

Patterns in substance use care among people who died from drug toxicities in Ontario

March 5, 2024

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Canada's source for
HIV and hepatitis C
information

Today's Agenda

- 1. Overview:**
Healthcare interactions prior to substance toxicity deaths in Ontario

Tara Gomes, Ontario Drug Policy Research Network

- 2. Reflections: Lived Experience Advisory Group**

Ashley Smoke and Tom Regehr, Ontario Drug Policy Research Network

- 3. Questions**

Prescribing Patterns, Substance Use Disorder Diagnoses, and Access to Treatment Prior to Substance-Related Toxicity Deaths in Ontario

March 5, 2024

Project Origins

Alcohol and drug toxicities continue to be a significant public health concern leading to enormous loss of life both in Canada and globally.

Funding



Public Health
Agency of Canada

Agence de la santé
publique du Canada

Lead Organizations

Public Health Ontario | Santé publique Ontario



ODPRN

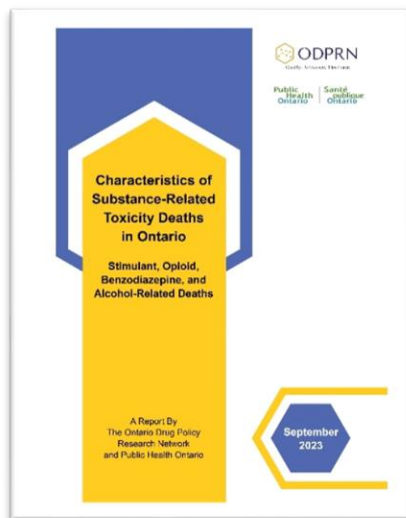
Quality. Relevance. Timeliness.

Data Support



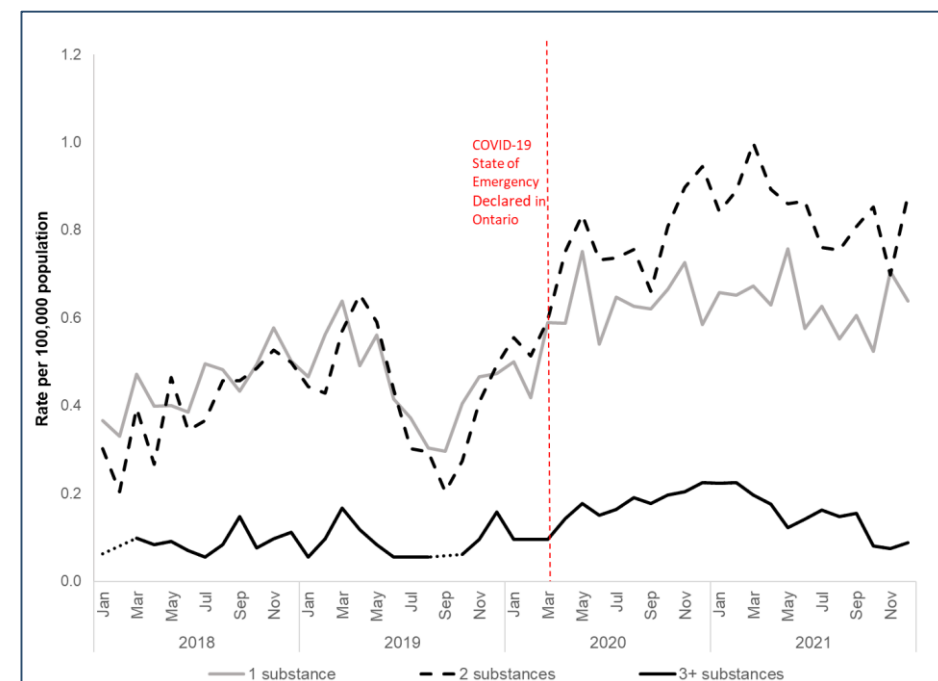
Opportunity: Leverage newly available data to better understand context of substance related harms and engagement in the healthcare system in Ontario, Canada through a **series of 3 reports**

First Report



September 2023: First report released, describing:

- Rising trends in toxicity deaths attributable to alcohol, benzodiazepines, opioids, and stimulants.
- The increasing role of polysubstance use.
- Characteristics surrounding death, and variability in these circumstances across different substance combinations

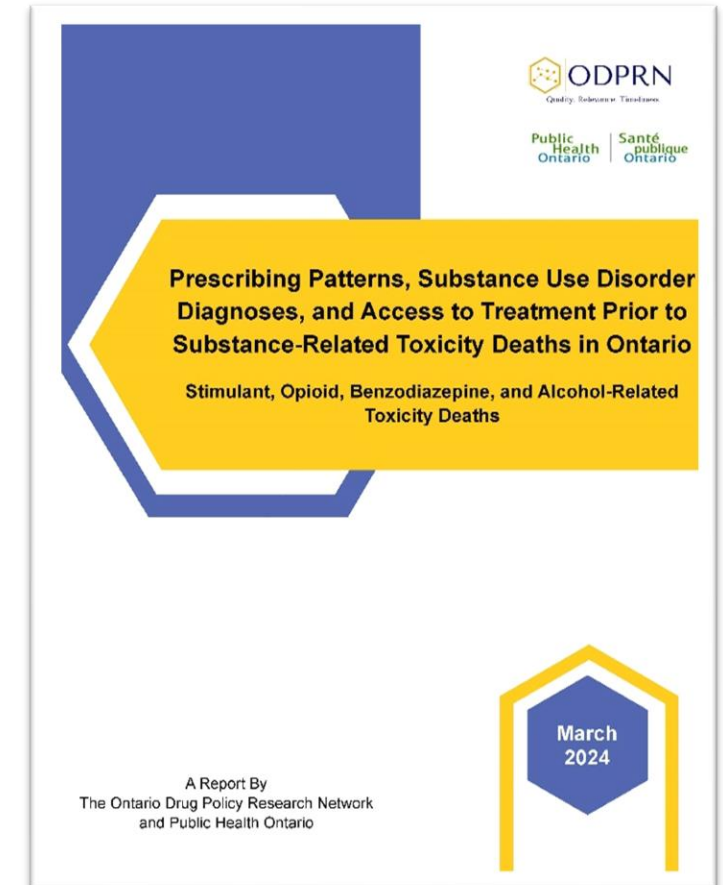


Gomes, T., Leece, P., Iacono, A., Yang, J., Kolla, G., Cheng, C., Ledlie, S., Bouck, Z., Boyd, R., Bozinoff, N., Campbell, T., Doucette, T., Franklyn, M., Newcombe, P., Pinkerton, S., Schneider, E., Shearer, D., Singh, S., Smoke, A., Wu, F. (2023). Deaths caused by alcohol, stimulant, opioid, and benzodiazepine toxicity in Ontario.

Building on this work

Analyses specific to substance-related toxicities needed to understand:

- Prior non-fatal substance-related toxicities
- Previous substance use disorder diagnoses
- Access to treatment(s) prior to death among those with an SUD



Methods

Study Population

People who died from an alcohol, stimulant, benzodiazepine, or opioid toxicity in Ontario, Canada from January 1, 2018 to June 30, 2022.*



* We defined a substance-related death as an acute toxicity death that was accidental and resulted from the direct contribution of the consumed substance, regardless of how the substance was obtained.

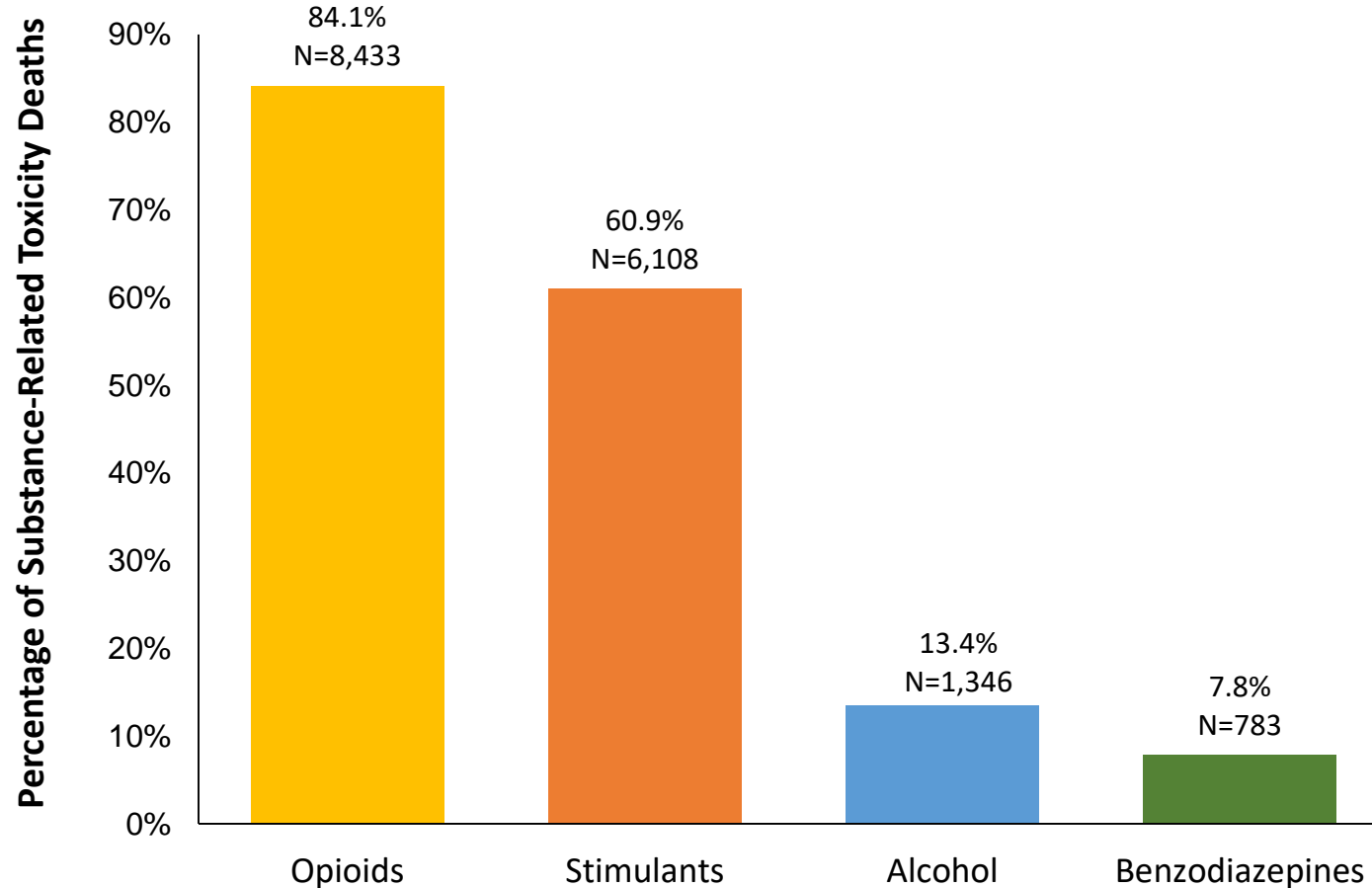

Data Sources


Linked health data, including:

- Demographic information
- Medications/treatment
- Healthcare encounters
- Coronial records for confirmed deaths from alcohol, stimulant, benzodiazepine, or opioid toxicity



Trends across overall substance groupings

10,024 

Accidental substance toxicity deaths between **2018** and **2022**

Number of Substance-Related Toxicity Deaths

First 12 Months
January 1, 2018 – December 31, 2018

N = 1,570

Last 12 Months
July 1, 2021 – June 30, 2022

N = 2,704

Substance-related toxicity deaths most commonly involved non-pharmaceutical substances

86%

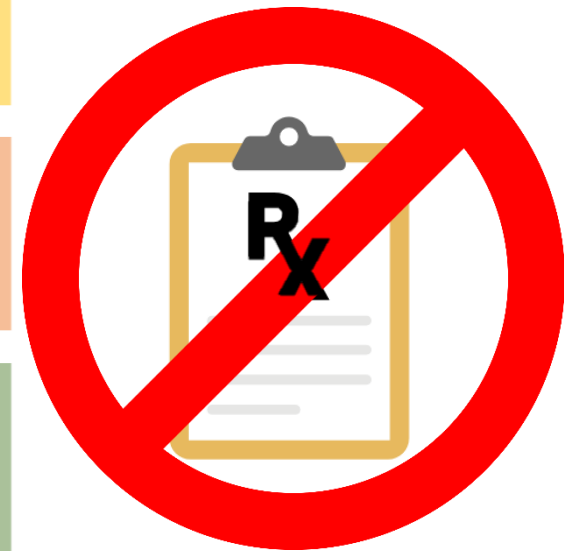
of **opioid**-related toxicity deaths **involved non-pharmaceutical opioids (e.g. fentanyl)**

99%

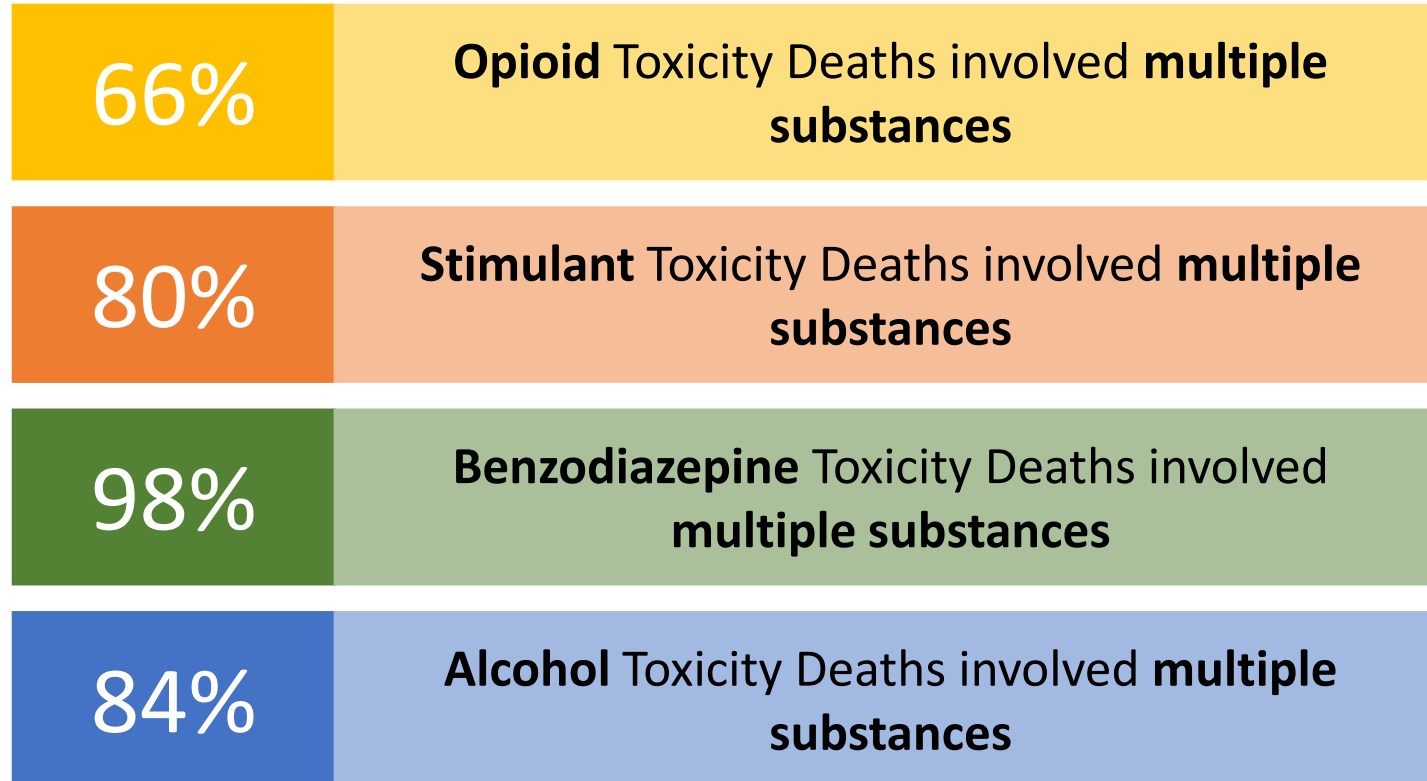
of stimulant-related toxicity deaths **involved non-pharmaceutical stimulants (e.g. cocaine, methamphetamine)**

50%

of benzodiazepine-related toxicity deaths **involved non-pharmaceutical benzodiazepines**



Polysubstance Use Remains High



Primarily lead to death when combined with opioids

Non-fatal substance-related toxicity incidents in the year prior were fairly common

Prior Non-Fatal Substance-Related Toxicities



1 in 5

were treated in a hospital setting for a substance-related toxicity incident in the year before death

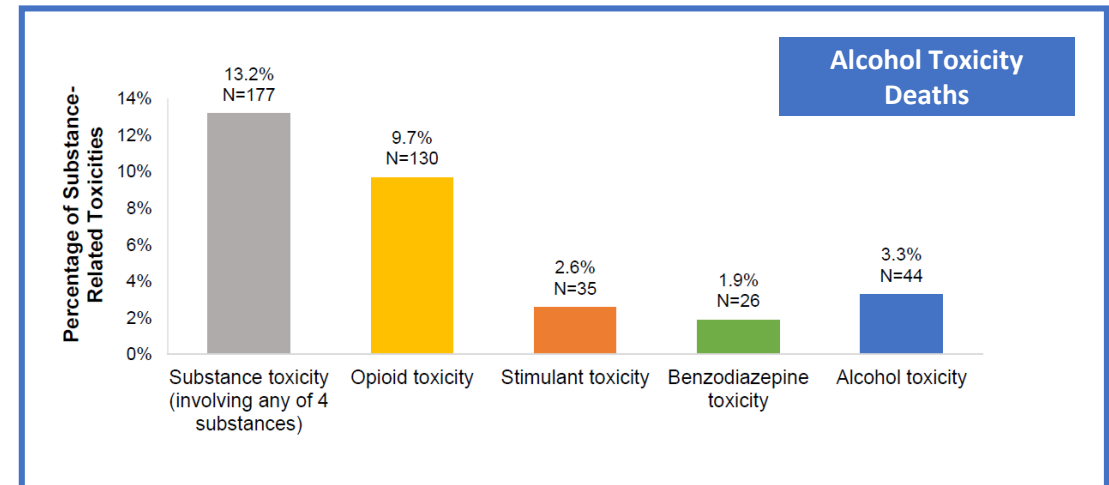
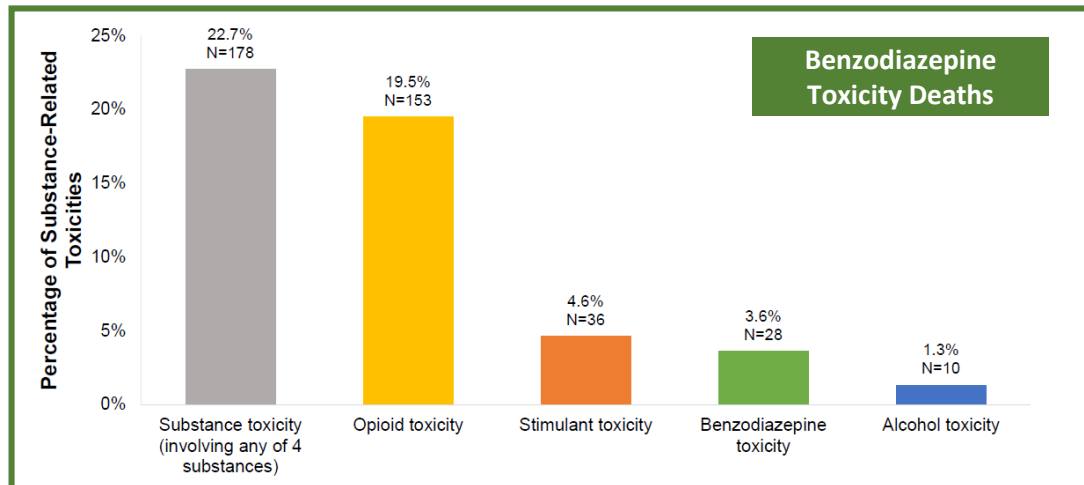
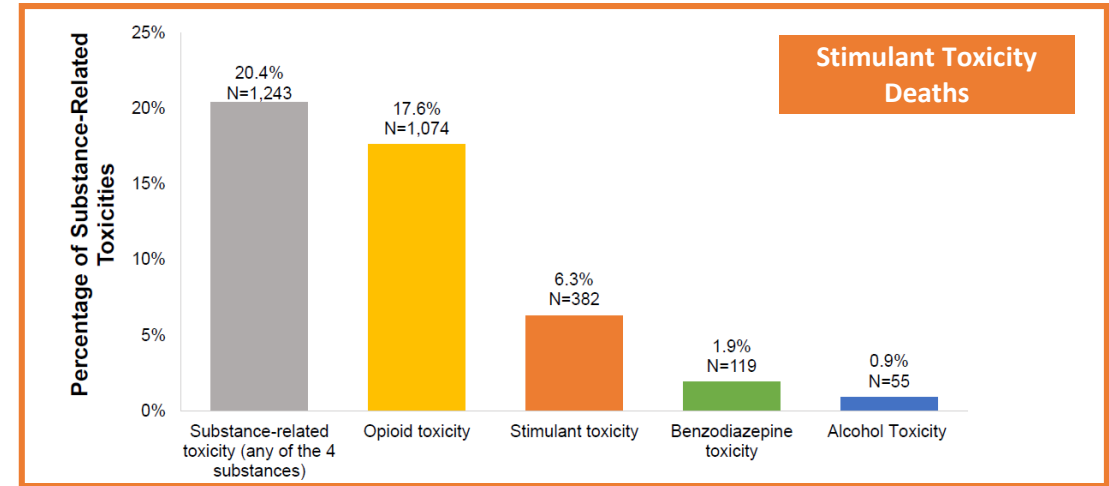
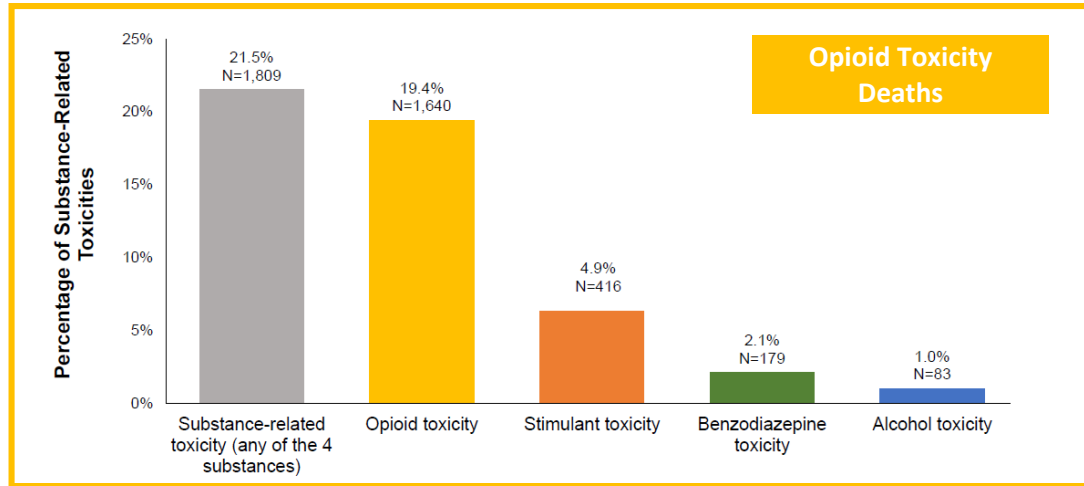
17% for an **opioid**-related toxicity

5.0% for a **stimulant**-related toxicity

1.0% for an **alcohol**-related toxicity

2.0% for a **benzodiazepine**-related toxicity

Prior Non-Fatal Toxicities by Substance Involved in Death



Opportunities for Improved Coordination of Care



Prior Substance Use Disorder Diagnoses

 **Nearly 2 in 3** people who died from a substance-related toxicity had a **prior substance use disorder diagnosis**



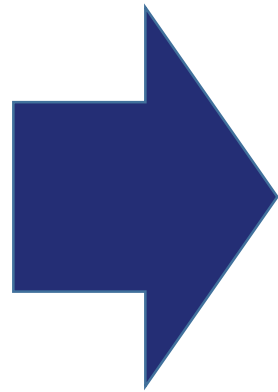
46.6%

Hospital-Based SUD
Encounter (5yr)



39.1%

Outpatient SUD
Encounter (1yr)





**Evidence-
Based,
Voluntary
Treatment**



**Harm
Reduction
Services**

Prior Substance Use Disorder Diagnoses and Treatment

Opioid-Related Toxicity Deaths

 **2 in 3** had a substance use disorder
 **1 in 2** had an **opioid use disorder**

Opioid use disorder diagnoses varied significantly across age groups:

41%

<25

56%

25 to 44

46%

45 to 64

36%

≥65

Prior Receipt of Opioid Agonist Treatment

(i.e. methadone, buprenorphine, slow release oral morphine)

83% in the past **5 years**

59% in the past **year**

30% in the past **30 days**

11% on the **day of death**



Opioid Use Disorder Diagnoses across sex:

54%

Females

50%

Males

Prior Substance Use Disorder Diagnoses

Stimulant-Related Toxicity Deaths



3 in 5 had a substance use disorder



1 in 4 had a **stimulant use disorder**

Stimulant use disorder diagnoses across age groups:

33%

<25

30%

25 to 44

22%

45 to 64

16%

≥65

Stimulant Use Disorder Diagnoses across sex:

32%

Females

25%

Males

Prior Substance Use Disorder Diagnoses and Treatment

Benzodiazepine-Related Toxicity Deaths

 **2 in 3** had a substance use disorder

Less than **1 in 20** had a **benzodiazepine use disorder**

Prior Receipt of Gabapentin and/or Pregabalin

42% in the past year

27% in the past 30 days


27% on the day of death



Prior Substance Use Disorder Diagnoses and Treatment

Alcohol-Related Toxicity Deaths

 **3 in 5** had a substance use disorder

 **1 in 2** had an alcohol use disorder

Alcohol use disorder diagnoses were similar across age groups:

52%

≤44

48%

45 to 64

55%

≥65

Prior Receipt of Naltrexone and/or Acamprosate



Prior Receipt of Topiramate and/or Gabapentin

16%

in the past year

19%

4.7%

in the past 30 days

13%

3.6%

on the day of death

9.4%

Alcohol Use Disorder Diagnoses across sex:

53%

Females

50%

Males

Evidence-Informed Responses and Needs

- **1 in 5 have prior non-fatal toxicities** → critical opportunities to support, connect, and transition people throughout the healthcare system
- **Two-thirds of people have a prior SUD** → need for both treatment and harm reduction approaches.
- **Low recent engagement with traditional treatment** → opportunities to remove barriers and ensure meeting needs of people with SUD
- **Slightly higher SUD diagnoses prior to death among women** → Gender-responsive approaches needed for people at risk of substance-related harms

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Community Response and Lived Experience
