

# Weekly report: COVID-19 case epidemiology and vaccination program update

**Report date:** November 30, 2022

Unless otherwise indicated, analyses are based on data up to and including November 26, 2022 that were available as of November 29, 2022.

## Highlights

### Reported COVID-19 cases

As of November 26, 2022, Public Health was reporting the following among residents of Sudbury and districts:

- **20,907** total known cases of COVID-19 since the beginning of the pandemic.
- **152** known active cases of COVID-19.
- **194** deaths due to COVID-19, of which **3** had occurred in the previous 14 days.

**Note:** As of December 31, 2021, eligibility for publicly funded PCR testing is limited to people who are associated with highest-risk settings or who are at high risk of severe health outcomes if they become infected. Therefore, counts of new and active cases underestimate the true number of people with COVID-19 in Sudbury and districts.

### COVID-related hospitalizations

On November 26, 2022, hospitals within Sudbury and districts were reporting:

- **23** admitted patients with a confirmed case of COVID-19, of which **15** had been admitted for treatment of COVID-19-related illness and **8** had been admitted for other reasons.
- **1** patient admitted to the intensive care unit (ICU) with a confirmed case of COVID-19, of which **1** had been admitted for treatment of COVID-19-related illness and **0** had been admitted for other reasons.

### Vaccination

As of November 26, 2022:

- **516,170** doses of a COVID-19 vaccine had been administered to residents of Sudbury and districts, including **176,325** first doses, **169,419** second doses, **106,655** third doses, **47,839** fourth doses, and **15,932** fifth doses.
- **89.3%** of local residents aged 5 years and older have received their first dose of vaccine, while **86.0%** have received their second dose, **54.2%** have received their third dose, **24.4%** have received their fourth dose, and **8.2%** have received their fifth dose.

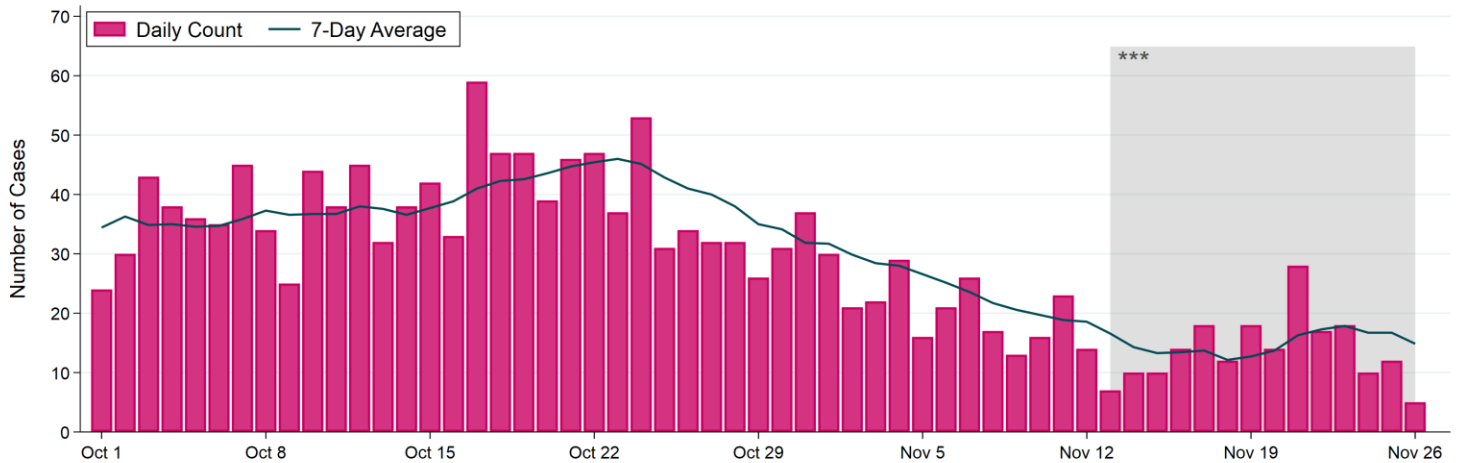
# Recent epidemiologic trends

## Reported COVID-19 cases

As of November 26, 2022, there had been **104** reported COVID-19 cases with symptom onset (or testing, if asymptomatic) in the previous 7 days, an average of **14.9** cases per day. This is higher than the previous week in which **89** cases (or **12.7** cases per day on average) had been reported (see Figure 1). There were **152** known active cases in Sudbury and districts on November 26, 2022, compared to **167** known active cases 7 days prior (see Figure 2).

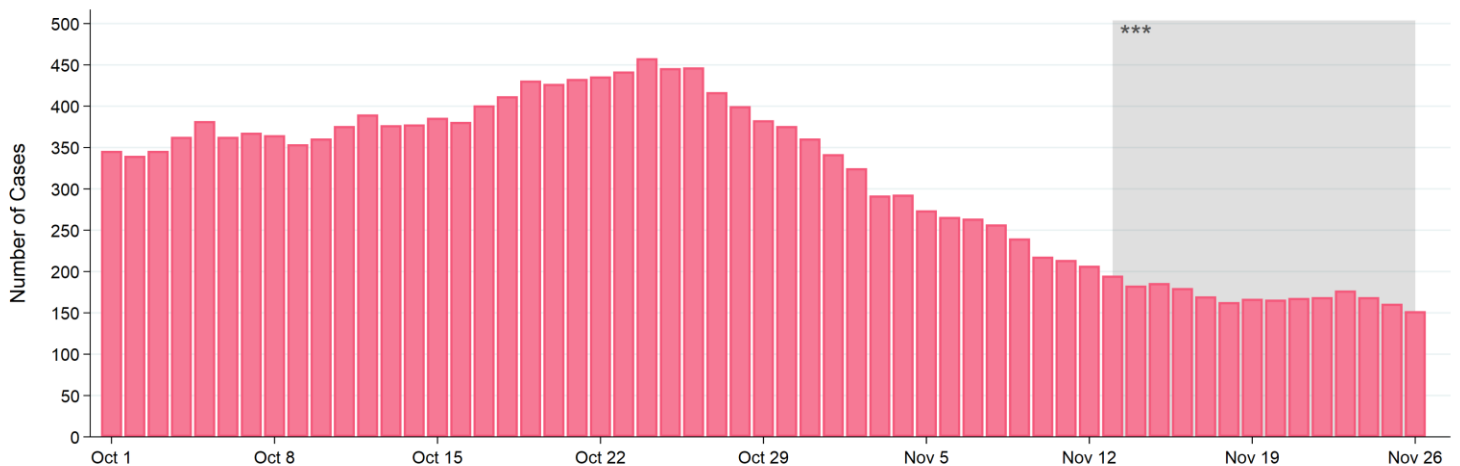
**Note:** As of December 31, 2021, eligibility for publicly funded PCR testing is limited to people who are associated with highest-risk settings or who are at high risk of severe health outcomes if they become infected. Therefore, counts of new and active cases underestimate the true number of people with COVID-19 in Sudbury and districts.

**FIGURE 1. Daily COVID-19 cases, past 8 weeks, Sudbury and districts**



Dates are the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

**FIGURE 2. Daily active COVID-19 cases, past 8 weeks, Sudbury and districts**



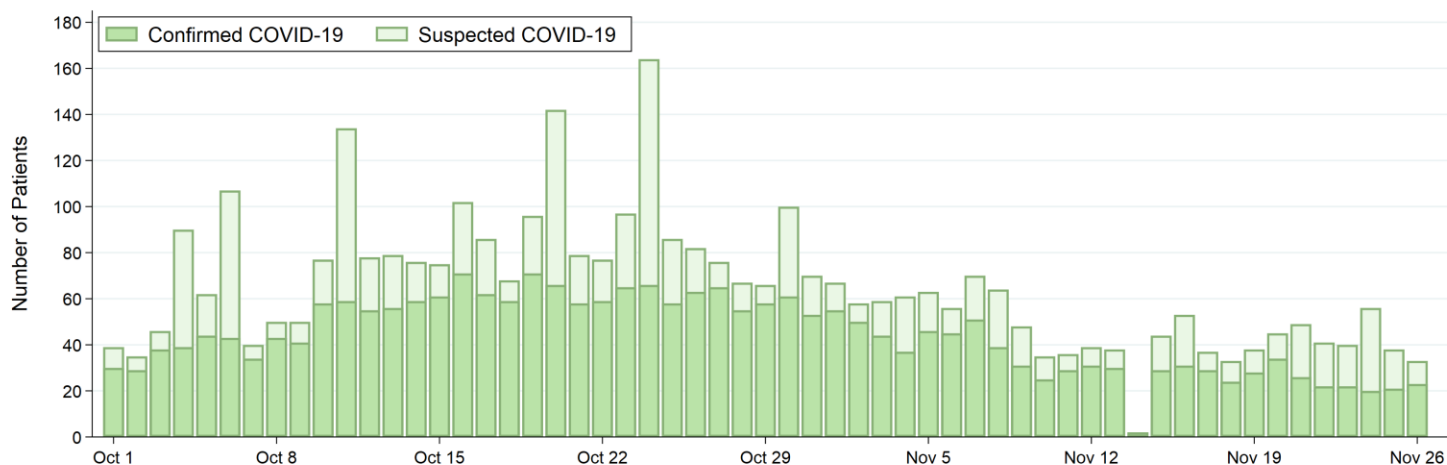
Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

# COVID-19 cases in local hospitals

On November 26, 2022, there were **23** confirmed cases of COVID-19 in local hospitals (see Figure 3), **15** of which were admitted due to COVID-19. Of these cases, **1** were currently in the intensive care unit (ICU) (see Figure 4). Seven days prior, on November 19, 2022, there were **15** patients in hospital for treatment of COVID-19 of which **2** were in the ICU.

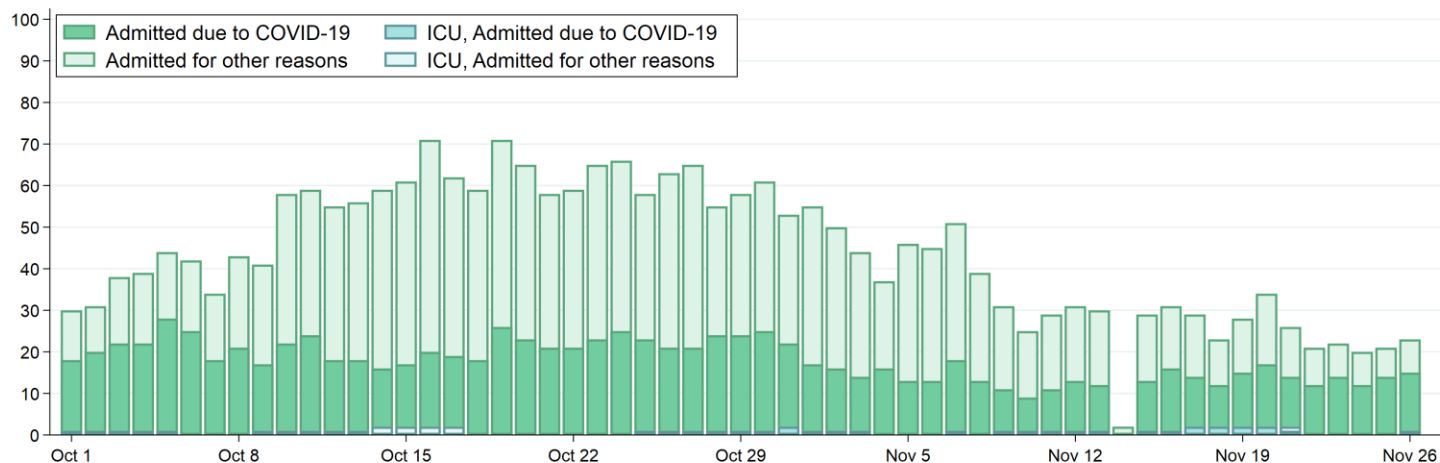
An additional **8** patients with confirmed COVID-19, in hospital on November 26, 2022, had been admitted for reasons other than COVID-19 (Figure 4). Further, **10** other patients were currently awaiting test results for suspected COVID-19 (Figure 3).

**FIGURE 3. Patients in local hospitals with confirmed or suspected COVID-19, by date, past 8 weeks, Sudbury and districts**



Counts shown are of patients currently in hospital, not new daily admissions. They include all patients diagnosed with COVID-19 including those admitted for treatment of other conditions. Counts may include residents of other geographic areas. Data Source: Daily Bed Census Summary, accessed via the COVID-19 Regional Hospitals Dashboard, Ontario Ministry of Health, November 29, 2022.

**FIGURE 4. Confirmed cases in local hospitals, by date and reason for admission, past 8 weeks, Sudbury and districts**



Counts shown are of patients currently in hospital, not new daily admissions. They include all patients diagnosed with COVID-19 including those admitted for treatment of other conditions. Counts may include residents of other geographic areas. Data Source: Daily Bed Census Summary, accessed via the COVID-19 Regional Hospitals Dashboard, Ontario Ministry of Health, November 29, 2022.

# Case demographics and area of residence

Table 1, below, summarizes the number and percentage of total and active COVID-19 cases reported in Sudbury and districts as of November 26, 2022, by their age, sex, and geographic area of residence.

**TABLE 1. Number and percentage of reported COVID-19 cases, by age, sex and geographic area of residence, Sudbury and districts**

Characteristic	Total Cases	Active Cases
Numbers of Cases	20,907 (100%)	152 (100%)
Sex: Male	7,193 (34.4%)	48 (31.6%)
Sex: Female	10,772 (51.5%)	96 (63.2%)
Sex: Not specified**	2,917 (14.0%)	7 (4.6%)
Ages: 19 and under	2,917 (14.0%)	7 (4.6%)
Ages: 20-39	6,794 (32.5%)	31 (20.4%)
Ages: 40-59	5,461 (26.1%)	42 (27.6%)
Ages: 60-79	3,582 (17.1%)	34 (22.4%)
Ages: 80 and over	2,142 (10.2%)	38 (25.0%)
Ages: Not specified**	11 (0.1%)	0 (0.0%)
Area: Greater Sudbury	17,790 (85.1%)	119 (78.3%)
Area: Manitoulin District	1,461 (7.0%)	11 (7.2%)
Area: Sudbury District, North	353 (1.7%)	13 (8.6%)
Area: Sudbury District, West	916 (4.4%)	8 (5.3%)
Area: Sudbury District, East	387 (1.9%)	1 (0.7%)

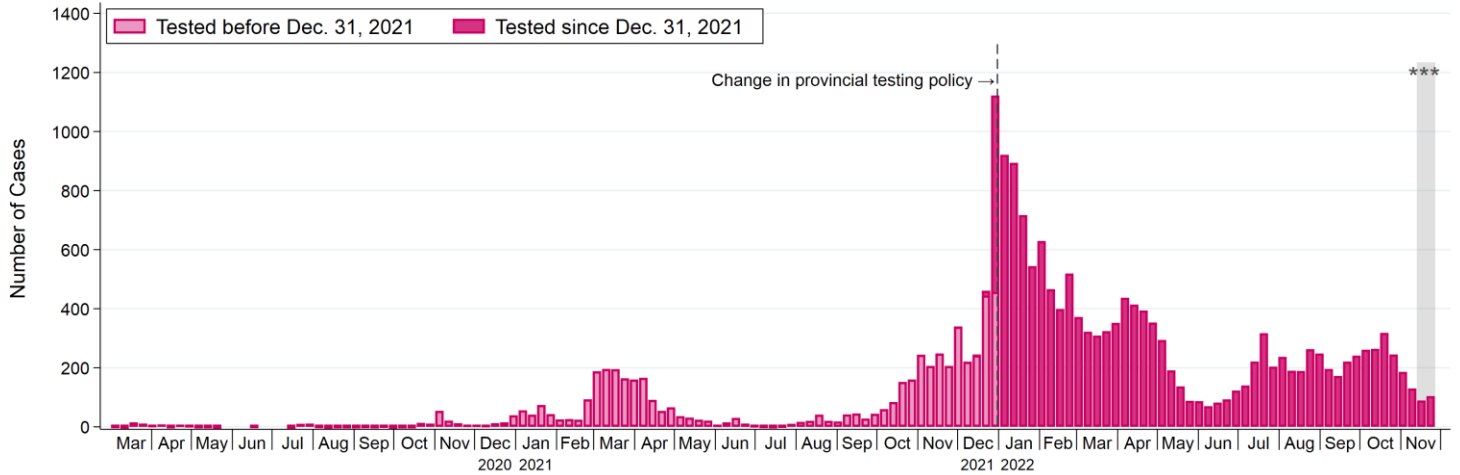
Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*Data on sex and age groups are listed as unspecified until there are sufficient numbers to allow them to be assigned to the appropriate categories. This ensures that individual cases cannot be identified. Sex is not specified for cases aged 19 years and under. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

# Historical epidemiologic trends

## Case counts by week

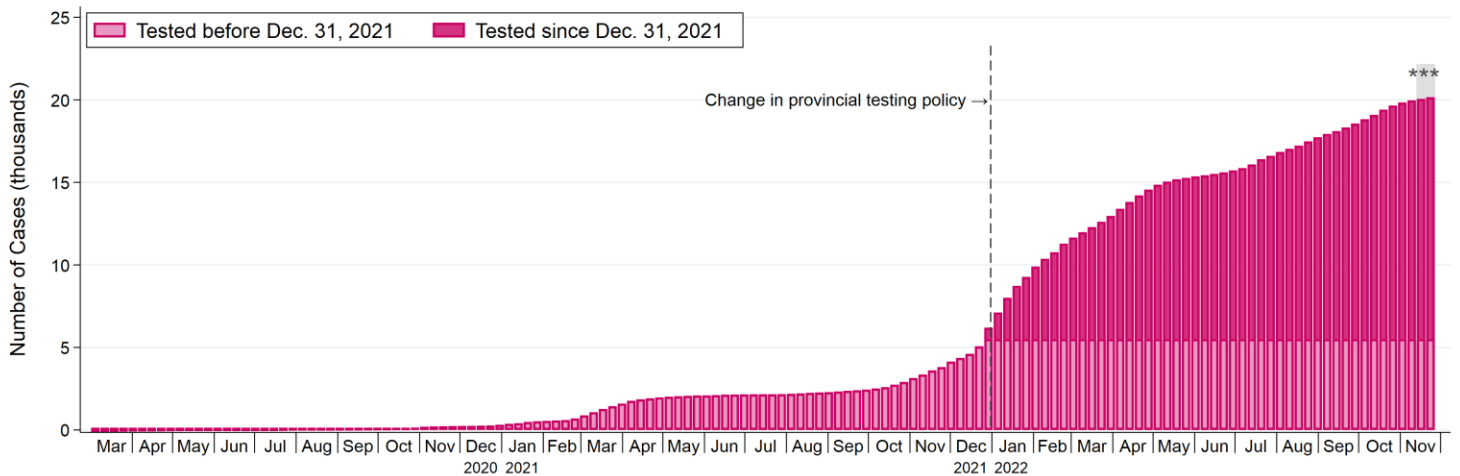
The following graphs show weekly COVID-19 case counts in Sudbury and districts since the first case was reported locally (Figure 5), and the cumulative weekly case count (Figure 6).

**FIGURE 5. Confirmed COVID-19 cases, by week, Sudbury and districts**



Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

**FIGURE 6. Cumulative confirmed COVID-19 cases, by week, Sudbury and districts**



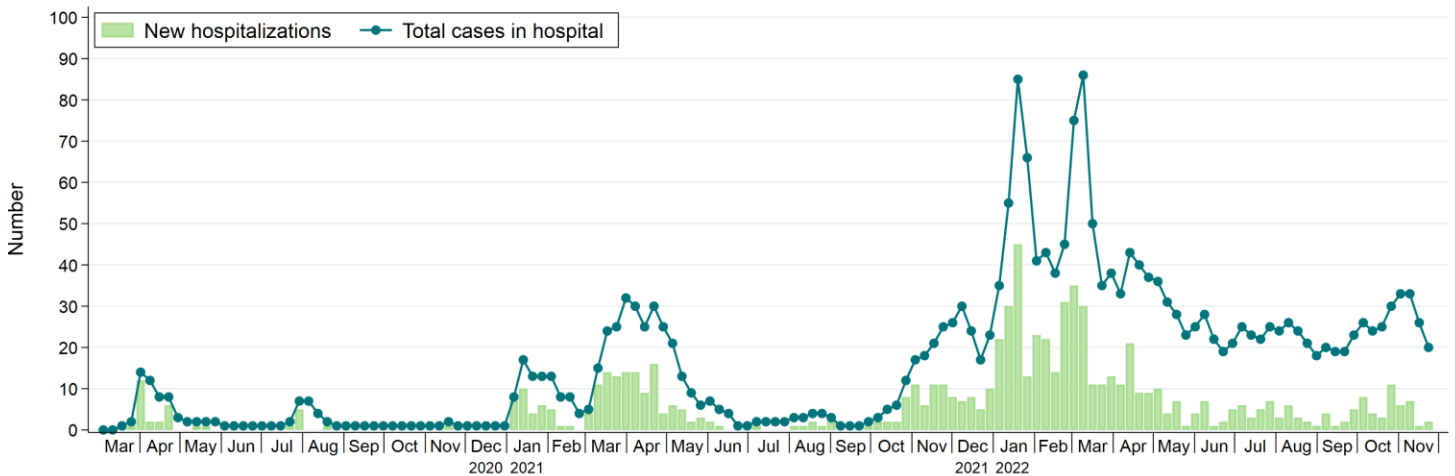
Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

# Hospitalizations among local cases

**Note:** These results come from a different data source than that which are reported on pages 1 and 3 of this report. These pertain to hospitalizations among residents of Sudbury and districts only, whereas reporting by local hospitals may include residents of other geographic areas. There may be delays in public health being notified of the hospitalization of local cases.

As of November 26, 2022, there have been **767** total hospitalizations due to COVID-19 among cases residing in Sudbury and districts. Figure 7, below, shows the number of new hospitalizations each week, along with the total number of residents in hospital due to COVID-19 at any point during that week.

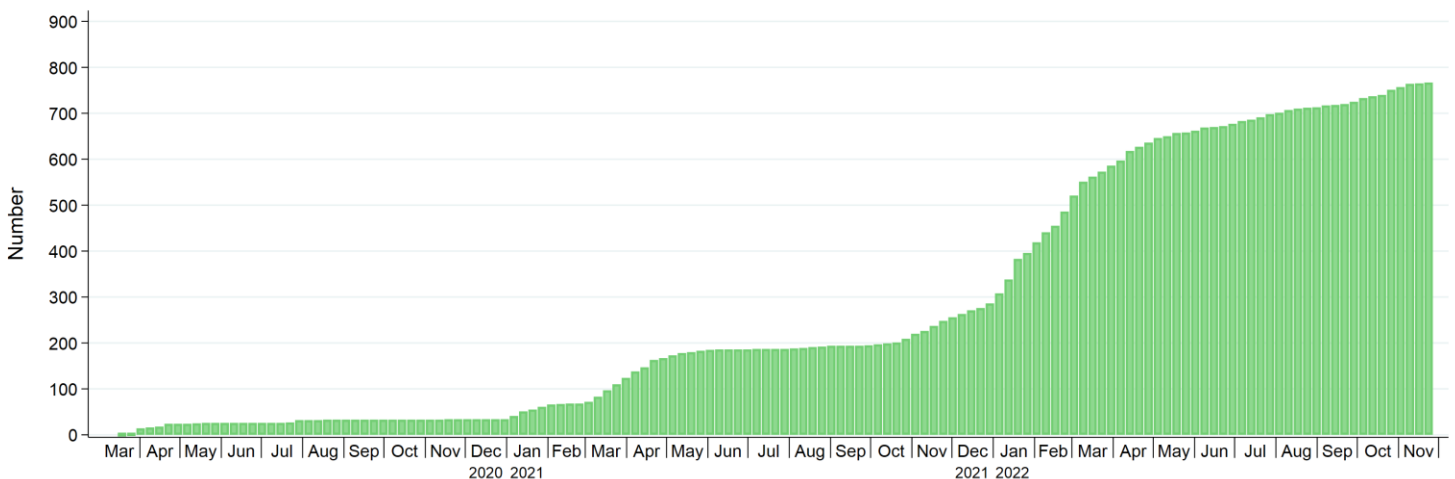
**FIGURE 7. New and total COVID-19 cases in hospital, by week, Sudbury and districts**



Cases hospitalized prior to acquiring their infection are counted only when they became an active case of COVID-19. Cases remaining in hospital following resolution of their infection are not counted once released from public health follow-up. These data exclude residents of other geographic regions receiving treatment at local hospitals unless their case is being managed by Public Health Sudbury & Districts. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

Figure 8 presents the cumulative count of new hospitalizations for COVID-19, by week.

**FIGURE 8. Cumulative hospitalizations among COVID-19 cases, by week, Sudbury and districts**



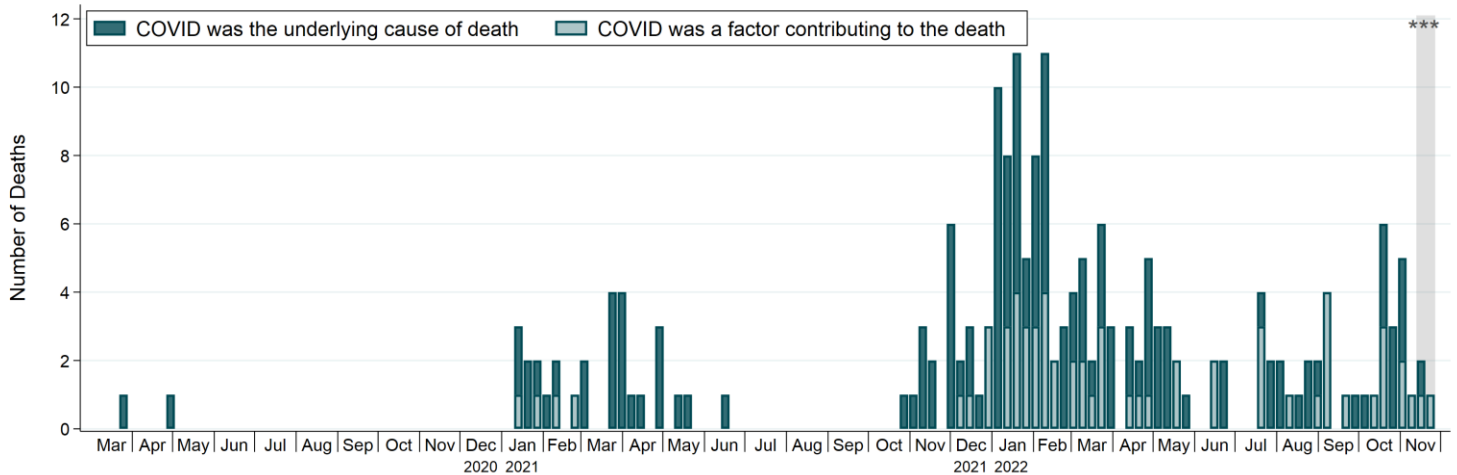
Cases hospitalized prior to acquiring their infection are counted only when they became an active case of COVID-19. These data exclude residents of other geographic regions receiving treatment at local hospitals unless their case is being managed by Public Health Sudbury & Districts. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

# COVID-19-related deaths

A COVID-19-related death is one in which COVID-19 is either the underlying cause of death, such as in deaths due to COVID pneumonia, or where COVID-19 has contributed to a death from other causes, such as a cardiac arrest. Deaths among COVID-19 cases in which COVID-19 did not play a role in the death are excluded from these counts.

As of November 26, 2022, there have been **194** COVID-related deaths among local residents since the start of the pandemic. COVID-19 was the underlying cause of death in **132** of these deaths and was a factor contributing to **56** other deaths. The cause of **6** additional deaths is currently unknown. There have been **3** COVID-19-related deaths in the past 14 days. Figure 9, below, shows the occurrence of COVID-19-related deaths by week since the start of the pandemic.

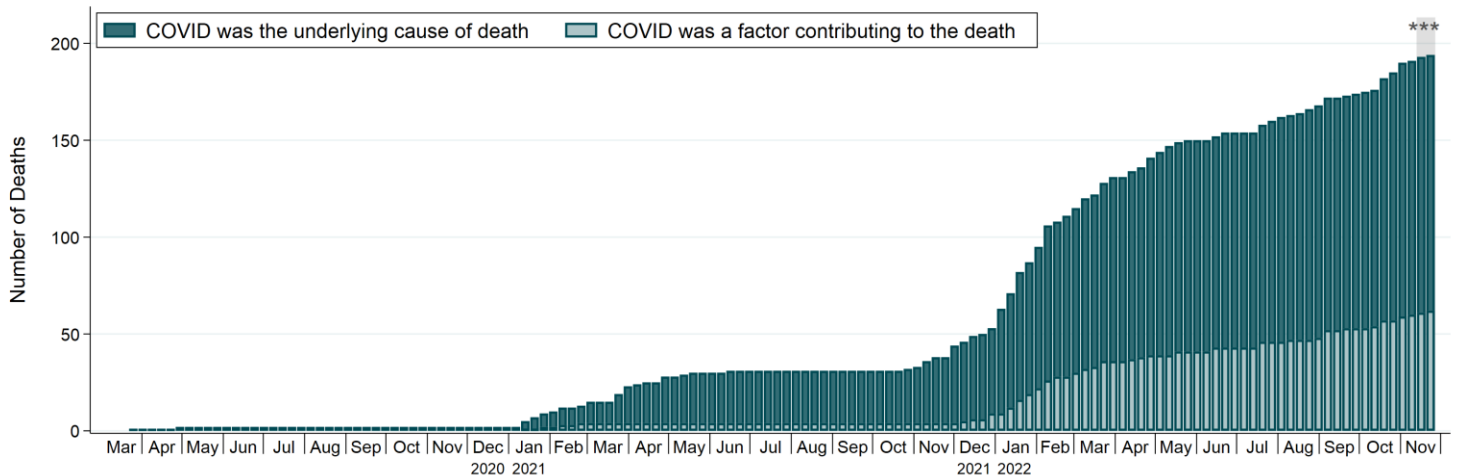
**FIGURE 9. COVID-related deaths, by week and type of death, Sudbury and districts**



\*\*\*Preliminary data, as there may be delays in a COVID-related death being reported to public health. Deaths among COVID-19 cases in which COVID-19 was not either the underlying cause of death, or a factor contributing to the death, were excluded. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM) November 29, 2022.

Figure 10, below, shows the cumulative count of local deaths by week.

**FIGURE 10. Cumulative COVID-related deaths, by week and type of death, Sudbury and districts**



\*\*\*Preliminary data, as there may be delays in a COVID-related death being reported to public health. Deaths among COVID-19 cases in which COVID-19 was not either the underlying cause of death, or a factor contributing to the death, were excluded. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM) November 29, 2022.

## Outbreaks

An outbreak may be declared within a given setting, such as a hospital, long-term care home, retirement home, or community congregate living setting, if there are two or more cases of COVID-19 in a 10-day period that have some link with each other with evidence that infection occurred in that setting. Public Health assesses each unique situation in determining if an outbreak should be declared, including, for example, occupation, exposures in the home, symptoms of the case, specific risk factors, and local epidemiology.

Prior to changes to provincial case and contact management guidance made on December 31, 2021, numerous outbreaks were declared in schools, workplaces, and in other locations or groups within the community. Following those changes, community outbreak investigations now focus on the highest-risk settings in our community, primarily locations where vulnerable people gather and/or live together such as group homes, shelters, hospices, and correctional institutions.

As of November 26, 2022, Public Health had declared 373 COVID-19 outbreaks in various local settings, as shown in Table 2, below.

**TABLE 2. Number of COVID-19 outbreaks declared, by type of setting and by year, Sudbury and districts**

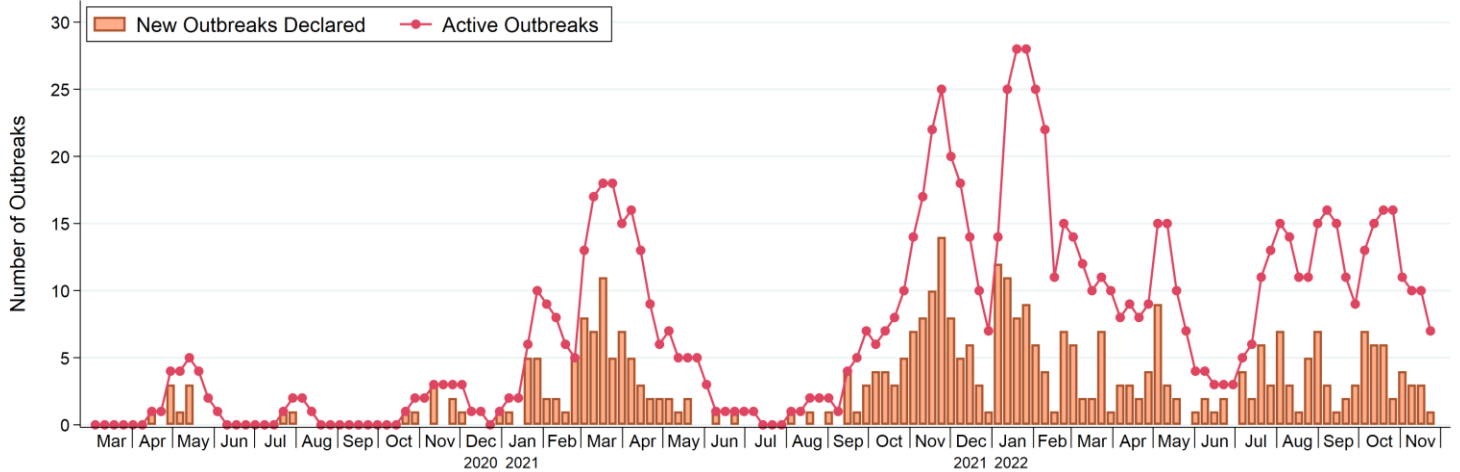
Type of Setting	Declared in 2020	Declared in 2021	Declared in 2022*	Currently Active
Hospital	0	9	60	1
Long-term care and retirement homes	14	18	64	5
Congregate living settings	0	15	63	0
Schools and daycares	2	64	0	0
Workplaces	0	46	0	0
Other settings	3	15	0	0
<b>TOTAL</b>	<b>19</b>	<b>167</b>	<b>187</b>	<b>6</b>

\*Year to date. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.



Figure 11, below, shows the number of new and active local outbreaks declared each week.

**FIGURE 11. New and active COVID-19 outbreaks, by week, Sudbury and districts**



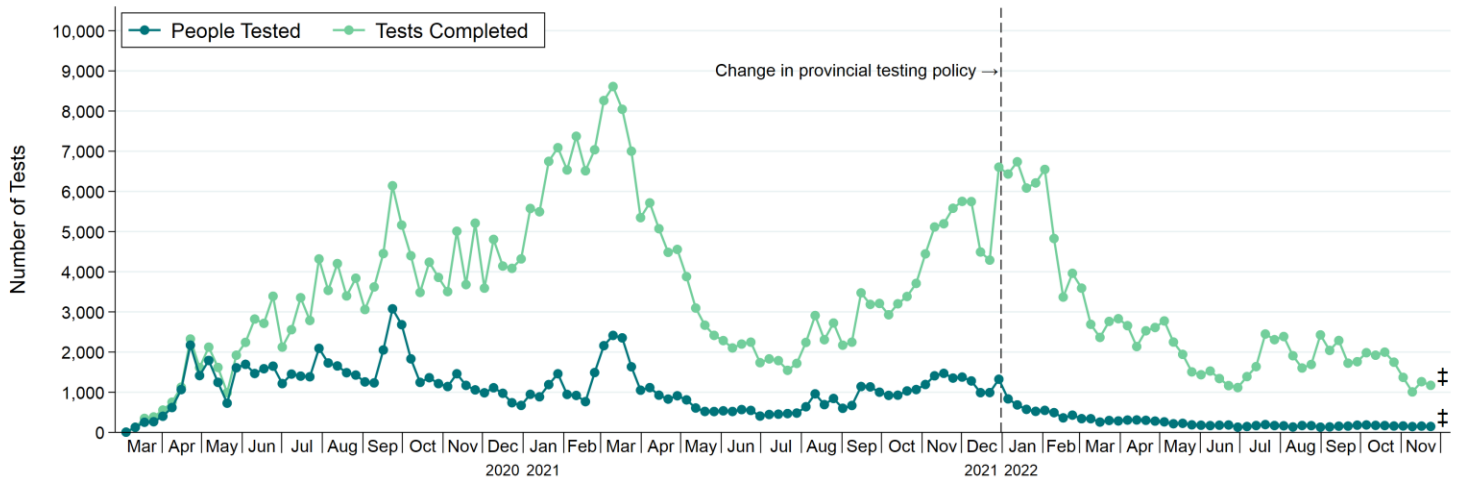
Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

## Testing

As of November 26, 2022, there had been **477,439** tests for COVID-19 among residents of Sudbury and districts. This includes preliminary counts of tests completed in the previous 6 days. Note that an individual can be tested on multiple occasions, and that samples collected on each such occasion may undergo multiple laboratory tests, which are counted separately.

Figure 12, below, shows the number of tests completed each week, as well as the number of individual people tested.

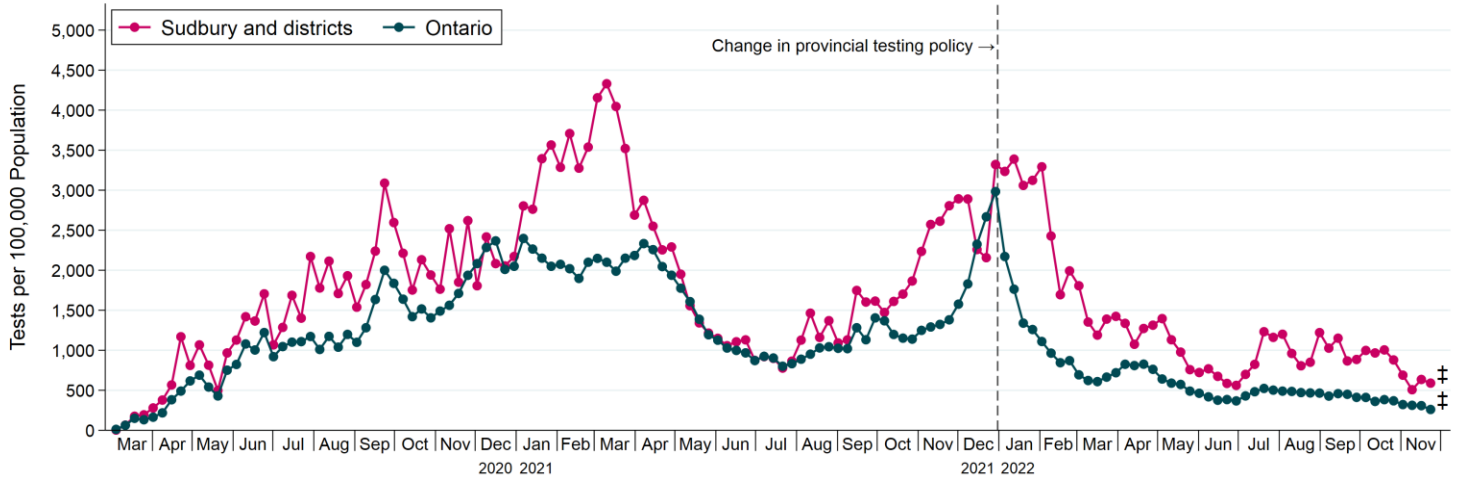
**FIGURE 12. Number of tests and people tested, by week, Sudbury and districts**



‡ Preliminary data. An individual may be tested on multiple occasions, and the samples collected may undergo multiple tests, each counted separately. Data source: Ontario Ministry of Health, Ontario Laboratories Information System (OLIS), accessed via the COVID-19 Dashboard, November 29, 2022.

Figure 13, below, shows the rate of tests completed per 100,000 population in Sudbury and districts compared to Ontario, overall. Note that if two regions have equivalent prevalence rates of COVID-19, a higher rate of testing will likely result in a larger number of COVID-19 cases being identified and reported, and thus a higher reported incidence rate.

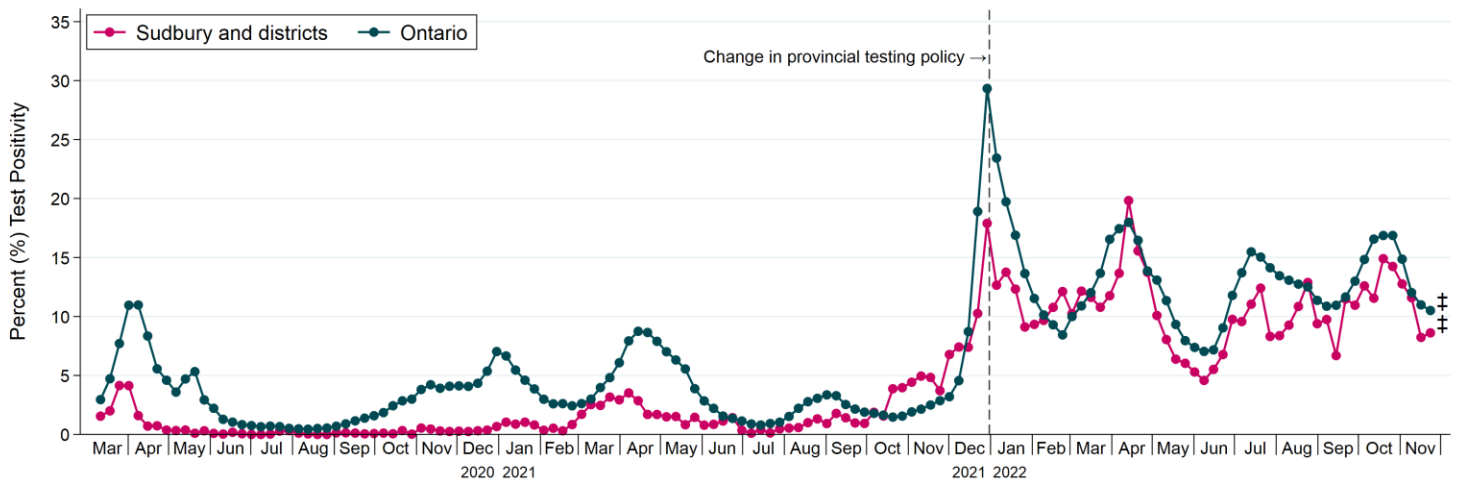
**FIGURE 13. Rate of tests per 100,000 population, by week and geographic region**



‡ Preliminary data. An individual may be tested on multiple occasions, and the samples collected may undergo multiple tests, each counted separately. Data source: Ontario Ministry of Health, Ontario Laboratories Information System (OLIS), accessed via the COVID-19 Dashboard, November 29, 2022.

Figure 14, below, shows the percent test positivity in both Sudbury and districts and in Ontario overall. This is the percentage of all laboratory tests completed that are positive for COVID-19. A high rate of test positivity (for example, 5% or above) can mean rates of transmission are high, rates of testing are too low, or both. Either way, it indicates that there are likely more people in the community who are positive for COVID-19 but haven't been tested yet.

**FIGURE 14. Percent positivity of COVID-19 tests, by week and geographic region**



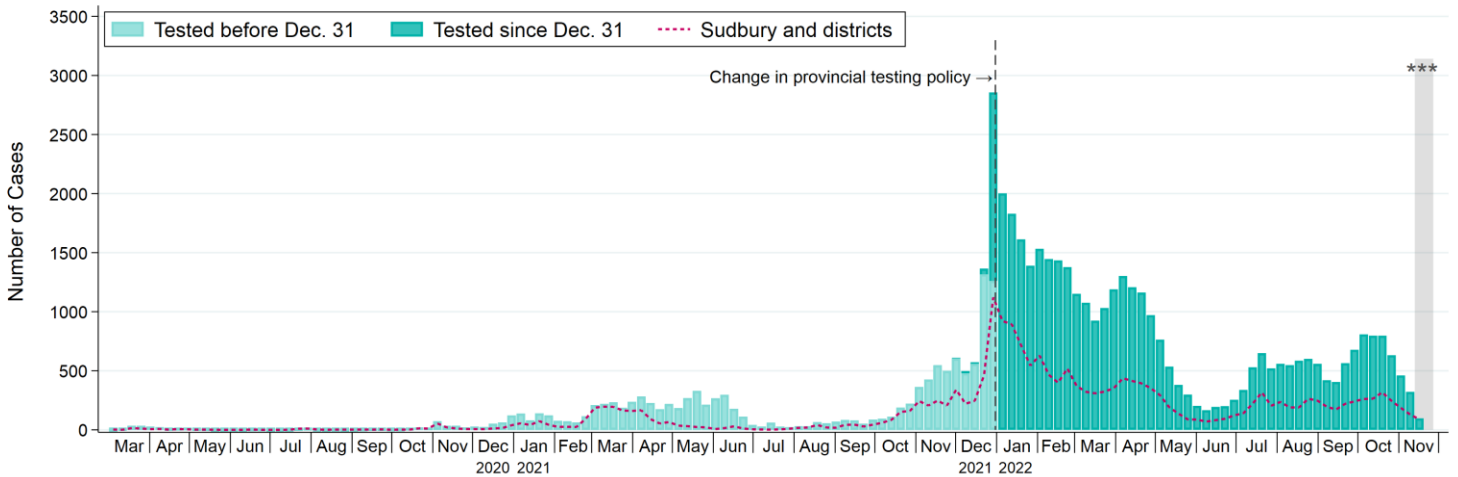
‡ Preliminary data. Samples collected may undergo multiple tests, each counted separately. Data source: Ontario Ministry of Health, Ontario Laboratories Information System (OLIS), accessed via the COVID-19 Dashboard, November 29, 2022.

# Regional context

## Case counts by week

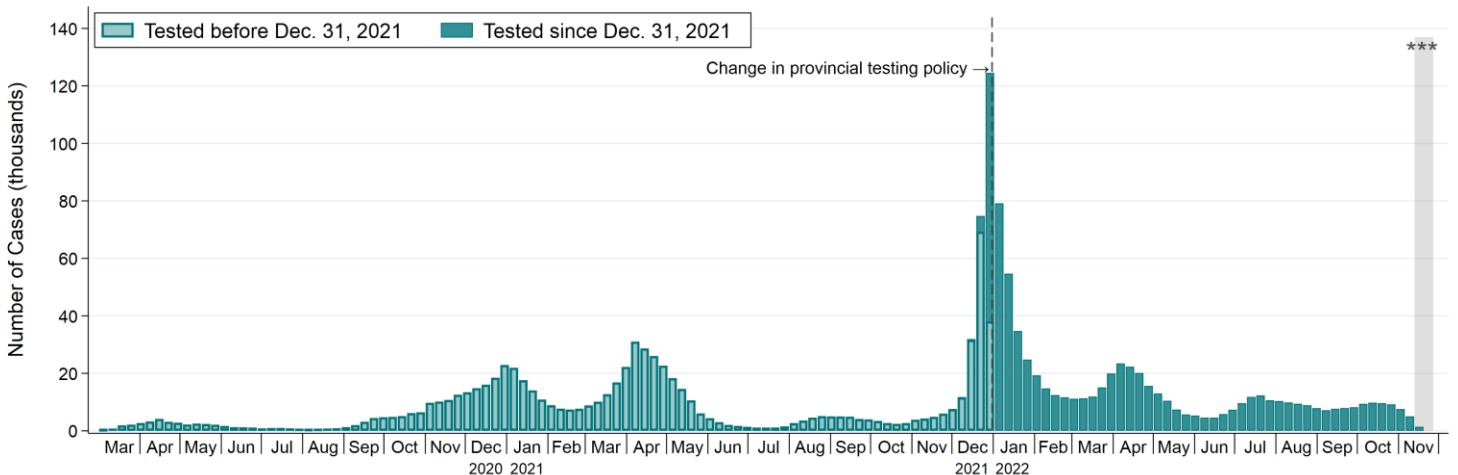
Figure 15, below, shows the number of newly reported COVID-19 cases by week in Northeastern Ontario and how many of those resided in Sudbury and districts. Figure 16 shows the weekly count in Ontario overall. Note that the vertical axis in the Ontario graph is very different, since provincial case counts are much higher than local counts.

**FIGURE 15. Confirmed COVID-19 cases, by week, Sudbury and districts and Northeastern Ontario**



Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

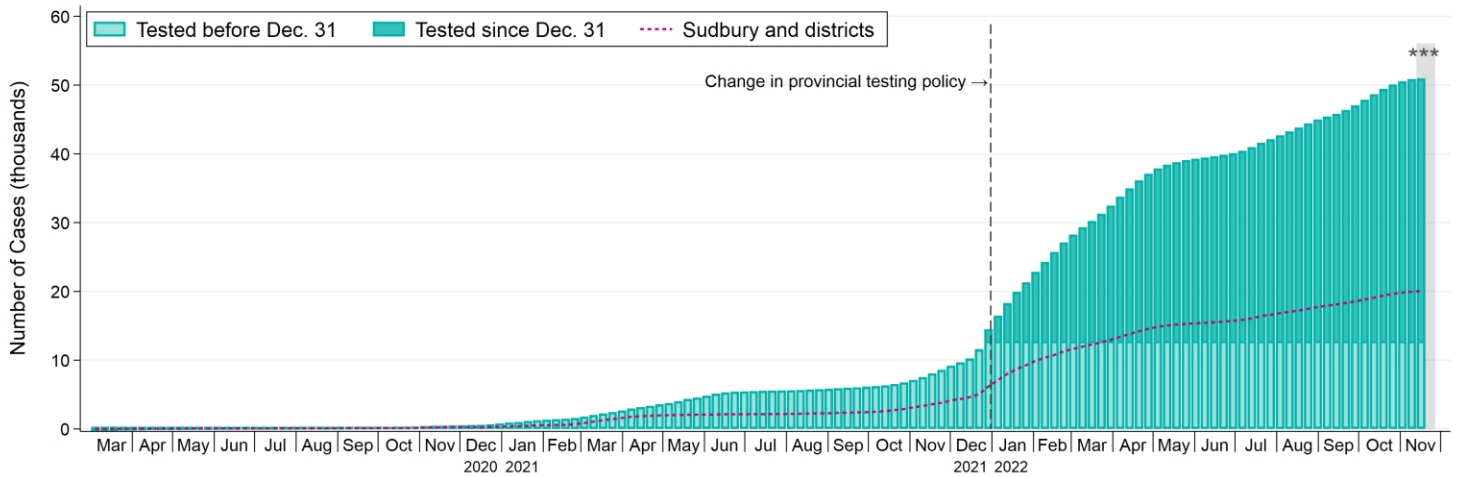
**FIGURE 16. Confirmed COVID-19 cases, by week, Ontario**



Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

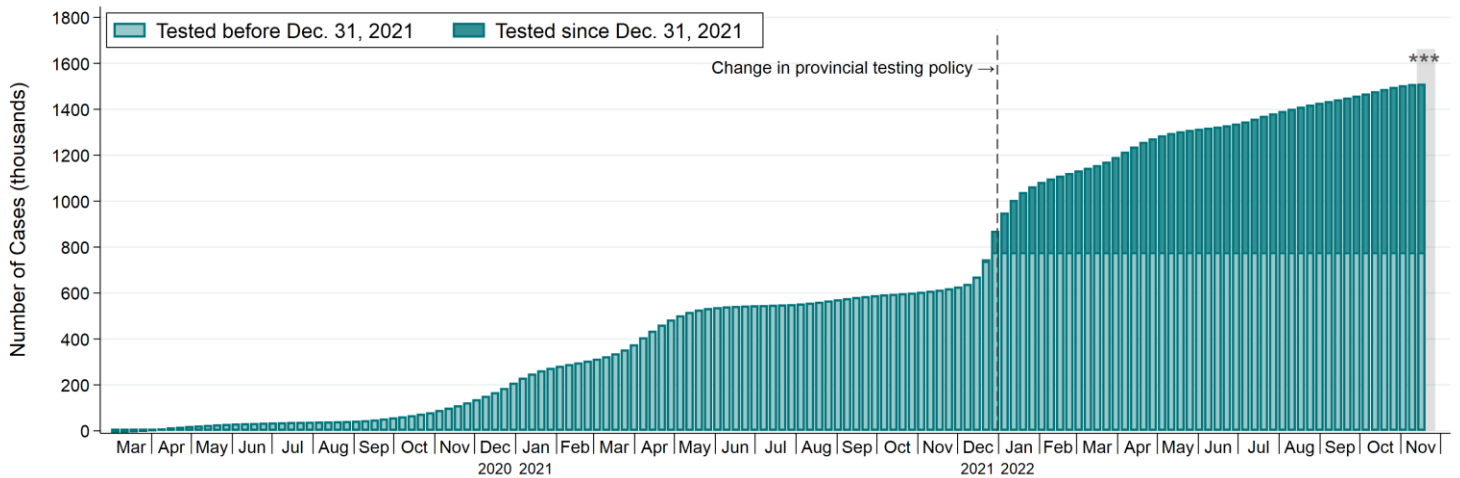
Figures 17 and 18 present a comparison of cumulative weekly case counts by region. Again, note the difference in the vertical axis for the Ontario graph.

**FIGURE 17. Cumulative confirmed COVID-19 cases, by week, Sudbury and districts and Northeastern Ontario**



Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

**FIGURE 18. Cumulative confirmed COVID-19 cases, by week, Ontario**

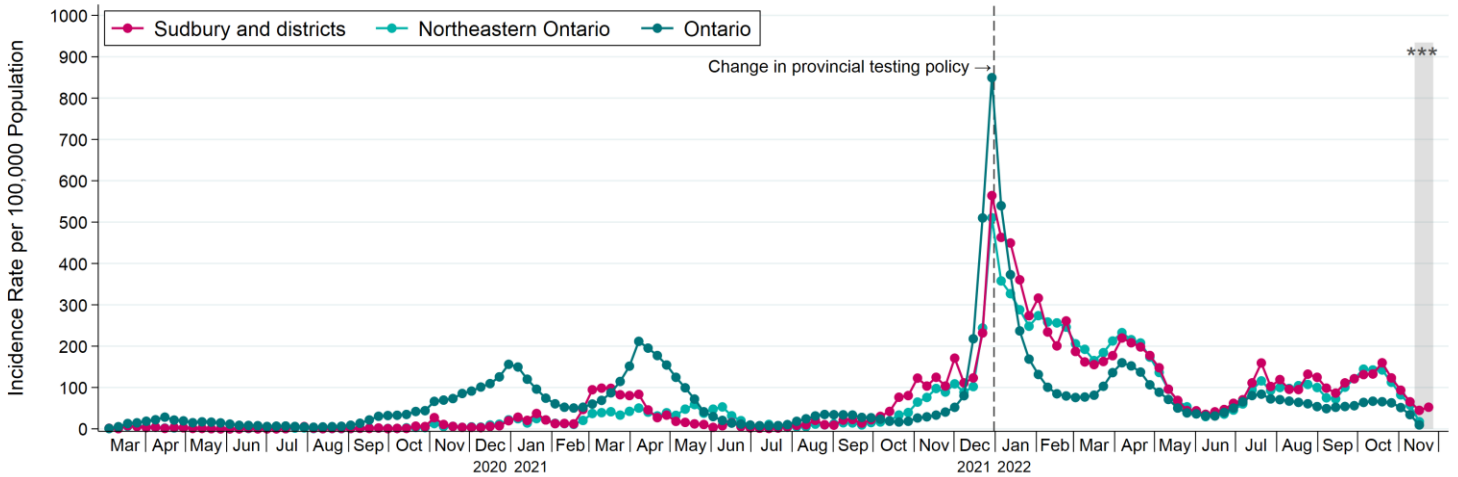


Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022.

# Incidence rates by week

Figure 19, below, presents weekly COVID-19 incidence rates by geographic region. These rates are the number of new cases of COVID-19 each week per 100,000 people in the population.

**FIGURE 19. Incidence rate of COVID-19 per 100,000 population, by week and geographic region**



Weeks represent the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. Due to changes in provincial testing policy effective December 31, 2021, confirmed cases are an underestimate of the true number of people with COVID-19. \*\*\* Infections occurring during this period may not yet be detected and/or reported. Data Source: (1) Ontario Ministry of Health, Case and Contact Management Solution (CCM), November 29, 2022; (2) Population Projections 2020, Ontario Ministry of Health, IntelliHEALTH Ontario, April 21, 2021

# Vaccination

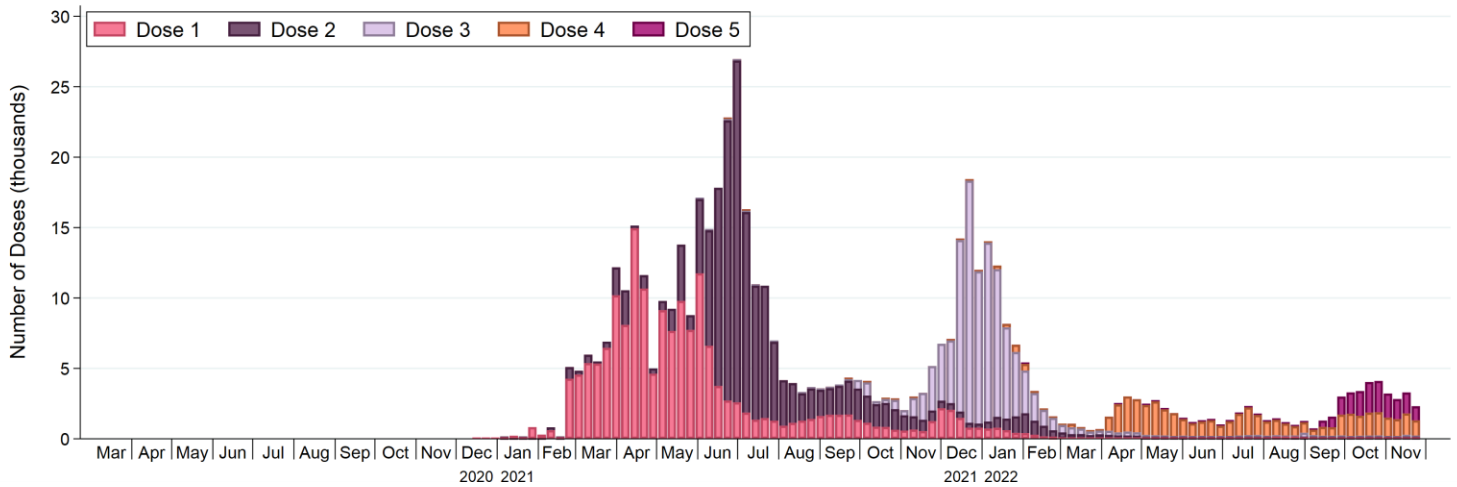
## Doses by week

This section presents information on COVID-19 vaccinations administered in Sudbury and districts, including those administered by Public Health, primary care, pharmacies, hospitals, First Nations, and other partners. Public Health Sudbury & Districts began administering COVID-19 vaccines in late January 2021.

As of November 26, 2022, **516,170** doses of a COVID-19 vaccine had been administered to residents of Sudbury and districts, including **176,325** first doses, **169,419** second doses, **106,655** third doses, **47,839** fourth doses and **15,932** fifth doses.

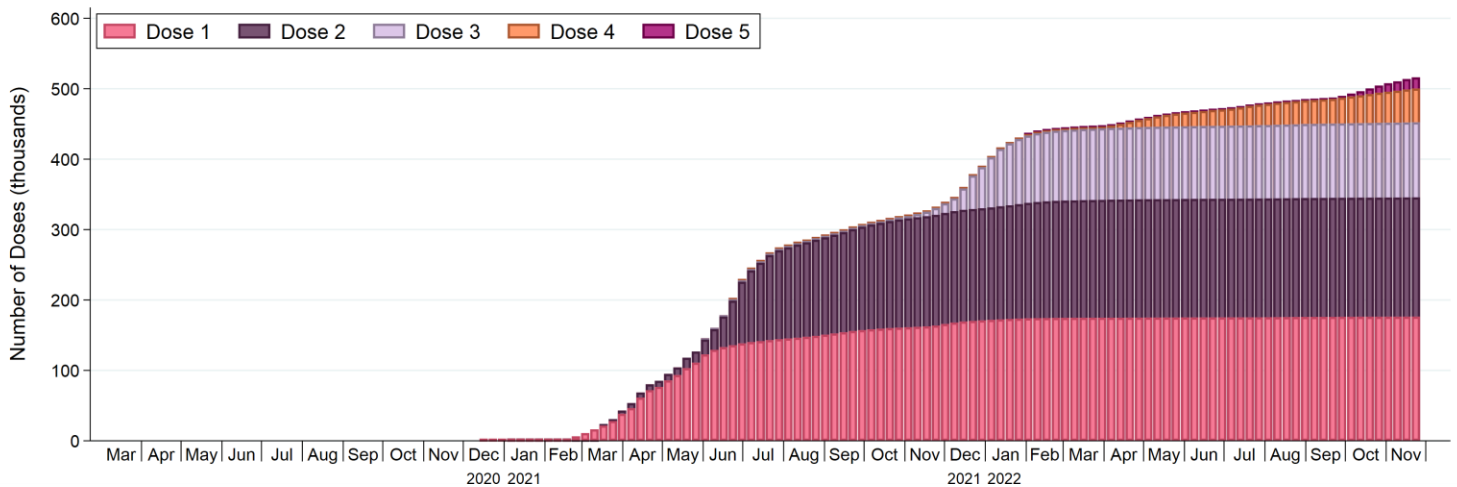
Figures 20 and 21, below, show the weekly and cumulative number of doses administered to local residents, respectively, by week and by dose.

**FIGURE 20. COVID-19 vaccinations received, by week and dose, Sudbury and districts**



Includes all vaccine doses given to residents of Sudbury and districts, including those administered by public health, primary care, hospitals, pharmacies and other partners. Data Source: Ontario Ministry of Health, COVaxON Application, November 29, 2022.

**FIGURE 21. Cumulative COVID-19 vaccinations received, by week and dose, Sudbury and districts**



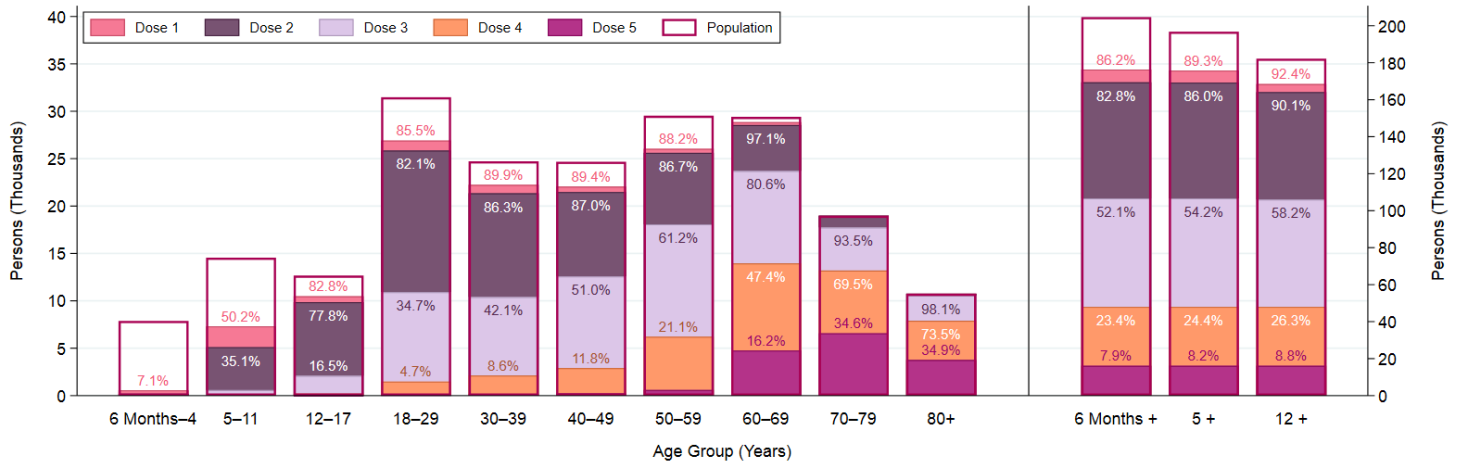
Includes all vaccine doses given to residents of Sudbury and districts, including those administered by public health, primary care, hospitals, pharmacies and other partners. Data Source: Ontario Ministry of Health, COVaxON Application, November 29, 2022.

## Vaccine coverage

All Ontarians aged 6 months and older are eligible to receive two doses of an approved COVID-19 vaccine. All individuals aged 5 years and older are eligible to additionally receive a booster dose at a recommended interval of 6 months, or a minimum of 3 months since their last dose.

Figure 22, below, shows the number of each vaccine dose administered to residents of Sudbury and districts of various ages, as well as the percentage of the population in that age group who have received each dose.

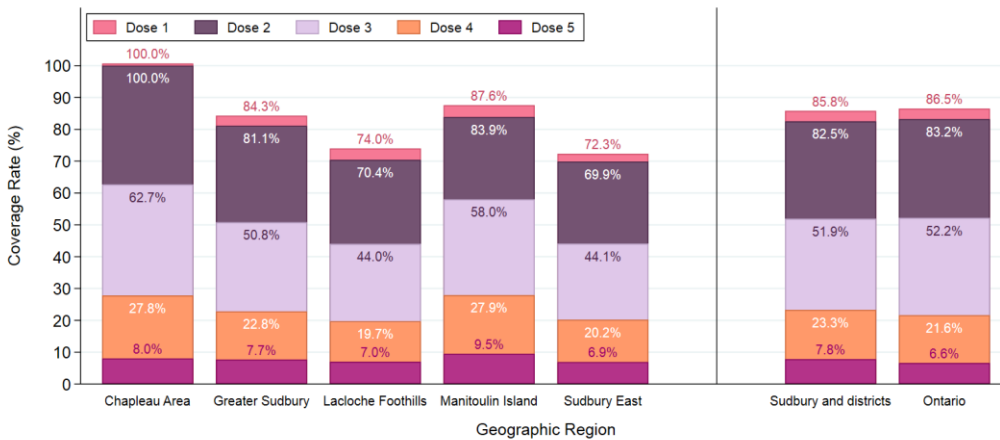
**FIGURE 22. Vaccines administered, number and population coverage, by age and dose, Sudbury and districts**



Bars are overlaid, not stacked. Bar heights represent the number of persons, while the bar labels display the percentage of the population. Age is the clients' current age, not their age on the day they received the vaccine. Includes all vaccine doses given to residents of Sudbury and districts, including those administered by public health, primary care, hospitals, pharmacies and other partners. Data Source: Ontario Ministry of Health, COVaxON Application, November 29, 2022; Statistics Canada Population Estimates, 2021; Ontario Data Catalogue, COVID-19 Vaccine Data by Age, November 29, 2022.

Figure 23, below, presents the vaccine coverage rate by dose and geographic region.

**FIGURE 23. Vaccine coverage rate (%), by dose and geographic region, Sudbury and districts**



Bars are overlaid, not stacked. Approximately 2% of doses could not be mapped to a particular geographic area due to gaps in data entry, and are therefore excluded from the sub-regional coverage estimates. They are, however, included in estimates for Sudbury and districts and Ontario. Includes all vaccine doses given to residents of Sudbury and districts, including those administered by public health, primary care, hospitals, pharmacies and other partners. Data Source: Ontario Ministry of Health, COVaxON Application, November 29, 2022; Statistics Canada Population Estimates, 2021.

## Adverse events following immunization (AEFIs)

An adverse event following immunization (AEFI) is an unwanted or unexpected health effect that happens after someone receives a vaccine, which may or may not be caused by the vaccine. Health care providers are required by law to report AEFIs to public health, and vaccine recipients or their caregivers may also voluntarily report AEFIs. These reports are an important part of public health's continuous monitoring of vaccines for safety. Of particular importance are events which require medical consultation, or unusual or unexpected events. Common or mild events do not need to be reported such as fever not accompanied by any other symptoms, injection site reactions that last less than four days, fainting, or events that are clearly attributable to other causes.

As of November 26, 2022, **439** AEFIs have been reported among residents of Sudbury and districts. This represents **0.088%** of the 496,302 doses administered in Ontario to local residents. Table 5, below, summarizes the number and rates of AEFIs reported per 100,000 doses administered, by brand/product.

**TABLE 3. Adverse events following immunization (AEFIs), count and rate, by Product, Sudbury and districts**

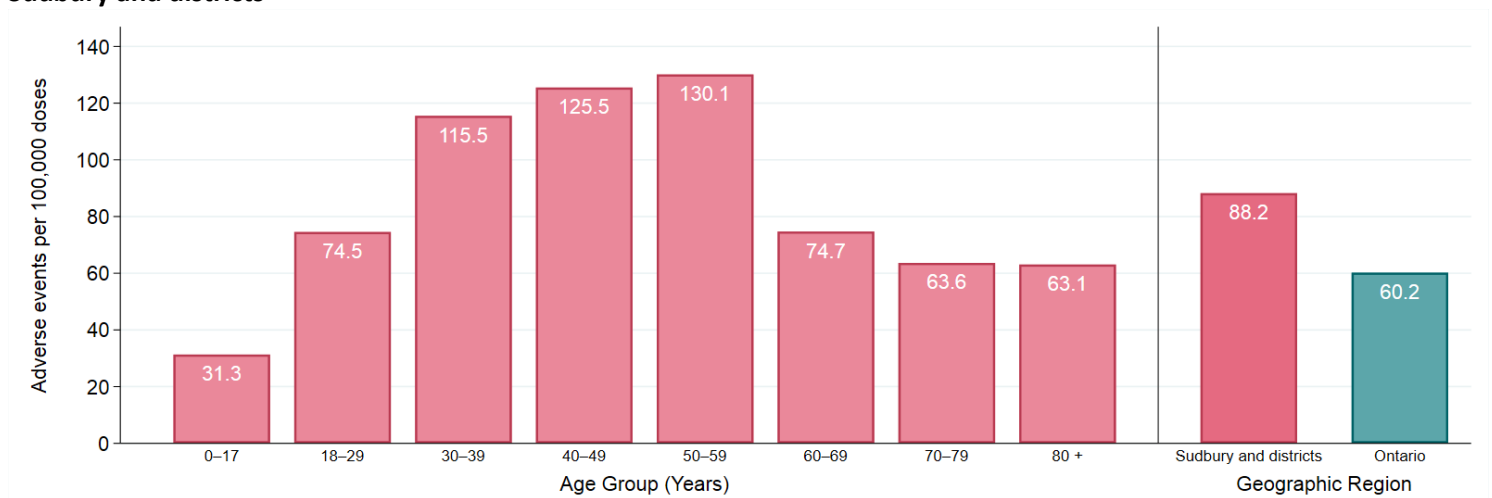
Product Name	Number of AEFIs	Total Doses Administered	Rate of AEFIs per 100,000 Doses
Pfizer-BioNTech Comirnaty, Adult	230	296,045	77.7
Pfizer-BioNTech Comirnaty, Bivalent	0	6,270	0.0
Pfizer-BioNTech Comirnaty, Pediatric	4	14,936	26.8
Pfizer-BioNTech Comirnaty, Infant	0	31	0.0
Moderna Spikevax	188	165,967	113.3
Moderna Spikevax, Bivalent	1	8,562	11.7
AstraZeneca Vaxzevria***	13	4,136	314.3
Janssen (Johnson & Johnson)	2	74	2,702.7
Other brands	1	281	355.9
<b>TOTAL</b>	<b>439</b>	<b>496,302</b>	<b>88.5</b>

Includes all vaccine doses given to residents of Sudbury and districts, including those administered by public health, primary care, hospitals, pharmacies and other partners, but excluding doses administered outside the province. \*\*\*Astrazeneca Vaxzevria was only administered locally from April 5 to August 30, 2021. Data Source: Ontario Ministry of Health, Case and Contact Management (CCM) Solution, November 29, 2022; Ontario Ministry of Health, COVaxON Application, November 29, 2022.



Figure 24, below, shows the rate of AEFIs by age group, and for all ages by geographic region.

**FIGURE 24. Rate of adverse events following immunization (AEFIs) per 100,000 doses, by age and geographic region, Sudbury and districts**



Due to a relatively small number of events and the resulting statistical instability, these rates should be interpreted with caution. Includes all vaccine doses given to residents of Sudbury and districts, including those administered by public health, primary care, hospitals, pharmacies and other partners. Age is the age of the client on the day the AEFI was reported. Data Sources: Ontario Ministry of Health, COVaxON Application, November 29, 2022; Ontario Ministry of Health, Ontario Ministry of Health, Case and Contact Management (CCM) Solution, November 29, 2022.