempted, first responders (police/fire/EMS) attempted resuscitation for more than half of the deaths in Toronto (71%) and the rest of the province (62%) in 2023 (Figure 4).^{9,10} However, where used, naloxone was administered more commonly by bystanders in Toronto (68%) and the rest of the province (64%) in 2023.¹¹

Figure 4: Accidental opioid toxicity deaths with resuscitation attempt and naloxone use by who attempted or used, Toronto compared to the rest of Ontario, 2023^{1,9,10,11}

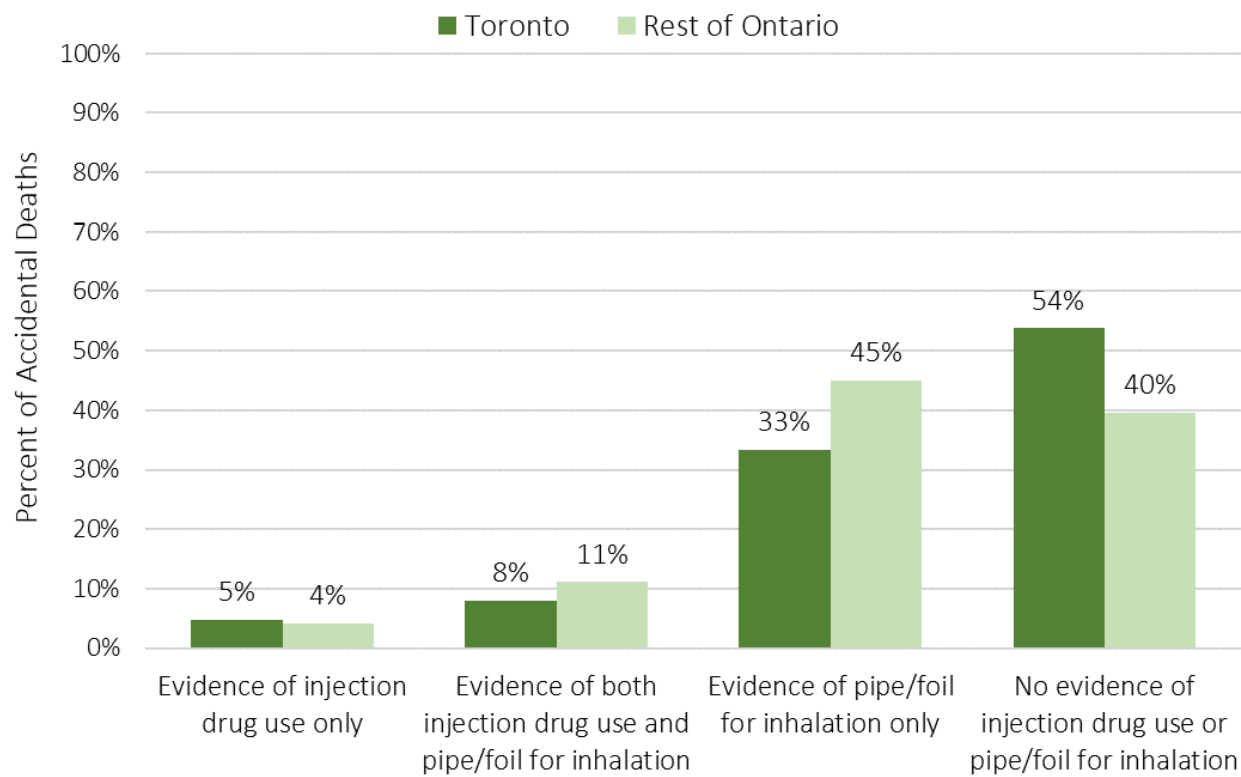


Mode of use

Although the investigating coroner found no evidence of injection drug use or pipe/foil use in more than half of the accidental deaths in Toronto, there was evidence of only pipe/foil use for inhalation in 33% of all accidental opioid toxicity deaths among Toronto residents in 2023, while this was true for 45% of the deaths in the rest of Ontario (Figure 5).¹ Please note, no evidence of injection drug use or pipe/foil use does not indicate that any of these modes were not used, but that there was no evidence found by the coroner of their use for an accidental death. This may indicate oral, nasal, transdermal, other, or unknown modes of drug use.

⁹ Attempt of resuscitation or administration of naloxone can be done by bystander, hospital, Police/Fire/EMS or can be unknown/missing. These categories are not mutually exclusive; some deaths can have multiple attempts of resuscitation or naloxone administration and can fall under more than one of these categories.
¹⁰ Resuscitation was attempted for 115 accidental deaths in Toronto in 2023, and for 725 deaths in the rest of Ontario.
¹¹ Naloxone was administered for 102 accidental deaths in Toronto in 2023, and for 511 deaths in the rest of Ontario.

Figure 5: Accidental opioid toxicity deaths by evidence of injection drug use or pipe/foil for inhalation, Toronto compared to the rest of Ontario, 2023¹

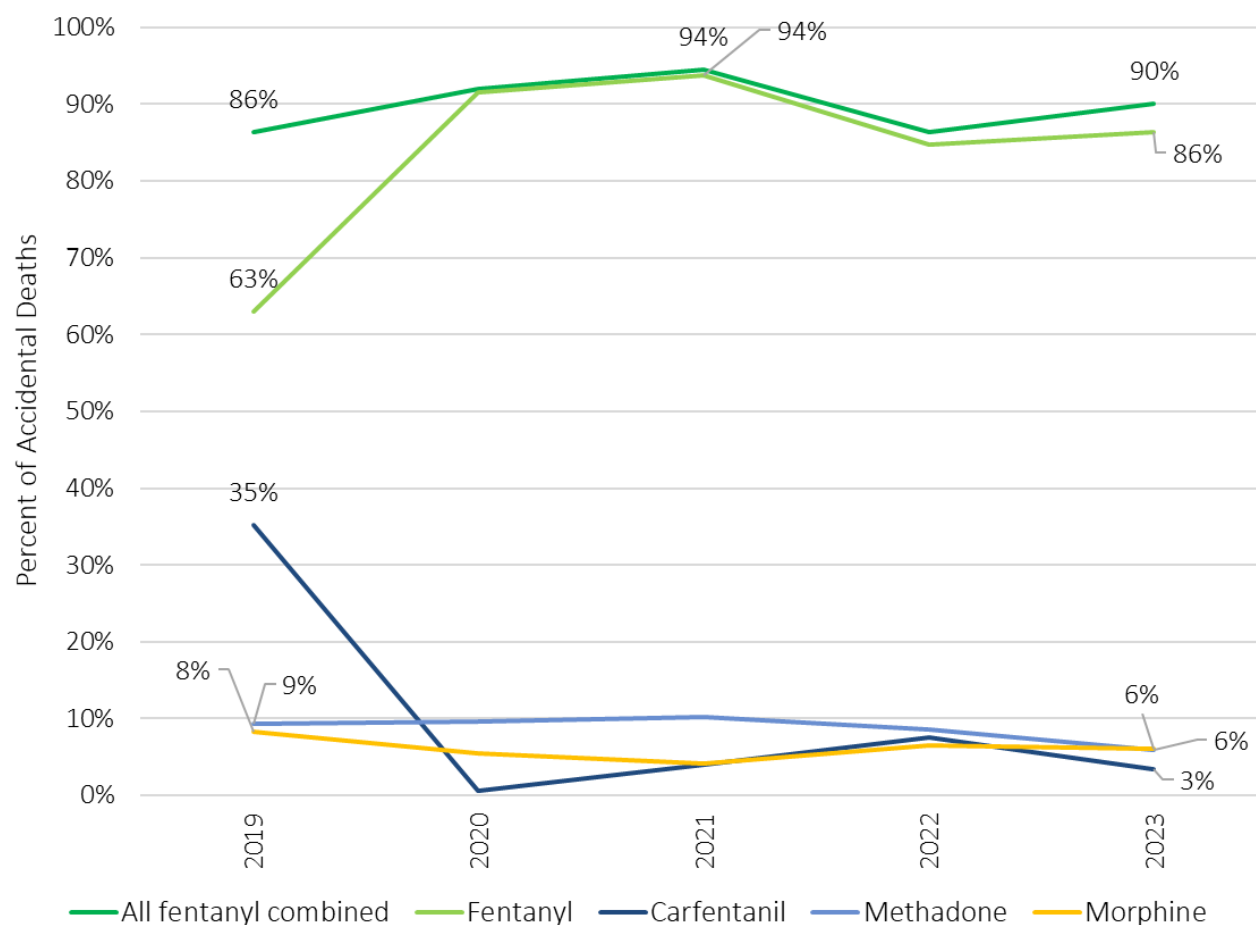


Type and origin of substances contributing to death

Between 2019 and 2023, fentanyl has continued to be the highest direct contributor to accidental opioid toxicity deaths in Toronto, with a peak of 94% in 2021 (Figure 6).^{1,12} Notably, carfentanil contributed to 35% of deaths in 2019, with a decrease in the following years and ending at 3% in 2023.

¹² Drug categories are not mutually exclusive; some deaths are attributed to multi-drug toxicity where a death can be caused by more than one drug.

Figure 6: Accidental opioid toxicity deaths by select type of opioid directly contributing to death, Toronto, 2019^{1,12}, 2020^{13,14}

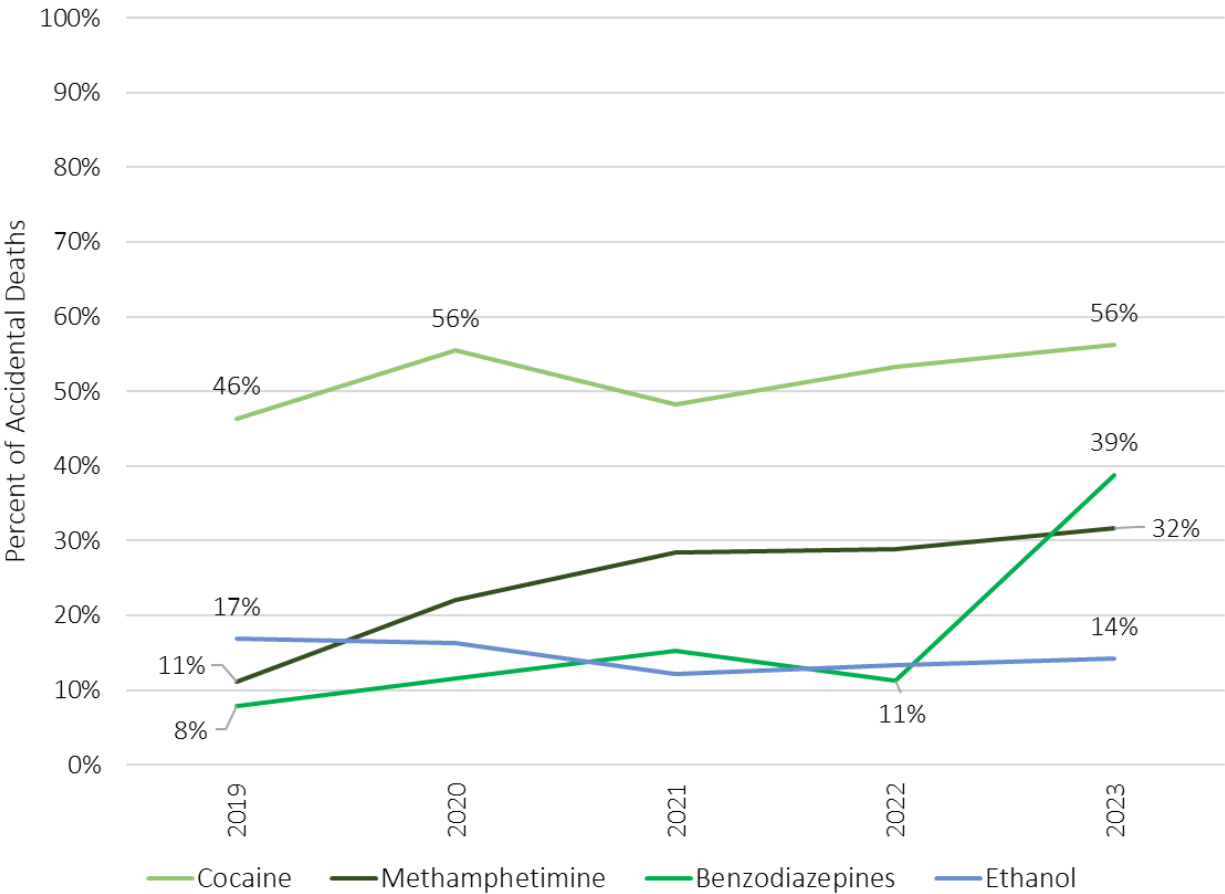


Cocaine has remained the non-opioid substance directly contributing to the highest percentage of accidental opioid toxicity deaths in Toronto from 2019 to 2023, contributing to 56% of deaths in 2023 (Figure 7).^{1,12} Other notable non-opioids include methamphetamine and benzodiazepines, where the contribution of both have increased in the recent years since 2019 from 11% and 8% (2019) to 32% and 39% (2023), respectively.

¹³ The “All fentanyl combined” category includes fentanyl, carfentanil and fentanyl analogues.

¹⁴ Only select substances are presented in this figure: all fentanyl combined, carfentanil, fentanyl, methadone and morphine. Other substances not shown include heroin, hydromorphone, buprenorphine, codeine, hydrocodone, other fentanyl analogues, oxycodone, tramadol, U47700 and oxycodone.

Figure 7: Accidental opioid toxicity deaths by select type of non-opioid directly contributing to death, Toronto, 2023^{1,12}



In 84% of accidental opioid toxicity deaths that occurred in Toronto in 2023, the opioids contributing to death were exclusively non-pharmaceutical in origin (Table 6).¹ This was slightly higher than the rest of the province at 79%. Other origins for the contributing opioids included pharmaceutical and mixed. The origin of the opioids was unclassified in 3% of accidental opioid-related toxicity deaths in both regions.

Table 6: Origin of opioids contributing to accidental opioid toxicity deaths in Toronto, compared to the rest of Ontario, 2023¹

Origin of contributing opioid	Percentage of accidental deaths	
	Toronto (N=476)	Rest of Ontario (N=1,910)
Non-pharmaceutical	84%	79%
Pharmaceutical	6%	9%
Both pharmaceutical and non-pharmaceutical	7%	10%
Unclassified	3%	3%

Data Sources

Office of the Chief Coroner for Ontario, January 2019 to December 2023.

- Yearly counts extracted August 2024.
- Detailed socio-demographic characteristics and nature and origin of substances received via September 5, 2024 Public Health Ontario Quarterly Public Health Unit Opioid-related Death Report, extracted on July 23, 2024.
- Data on living arrangement received via February 28, 2025 Public Health Ontario Quarterly Public Health Unit Opioid-related Death Report, extracted on February 5, 2025.

Data Notes

- Deaths included are caused by opioid toxicity, with or without other drugs also contributing to death.
- Deaths due to chronic substance use, medical assistance in dying, homicides and trauma where an intoxicant contributed to the circumstances of the injury are excluded.
- Counts of less than 5 are assessed for risk of identification and potentially suppressed.
- Deaths have been assigned to Toronto based on the six-digit postal code of the residence of the deceased individual. If the postal code of the residence was not available, the postal code of the incident location was used. If this information was not available, the postal code of the death location was used. In cases where postal code is unavailable, other geographic information such as city of residence/incident/death may be used to assign PHU.
- An individual is considered to have died at home if the location of death address is the same as their home address.
- Emergency responders refer to EMS, Police and Fire.
- Living arrangement categories include private dwelling, homeless, collective dwelling, correctional facility, residential care facility, hospital or long-term care home, other, and unknown.
 - In Q3 2021, the OCCO transitioned to a new case management system, which may have contributed to an increase in “Unknown” living arrangements. Some unknown living arrangements may include those experiencing homelessness or those with no otherwise indicated living arrangement.
- Incident location categories include private residence, public building, hotel/motel, congregate living, shelter, hospital/clinic, correctional facility, in a vehicle, and outdoors.
- Origin of contributing opioid include non-pharmaceutical, pharmaceutical and unclassified.
- Gender is based on gender identity at time of death.
- Information on recent release from a correctional facility is collected by the coroner from next of kin or witnesses.
- Information on someone being present during time of death who could intervene is collected by the coroner. If the coroner attends the scene, they collect this information from witnesses or other first responders (i.e., EMS).
- The substances reported in the data are not reflective of all contributing substances for a death. The cases reflect confirmed opioid toxicity deaths with at least one opioid contributing to death, but the record-level data indicates presence (i.e., detection at post-mortem).

Definitions

Term	Definition
Living Arrangement	
Private dwelling	A separate set of living quarters designed for or converted for human habitation. Must include a source of heat or power and must be an enclosed space that provides shelter/protection from the elements. In Toronto, this includes community housing units.
Homeless	Without stable, permanent, appropriate housing, or the immediate prospect, means and ability of acquiring it; includes no fixed address and those temporarily residing in shelters.
Collective dwelling	Lodging and rooming houses, hotels, motels, tourist establishments, campgrounds and parks, sober living facilities, school residences and training centre residences, work camps, religious establishments, military bases, commercial vessels.
Correctional facility	May include federal correctional institutions, provincial and territorial custodial facilities, young offenders' facilities, jails and police lock-up facilities.
Residential care facility (including group homes)	Institutions or establishments that provide accommodation, and potentially treatment, to various groups (e.g., physically handicapped, children/youth, persons with psychiatric disorders or developmental disabilities).
Hospital or long-term care home	An institution or establishment providing medical care (short term or continuous).
Incident Location	
Private residence	Apartment/Condominium, Single-detached house, Rowhouse/townhouse, Semi-detached house, Private residence, Trailer/Mobile home, Private Residence, Rural/Agricultural: Residential, Shed, Community Housing, Barn
Public building	Airport, Recreational building, Commercial, Commercial/retail building, Other public building
Hotel/motel	This may also include deaths in temporary hotel shelters implemented for COVID-19 response
Congregate living	Long-term care home, Supported living, Rooming house
Outdoors	Urban/Suburban, Recreational space, Railroad: On tracks, Forest/Park/Conservation area
Origin of Contributing Opioid	
Non-pharmaceutical	<ul style="list-style-type: none"> • Heroin, fentanyl analogues (including carfentanil), U-47700 • Fentanyl without evidence of patch, vial or other pharmaceutical formulation or prescription is determined to be of suspected non-pharmaceutical origin. • Morphine without or unknown evidence of a prescription, with or without 6-monoacetylmorphine (6-MAM) and with evidence suggesting non-pharmaceutical heroin use (e.g., other non-pharmaceutical opioids detected on toxicology such as carfentanil or history of consuming or seeking heroin). • Codeine without or unknown evidence of a prescription, with 6-MAM, or without 6-MAM but with morphine (without a prescription) and with evidence suggesting non-pharmaceutical heroin use.
Pharmaceutical	<ul style="list-style-type: none"> • Buprenorphine/naloxone, codeine without 6-MAM or 6-MAM and evidence suggesting non-pharmaceutical heroin use, dextromethorphan, fentanyl (with evidence of patch, vial or other pharmaceutical formulation), hydrocodone, hydromorphone, loperamide, meperidine, methadone, morphine with evidence of a morphine or codeine prescription, oxycodone, oxymorphone or tramadol. • May include opioids that were prescribed to the deceased person or that were prescribed to someone else (i.e., diverted).
Unclassified	Opioid could not be clearly categorized as non-pharmaceutical or pharmaceutical