Data on Substance-Related Toxicity Deaths: A summary for service providers and policy-makers

A series of reports by the Ontario Drug Policy Research Network (ODPRN) and Public Health Ontario (PHO) used provincial health data to characterize accidental substance-related toxicity deaths involving opioids, stimulants, benzodiazepines, and/or alcohol and how individuals interacted with substance use treatment and healthcare services before their death. CATIE has summarized key findings and considerations for community providers and policy-makers.

Key findings from the reports

Substance toxicity deaths increased and involved multiple substances

- Between 2018 and 2022, there were 12,115 accidental substance-related toxicity deaths in Ontario, with the number of deaths rising from an average 4.5 deaths to 8 deaths per day.
- The number of deaths involving multiple substances is growing, highlighting the increasing toxicity of the unregulated drug supply and effects of polysubstance use on the risk of toxicity death.
- In 2022, the combination of opioids and stimulants in substance toxicity deaths increased from 31% in 2018 to 42%, making it the most common substance combination in toxicity deaths. The proportion of deaths involving the combination of opioids, stimulants, and benzodiazepines doubled from 2018 to 2022. Benzodiazepines are powerful sedatives, which can complicate the response to an opioid overdose.

Substance toxicity deaths disproportionally impacts specific communities in Ontario

- Over half of deaths occurred among people aged 25 to 44, and three-quarters of those who died were males.
- Death rates were three times higher among people living in Northern compared with Southern Ontario.
- The highest concentration of deaths was among those living in the lowest income neighbourhoods.

Substance use services did not meet everyone's needs

- Nearly two-thirds of people who died had an existing substance use disorder diagnosis, but engagement with treatment services was low.
    - Only one-third of people with an opioid use disorder who died from an opioid-related toxicity received opioid agonist treatment (OAT) in the month before their death.
    - Less than 5% of people with an alcohol use disorder who died of an alcohol-related toxicity received the recommended first-line treatment for their diagnosis in the month before their death.
- One in five people who died had been treated in a hospital in the past year for a non-fatal substance-related toxicity; most of these toxicities involved opioids.

Our health and hospital system missed opportunities to engage people at risk of toxicity

- People who died frequently interacted with the healthcare system before their death, with over one-third of people having an outpatient or hospital encounter in the week before their death. One in seven visited the emergency department (ED) in the week before they died.
- Of the people who died, 87% had received a mental health diagnosis in the last five years.
- In the week before their death, one in 10 people visiting EDs and one-quarter of people admitted to hospitals left before medically advised, likely due to unaddressed pain or withdrawal symptoms.
- One in 10 people had received a hepatitis C diagnosis in the past five years.

Read the full reports and infographics at
odprn.ca/substance-toxicity-deaths-reports

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Implications for service providers and policy-makers

Implement programs to address toxicities from polysubstance use and the changing, unregulated drug supply

- Policy-makers and program planners need to adapt and expand evidence-based, culturally appropriate programs to prevent substance toxicity deaths, including harm reduction services (e.g., supervised consumption services, safer supply programs/prescribed alternatives) and evidence-based treatment options (e.g., lower barrier medication-based treatment, psychosocial interventions).
    - The high burden of substance toxicity deaths in Northern Ontario reflects the need for greater availability of programs and services in this region that are tailored to community needs, including First Nations or rural populations.
- Policy-makers and program planners need to implement interventions that address harms from polysubstance use. This includes adapting existing overdose response training and expanding medication-based treatments that target multiple substance dependencies.
- Service providers should increase awareness around the impact of benzodiazepines on opioid overdose response. There should be ongoing training that emphasizes monitoring breathing for people who remain sedated, avoiding excessive use of naloxone when breathing is normal to mitigate withdrawal symptoms, and always calling 911. Oxygen plays an important role in supporting breathing stabilization during toxicities and there is a need for improved access and training in appropriate settings.

Expand options for people seeking substance use treatment to encourage retention in care

- Healthcare organizations should encourage and provide guidance for addiction medicine providers to expand flexible and low-barrier treatment options to help retain people in care. This includes higher dose formulations, new treatment modalities (like long-acting injectable therapies), combination therapies, and prescribed safer alternatives to the unregulated drug supply.
- Addiction service providers need to recognize and address emerging benzodiazepine dependence among people using opioids from the unregulated drug supply, including integrating support for withdrawal from benzodiazepines when individuals are accessing OAT.
- Policy-makers and program planners need to address barriers and improve access to alcohol use disorder treatment, as available medications are significantly underused.

Improve links to substance use services from primary care and hospitals

- Health system planners need to improve pathways to substance use care from primary care or hospitals (including EDs). People at risk of toxicity should be rapidly connected treatment and harm reduction. As needed, people should also be connected to other types of care including mental health services, HIV/hepatitis C care, wound and skin infection care, as well as social services for housing, income support, food and more.
- Hospitals should explore new models of care, like addictions consult services. These interdisciplinary teams can support patients to address needs like withdrawal/pain management, rapid treatment initiation, psychosocial supports, patient advocacy while in hospital, and support for the transition to community care.
- Primary care providers require more awareness, training, and resources to support high-quality, non-stigmatizing care and referrals for people in their care who use substances.