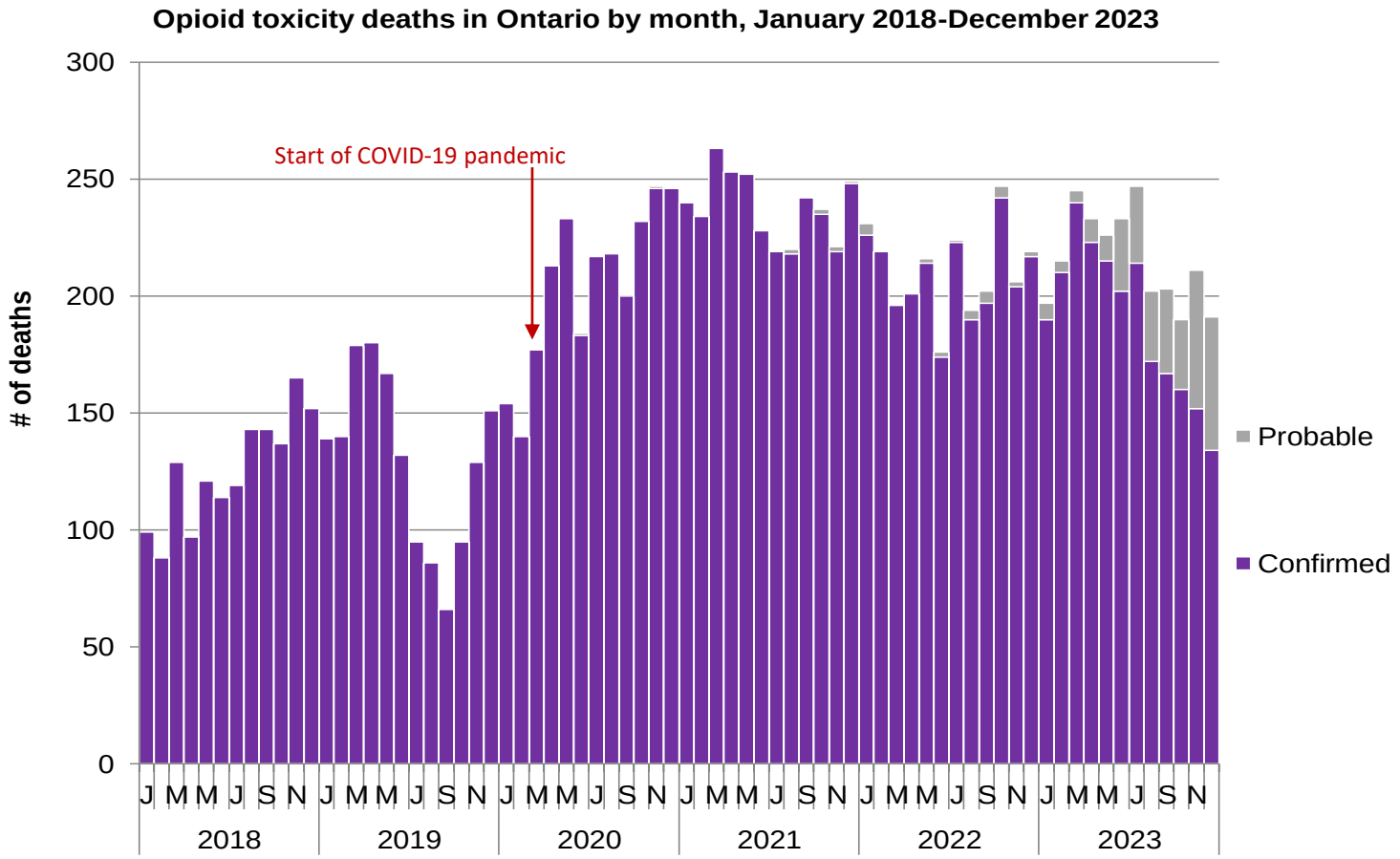
Quarterly Update from the Office of the Chief Coroner

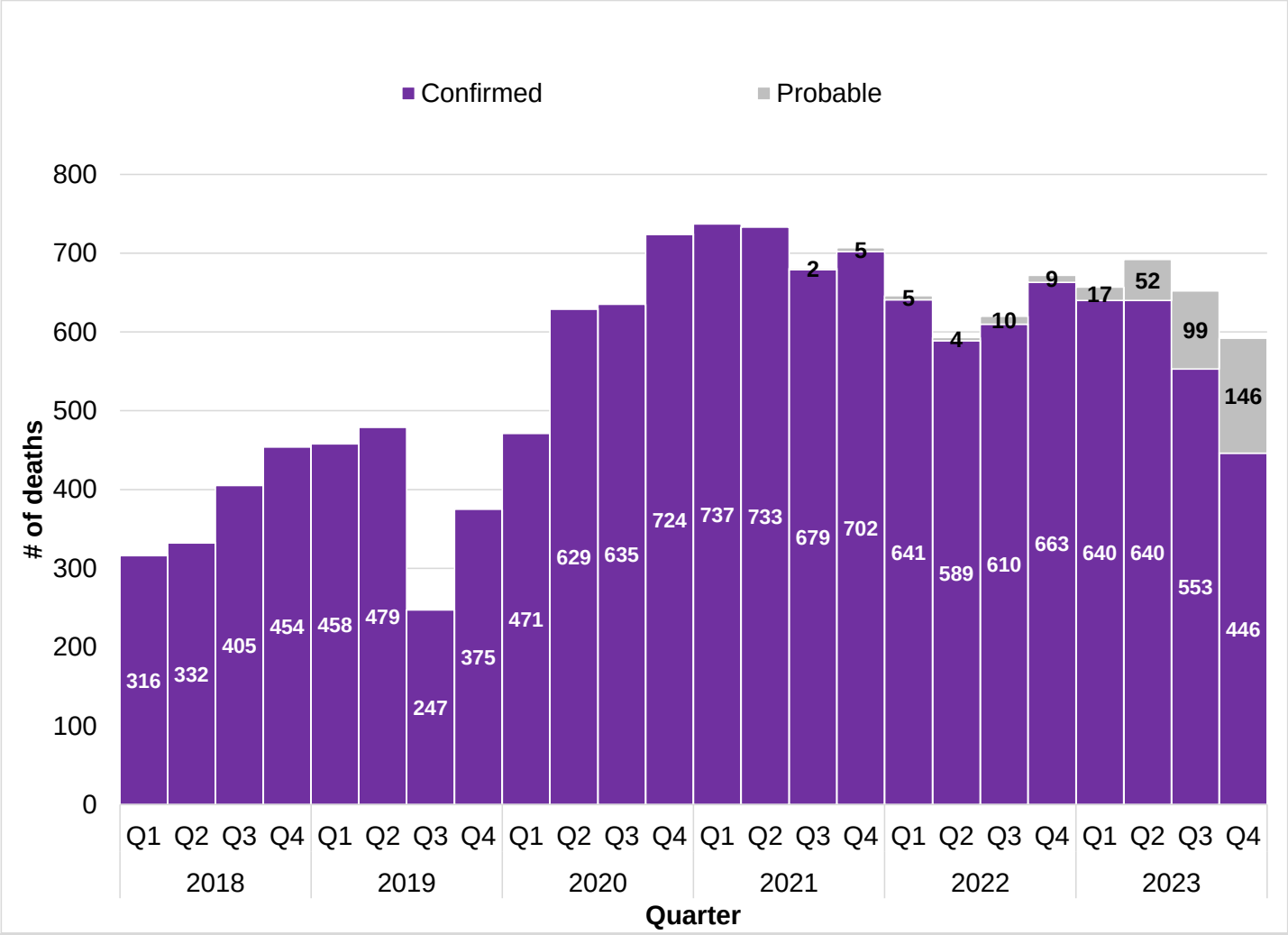
Opioid Toxicity Deaths in Ontario



	2018	2019	2020	2021	2022	2023
Average deaths per month*	126	130	205	238	211	216
Average deaths per day*	4	4	7	8	7	7

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024
Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

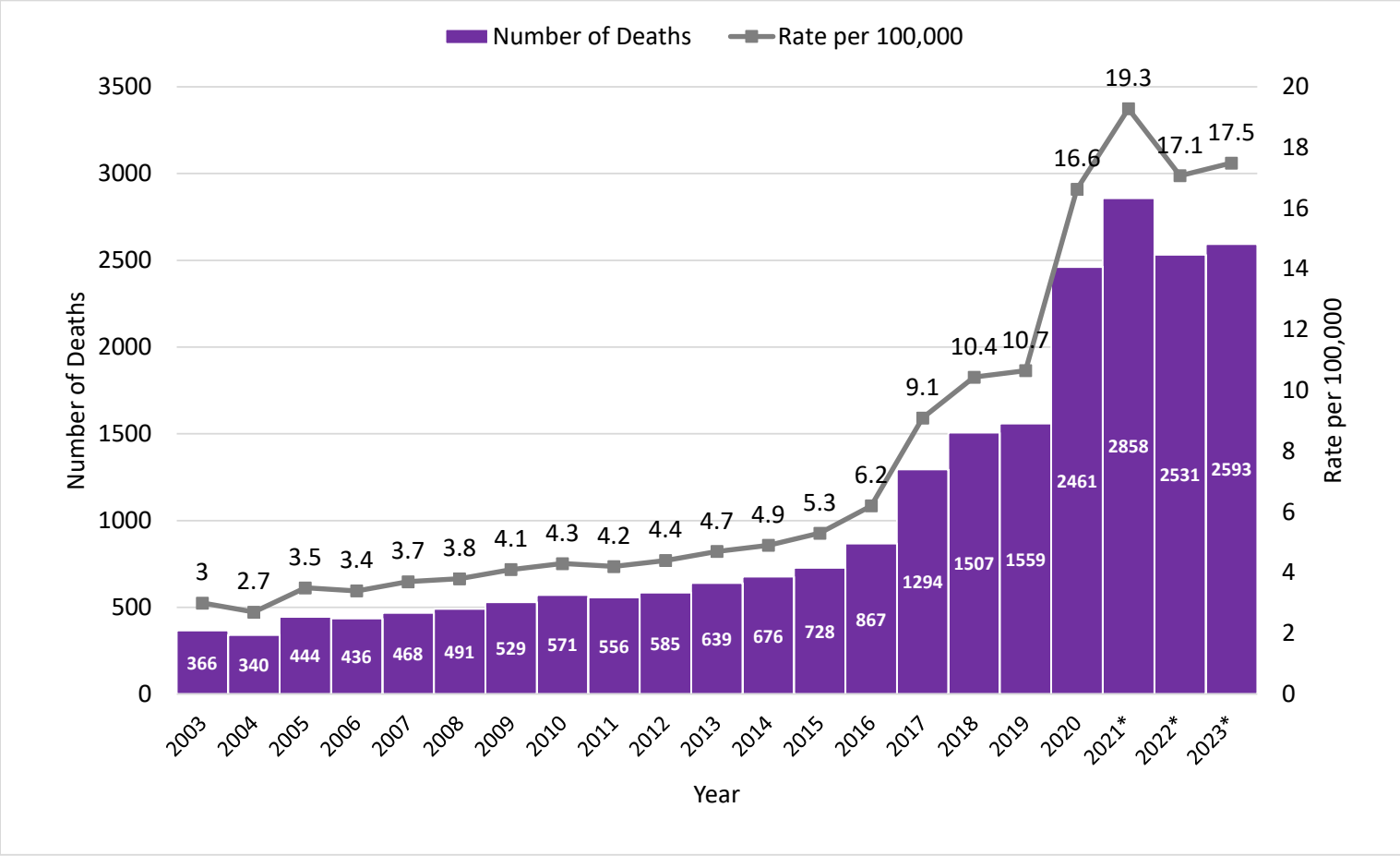
Opioid toxicity deaths in Ontario by quarter, 2018-2023



The number of opioid-related deaths* in the most recent quarter (Q4 2023; 592 deaths) is 9% lower than the number of deaths in quarter prior (Q3 2023; 652 deaths) (preliminary).

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024
Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

Opioid toxicity deaths in Ontario by year, 2003-2023

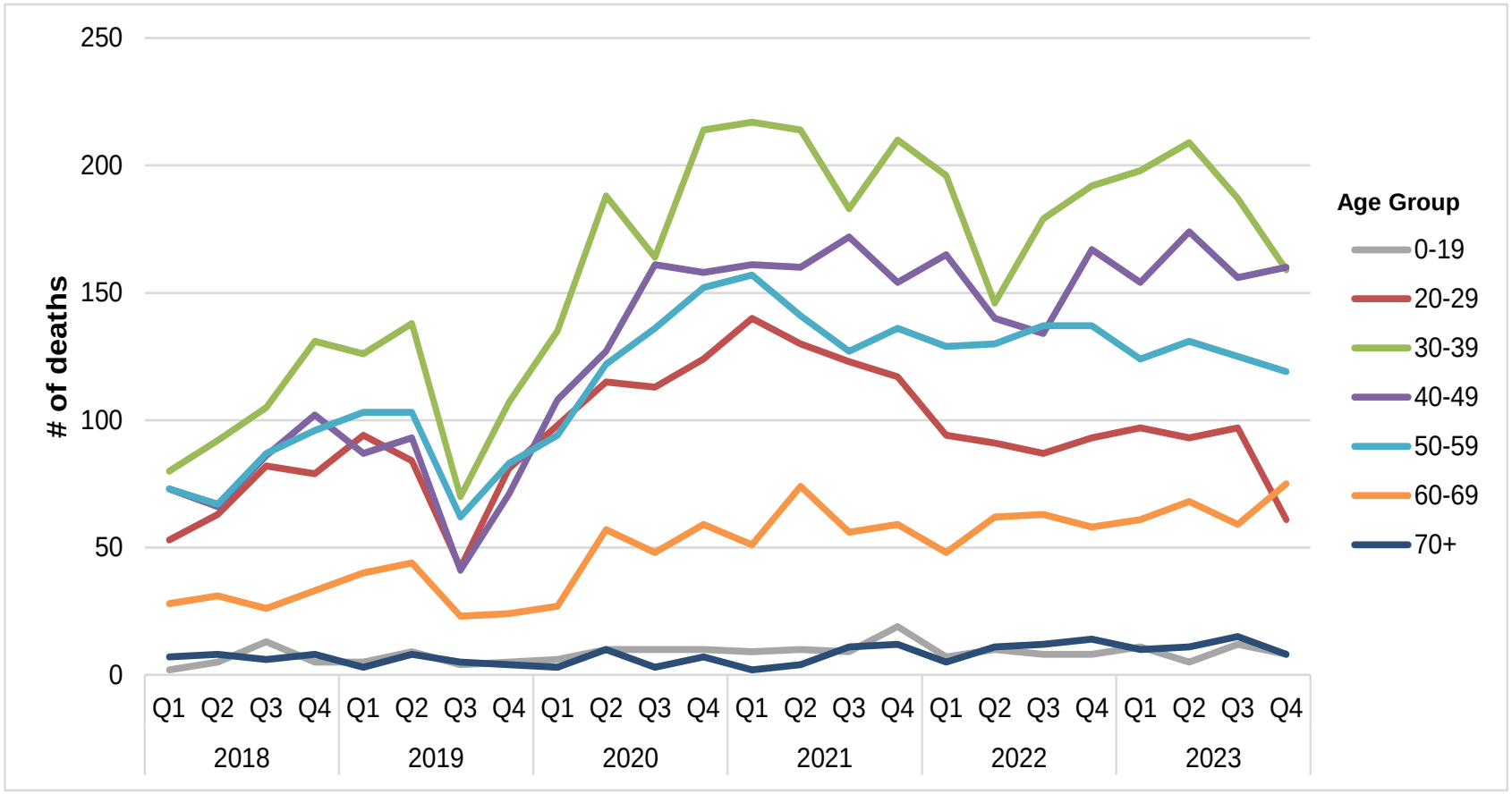


In **2021**, the mortality rate for opioid toxicity in Ontario was 19.3 per 100,000 population; **more than double** the rate in 2017 (9.1).

In **2023**, the mortality rate has **decreased by 9%** compared to 2021, however remains **64% higher** than in 2019.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024
Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

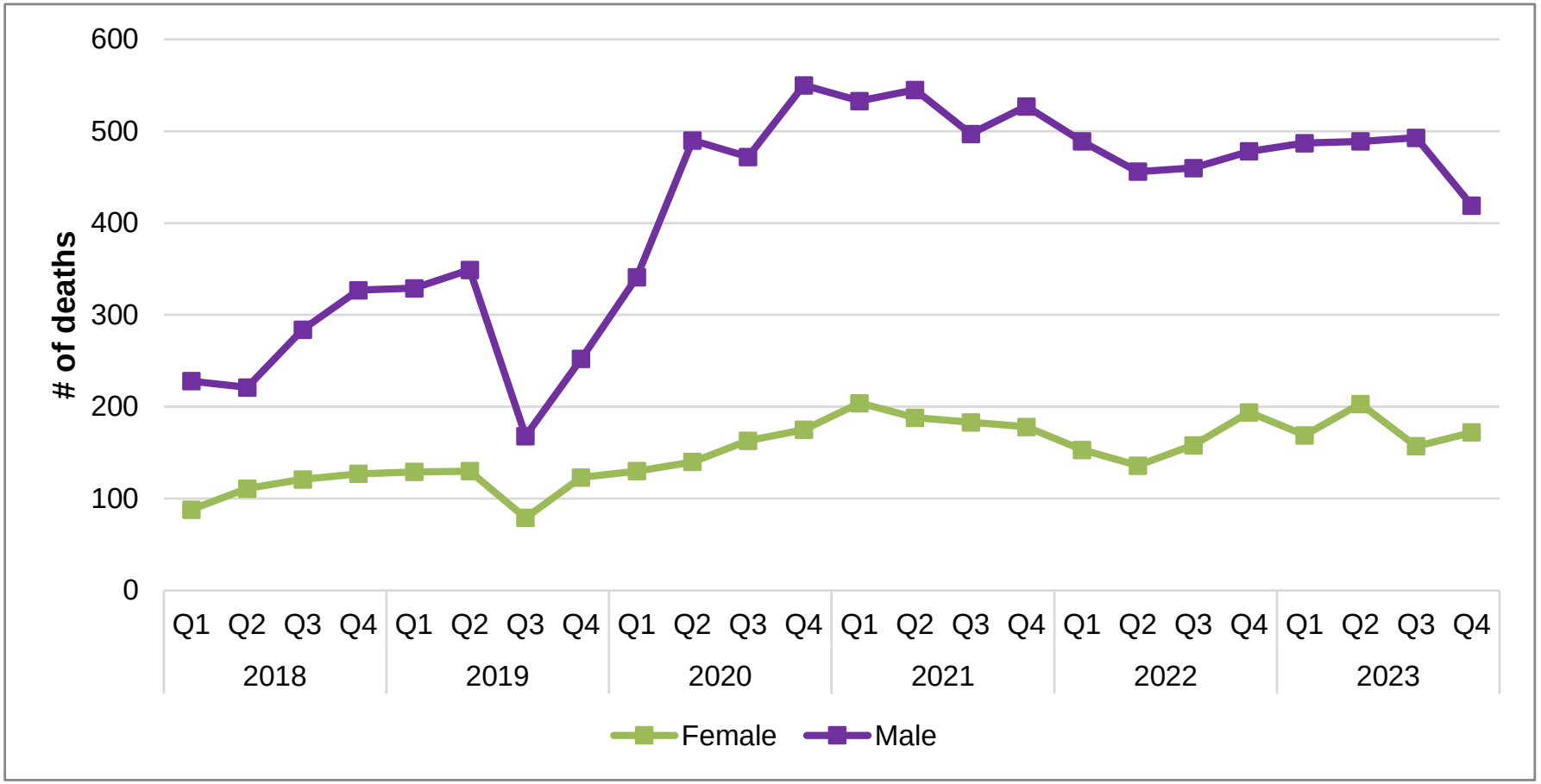
Opioid toxicity deaths in Ontario by age group, 2018-2023



Age groups **30-59** continue to be **most impacted**, accounting for 74% of deaths in Q4 2023.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024
Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

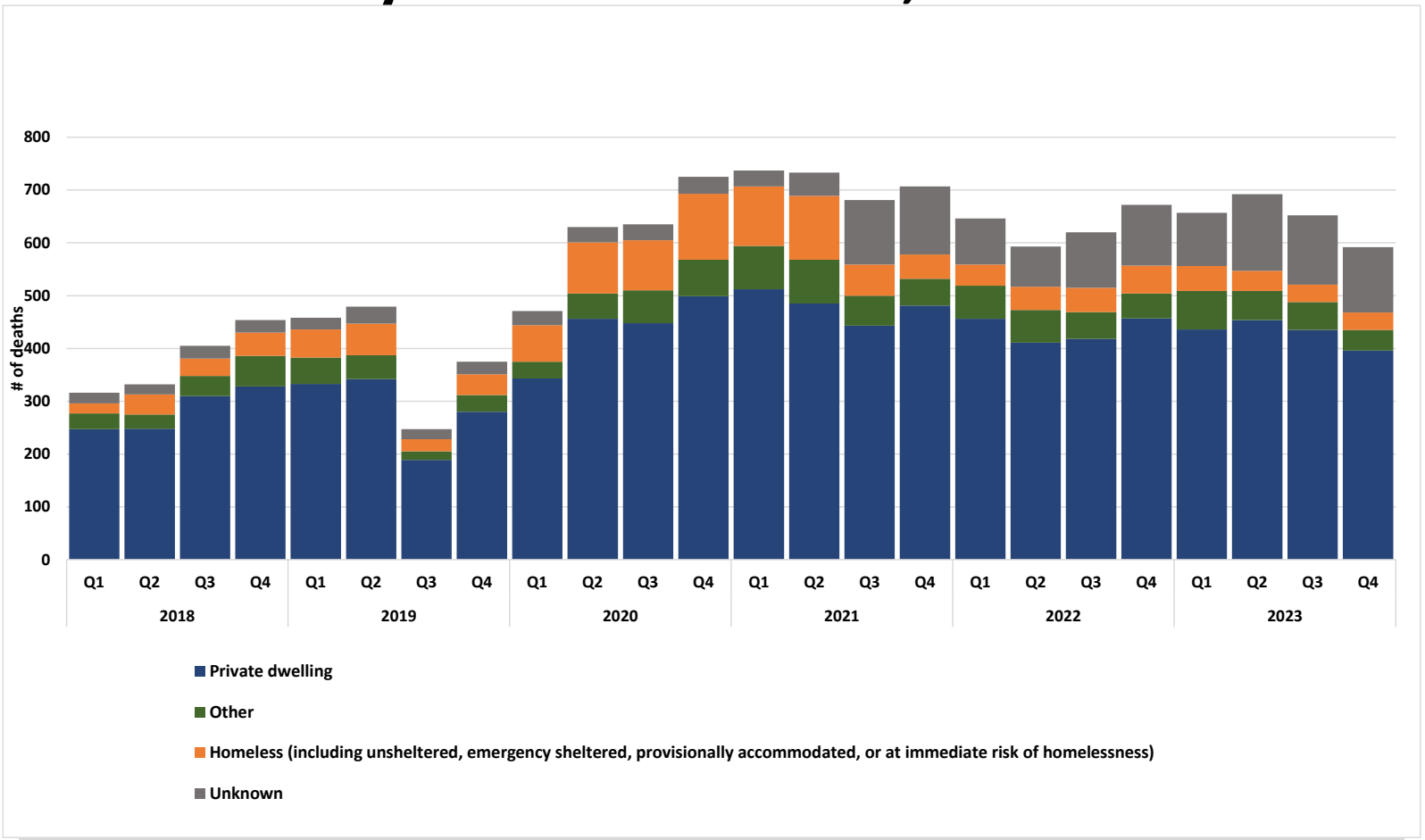
Opioid toxicity deaths in Ontario by sex, 2018-2023



3 in 4 deaths have been among **males** since the start of the pandemic.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024
Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

Living Arrangements at time of death among Opioid Toxicity deaths in Ontario, 2018-2023

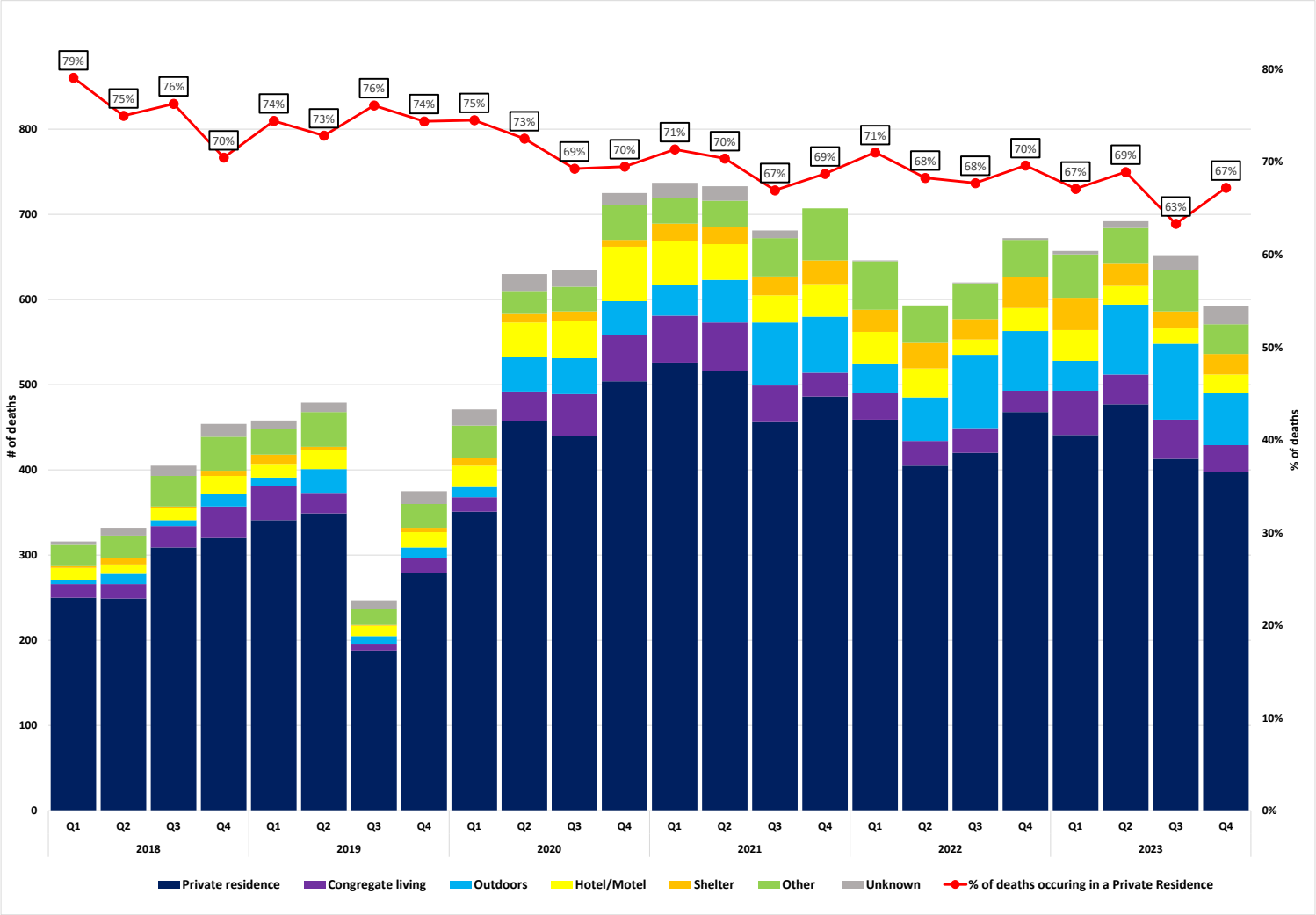


Majority of opioid toxicity deaths occur in those who live in a private residence.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

In Q3 2021, the OCC 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.
'Other' living arrangements include: Correctional Facilities, Hospital or Long-term Care home, Mental Health Facility/Mental Health Unit in hospital, Residential care facilities (including group homes), Retirement home (including senior residences), and Other collective dwellings (including chronic care facilities/units in a hospital, lodging and rooming houses, hotels/motels, military bases, sober living/rehabilitation facilities).

Locations of Incident among Opioid Toxicity Deaths in Ontario, 2018-2023

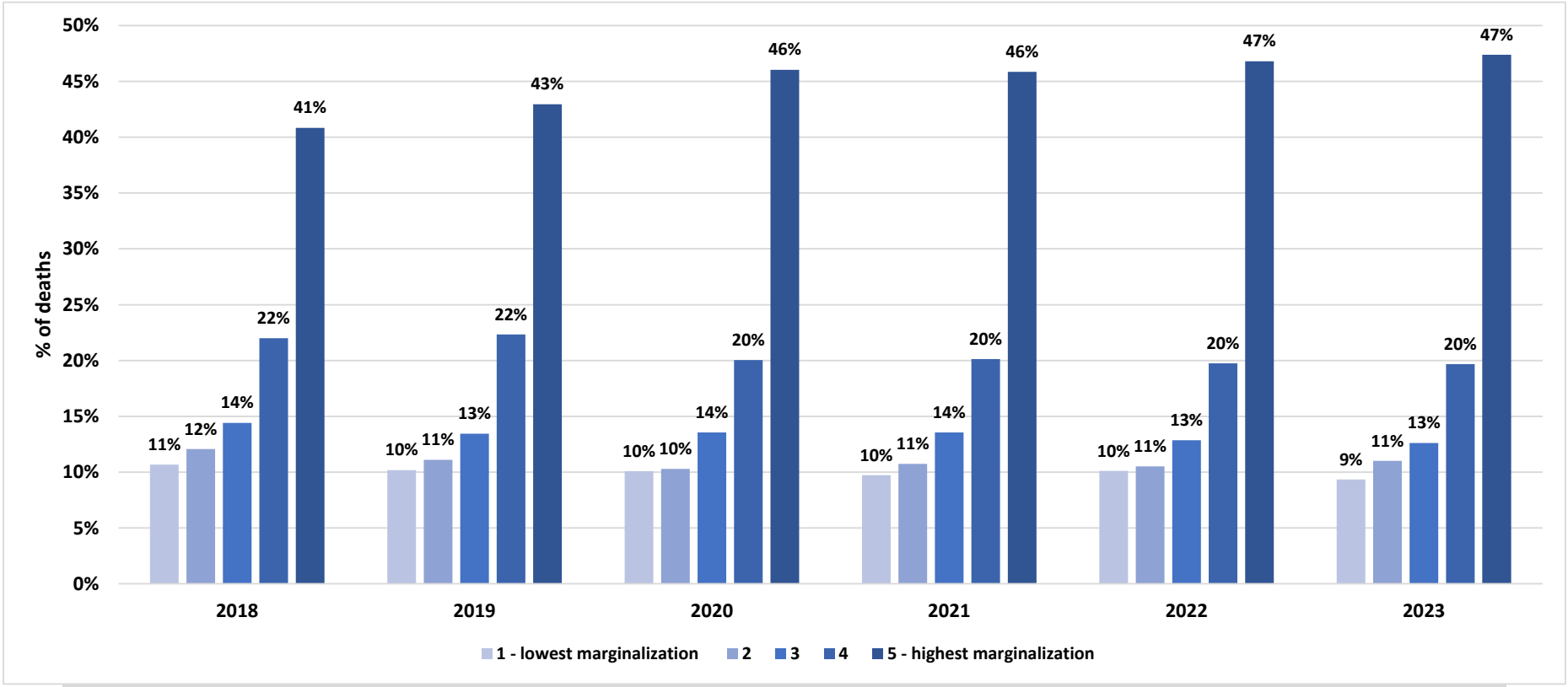


The majority of fatal opioid toxicity events (7 in 10) occur in private residences.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

'Other' locations of incident include: Correctional Facility, in Custody, Hospital/Clinic, in a Vehicle, Public building, and Industrial (Construction Site, Factory, Plant, Warehouse, Mine)

Material Resources Marginalization Index among opioid toxicity deaths in Ontario, 2018-2023

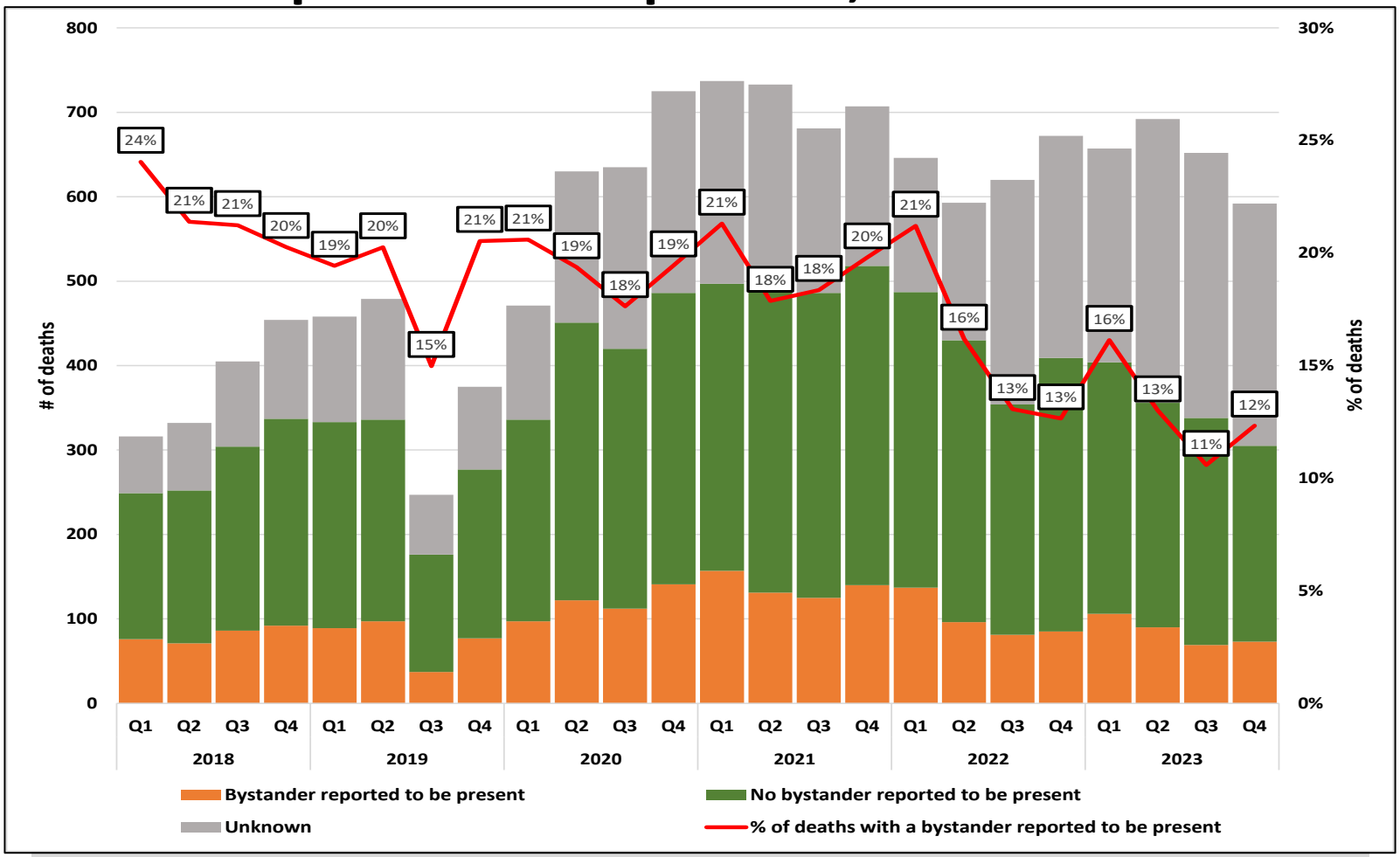


Nearly half of all opioid toxicity deaths occur among people living in areas experiencing the highest level of material resource marginalization (i.e., extreme difficulty attaining basic material needs).

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

Based on postal code of residence where available; if missing, then postal code of incident is used. The 2021 Ontario Marginalization (ON-MARG) Index uses dissemination area (defined as a "relatively stable geographic unit with average population of 400 to 700 persons") and material resources quintiles. The material resources dimension is related to poverty and the inability to attain basic material needs such as housing, food, clothing, and education. It is a known limitation that ON-MARG may not be able to accurately represent Indigenous reserves, Indigenous people living off reserve or institutionalized populations (nursing homes, penitentiaries etc.) due to how the information is collected in the census.

Opioid Toxicity Deaths in Ontario with a bystander reported to be present, 2018-2023

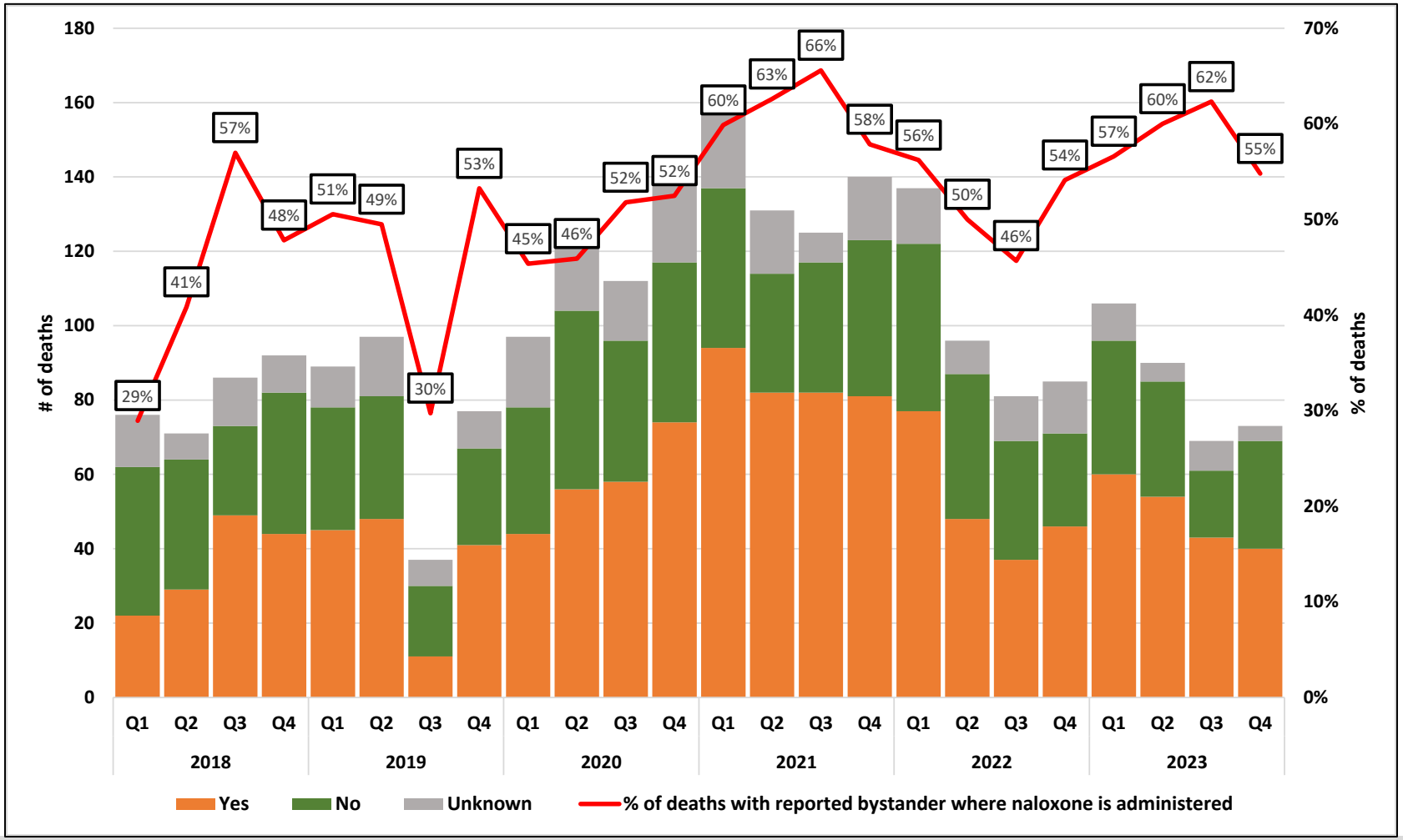


A bystander was reported to be present among 1 in 10 opioid toxicity deaths in Q4 2023.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

Presence of a bystander does not necessarily indicate readiness to intervene (e.g., present but asleep). Interpretation may be limited due to the high proportion unknown.

Opioid Toxicity Deaths in Ontario with reported naloxone administration where a bystander was reported to be present, 2018-2023

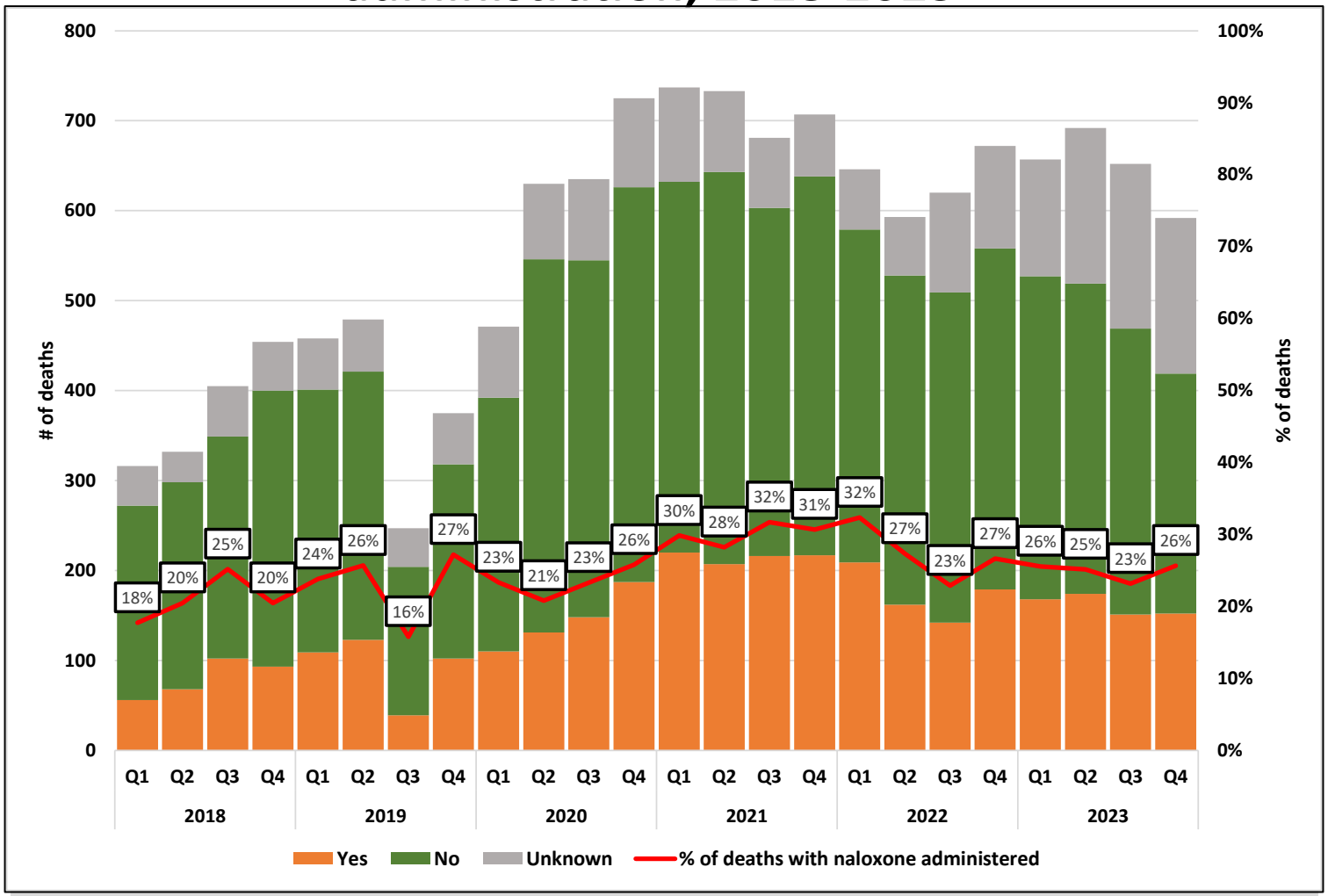


Naloxone was administered among approximately 6 in 10 opioid toxicity deaths in 2023 among incidents where a bystander was reported to be present.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

Presence of a bystander does not necessarily indicate readiness to intervene (e.g., present but asleep). Interpretation may be limited due to the high proportion unknown. Trends in naloxone administration among fatal toxicity events are challenging to interpret. For example, the timing of administration (e.g. before or after death) may vary. Assessing trends in naloxone administration where a bystander was reported to be present may inform potential opportunities for intervention. These data do not necessarily reflect naloxone effectiveness; this should be assessed in consideration with non-fatal outcomes.

Opioid Toxicity Deaths in Ontario with reported naloxone administration, 2018-2023

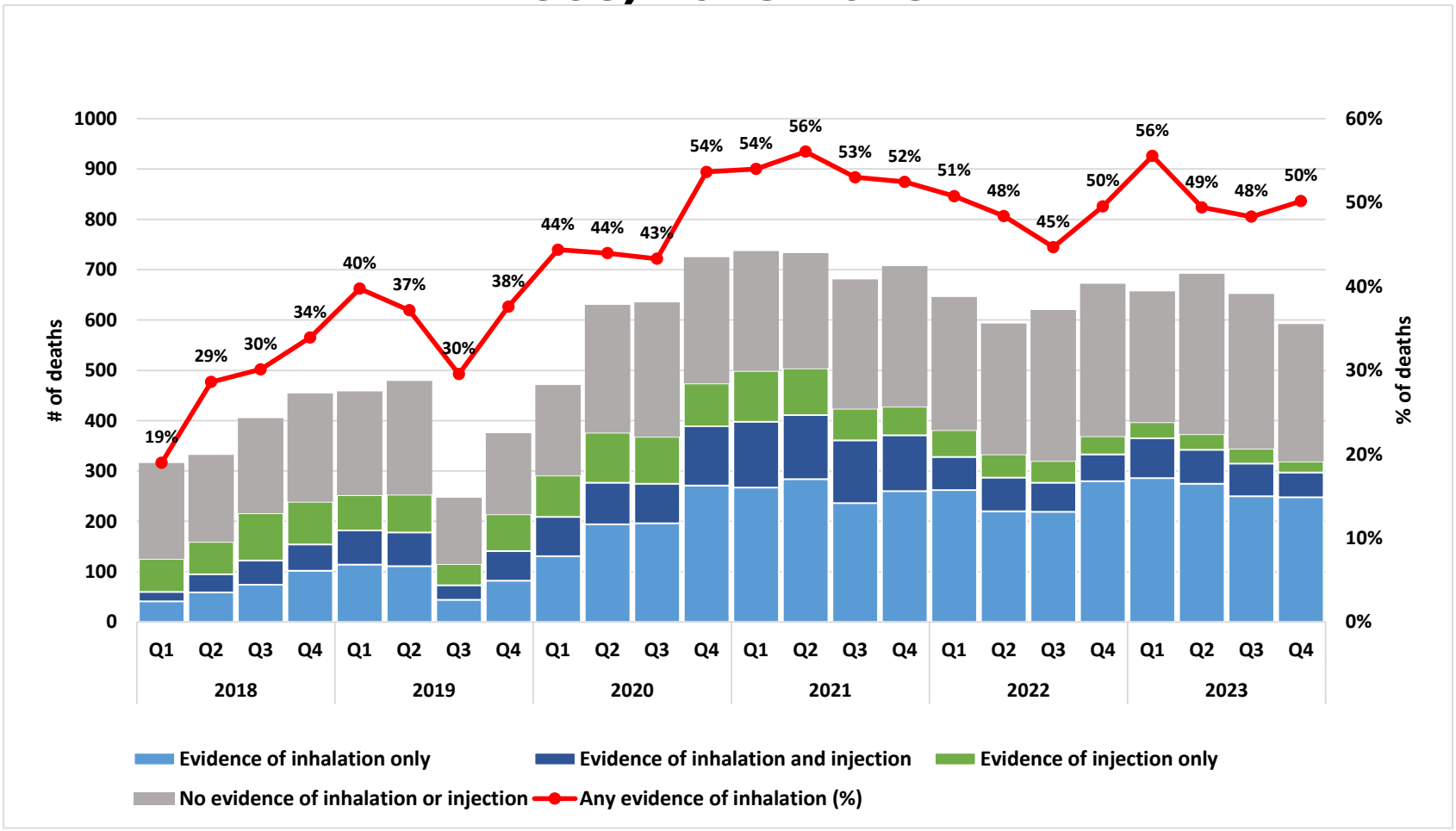


Naloxone was administered among 1 in 4 opioid toxicity deaths in 2023.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. . Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

These data reflect naloxone administration regardless of if a bystander was reported to be present. Trends in naloxone administration among fatal toxicity events are challenging to interpret. For example, the timing of administration (e.g. before or after death) may vary. These data do not necessarily reflect naloxone effectiveness; this should be assessed in consideration with non-fatal outcomes.

Opioid Toxicity Deaths in Ontario by Presumed Mode of Use, 2018-2023



Since 2020, approximately half of opioid toxicity deaths had evidence of inhalation.

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024. Includes confirmed and probable opioid toxicity deaths and ongoing investigations where information may be pending. Data are preliminary and subject to change.

Presumed mode of use is based on substance use equipment found at the scene (location of incident/death). Substance use equipment found at the scene may provide proxy information for potential mode of drug use, but may also reflect previous modes of use, or substance use equipment that was used by someone else. Other substance use equipment besides a syringe, pipe and foil may have been found at scene (e.g., pill crusher, cooker, grinder, spoon). When no pipe, foil or evidence of injection was present, mode may include oral, nasal, transdermal, other or unknown modes of drug use. Among ongoing investigations, deaths with 'no evidence' may include cases where information is pending.

Substances involved in opioid toxicity deaths in Ontario, 2018-2023

	% of Opioid Toxicity Deaths by Year					
	2018	2019	2020	2021	2022	2023
Non-Pharmaceutical Opioids						
Total fentanyl/Fentanyl analogues	67.9	75	85.7	88.8	83.4	86
Fentanyl	64.4	53.4	85.5	87.9	81.7	82.3
Carfentanil	6.3	31.4	0.5	4.3	7.6	3.4
Fluorofentanyl	0	0	0	0.1	1.3	21.1
Other Fentanyl Analogues**	1.4	1.3	1.2	0.4	0.5	0.8
Nitazenes*	0	0	0	0.2	0.8	0.6
Heroin	7.2	4.1	1.7	0.8	0.4	0.7
Opioids Indicated for Pain						
Codeine	4.6	2.6	1.8	1.4	1.4	1.4
Oxycodone	11.1	9.1	4.9	3.8	5.8	4.8
Hydromorphone	10.8	10.1	6.1	5.9	7	7.5
Tramadol	1.1	0.6	0.4	0.2	0.4	0.4
Morphine	10.7	8	5.2	4	5.7	5.5
Opioid Agonist Treatment						
Methadone	12.9	12.9	10.4	10.3	9.6	8.4
Buprenorphine	0.1	0.3	0.3	0.1	0.1	0.4
Other Substances						
Total Stimulant(s)	43.4	48.2	56.9	59.3	59.8	68
Methamphetamine	16.3	20.5	25.8	30.3	32	35.1
Cocaine	32.2	34.4	41.6	40	39.5	48.7
Other Stimulants	2.4	1.4	1.7	1.2	1.4	2.5
Alcohol	13.7	12.6	12.8	10.6	12.3	11.4
Benzodiazepines	11.9	8.4	9.2	10.9	10.8	30.1
*Detection of nonpharmaceutical benzodiazepines**	32.7	29.8	45.1	64.5	48.7	64.4
*Detection of xylazine**	0	0	0.2	2.1	2.5	2.9

**Includes Para-fluorobutyryl Fentanyl, Cyclopropylfentanyl, Furanylfentanyl, Despropionyl Fentanyl, Furanyl UF 17, Methylfentanyl, and Acetylfentanyl

Fentanyl continues to contribute to the majority (82.3%) of opioid toxicity deaths. **Stimulants** are involved in nearly 7 in 10 opioid toxicity deaths.

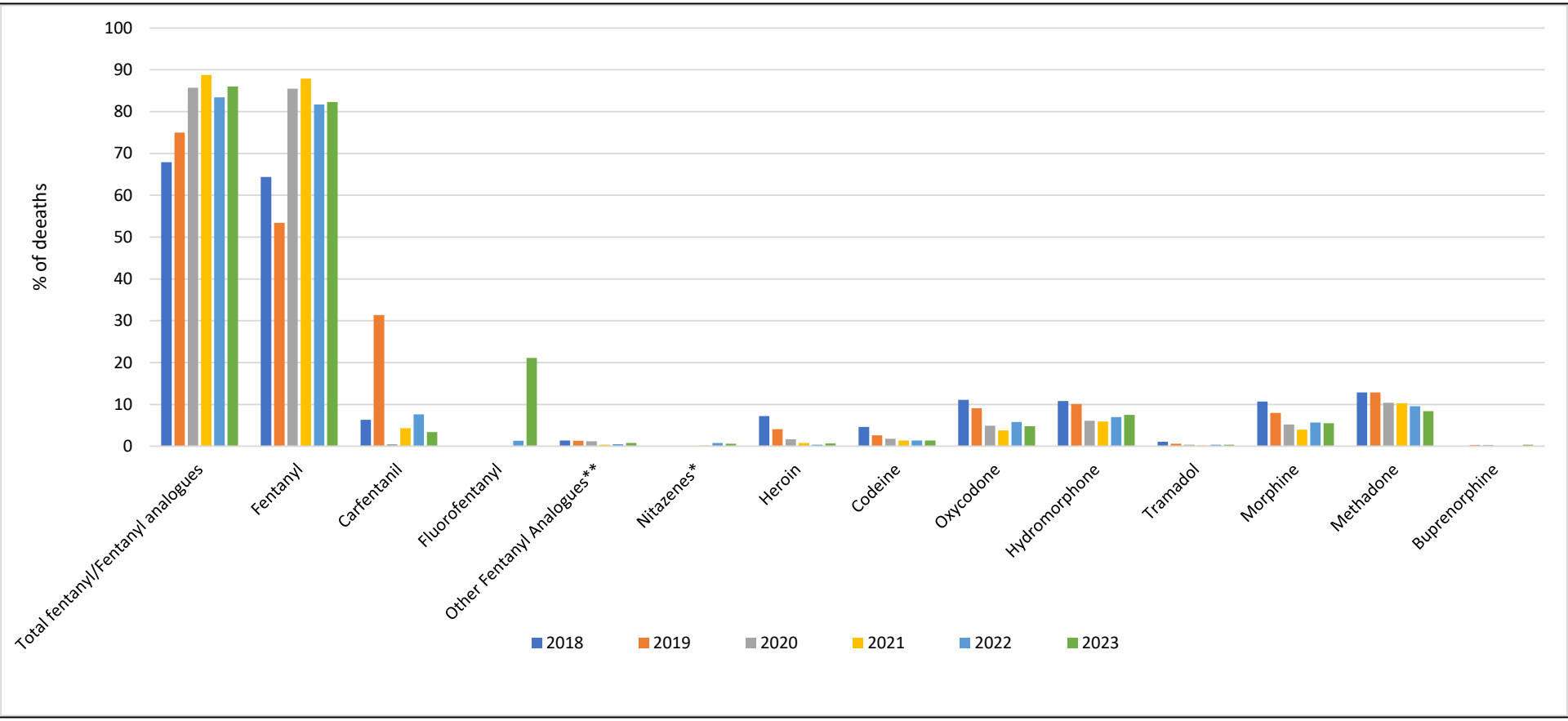
Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024.

Includes confirmed opioid toxicity deaths only. Data are preliminary and subject to change. Data reflect substances attributed to cause of death unless otherwise indicated.

**Due to evolving toxicology methods and best practices around quantifying and defining toxic levels of nitazenes, non-pharmaceutical benzodiazepines, and xylazine, these substances may not be consistently characterized in the cause of death.*

***Includes Para-fluorobutyryl Fentanyl, Cyclopropylfentanyl, Furanylfentanyl, Despropionyl Fentanyl, Furanyl UF 17, Methylfentanyl, and Acetylfentanyl*

Opioids Involved in Opioid Toxicity Deaths in Ontario, 2018-2023



Fluorofentanyl (a fentanyl analogue) attribution in opioid toxicity deaths increased from 1.3% in 2022 to 21.1% in 2023, the majority of deaths involving fluorofentanyl also involve fentanyl.

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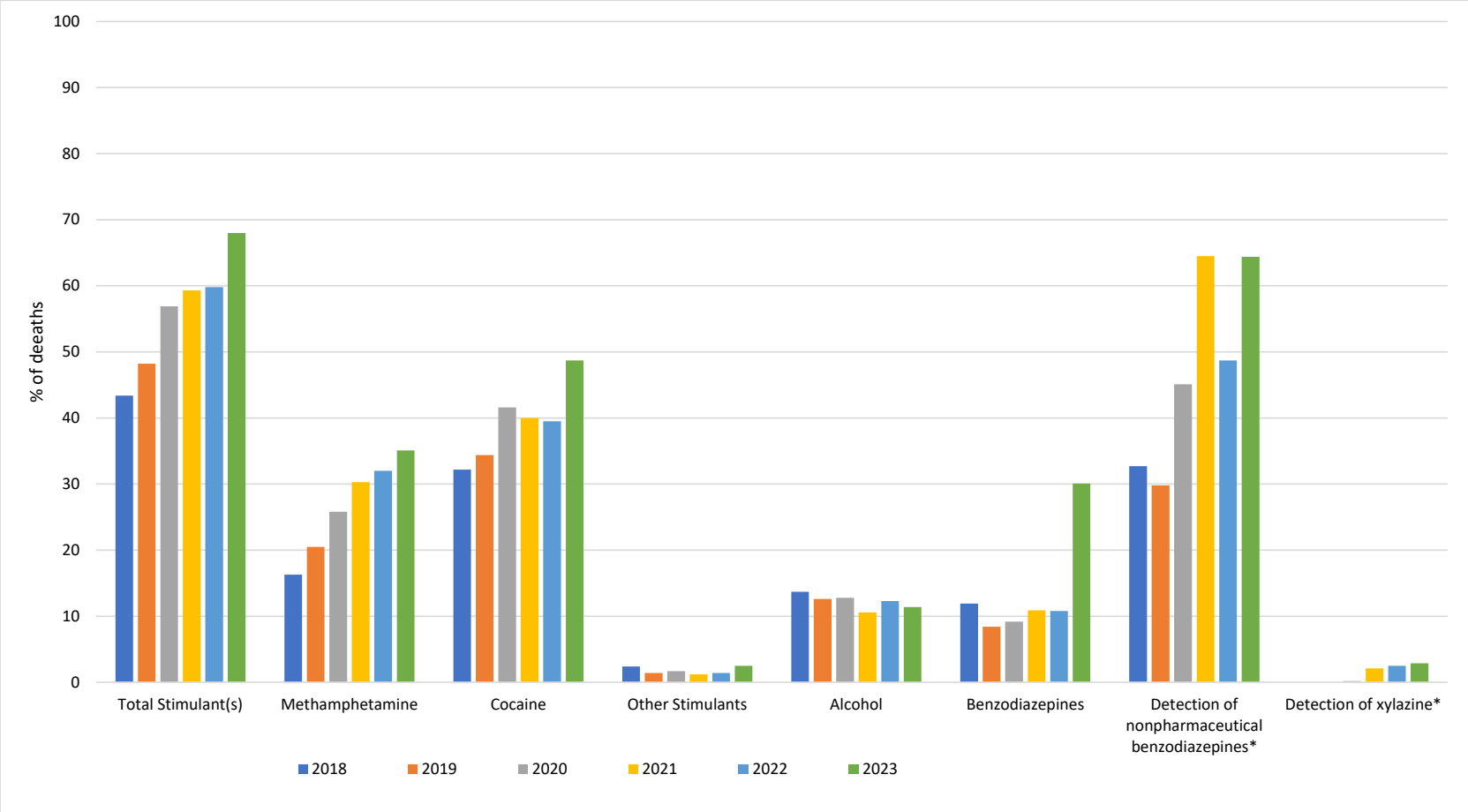
Includes confirmed opioid toxicity deaths only. Data are preliminary and subject to change. Data reflect substances attributed to cause of death unless otherwise indicated.

**Due to evolving toxicology methods and best practices around quantifying and defining toxic levels of nitazenes, non-pharmaceutical benzodiazepines, and xylazine, these substances may not be consistently characterized in the cause of death.*

***Includes Para-fluorobutyryl Fentanyl, Cyclopropylfentanyl, Furanylfentanyl, Despropionyl Fentanyl, Furanyl UF 17, and Acetylfentanyl*

Other Substances Involved in Opioid Toxicity Deaths in Ontario, 2018-2023



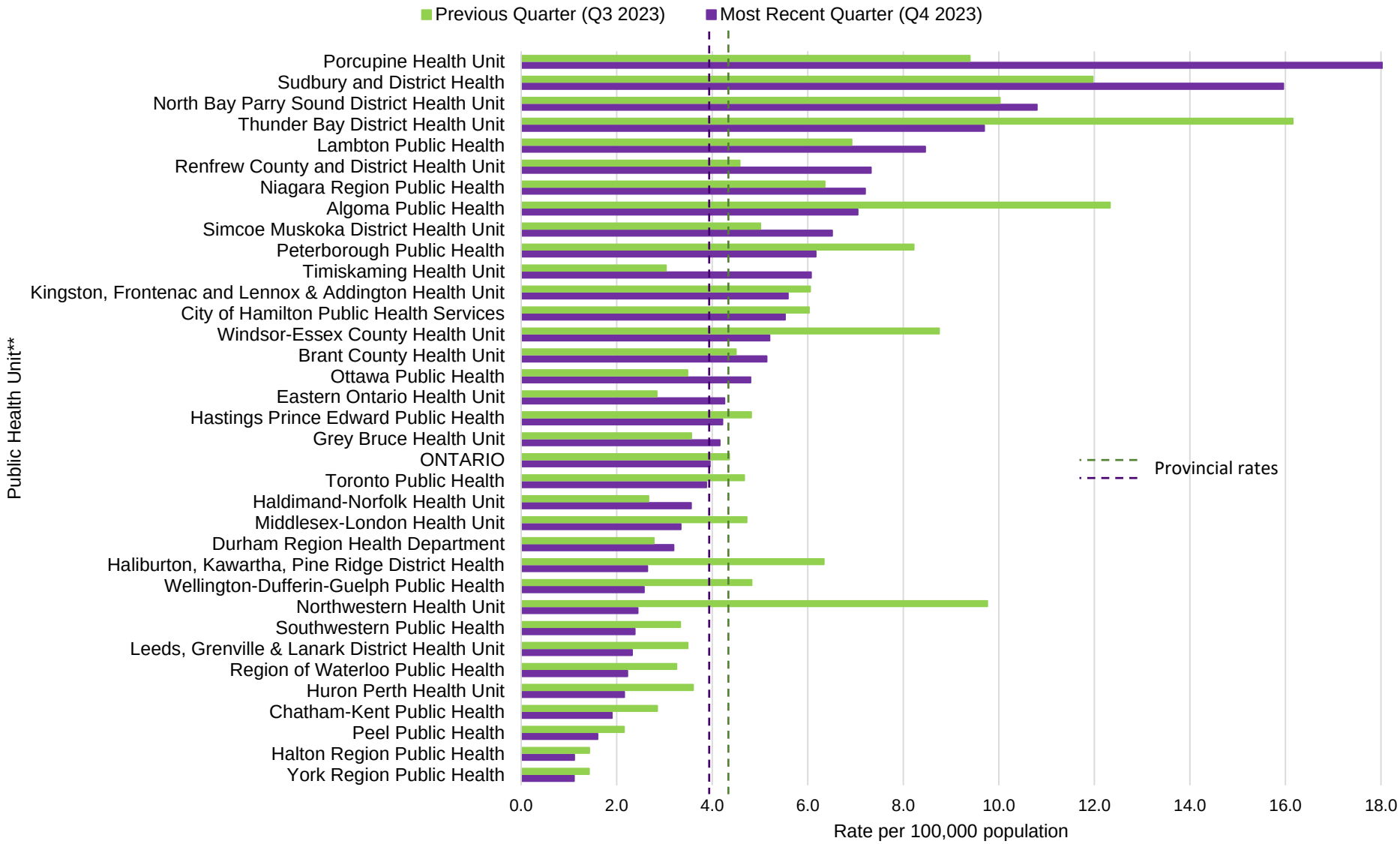
Benzodiazepines are involved in over 3 in 5 opioid toxicity deaths (Q1-Q4 2023).
Cocaine is involved in nearly half of all opioid toxicity deaths (Q1-Q4 2023).

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024.
Includes confirmed opioid toxicity deaths only. Data are preliminary and subject to change. Data reflect substances attributed to cause of death unless otherwise indicated.
**Due to evolving toxicology methods and best practices around quantifying and defining toxic levels of nitazenes, non-pharmaceutical benzodiazepines, and xylazine, these substances may not be consistently characterized in the cause of death.*

Opioid Toxicity Deaths by Region

Opioid toxicity mortality rate by PHU region - Quarterly

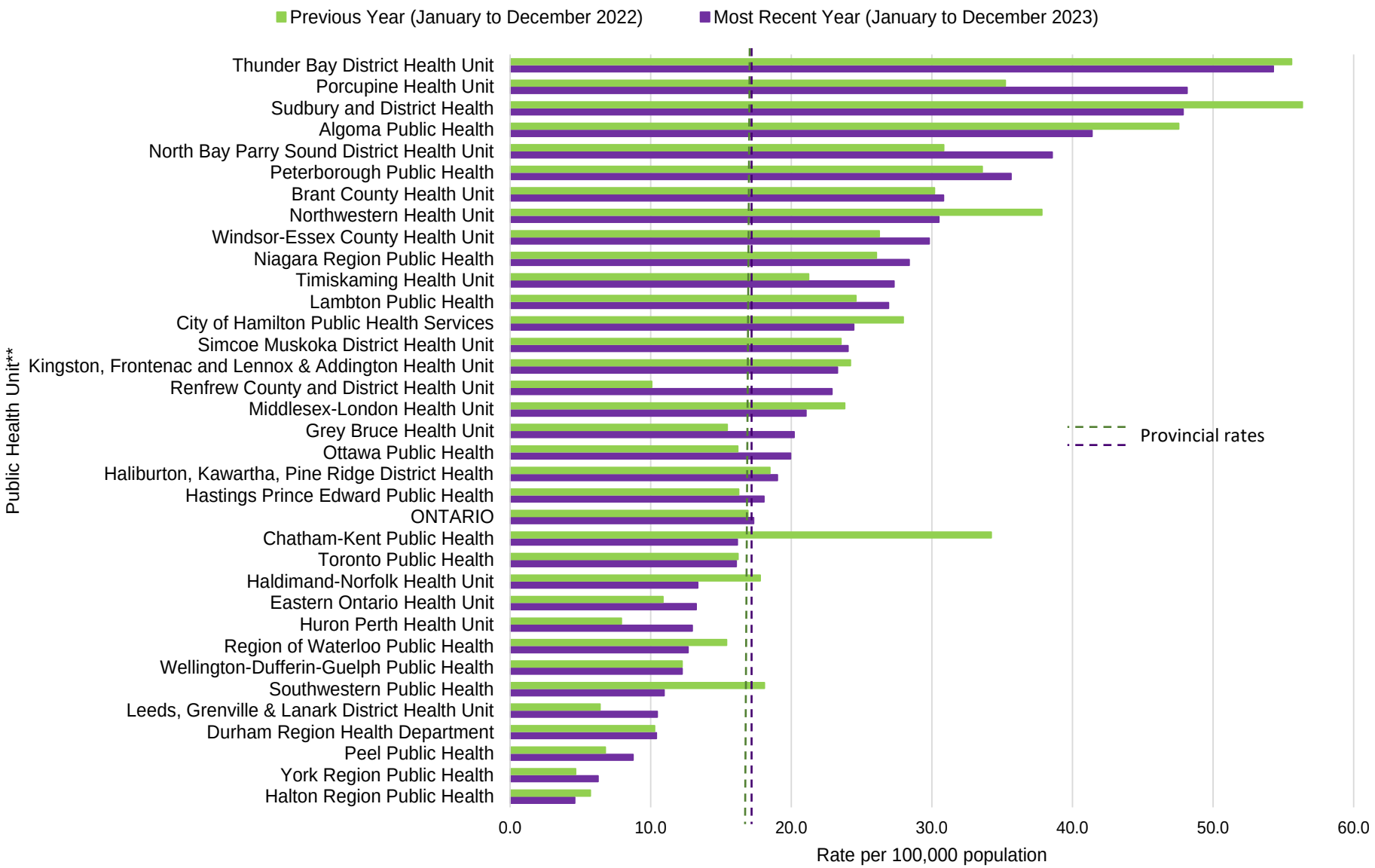
Most recent two quarters of data available*



Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024.
*includes both confirmed and probable opioid-related deaths, preliminary and subject to change
**based on location of incident

Opioid toxicity mortality rate by PHU region - Annual

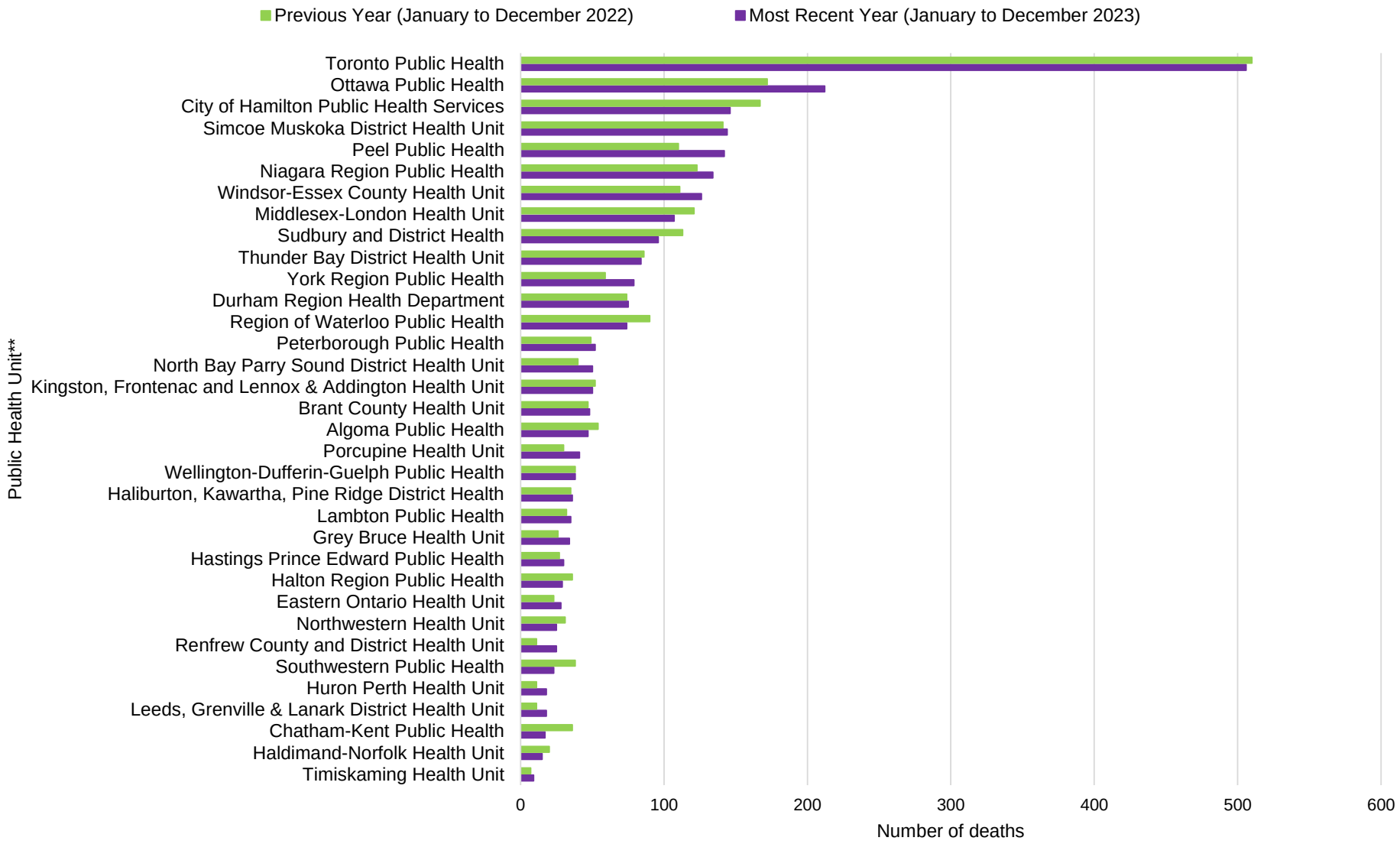
Most recent two years of data available*



Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024.
*includes both confirmed and probable opioid-related deaths, preliminary and subject to change
**based on location of incident

Number of opioid toxicity deaths by PHU region

Most recent two years of data available*



Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024.
*includes both confirmed and probable opioid-related deaths, preliminary and subject to change
**based on location of incident

Opioid Toxicity Mortality Rate by Census Subdivision (CSD)

Ten (10) CSDs with the highest mortality rates in 2023 (Q1-Q4):

Census Subdivision**	Opioid toxicity* mortality rate per 100,000 population (annualized)	Number of Opioid toxicity deaths
THUNDER BAY	69.5	77
NORTH BAY	62.6	34
TIMMINS	59.5	25
PETERBOROUGH	53.8	46
GREATER SUDBURY	52.0	88
SAULT STE. MARIE	49.5	37
ORILLIA	49.1	17
WINDSOR	46.0	106
CORNWALL	43.3	21
SARNIA	41.9	31
Ontario (for reference)	17.5	2593

Source: Office of Chief Coroner (OCC) - Data effective April 29, 2024.
*Includes both confirmed and probable opioid-related deaths; **preliminary and subject to change.**
**Based on location of incident. Among CSDs with >30,000 population.