



Northwestern Health Unit

Quarterly Opioid Surveillance Report

Q1 2023

January-March

This report outlines recent local trends in opioid- and drug-related harms.

NWHU makes this information available to partner organizations for internal planning and evaluation purposes. The report is not intended for distribution to the public. Please share the report within your organization as appropriate.



75

Key Points:

- Between January 2018 and November 2022, 83 confirmed opioid-related deaths took place in the Northwestern Health Unit (NWHU)
 - In 2022, the Northwestern Health Unit (NWHU) had significantly higher rates of confirmed opioid deaths than Ontario and significantly lower rates of confirmed opioid deaths than six other Northern Health Units (Algoma, North Bay- Parry Sound, Porcupine, Sudbury, Thunder Bay and Timiskaming)
- Between January 2018 and February 2023, 188 suspected drug-related deaths took place in the NWHU.
 - In 2022, 77.3% of deaths (n=33) took place in a private residence

Introduction

Throughout all of Ontario, opioid-related harms have steadily increased, and the Northwestern Health Unit catchment area has been disproportionately affected by trending increases in emergency room visits from opioid overdose and opioid-related deaths. These gaps in opioid-related harms have changed due to response efforts to the COVID-19 pandemic (Ontario Drug Policy Research Network, 2020), and in the months following the onset of the pandemic.

This report will describe recent rates of opioid-related harms within the Northwestern Health Unit catchment area within the most recent 3-5 years. It is comprised of both local and provincial trends and statistics on confirmed opioid-related deaths, suspected drug-related deaths and emergency room visits from opioid overdose.

Data Sources and Notes

Data for confirmed opioid-related deaths were obtained from the weekly and monthly updates published by the Office of the Chief Coroner, which obtained this data from the DIS (Office of the Chief Coroner, 2023A; Office of the Chief Coroner, 2023B). Conclusions on cause of death may take several months to become available, hence data on confirmed opioid-related deaths lag behind and are not available for very recent months.

Data for suspected drug-related deaths were also obtained from weekly and monthly updates published by the Office of the Chief Coroner (and obtained from the DIS) (Office of the Chief Coroner, 2023A; Office of the Chief Coroner, 2023B). The criteria that are considered for a death to be suspected to be related to drugs include: drugs and drug use equipment being found at the scene of death, history of drug abuse, history of naloxone abuse, physical signs of drug use, positional asphyxia, being unresponsive with snoring prior to death, or having preliminary autopsy results that point to a suspected drug intoxication (Office of the Chief Coroner, 2023A). Suspected drug-related deaths may include opioid-related deaths, non-opioid acute drug toxicity or natural deaths. It generally takes 3 months for results from a toxicology exam to become available. When deaths initially thought to be drug related are determined to be natural deaths, this death is not removed from the preliminary suspected drug related death

count to maintain comparable baseline data for the most recent months. These data are preliminary and subject to change.

Data on emergency room visits due to opioid overdose were collected from the NACRS and CIHI (Ministry of Health, 2023). ICD-10-CA codes used to identify opioid overdoses are listed in Appendix 1.

Rates of opioid-related harms in the Northwestern Health Unit were compared to those of Ontario as a whole and six other health units in Northern Ontario: Algoma; North Bay - Parry Sound; Porcupine; Sudbury & Districts; Thunder Bay; and Timiskaming. We defined these six combined health units as the 'Northern health units'; rates of opioid-related harms for the Northwestern Health Unit are not included within the rates of the Northern health units.

Confirmed Opioid-Related Deaths

Overview:

Between January 2018 and November 2022, 83 opioid-related deaths were confirmed to have occurred among people living within the boundaries of the Northwestern Health Unit. In comparison, within the same time period there were 10,294 opioid-related deaths across all of Ontario and 1,252 opioid-related deaths within the other Northern health units.

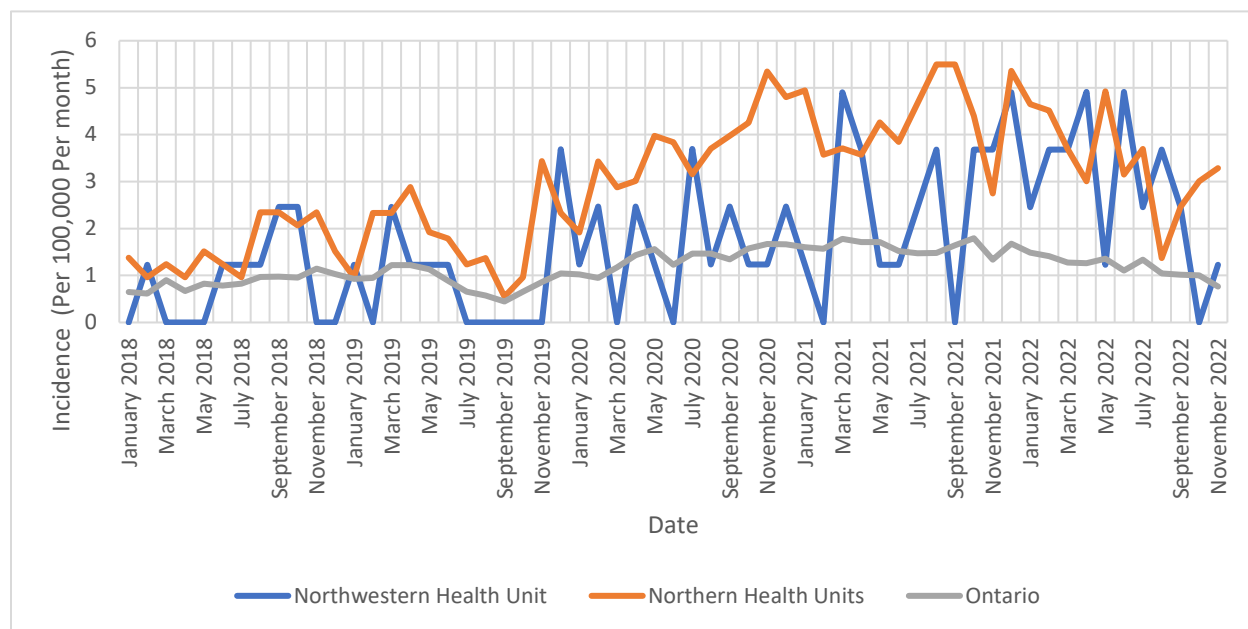
Incidence:

In the most recent year with complete data (2021) the Northwestern Health Unit had an incidence rate of 30.6 opioid-related deaths per 100,000 people. This was higher than Ontario's 2021 incidence rate of 19.3 opioid-related deaths per 100,000 people and lower than the incidence rate across the northern health units of 52.1 opioid-related deaths per 100,000 people. Monthly incidence rates of opioid-related deaths across all three regions are shown in Figure 1.

All three regions experienced a steep increase in confirmed opioid-related deaths during 2020. The 2019 yearly incidences for confirmed opioid-related deaths were 11.1 deaths per 100,000 in the Northwestern Health Unit, 22.1 deaths per 100,000 in the Northern health units and 10.6 deaths per 100,000 throughout Ontario. In comparison, during 2020, the yearly incidence of confirmed opioid-related deaths were 19.7 deaths per 100,000 in the Northwestern Health Unit, 44.3 deaths per 100,000 in the Northern health units and 16.5 deaths per 100,000 throughout Ontario.

Differences in cumulative incidence rates across 2022 were statistically significantly between the Northwestern Health Unit and Ontario, but not between the Northwestern Health Unit and the Northern health units.

Figure 1: Monthly incidence of Confirmed Opioid-Related Deaths, Rates per 100,000



Data source: Office of the Chief Coroner of Ontario. Date Accessed: March 2023

Suspected Drug-Related Deaths

Overview:

Between January 2018 and February 2023, 188 suspected drug-related deaths were recorded within the Northwestern Health Unit. In the most recent year with full data -2022- 44 suspected drug-related deaths were recorded.

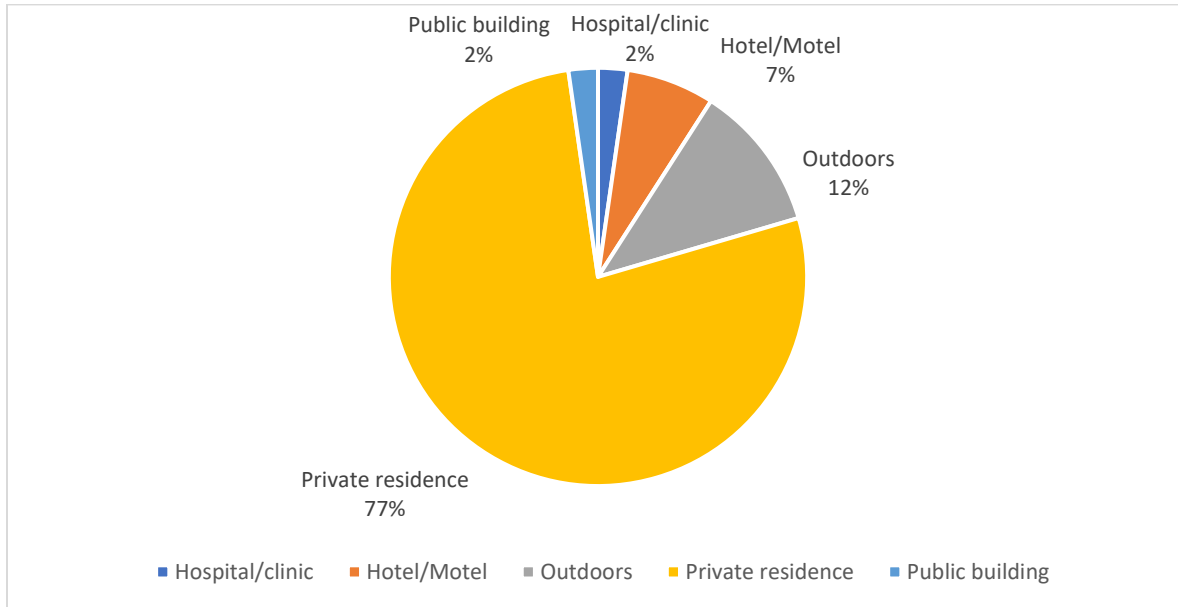
In comparison, Between January 2018 and February 2023, there were 16,117 suspected drug-related deaths across Ontario, with approximately 254 deaths occurring on average each month. In 2022, 3,360 suspected drug-related deaths occurred in Ontario.

Demographics:

In 2022, most of the suspected drug-related deaths (n = 34, 77.3%) occurred in a private residence (Figure 2). 9 (20.5%) suspected drug-related deaths in the Northwestern Health Unit occurred among those aged 35 to 39 and 8 (18.2%) occurred within those aged 25 to 29 (Figure 3). 24 (54.5%) suspected drug-related deaths occurred among males. 25% (n = 5) of females who had a suspected drug-related death were between 25 and 29 years of age (Figure 3). In contrast, the largest proportion of males (16.7%, n = 4) who died from a suspected drug-related death were between 30 and 34 years of age (Figure 3).

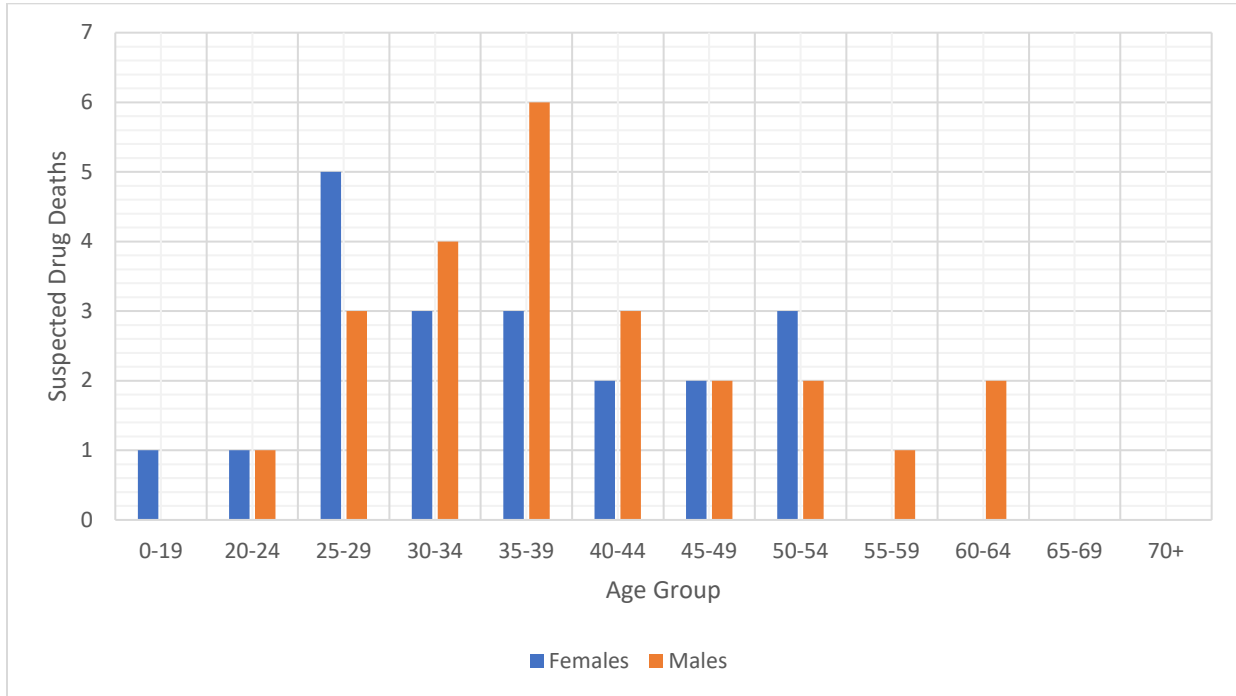
Throughout Ontario in 2022, most suspected deaths (n = 2348, 80.6%) occurred in private residences (Figure 4). The largest proportion of suspected deaths (13.6%, n = 457), were found to occur in the 35-39 age group (Figure 5). In addition, nearly three-quarters of suspected drug-related deaths occurred among males (n = 2431, 72.8%), with the largest fraction of deaths occurring among males aged 35-39 (n = 328, 13.9%) (Figure 5).

Figure 2: Locations of Suspected Drug-Related Deaths in the Northwestern Health Unit, 2022



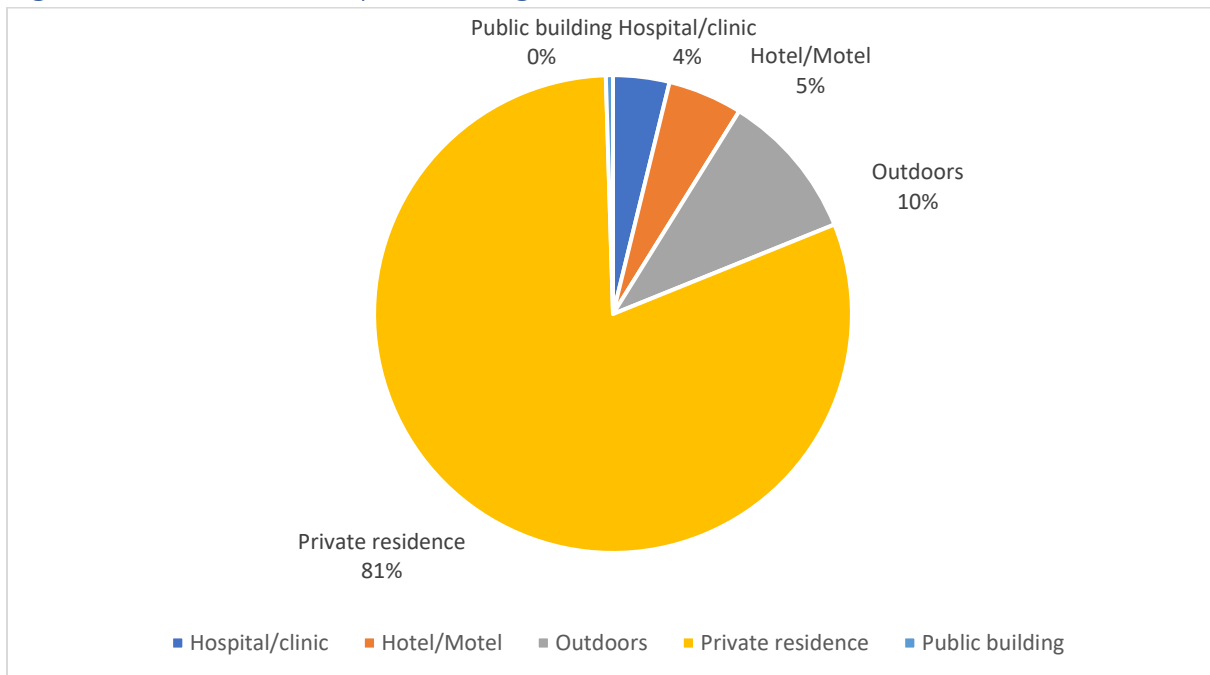
Data source: Office of the Chief Coroner of Ontario. Date Accessed: March 2023
Data are preliminary and subject to change

Figure 3: Breakdown of Suspected Drug-Related deaths in the Northwestern Health Unit by Age Group and Sex, 2022



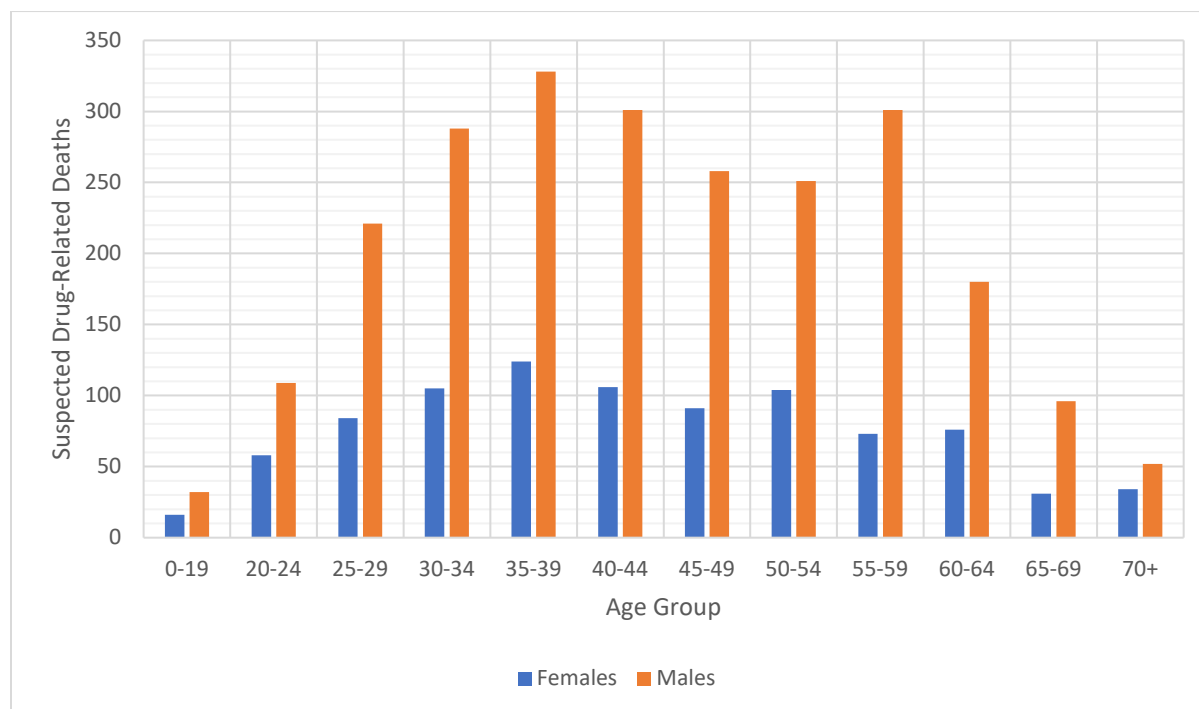
Data source: Office of the Chief Coroner of Ontario. Date Accessed: March 2023
 Data are preliminary and subject to change

Figure 4: Locations of Suspected Drug-Related Deaths in Ontario, 2022



Data source: Office of the Chief Coroner of Ontario. Date Accessed: March 2023
 Data are preliminary and subject to change

Figure 5: Breakdown of Suspected Drug-Related deaths in Ontario by Age Group and Sex, 2022



Data source: Office of the Chief Coroner of Ontario. Date Accessed: March 2023
 Data are preliminary and subject to change

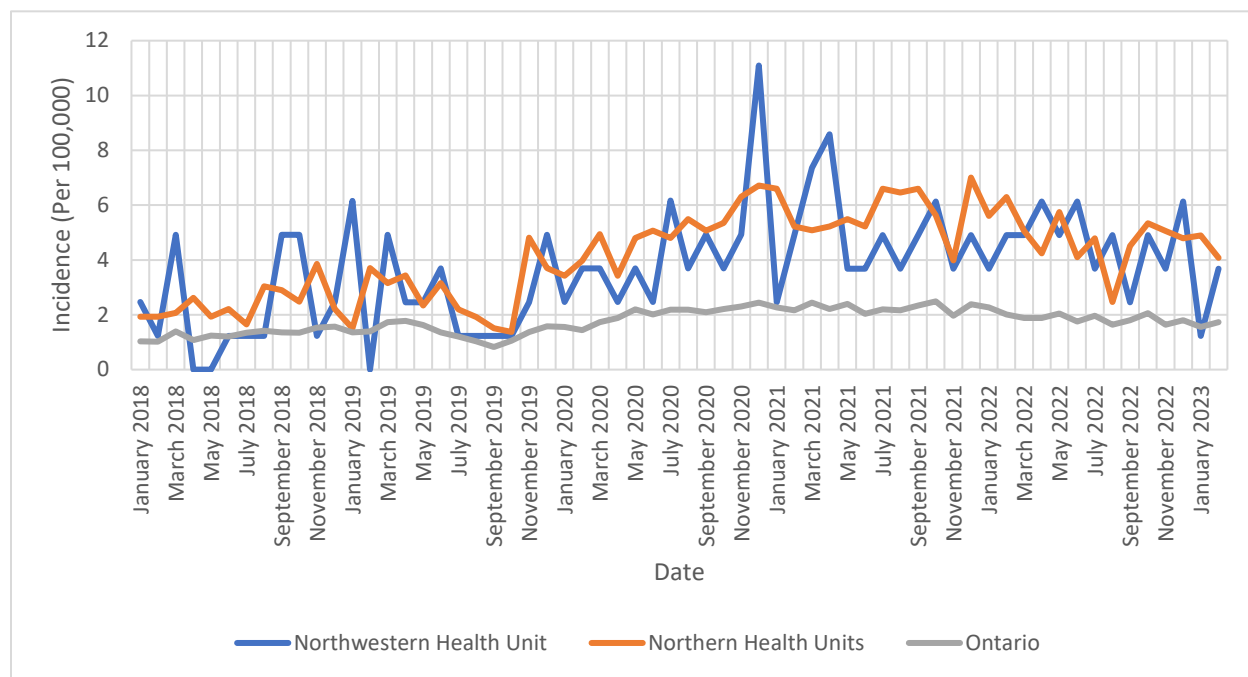
Incidence:

Rates of suspected drug-related deaths in the Northwestern Health Unit catchment area increased steadily between 2018 and 2022. In 2018, the rate of suspected drug-related deaths was 25.8 deaths per 100,000 people; by 2020, this rate spiked to 53.0 deaths per 100,000 people, and increased again to 56.5 deaths per 100,000 people by 2022.

These rates were substantially higher than the provincial rates of suspected drug-related deaths over the same time period (Figure 6). By 2022, the rate of suspected drug-related deaths in Ontario was 22.7 deaths per 100,000 people. Conversely, the Northwestern Health Unit tended to have slightly lower rates of suspected drug-related deaths compared to the Northern health units (Figure 6). The rate of suspected drug-related deaths across these six health units was 58.0 deaths per 100,000 people by 2022.

Differences in incidence across these units over the last three months were found to be statistically significant between the Northwestern Health Unit and the Northern health units, but not between the Northwestern Health Unit and Ontario.

Figure 6: Monthly Incidence of Suspected Drug-Related Deaths per 100,000 in the Northwestern Health Unit, Northern Public Health Units and Ontario: 2018-2023



Data source: Office of the Chief Coroner of Ontario. Date Accessed: March 2023

Data are preliminary and subject to change

Opioid-Overdose Emergency Room (ER) Visits:

Overview:

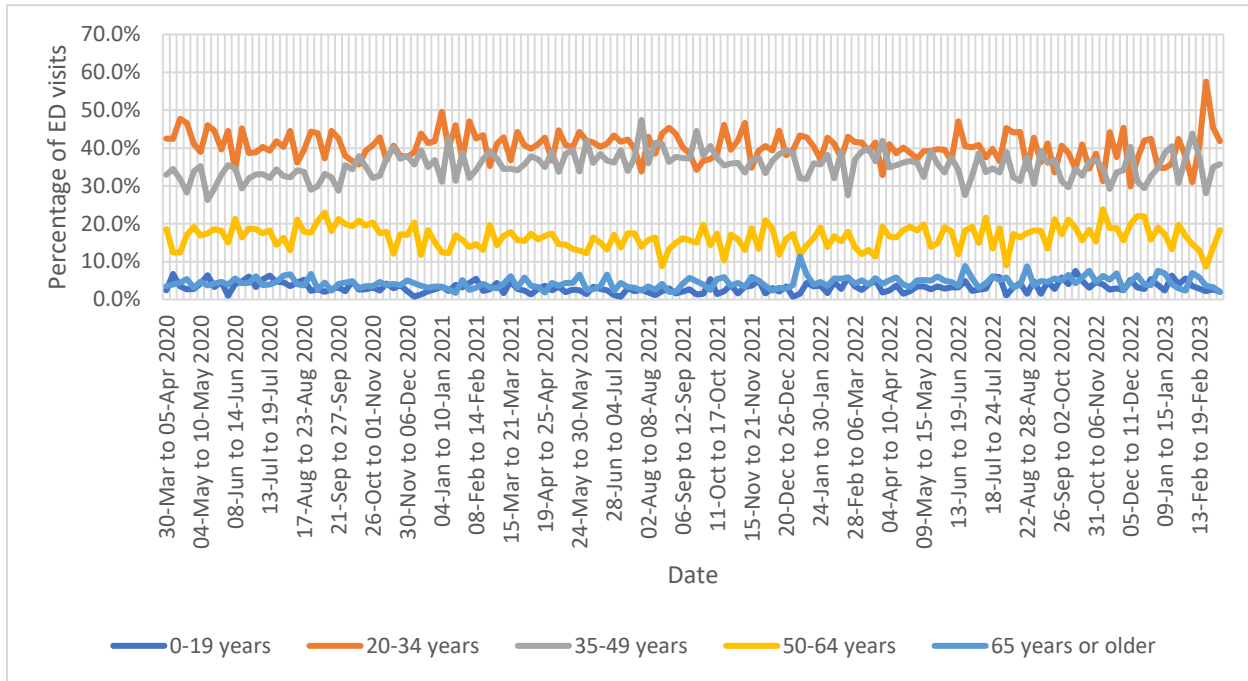
ER visits were identified using patient postal code. Between April 2020 and March 2023, there were a total of 40,408 patients visiting emergency departments (ED) for opioid overdoses throughout Ontario, with an average 263.7 (\pm 67.6) opioid overdose ED visits occurring per week and 1122 (\pm 284.1) visits occurring per month.

In Ontario, 78.9% of these visits were reported to have occurred due to “accidental” motivation, while 9.5% were reported as having “intentional motivations”. Most ED visits from opioid overdose in Ontario occurred within the 20-34 (40.3%) and the 35-49 year age group (35.4%) (Figure 7). 48.1% of patients were female.

In the Northwestern Health Unit region, between April 2020 and March 2023, there were 387 emergency department visits due to opioid overdose, with an average 2 (\pm 2.2) visits occurring per week and 11 (\pm 5.9) visits occurring per month. Most (57.5%) of these opioid overdoses were reported as accidental. 16.58% of opioid overdoses in the NWHU were reported as

intentional. Other demographic data, such as sex or age of individuals brought to ERs for opioid overdose within the NWHU, were not available.

Figure 7: Breakdown of opioid overdose ED visits in Ontario, by Age Group, 2020-2023



Data source: Ontario Ministry of Health and Long-Term Care (MOHLTC). Date Accessed: March 2023

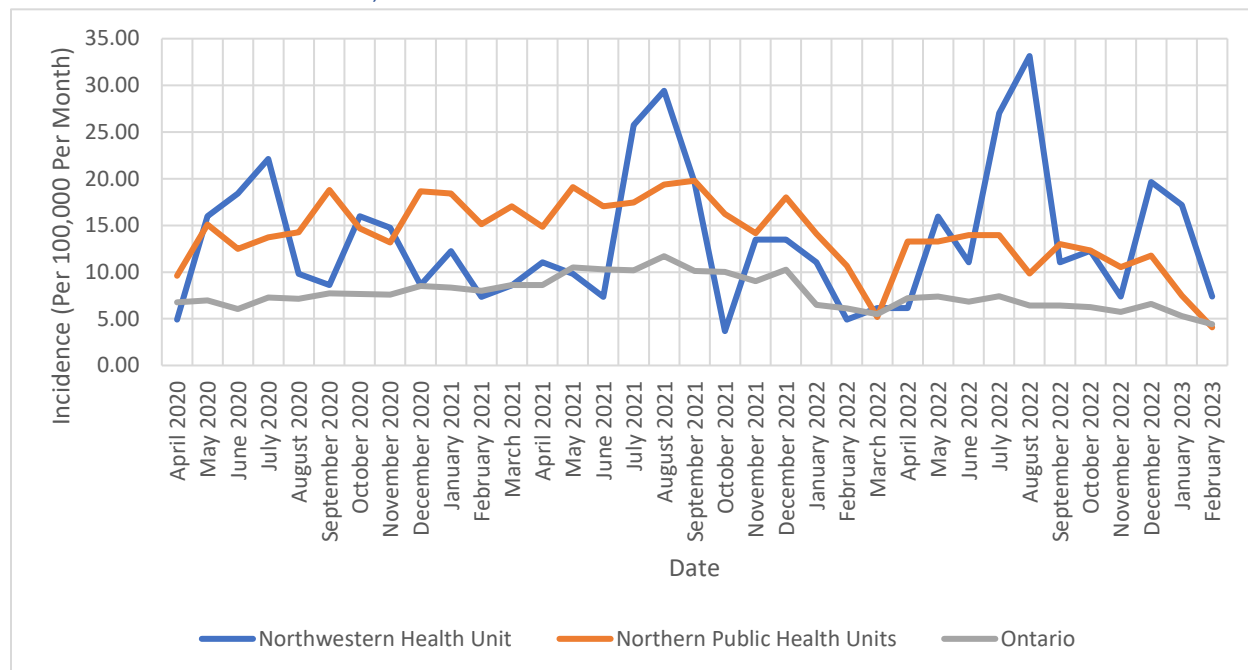
Incidence:

In the NWHU catchment area, opioid-related ER visits have increased. The incidence rate for ER visits has risen from 119.1 visits per 100,000 in 2020, to 161.9 visits per 100,000 in 2021, to 165.7 visits per 100,000 in 2022 (Figure 8).

Slightly different trends were seen across Ontario and the six closest northern health units, where 2022 incidence rates declined from 2021. In 2022, Ontario had an incidence rate of opioid-related ER visits of 78.4 visits per 100,000, which was down from the 2021 incidence of 115.7 visits per 100,000. Similarly in the six nearest northern health units, incidence rates of opioid-related ER visits were 130.4 visits per 100,000 in 2020, 206.5 visits per 100,000 in 2021, and 141.9 visits per 100,000 in 2022.

Changes in these incidence rates are depicted in Figure 8. Differences in incidence over the last three months were statistically significant between both the Northwestern Health Unit and Ontario, as well as the Northwestern Health Unit and the Northern health units.

Figure 8: Monthly Incidence of ER Visits from Opioid Overdose per 100,000 in the Northwestern Health Unit, Northern Public Health Units and Ontario: 2020-2023



Data source: Ontario Ministry of Health and Long-Term Care (MOHLTC). Date Accessed: March 2023

Discussion

Overall, we found that the Northwestern Health Unit is experiencing significantly higher rates of opioid-related harms, such as opioid overdose ER use or death, compared to provincial rates. With the exception of 2022, rates of opioid-related harms generally increased each year. These findings match previously reported research in Ontario, which reported opioid-related harms had more than doubled since 2003 (Morin et al., 2017). In particular, our analysis shows increases in opioid-related mortality in the NWHU across recent years, which is supported by data previously released by Public Health Ontario (Gomes et al., 2021) Furthermore, our findings corroborate what was reported on opioid-related harms in Northern Ontario versus Ontario in the media (Casey, 2021; Casey, 2022), where Northern Ontario was described as having a rate of opioid mortality that was “...more than double ...” what was being found elsewhere in the province (Casey, 2022). Moreover, our data also found strong upticks in opioid overdose ER visits and deaths following 2020 across Ontario, which were likely increased due to COVID-19-related interventions that involved limiting opioid-related community services (Ontario Drug Policy Research Centre, 2020).

In addition, we also found that opioid morbidity and mortality in the Northwestern Health Unit tended to be slightly lower compared to the combined opioid-related morbidity and mortality of six neighbouring health units. Unfortunately, little research has been done to examine why trends of opioid-related harms differ between these regions. Thus, this report will support

current and future opioid-related harms prevention efforts by providing up-to-date information on opioid-related trends within the Northwestern Health Unit.

Limitations

This report only guarantees that data is accurate as of the date it was extracted or accessed. Historical data can sometimes change in subsequent updates, and the suspected deaths data in particular are considered preliminary. Additionally, records containing data from confirmed cases of opioid-related deaths are released at a lag relative to suspected drug-related death data, due to the lengthy process of determining cause of death.

References:

- Casey, L. Ontario science table wants new opioid strategies: Rates of fatal overdoses have risen by 60% in province since march 2020, group says. (2021, Sep 10). *Toronto Star*. Retrieved from: <https://www.proquest.com/newspapers/ontario-science-table-wants-new-opioid-strategies/docview/2570955111/se-2>
- Casey, L. Opioid deaths in Ontario rose dramatically in pandemic's first 2 years compared to 2019, early data shows. (2022, Aug 23). *CBC Sudbury*. Retrieved from: <https://www.cbc.ca/news/canada/sudbury/opioid-crisis-ontario-pandemic-1.6559379>
- Gomes, T., Murray, R., Kolla, G., Leece, P., Bansal, S, Besharah, J, Cahill, T., Campbell, T., Fritz, A., Munro, C., Toner, L., Watford, J. (2021). Changing circumstances surrounding opioid-related deaths in Ontario during the COVID-19 pandemic. Ontario Drug Policy Research Network.
- Ministry of Health (2023). Weekly emergency department visits for opioid overdose: FY2022/23 Week 50: 06-Mar to 12-Mar, 2023. Accessed March, 2023
- Morin, K. A., Eibl, J. K., Franklyn, A. M., & Marsh, D. C. (2017). The opioid crisis: past, present and future policy climate in Ontario, Canada. *Substance abuse treatment, prevention, and policy*, 12(1), 45. <https://doi.org/10.1186/s13011-017-0130-5>
- Office of the Chief Coroner (2023). Monthly Update: Opioid and suspect drug-related deaths in Ontario. Accessed March, 2023
- Office of the Chief Coroner (2023). Weekly Update on Suspect Drug-Related Deaths in Ontario, by Public Health Unit (PHU) Region. Accessed March, 2023
- Ontario Drug Policy Research Network; Office of the Chief Coroner for Ontario/Ontario Forensic Pathology Service; Ontario Agency for Health Protection and Promotion (Public Health Ontario); Centre on Drug Policy Evaluation (2020). Preliminary Patterns in Circumstances Surrounding Opioid-Related Deaths in Ontario during the COVID-19 Pandemic. https://www.publichealthontario.ca/-/media/Documents/O/2020/opioid-mortality-covid-surveillance-report.pdf?rev=f44a37dcd80d49a69a5d262ed715dd94&sc_lang=en

Appendix 1: ICD-10-CA Codes for opioid overdose

1. Main or other problem of opioid poisoning (FY2017/18):
T40.0 Poisoning by opium
T40.1 Poisoning by heroin
T40.2 Poisoning by other opioids
T40.3 Poisoning by methadone
T40.4 Poisoning by other synthetic narcotics
T40.6 Poisoning by other and unspecified narcotics
T40.20 Poisoning by codeine and derivatives
T40.21 Poisoning by morphine
T40.22 Poisoning by hydromorphone
T40.23 Poisoning by oxycodone
T40.28 Poisoning by other opioids, not elsewhere classified
T40.40 Poisoning by fentanyl and derivatives
T40.41 Poisoning by tramadol
T40.48 Poisoning by other synthetic narcotics, not elsewhere classified