Public Health Sudbury & Districts Coronavirus Disease 2019 (COVID-19) Epidemiology Update

All information in this report is based on data available from Public Health Sudbury & Districts as of 4:00 PM November 21, 2021, unless otherwise specified.

Highlights

Active COVID-19 Cases and Outbreaks

As of November 21, 2021, Public Health Sudbury & Districts was reporting:

- **258** active cases of COVID-19, of which:
    - **118** active cases (**45.7%**) were 19 years old or younger
    - **32** active cases (**12.4%**) were 60 years old or older
    - **38** active cases (**14.8%**) were linked to an outbreak
    - **69** active cases (**27.0%**) had no known epidemiological link (unknown exposure)
- **7** new hospitalizations due to COVID-19 in the past 7 days, with **21** cases in hospital at some point during that time.
- **3** active outbreaks declared in local hospitals, long-term care homes and retirement homes
- **16** active outbreaks declared in local schools and licensed daycares
- **5** active outbreaks declared in other community settings

Total COVID-19 Cases and Outbreaks

Since the beginning of the pandemic, Public Health Sudbury & Districts has reported:

- **3,572** cases of COVID-19, of which:
    - **893** cases (**25.0%**) were 19 years old or younger
    - **550** cases (**15.4%**) were 60 years old or older
    - **830** cases (**23.2%**) are linked to an outbreak
    - **687** cases (**19.2%**) have no known epidemiological link (unknown exposure)
- **201** hospitalizations due to COVID-19
- **37** deaths due to COVID-19. The local *case fatality rate* is **1.0%** (i.e., *Total Deaths / Total Cases x 100%*)
- **37** outbreaks declared in local hospitals, long-term care homes and retirement homes
- **51** outbreaks declared in local schools and licensed daycares
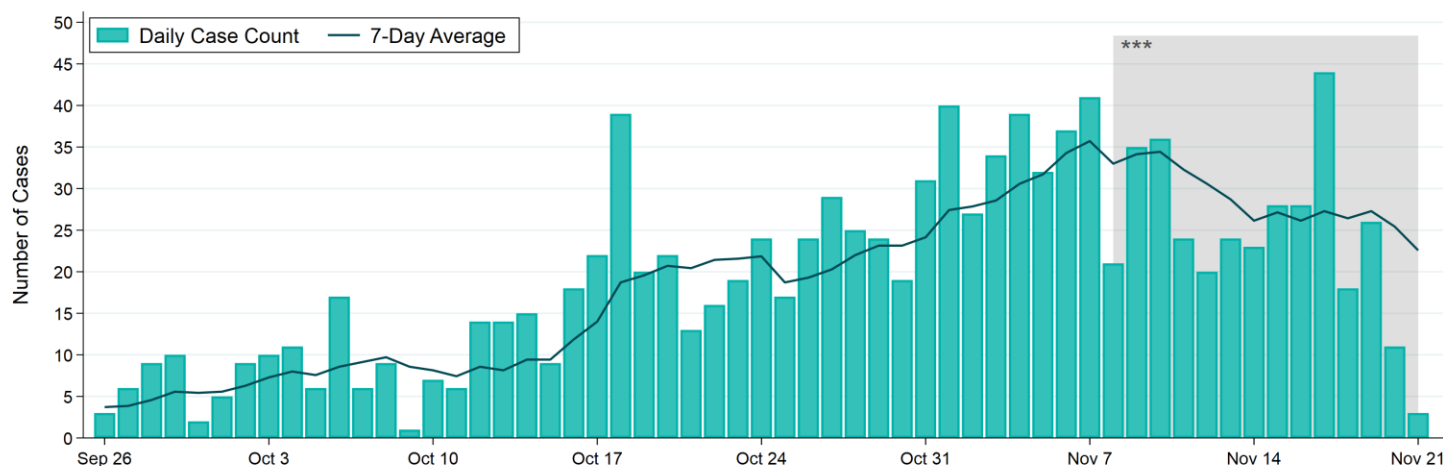- **65** outbreaks declared in other community settings

Epidemiology – Sudbury and Districts

Current Status

Public Health Sudbury & Districts has reported **3,572** cases of COVID-19 since the start of the pandemic. Of these, **258** cases (**8.4%**) are currently active, and **37** (**1.0%**) cases have died from COVID-19.

The current 7-day average rate of new COVID-19 cases is **18.7** cases per day.
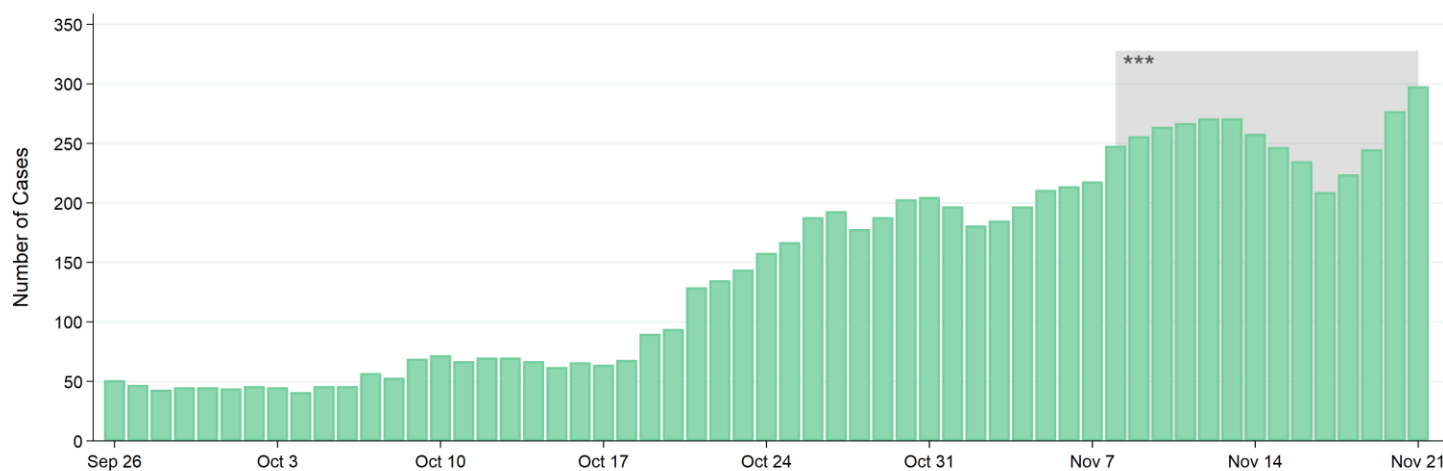
FIGURE 1. Daily confirmed COVID-19 cases and rolling 7-day average, past 8 weeks, Sudbury and districts

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.
*** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)

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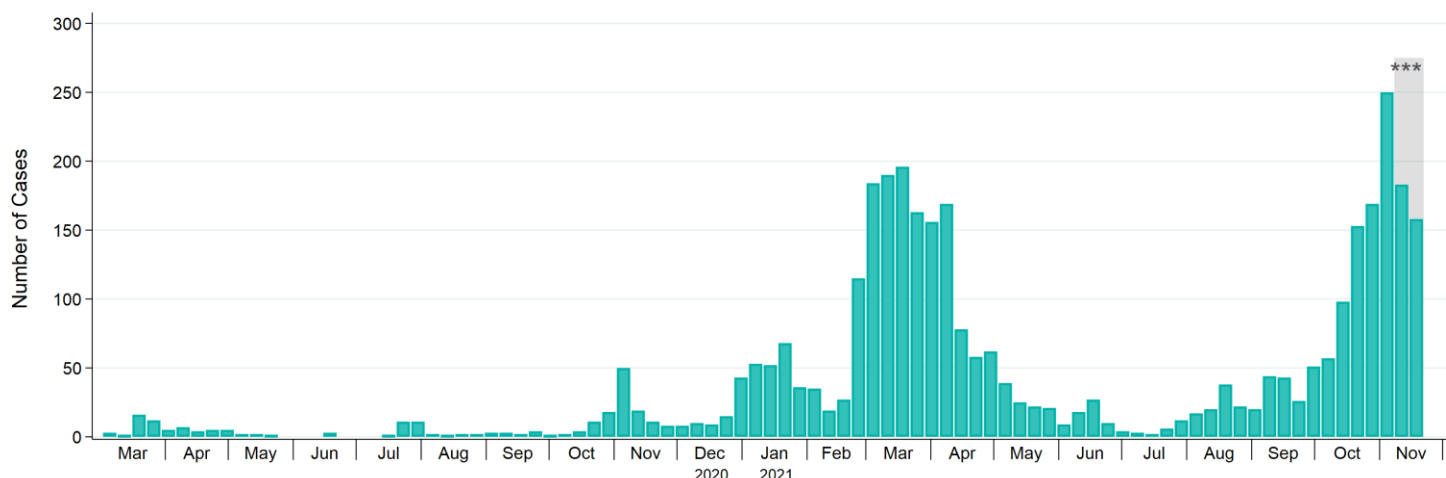

*** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)
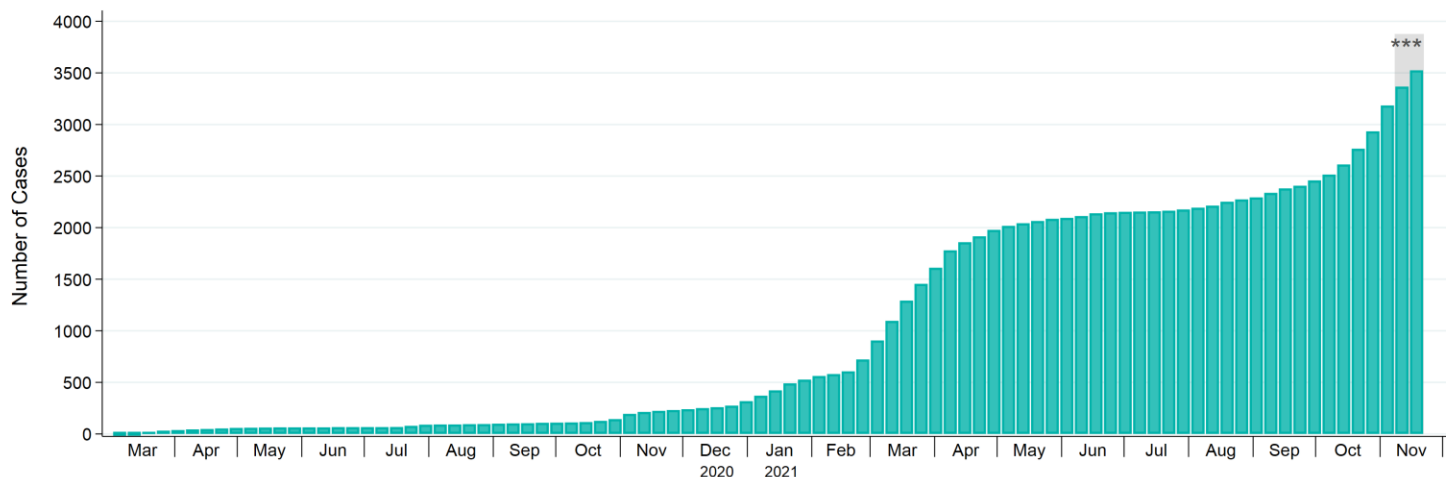
Case Counts by Week

The following graphs show weekly COVID-19 case counts in Sudbury and districts since the first case was reported locally (Figure 3), and the cumulative weekly case count (Figure 4).

FIGURE 3. Confirmed COVID-19 cases, by week, Sudbury and districts

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)

FIGURE 4. Cumulative confirmed COVID-19 cases, by week, Sudbury and districts

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)

Case Characteristics

Table 1, below, summarizes the number and percentage of total and active COVID-19 cases in Sudbury and districts by various characteristics, including age, sex, location and whether they have screened positive for a variant of concern (VOC).

TABLE 1. Number and Percentage of Cases, by Various Characteristics

Characteristic	Total Cases	Percentage (%)	Active Cases	Percentage (%)
Numbers of Cases	3,572	100%	258	100%
Change from 7 days ago	212	6.3%*	40	15.5%*
Cases screening positive for a variant of concern (VOC)	1,824	51.1%	-	-
Sex: Male	1,368	38.3%	64	24.8%
Sex: Female	1,326	37.1%	91	35.3%
Sex: Not specified**	877	24.6%	103	39.9%
Ages: 19 and under	893	25.0%	118	45.7%
Ages: 20-39	1,290	36.1%	67	26.0%
Ages: 40-59	838	23.5%	41	15.9%
Ages: 60-79	417	11.7%	29	11.2%
Ages: 80 and over	133	3.7%	3	1.2%
Ages: Not specified**	0	0.0%	0	0.0%
Area: Greater Sudbury	3,302	92.4%	227	88.0%
Area: Manitoulin District	99	2.8%	8	3.1%
Area: Sudbury District, North	15	0.4%	0	0.0%
Area: Sudbury District, West	91	2.5%	11	4.3%
Area: Sudbury District, East	65	1.8%	12	4.7%

*Percent change represents the degree of change over time, calculated: (New-Original)/Original

**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: Public Health Sudbury & Districts

Variants of Concern (VOCs)

COVID-19 variants of concern (VOC) are genetic mutations to the virus that may result in the infection being more easily transmissible, cause more severe illness, or both. In total, **1,824** cases have screened positive for a VOC in Sudbury and districts.

Note: as of November 12, 2021, routine testing of positive COVID-19 samples for VOCs is no longer being conducted. Certain eligible samples will now be forwarded for whole genome sequencing, which can take many weeks to complete. Starting November 23rd, 2021, Public Health Sudbury & Districts will no longer be reporting VOCs among active cases in this report.

Table 2, below, shows counts of cases identified as confirmed or probable VOCs in Sudbury and districts by lineage or, when lineage is not available, by the results of screening for mutations of interest prior to this practice being discontinued on November 12, 2021.
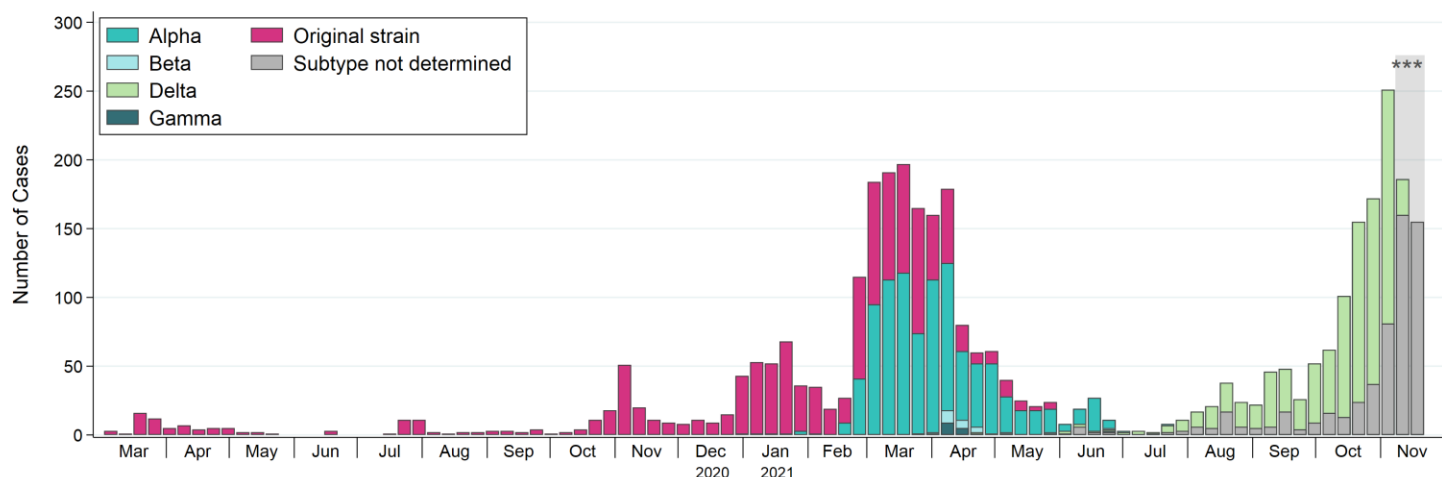
TABLE 2. Number of confirmed and probable COVID-19 variants of concern, by lineage / mutation

Subtype Classification	Lineage / Mutation	Total Cases	Active Cases
Alpha	Lineage B.1.1.7	73	0
Beta	Lineage B.1.351	11	0
Delta	Lineage B.1.617.2	117	1
Gamma	Lineage P.1	5	0
Probable Alpha*	Mutation N501Y(+)	876	0
Probable Beta	Mutation N501Y(+), Mutation E484K(+), Mutation K417N(+)	2	0
Probable Beta/Gamma*	Mutation N501Y(+), Mutation E484K(+)	10	0
Probable Delta*	Mutation N501Y(-), Mutation E484K(-)	725	13
Probable Gamma	Mutation N501Y(+), Mutation E484K(+), Mutation K417T(+)	5	0

A "probable" classification is based on a combination of routine testing for mutations, which was discontinued as of November 12, 2021, along with local epidemiology. *Many variant cases were screened prior to the development of additional tests for newly identified mutations/variants. They are usually not retested. The presence of Mutation N501Y in the absence of evidence of other mutations is presumed to indicate the Alpha variant, which was dominant in Ontario during the third wave. ** There is not yet a screening test for the mutation associated with the Delta variant. It tests negative for Mutations N501Y and E484K, as does the original strain of COVID-19. All cases testing negative for both these mutations after June 1, 2021 – by which time the Delta variant was the dominant strain in Ontario – are presumed to be Delta. Data source: Public Health Sudbury & Districts

Figure 5, below, presents weekly COVID-19 case counts by their VOC subtyping results, if available.

FIGURE 5. COVID-19 cases, by week and confirmed or presumed VOC lineage, Sudbury and districts

Routine testing for VOCs was discontinued as of November 12, 2021. Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data source: Public Health Sudbury & Districts

Probable Exposure

Table 3, below, summarizes how local COVID-19 cases are thought to have acquired their COVID-19 infection. Both total and active cases are presented. Exposure categories are assigned using the hierarchy shown in the table for prioritization. This means that if a case might have acquired their infection in multiple different ways, the exposure classification shown higher in the table below will be assigned.
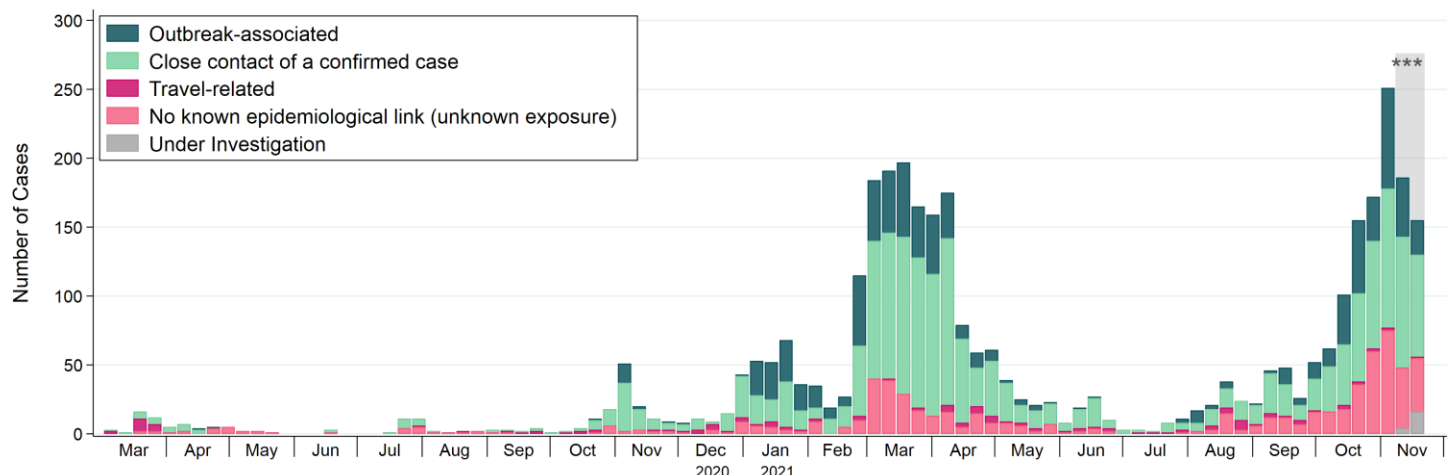
TABLE 3. Cases, by probable exposure, Sudbury and districts

Exposure	Total Cases	Percentage (%)	Active Cases	Percentage (%)
Outbreak-associated	830	23.2%	38	14.8%
Close contact of a confirmed case	1,910	53.5%	130	50.8%
Travel-related	124	3.5%	1	0.4%
No known epidemiological link (unknown exposure)	687	19.2%	69	27.0%
Under investigation	19	0.5%	18	7.0%

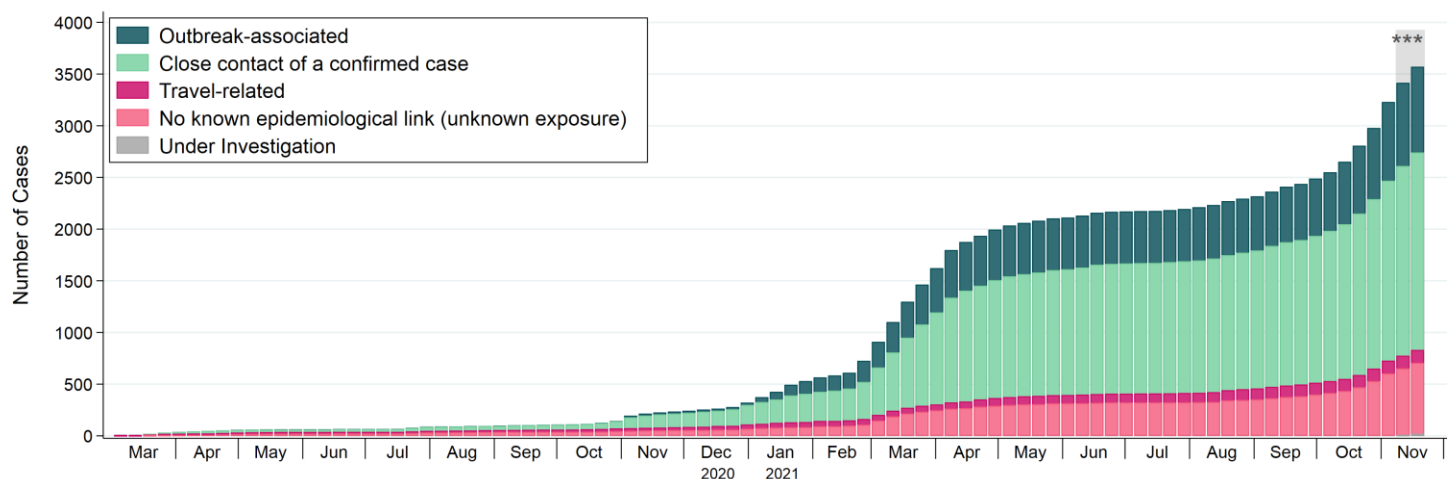Data Source: Public Health Sudbury & Districts

Figures 6 and 7, below, summarize the weekly and cumulative weekly COVID-19 case counts by the cases' probable exposure, respectively. The bars in the graph are stacked to illustrate the proportion of total cases each week that each exposure category represents.

FIGURE 6. COVID-19 cases, by week and probable exposure, Sudbury and districts

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Cases for which the probable exposure is currently under investigation have been excluded. Data source: Public Health Sudbury & Districts.

FIGURE 7. Cumulative COVID-19 cases, by week and probable exposure, Sudbury and districts
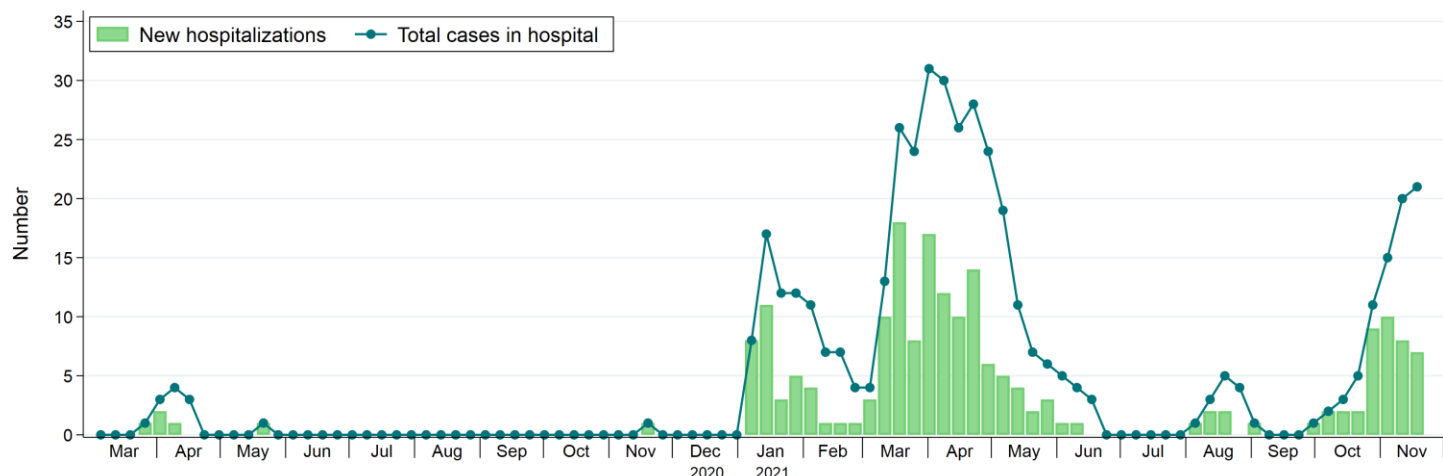

Weeks start on Monday and are the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. *** Infections occurring during this period may not yet be detected and/or reported. Cases for which the probable exposure is currently under investigation have been excluded. Data source: Public Health Sudbury & Districts.

Hospitalizations

In total there have been **201** hospitalizations due to COVID-19 among cases in Sudbury and districts. Figure 8, below, shows the number of new hospitalizations each week, along with the total number of patients in hospital due to COVID-19 at any point during that week.
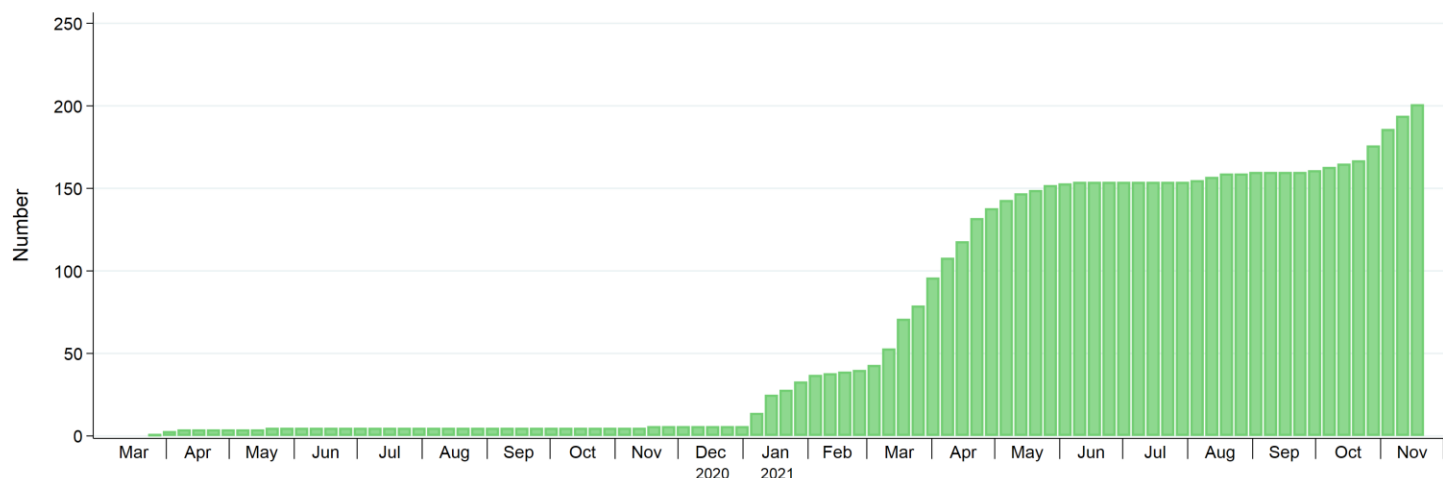
FIGURE 8. New and total COVID-19 cases in hospital, by week, Sudbury and districts

Weeks start on Monday. 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 & District. Data source: Public Health Sudbury & Districts.

Figure 9 presents the cumulative count of new hospitalizations for COVID-19, by week.

FIGURE 9. Cumulative hospitalizations among COVID-19 cases, by week, Sudbury and districts
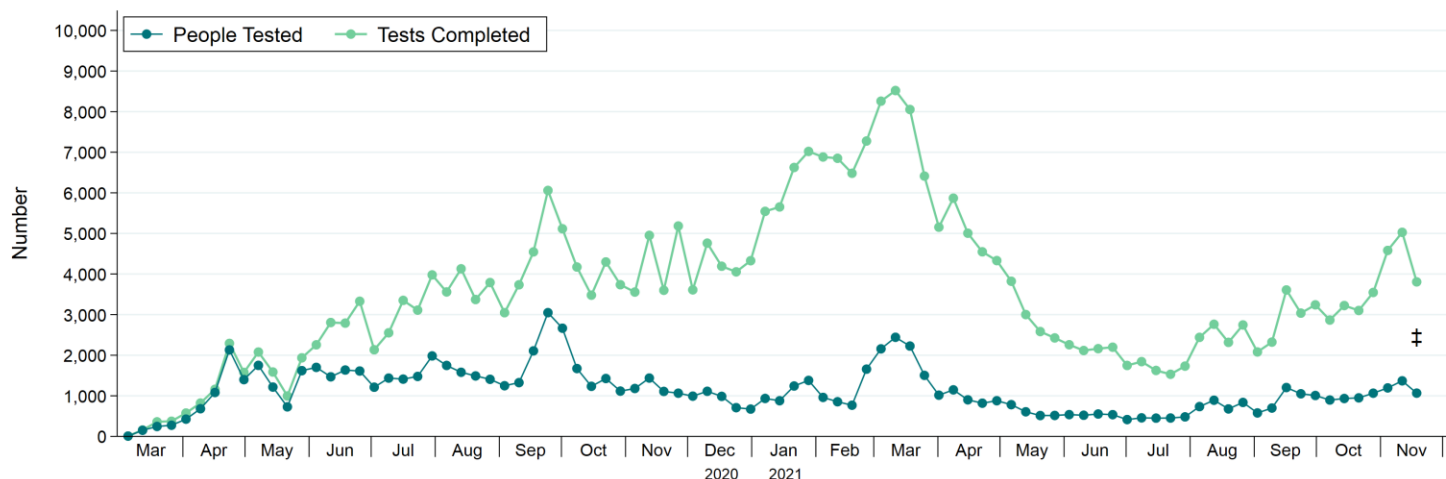

Weeks start on Monday. Cases hospitalized prior to acquiring their infection are counted only when they became an active case of COVID-19. These data exclude residents of other geographic regions receiving treatment at local hospitals unless their case is being managed by Public Health Sudbury & District. Data source: Public Health Sudbury & Districts.

Testing

As of November 21, 2021, there have been **322,054** 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 10 shows the number of tests completed each week, as well as the number of individual people tested.
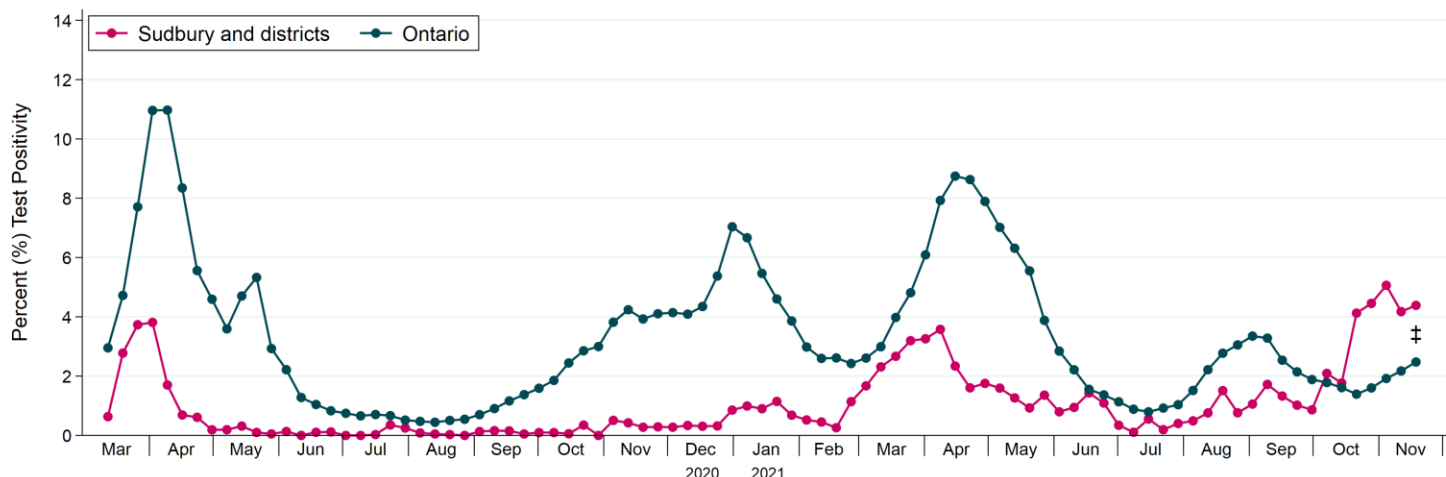
FIGURE 10. Number of tests and people tested, by week, Sudbury and districts

‡ Preliminary data. Weeks start on Monday. An individual may be tested on multiple occasions, and the samples collected may undergo multiple tests, each counted separately. Data source: COVID-19 Testing Report (SAS Visual Analytics), Ministry of Health, November 23, 2021

Figure 11, 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 11. Percent positivity of COVID-19 tests, by week and geographic region

‡ Preliminary data. Weeks start on Monday. Samples collected may undergo multiple tests, each counted separately. Data source: COVID-19 Testing Report (SAS Visual Analytics), Ministry of Health, November 23, 2021

Outbreaks in Hospitals, Long-term Care and Retirement Homes

An outbreak in a hospital will be declared if there are two or more cases of COVID-19 in a 14-day period that have some link with each other, and with evidence that infection occurred at the hospital. In long-term care or retirement homes, an outbreak may be declared with a single case among staff or residents. 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.

- In total there have been **37** COVID-19 outbreaks in local hospitals, long-term care homes and retirement homes.
- Of the declared outbreaks, **3** are currently active, and **34** have been declared over.

The table below provides a summary of outbreaks that have been active within the past 7 days.

TABLE 4. Summary of recent outbreaks in hospitals, long-term care and retirement homes, Sudbury and districts

Name of Facility	Facility Type	Status	Date Active	Date Declared Over
Withdrawal Management Services, Health Sciences North (Pine St.)	Hospital	Active	November 22	-
Chartwell Westmount on William Retirement Residence	Retirement Home	Active	November 5	-
Health Sciences North, 4th Floor North Tower	Hospital	Active	October 30	-

Data Source: Public Health Sudbury & Districts

Outbreaks in Schools and Licensed Daycares

An outbreak in a school or daycare will be declared if there are two or more cases of COVID-19 in a 14-day period that have some link with each other, and with evidence that infection occurred at the school.

- In total there have been **51** COVID-19 outbreaks in area schools and licensed daycares.
- Of the declared outbreaks, **16** are currently active, and **35** have been declared over.

The table below provides a summary of outbreaks that have been active within the past 7 days.

TABLE 5. Summary of recent outbreaks in schools and licensed daycares, Sudbury and districts

Name of School	School Type	Status	Date Active	Date Declared Over
Holy Cross Catholic School	School	Active	November 22	-
Our Children Our Future, St	Daycare	Active	November 22	-
School Bus route AM L102	School Bus	Active	November 21	-
École séparée St-Augustin	School	Active	November 21	-
École séparée St-Pierre	School	Active	November 20	-
École séparée St-Antoine	School	Active	November 20	-
R L Beattie Public School	School	Active	November 20	-
St. Charles College (Secondary)	School	Active	November 16	-
École publique de la Rivière	School	Active	November 16	-
School Bus Route PM L023	School Bus	Active	November 15	-
School Bus Route N705 AM & PM	School Bus	Active	November 15	-
Redwood Acres School	School	Active	November 13	-
Sudbury Secondary School	School	Active	November 12	-
St. Anne Catholic Elementary School	School	Active	November 12	-
Jennifer's Private Daycare	Daycare	Active	November 10	-
Holy Trinity Catholic School	School	Active	November 8	-

Data Source: Public Health Sudbury & Districts

Outbreaks in Other Community Settings

An outbreak in a community setting may be declared if there are two or more cases of COVID-19 in a 14-day period that have some link with each other, and with evidence that infection occurred in that setting.

- In total there have been **65** COVID-19 outbreaks in community settings.
- Of the declared outbreaks, **5** are currently active, and **60** have been declared over.

The table below provides a summary of outbreaks that have been active within the past 7 days.

TABLE 6. Summary of recent outbreaks in community settings, Sudbury and districts

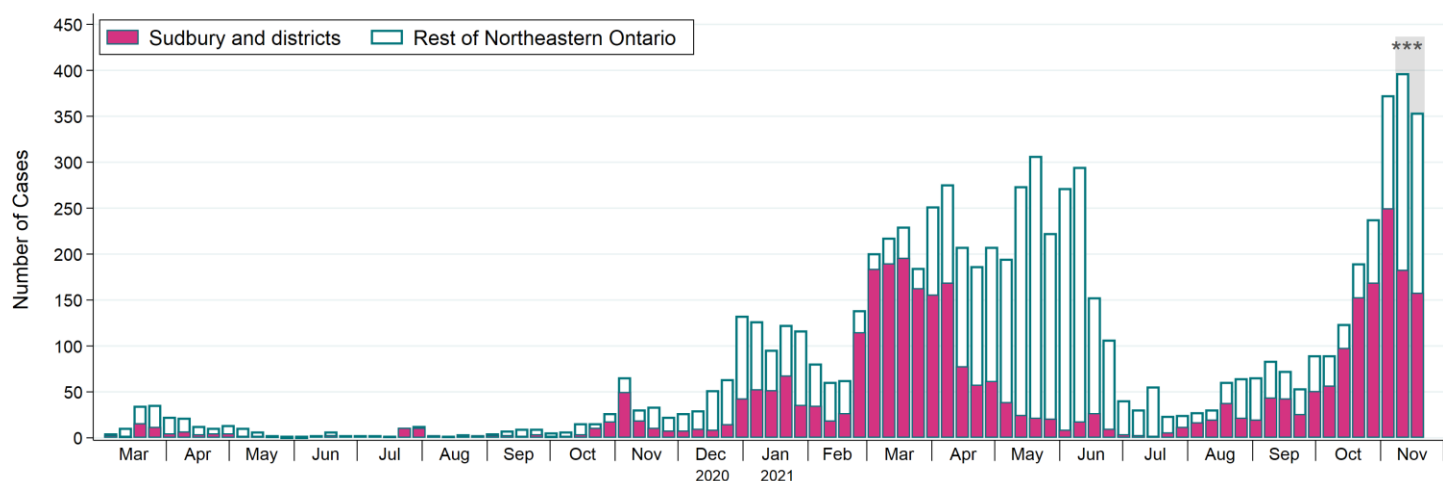| Location	Type of Setting	Status	Date Active	Date Declared Over
Vale Creighton Mine	Workplace	Active	November 17	-
Aaron Taxi	Workplace	Active	November 17	-
Rehan's Your Independent Grocer	Workplace	Over	November 15	November 23
Manitoulin Panthers PeeWee Hockey Teams	Community Outbreak	Over	November 11	November 22
The Rock Harley	Workplace	Over	November 9	November 20
Glencore Nickel Rim South Mine	Workplace	Over	November 5	November 20
March of Dimes	Congregate Living	Active	November 4	-
CMHA, Victoria Street Place	Congregate Living	Over	November 2	November 18
Vale North Mine	Workplace	Active	November 2	-
Vale South Mine	Workplace	Over	October 25	November 20
Memorial Park, Greater Sudbury	Community Public Setting	Active	October 12	-

Data Source: Public Health Sudbury & Districts
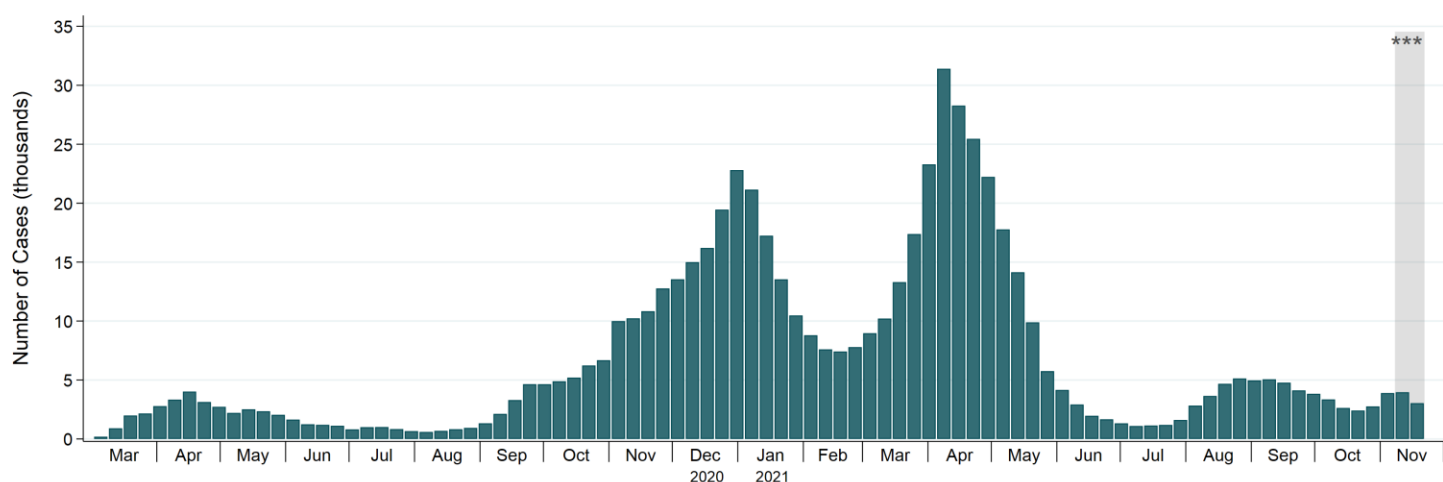
Regional Context

Case Counts by Week

Figure 12, below, shows the number of new COVID-19 cases by week in both Sudbury and districts and Northeastern Ontario. Figure 13 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 12. Confirmed COVID-19 cases, by week, Sudbury and districts and Northeastern Ontario

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)
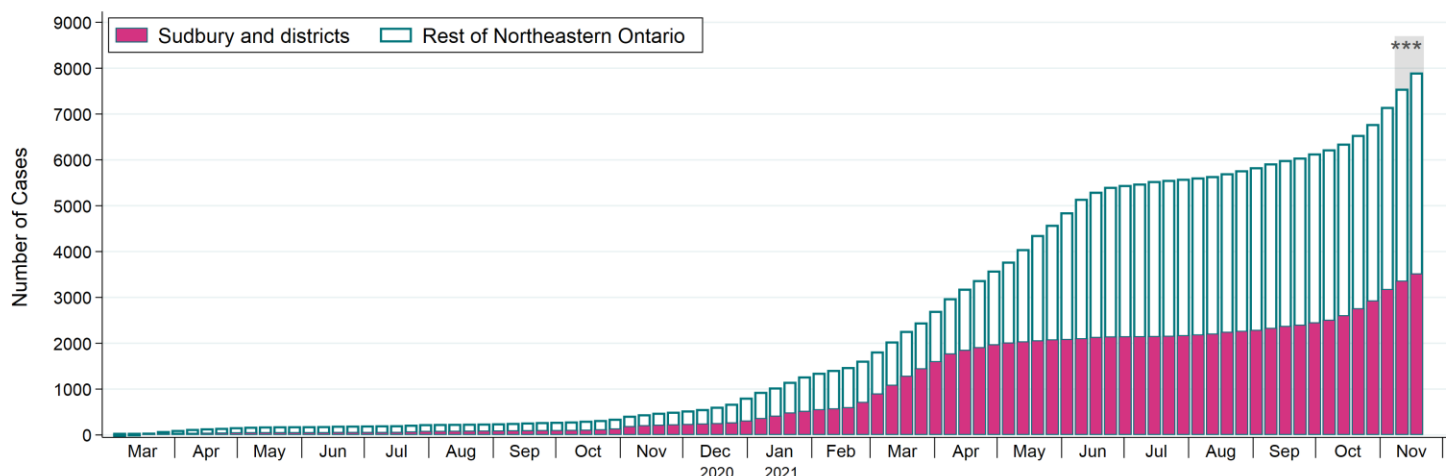
FIGURE 13. Confirmed COVID-19 cases, by week, Ontario

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)
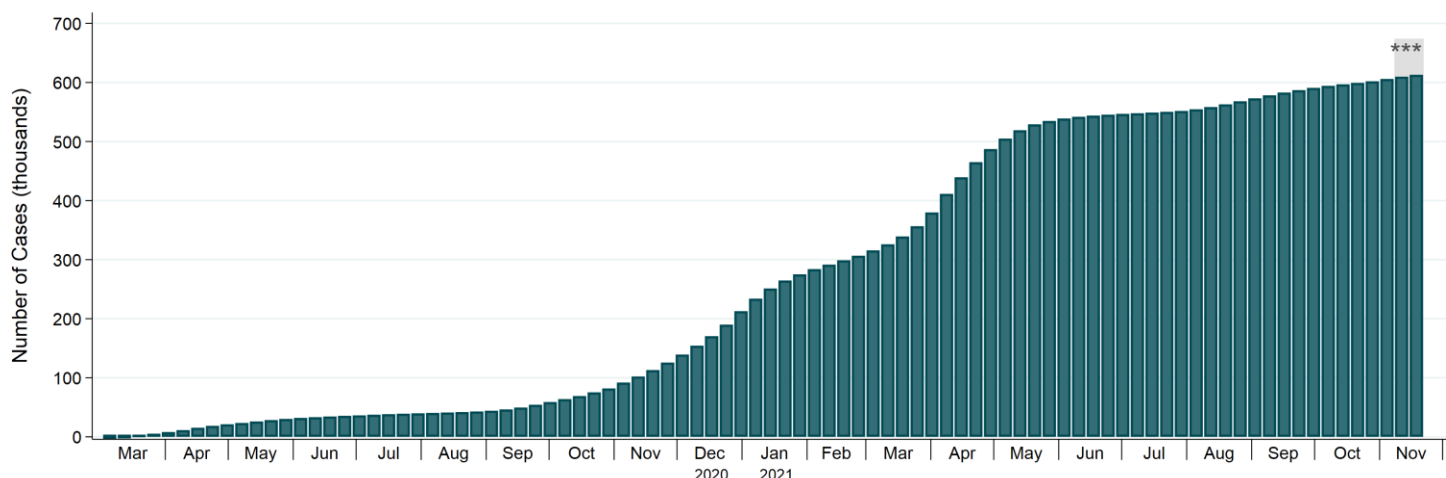
Figures 14 and 15 present a comparison of cumulative weekly case counts by region. Again, note the difference in the vertical axis for the Ontario graph.

FIGURE 14. Cumulative confirmed COVID-19 cases, by week, Sudbury and districts and Northeastern Ontario

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)

FIGURE 15. Cumulative confirmed COVID-19 cases, by week, Ontario

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021)

Incidence Rates by Week

Figure 16, 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.

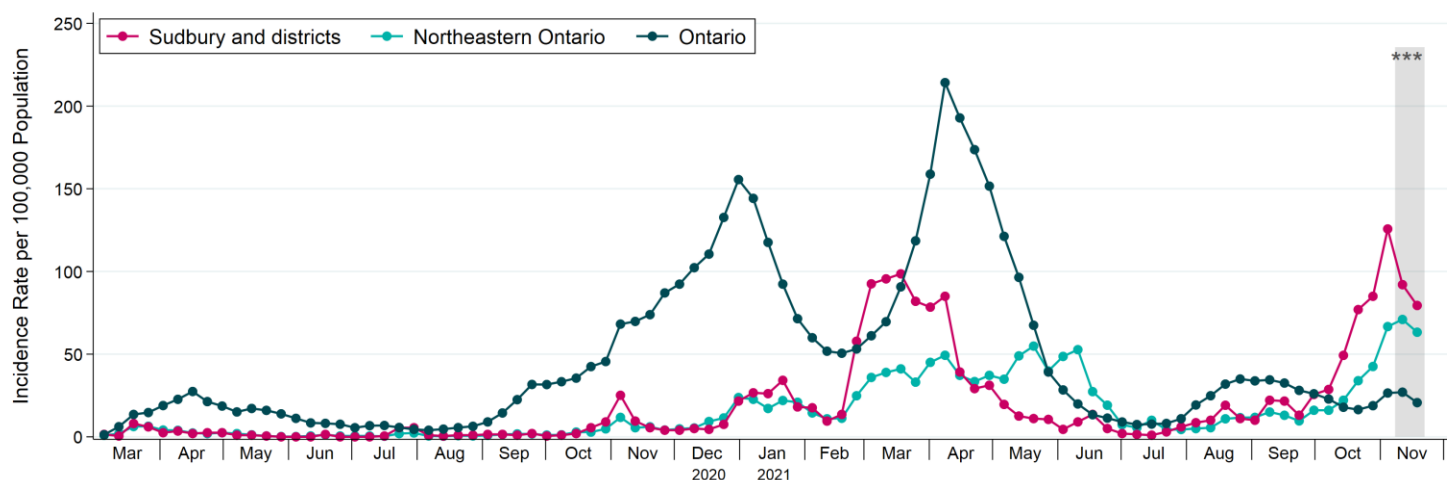**FIGURE 16. Incidence rate of COVID-19 per 100,000 population, by week and geographic region**

Weeks start on Monday and 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. *** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. https://data.ontario.ca/dataset/ confirmed-positive-cases-of-covid-19-in-ontario (Access Date: November 23, 2021) and Population Projections 2020, Ontario Ministry of Health, IntelliHEALTH Ontario, Access Date: April 21, 2021

Regional Case and Testing Summary

Tables 7 and 8 (next page) present an overall summary of COVID-19 cases and testing by geographic region including Canada, Ontario, Northern Ontario, Northeastern Ontario and Sudbury and districts.

TABLE 7. Regional COVID-19 case summary

Geographic Area	Cases	Cumulative incidence per 100,000*	Active Cases	Prevalence per 100,000**	Resolved Cases	Resolved Rate	Deceased	Case Fatality Rate	Data Availability†
Canada	1,770,106	4,709.1	24,127	64.2	1,745,979	98.6%	29,526	1.7%	November 22
Ontario	612,931	4,180.9	5,487	37.4	607,444	99.1%	9,974	1.6%	November 22
Northern Ontario	12,515	1,570.4	590	74.0	11,925	95.3%	163	1.3%	November 19
Northeastern Ontario	7,833	1,400.2	565	101.0	7,268	92.8%	88	1.1%	November 19
Public Health Sudbury & Districts	3,572	1,796.3	258	129.7	3,314	92.8%	37	1.0%	November 22

* Cumulative incidence is the rate at which new cases have occurred since the beginning of the pandemic. ** Prevalence is the current rate of active (unresolved) cases in the population
† This report is based on the most currently available information at date and time of production.
Data source: Statistics Canada, Government of Canada COVID-19 Update, Ontario MOH COVID-19 Update, integrated Public Health Information System (iPHIS) database, Northwestern Health Unit, Thunder Bay District Health Unit, Algoma Public Health, North Bay Parry Sound District Health Unit, Public Health Sudbury & Districts, Porcupine Health Unit, Timiskaming Health Unit.

TABLE 8. Regional COVID-19 testing summary

Geographic Area	Tests Completed	Tests per 100,000	% Tests that were Positive*	People Tested	People Tested per 100,000	% People Tested who were Positive**	Data Availability†
Canada	48,148,527	128,091	Not Available	Not Available	Not Available	Not Available	November 20
Ontario	17,349,206	118,342	3.5%	6,404,402	43,686	9.6%	November 21
Northern Ontario	1,159,181	145,459	1.1%	363,306	45,589	3.4%	November 21
Northeastern Ontario	809,854	144,770	1.0%	251,040	44,876	3.1%	November 21
Public Health Sudbury & Districts	322,054	161,957	1.1%	101,425	51,005	3.5%	November 21

* This is calculated using the following formula: Total Positive Tests / Total Tests x 100%. Note: an individual person may be tested on multiple different occasions. Samples collected on each such occasion may undergo multiple tests, and thus may yield multiple positive tests. The number of positive tests will therefore exceed the number of confirmed cases within an area.
** This is calculated using the following formula: Total Confirmed Cases / Total People Tested x 100%
† This report is based on the most currently available information at date and time of production.
Data source: Statistics Canada, Government of Canada COVID-19 Update; COVID-19 Testing Report (SAS Visual Analytics), Ontario Ministry of Health, November 23, 2021