Substance Use and Harms Tool

Updated: July 2025

Introduction

The Substance Use and Harms Tool integrates a number of different data sources to provide a view of harms and harm reduction indicators related to substance use in the province. This user guide describes the contents of this interactive report, how it is organized, and the functionalities for visualizing the content.

This interactive report includes substance-related harm indicators such as emergency department (ED) visits, hospitalizations, and deaths due to substance use, as well as for harm reduction indicators such as naloxone kit, needle, and foil distribution in the province. Data is presented for the most recent ten years where available.

The tool is organized into two sections with tabs which provide different views of the data:

Substance-related harms:

- **Overall tab:** contains both counts and rates of harms over time for a single indicator at a time
- **Trends tab:** users can compare different indicators over time
- **Public health unit tab:** users can compare trends for indicators by public health unit
- **Age and sex tab:** users can compare age group trends or distribution
- **Drug type tab:** users can compare trends by specific drug types within each drug class
- **Data tables tab:** users can customize tables to export data from the tool
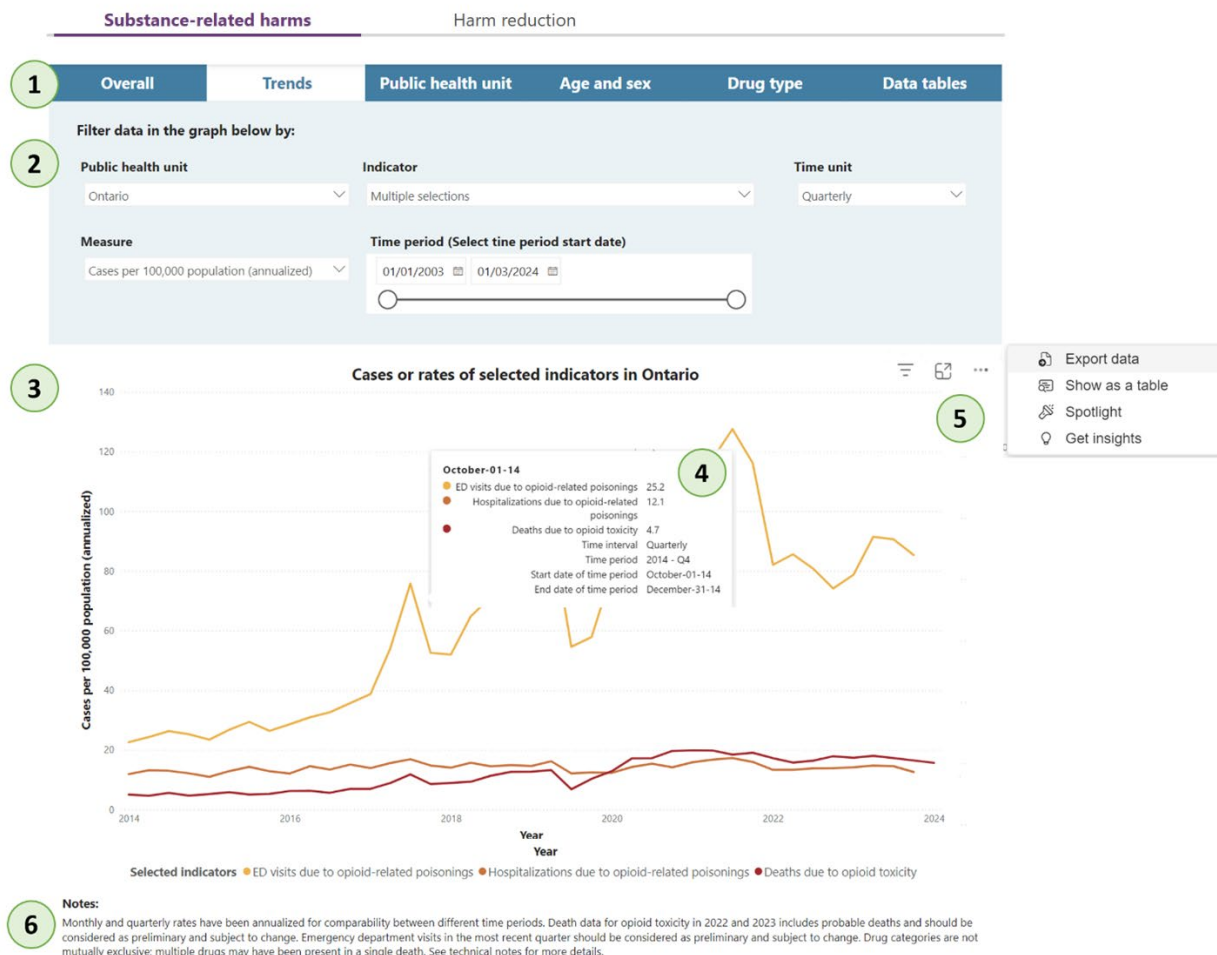
Harm reduction:

- **Overall tab:** contains both counts and rates of harm reduction indicators over time for a single indicator at a time
- **Trends tab:** users can compare different indicators over time
- **Public health unit tab:** users can compare trends for indicators by public health unit
- **Data tables tab:** users can customize tables to export data from the tool

Using the Substance Use and Harms Tool

Overview

Generally, the functionality is similar across the different tabs in the tool. The available selection areas of the tool are numbered and summarized below.

1. **Navigation bar:** This top navigation bar is used to move between the different sections (Substance-related harms and Harm reduction) and tabs (e.g., Overall, Trends, Public health unit, Age and sex, Drug type, and Data table). The tab being viewed is indicated in white, while the others remain blue.

2. **Filters:** Filters are used to select or remove content included in the graphs, and can be opened by selecting the drop down arrow on the right side. The filter will either allow for a single selection or multi-selection depending on the chosen stratifier. Further details on filters in specific tabs are available later in this guide.

   - The 'Measure' filter appears within the 'Trends', 'Public health unit', 'Age and sex', and 'Drug type' tabs and can be used to change the measure visualized in the graph below

   - The 'Time period' filter is used to adjust the time period used to plot the data on the x-axis of the graph by either selecting a start and end date in the top boxes or by dragging the slider below the date selection. This filter is used in conjunction with the 'Time unit' filter (monthly, quarterly, yearly) to visualize data shown by month, quarter, or year. Users should select the first day of the month, quarter (January, April, July, October), or year that they want to include. The 'Age and sex' and 'Drug type' tabs contain only yearly data so this filter will be replaced by a 'Year' filter in those tabs.

3. **Graph:** Each tab contains a single graph that is adjusted based on user selection in the above filters.

4. **Tooltips:** When hovering over any data point on a graph, a tooltip will appear with related information about that data point.

5. **Download data from the graph:** When hovering over a graph, a context menu (denoted by three dots) will appear at the top right. Once selected, users can choose to export the data in the graph or view the data in the graph as a table. To capture an image of the graph, users can use the Snipping tool built into Microsoft Windows (Windows logo key + Shift + S) or macOS (Command + Shift + 5).

6. **Notes:** Beneath the graph in each tab are brief notes describing important considerations for data interpretation. Further details can be found in the technical notes.
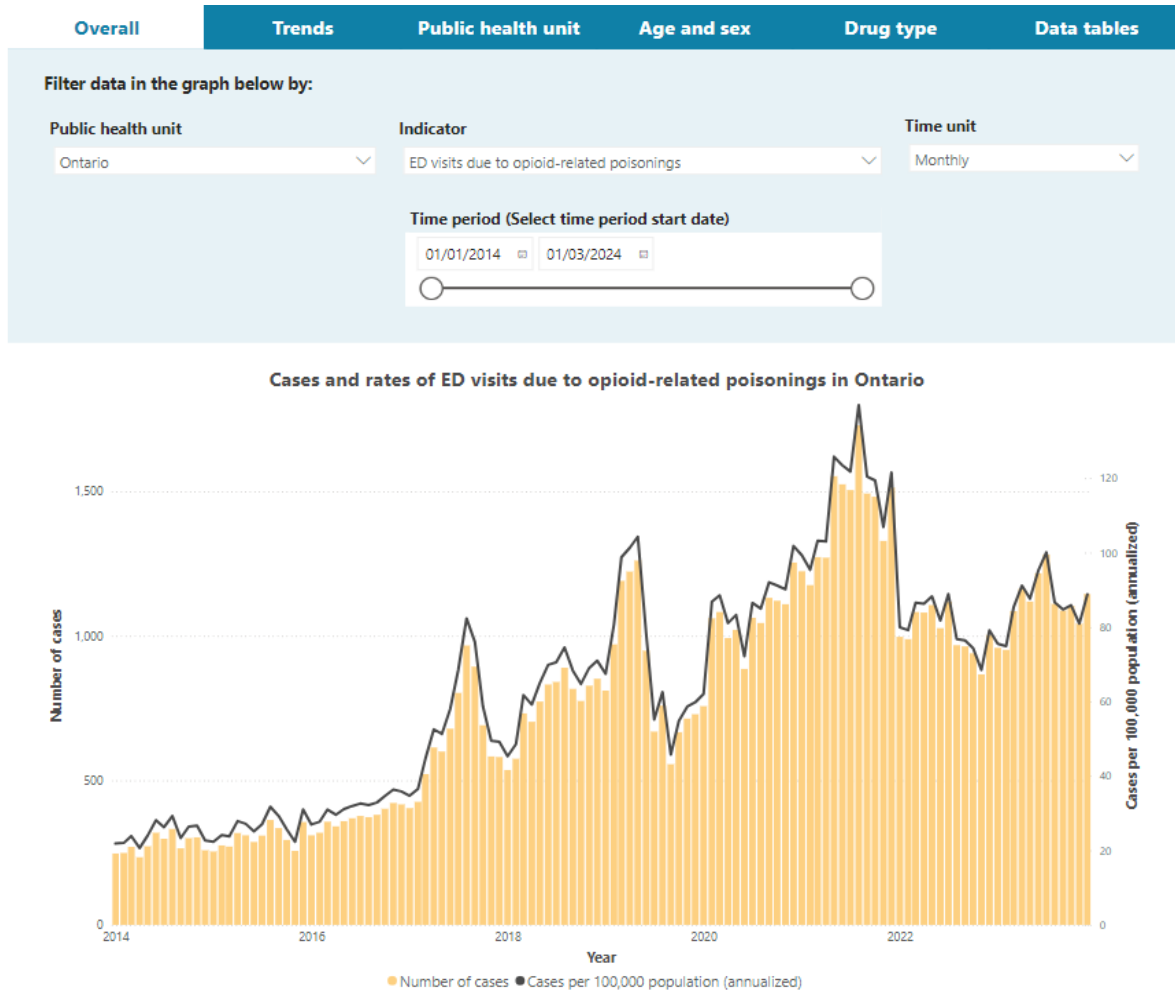
Substance-related Harms

The following indicators can be found throughout the substance-related harms section of the tool:

- ED visits due to opioid-related poisonings

- Hospitalizations due to opioid-related poisonings

- Deaths due to opioid toxicity

- Deaths due to opioid toxicity (with stimulant involvement)

- Deaths due to opioid toxicity (with benzodiazepine involvement)

- Deaths due to opioid toxicity (with alcohol involvement)

- ED visits due to stimulant-related poisonings

- Hospitalizations due to stimulant-related poisonings

- Deaths due to stimulant toxicity

- Deaths due to stimulant toxicity (without opioid involvement)

- ED visits due to benzodiazepine-related poisonings

- Hospitalizations due to benzodiazepine-related poisonings

- Deaths due to benzodiazepine toxicity

- Deaths due to benzodiazepine toxicity (without opioid involvement)

- ED visits due to alcohol-related poisonings

- ED visits due to conditions entirely attributable to alcohol

- Hospitalizations due to alcohol-related poisonings

- Hospitalizations due to conditions entirely attributable to alcohol

- Deaths due to alcohol toxicity

- Deaths due to alcohol toxicity (without drug involvement)

- Deaths due to alcohol toxicity (with drug involvement)
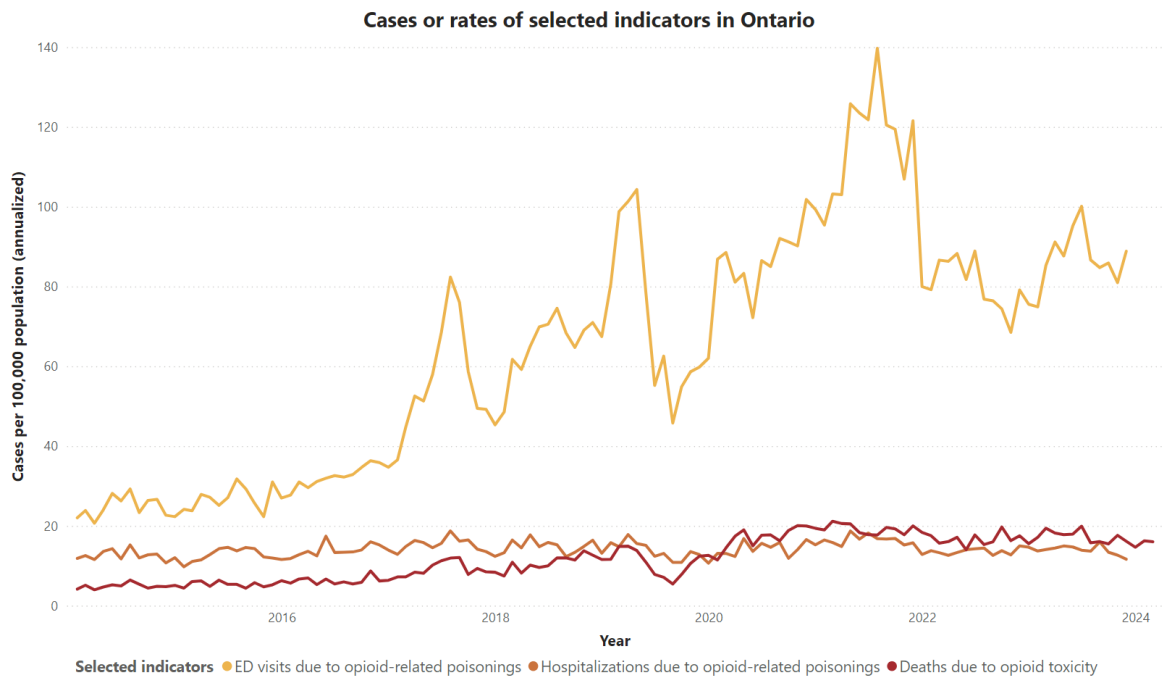
Overall Tab

This tab provides a bar and line graph visualizing both counts and rates of harms over time for a single indicator at a time, with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator, time unit (monthly, quarterly, yearly), and time period.

Trends Tab

This tab provides a multi-line graph visualizing either counts or rates of harms over time for multiple indicators at a time, with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator, time unit (monthly, quarterly, yearly), and time period. Selecting more than one indicator in that filter will add the corresponding information to the graph.

Public Health Unit Tab

This tab provides a multi-line graph visualizing either counts or rates of harms over time for multiple public health units at a time, with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator, and time period. Selecting more than one public health unit in that filter will add the corresponding information to the graph (by default only the provincial line is selected).
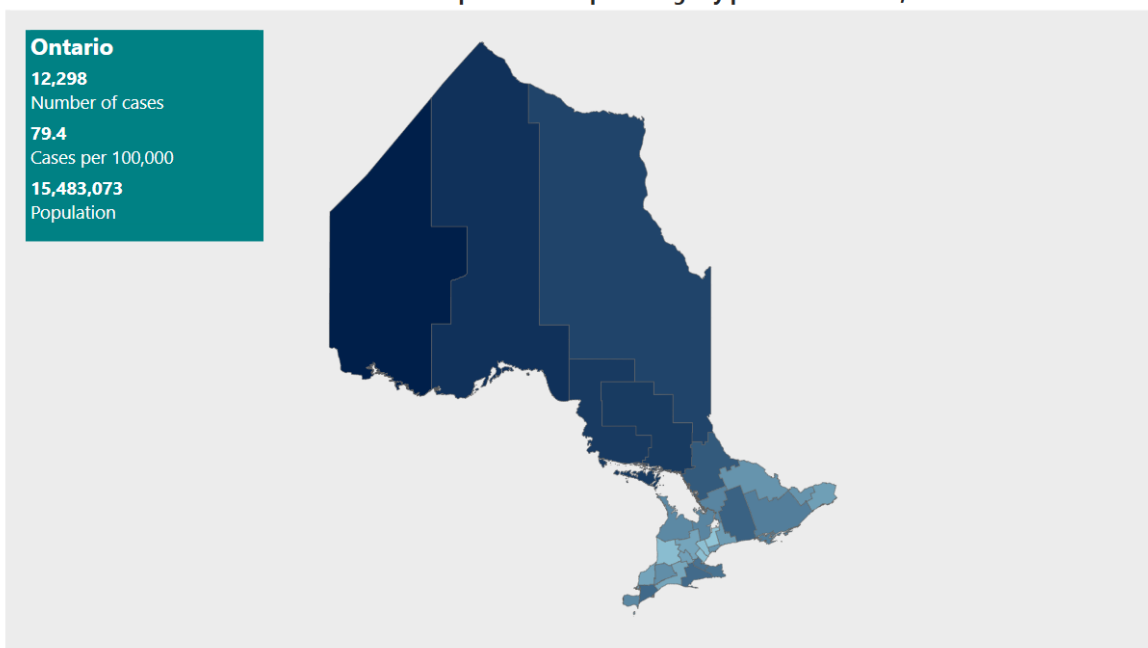
Overall	Trends	Public health unit	Age and sex	Drug type	Data tables

View data by:

Trends over time	Map of public health units

Filter data in the graph below by:

Public health unit
Multiple selections ⌄

Indicator
ED visits due to opioid-related poisonings ⌄

Time unit
Monthly ⌄

Measure
Cases per 100,000 population (annualized) ⌄

Time period (Select time period start date)
01/01/2014 🗓 01/03/2024 🗓

Cases and rates of ED visits due to opioid-related poisonings in selected public health units

Selected PHUs ● Ontario ● City of Hamilton Public Health Services

This tab also provides a shaded map view of the province where rates of harms are visualized by public health unit.

Overall	Trends	Public health unit	Age and sex	Drug type	Data tables

Trends over time	Map of public health units

Filter data in the graph below by:

Public health unit	Indicator	Year
Ontario ⌄	ED visits due to opioid-related poisonings ⌄	2024 ⌄

Rates of ED visits due to opioid-related poisonings by public health unit, 2024

Ontario
12,298
Number of cases
79.4
Cases per 100,000
15,483,073
Population

Age and Sex Tab

This tab provides a multi-line graph visualizing either counts or rates of harms over time by age group ('Trends by age group') or sex ('Trends by sex') with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator time unit (monthly, quarterly, yearly), sex, age group, and time period. The purple buttons below the top navigation bar can be used to move between the different views.

| Overall	Trends	Public health unit	Age and sex	Drug type	Data tables

View data by:

Trends by age group	Trends by sex	Distribution by age group	Distribution by age group and sex

Filter data in the graph below by:

Public health unit	Indicator	Sex	Age group
Ontario ⌄	Deaths due to opioid toxicity ⌄	Multiple s... ⌄	Multiple s... ⌄

Measure

Cases per 100,000 population (annualized) ⌄

Time period (Select time period start date)

01/01/2014 ▦ 01/12/2023 ▦

Cases or rates of deaths due to opioid toxicity by age group in Ontario

Selected age groups ● 0 to 14 ● 15 to 24 ● 25 to 44 ● 45 to 64 ● 65+

This tab also provides a distribution view of the data by age group ('Distribution by age group') or by age group and sex ('Distribution by age group and sex').

| Overall | Trends | Public health unit | Age and sex | Drug type | Data tables |

View data by:

| Trends by age group | Trends by sex | Distribution by age group | Distribution by age group and sex |

Filter data in the graph below by:

Public health unit	Indicator		Sex	Age group
Ontario ∨	Deaths due to stimulant toxicity ∨		Multiple s... ∨	Multiple s... ∨

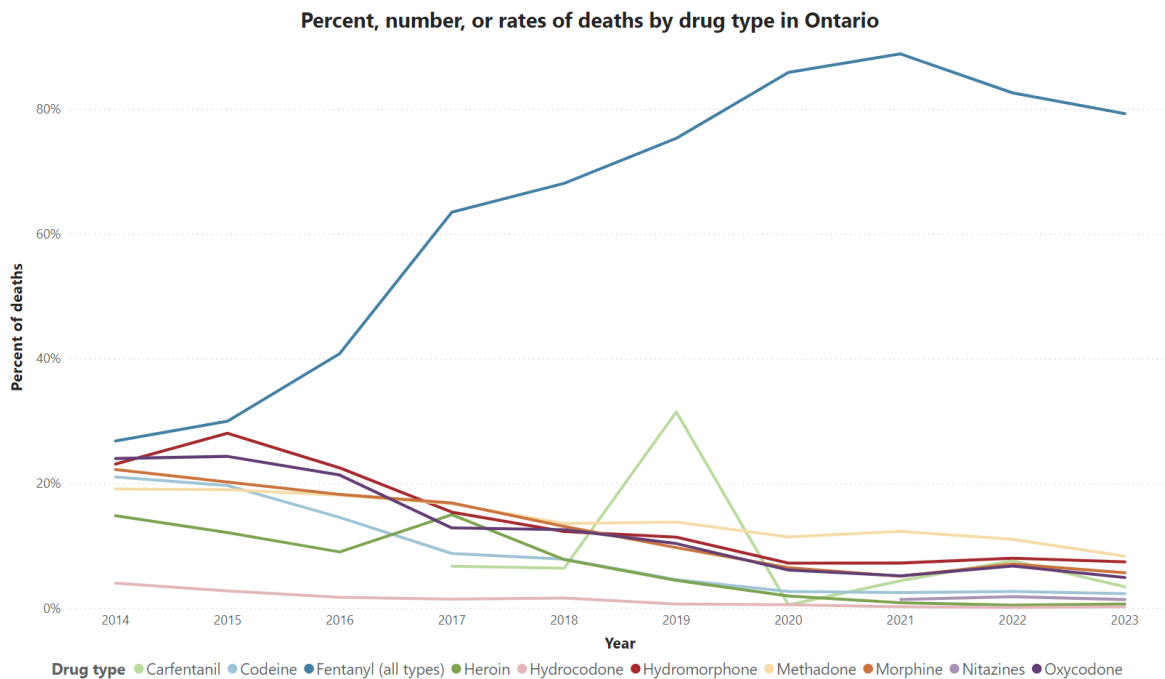| Measure	Year (data will be aggregated if multiple years are selected)
Cases per 100,000 population (annualized) ∨	2023 ∨

Cases or rates of deaths due to stimulant toxicity by age group and sex in Ontario

Sex ● Female ● Male
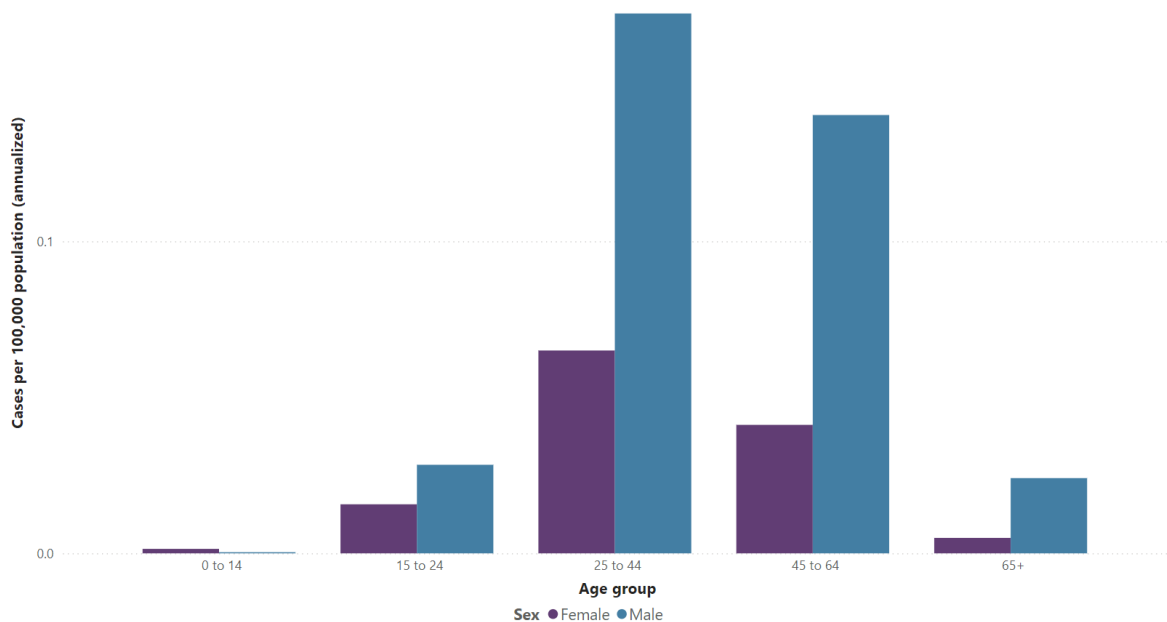
Drug Type Tab

This tab provides a multi-line graph visualizing either counts, percent, or rates of deaths over time, by drug type with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), drug class (opioids, stimulants, benzodiazepines), drug type (opioids: codeine, fentanyl (all types), carfentanil, heroin, hydrocodone, hydromorphone, methadone, morphine, nitazines, oxycodone; stimulants: cocaine, methamphetamines, other stimulants; benzodiazepines: approved benzodiazepines, unapproved benzodiazepines) and year. If there were between 1 and 4 total drug-related deaths in the year for a public health unit the results will be suppressed and will show as blank in the graph.

Data Tables Tab

This tab provides a table view where users can download data from the other tabs for multiple public health units and indicators at a single time. There are three different table views: overall (without age and sex), by age and sex, and by drug type. As noted in the tool overview section, users should interact with the context menu (three dots) at the top right of the table to export data.

Overall	Trends	Public health unit	Age and sex	Drug type	Data tables

View data by:

Overall	By sex and age group	Drug type

Filter data in the graph below by:

Public health unit

| Ontario ⌄ |

Indicator

| ED visits due to opioid-related poisonings ⌄ |

Year

| All ⌄ |

Time unit

| Yearly ⌄ |

| Public health unit	Indicator	Time interval	Time period	Start date of time period	End date of time period	Number of cases	Population	Cases per 100,000 population (annualized)
Ontario	ED visits due to opioid-related poisonings	Yearly	2003	January-01-03	December-31-03	1,858	12,168,529	15.3
Ontario	ED visits due to opioid-related poisonings	Yearly	2004	January-01-04	December-31-04	2,043	12,316,914	16.6
Ontario	ED visits due to opioid-related poisonings	Yearly	2005	January-01-05	December-31-05	2,086	12,459,029	16.7
Ontario	ED visits due to opioid-related poisonings	Yearly	2006	January-01-06	December-31-06	2,150	12,594,935	17.1
Ontario	ED visits due to opioid-related poisonings	Yearly	2007	January-01-07	December-31-07	2,231	12,713,344	17.5
Ontario	ED visits due to opioid-related poisonings	Yearly	2008	January-01-08	December-31-08	2,411	12,824,194	18.8
Ontario	ED visits due to opioid-related poisonings	Yearly	2009	January-01-09	December-31-09	2,886	12,940,965	22.3
Ontario	ED visits due to opioid-related poisonings	Yearly	2010	January-01-10	December-31-10	2,841	13,067,062	21.7
Ontario	ED visits due to opioid-related poisonings	Yearly	2011	January-01-11	December-31-11	2,934	13,198,580	22.2
Ontario	ED visits due to opioid-related poisonings	Yearly	2012	January-01-12	December-31-12	3,154	13,326,006	23.7
Ontario	ED visits due to opioid-related poisonings	Yearly	2013	January-01-13	December-31-13	3,051	13,450,706	22.7
Ontario	ED visits due to opioid-related poisonings	Yearly	2014	January-01-14	December-31-14	3,347	13,564,168	24.7
Ontario	ED visits due to opioid-related poisonings	Yearly	2015	January-01-15	December-31-15	3,628	13,662,336	26.6
Ontario	ED visits due to opioid-related poisonings	Yearly	2016	January-01-16	December-31-16	4,427	13,791,257	32.1
Ontario	ED visits due to opioid-related poisonings	Yearly	2017	January-01-17	December-31-17	7,764	13,972,767	55.6

Harm Reduction

Harm reduction indicators have been calculated and provided by the Ontario Drug Policy Research Network (ODPRN). For further details and additional harm reduction indicators, visit the Ontario Opioid Tool. The following indicators can be found throughout the harm reduction section of the tool:

- Total number of naloxone doses
- Pharmacy provided naloxone doses
- Community provided naloxone doses
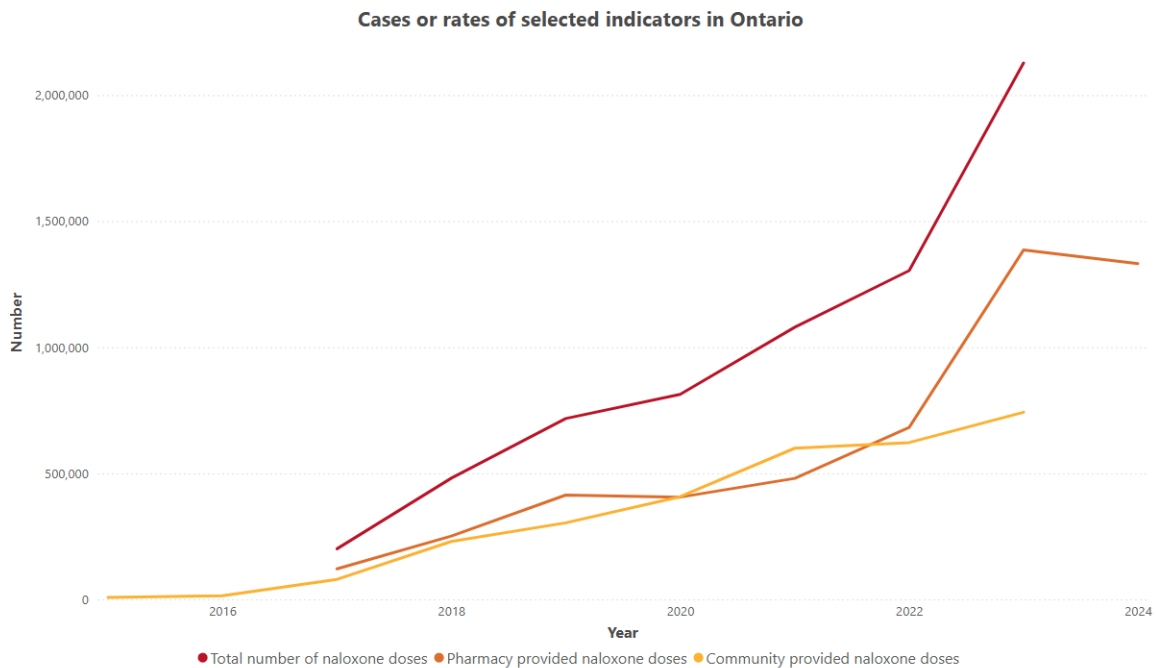- Total number of needles provided
- Total number of foils provided

Overall Tab

This tab provides a bar and line graph visualizing both counts and rates of harm reduction indicators over time for a single indicator at a time, with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator, time unit (monthly, quarterly, yearly), and time period.
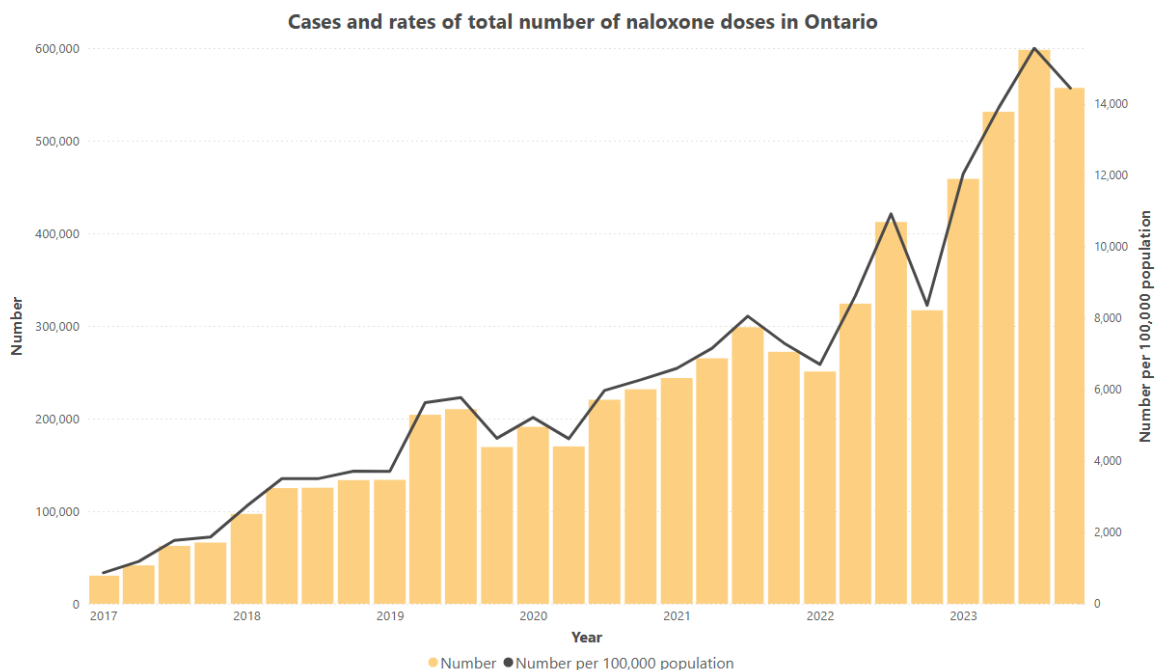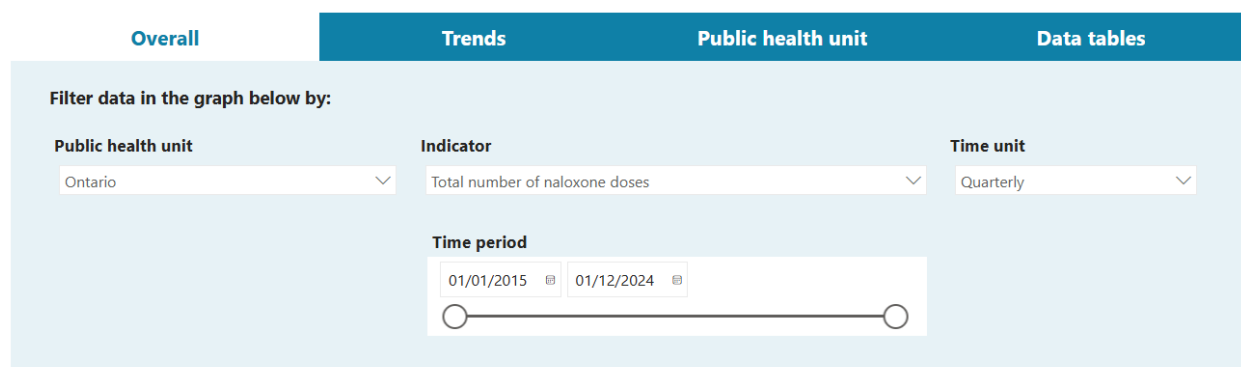
Trends Tab

This tab provides a multi-line graph visualizing either counts or rates of harm reduction indicators over time for multiple indicators at a time, with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator, time unit (monthly, quarterly, yearly), and time period. Selecting more than one indicator in that filter will add the corresponding information to the graph.
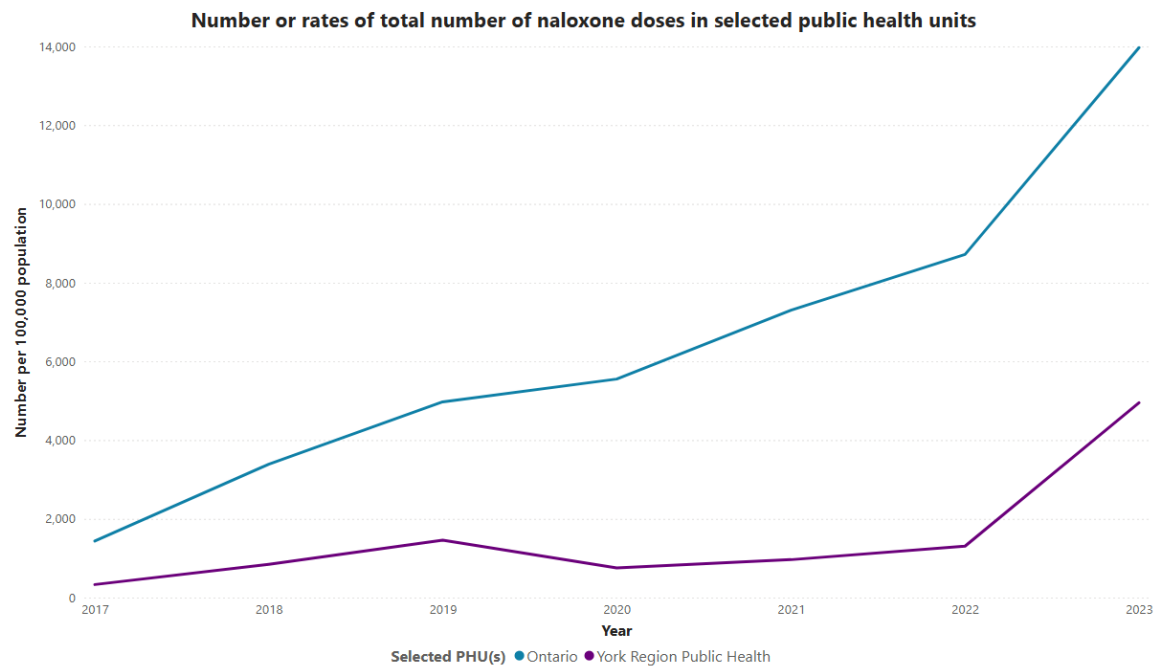
Public Health Unit Tab

This tab provides a multi-line graph visualizing either counts or rates of harms over time for multiple public health units at a time, with filters to adjust the public health unit (province of Ontario or one of the 29 PHUs in the province), indicator, and time period. Selecting more than one public health unit in that filter will add the corresponding information to the graph (by default only the provincial line is selected).

This tab also provides a shaded map view of the province where rates of harm reduction indicators are visualized by public health unit.

| Overall | Trends | Public health unit | Data tables |

| Trends over time | Map of public health units |

Filter data in the graph below by:

| Public health unit | Indicator | Year |
| Multiple selections | Community provided naloxone doses | 2023 |

Rates of community provided naloxone doses by public health unit, 2023
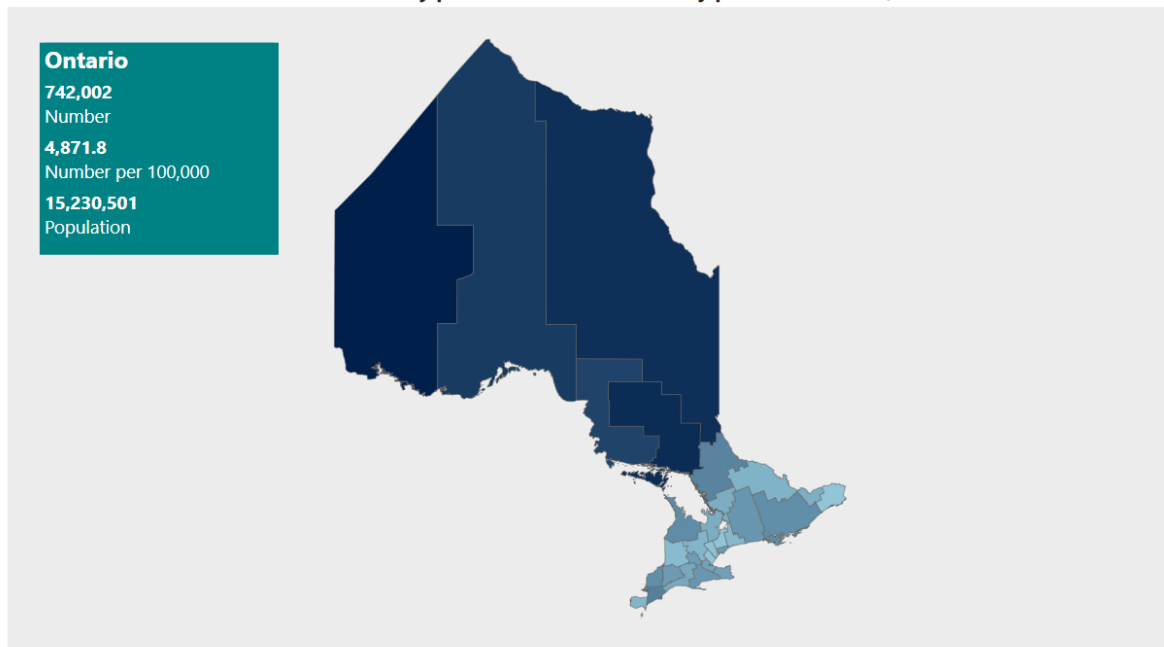
Ontario

742,002
Number

4,871.8
Number per 100,000

15,230,501
Population

Data Tables Tab

This tab provides a table view where users can download data from the other tabs for multiple public health units and indicators at a single time. As noted in the tool overview section, users should interact with the context menu (three dots) at the top right of the table to export data.

Overall	Trends	Public health unit	Data tables

Filter data in the graph below by:

Public health unit	Indicator	Time unit
All ⌄	Total number of naloxone doses ⌄	All ⌄

Time period

All ⌄

Public health unit	Indicator	Time unit	Year / Quarter	Number	Population	Number per 100,000 population (annualized)
Ontario	Total number of naloxone doses	Quarterly	2017 - Q1	30,374	13,972,767	869.5
Algoma Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	628	116,451	2,157.1
Chatham-Kent Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	148	105,015	563.7
City of Hamilton Public Health Services	Total number of naloxone doses	Quarterly	2017 - Q1	1,916	555,973	1,378.5
Durham Region Health Department	Total number of naloxone doses	Quarterly	2017 - Q1	1,466	670,432	874.7
Eastern Ontario Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	462	208,769	885.2
Grand Erie Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	766	259,947	1,178.7
Grey Bruce Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	400	167,495	955.3
Haliburton Kawartha Northumberland Peterborough Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	1,048	327,618	1,279.5
Halton Region Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	418	569,034	293.8
Huron Perth Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	20	140,342	57.0
Lambton Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	190	129,579	586.5
Middlesex-London Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	1,034	476,576	867.9
Niagara Region Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	976	462,387	844.3
North Bay Parry Sound District Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	224	127,707	701.6
Northeastern Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	256	119,897	854.1
Northwestern Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	696	80,872	3,442.5
Ottawa Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	4,710	974,041	1,934.2
Peel Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	800	1,447,582	221.1
Public Health Sudbury & Districts	Total number of naloxone doses	Quarterly	2017 - Q1	994	201,884	1,969.4
Region of Waterloo Public Health and Emergency Services	Total number of naloxone doses	Quarterly	2017 - Q1	2,976	559,209	2,128.7
Renfrew County and District Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	284	106,652	1,065.1
Simcoe Muskoka District Health Unit	Total number of naloxone doses	Quarterly	2017 - Q1	876	563,493	621.8
South East Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	2,054	540,450	1,520.2
Southwestern Public Health	Total number of naloxone doses	Quarterly	2017 - Q1	252	206,955	487.1

Citation

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Ontario