

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 15, 2021, unless otherwise specified.

Highlights

Active COVID-19 Cases and Outbreaks

As of November 15, 2021, Public Health Sudbury & Districts was reporting:

- **264** active cases of COVID-19, of which **124 (47.0%)** had screened positive for a COVID-19 variant of concern (VOC)
 - **59** active cases (**22.3%**) were 19 years old or younger
 - **62** active cases (**23.5%**) were 60 years old or older
 - **79** active cases (**29.9%**) were linked to an outbreak
 - **59** active cases (**22.3%**) had no known epidemiological link (unknown exposure)
- **6** new hospitalizations due to COVID-19 in the past 7 days, with **18** cases in hospital at some point during that time.
- **2** active outbreaks declared in local hospitals, long-term care homes and retirement homes
- **7** active outbreaks declared in local schools and licensed daycares
- **8** 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:

- **3,338** cases of COVID-19, of which **1,824 (54.6%)** have screened positive for a COVID-19 variant of concern (VOC)
 - **780** cases (**23.4%**) were 19 years old or younger
 - **528** cases (**15.8%**) were 60 years old or older
 - **784** cases (**23.5%**) are linked to an outbreak
 - **618** cases (**18.5%**) have no known epidemiological link (unknown exposure)
- **193** hospitalizations due to COVID-19
- **34** deaths due to COVID-19. The local *case fatality rate* is **1.0%** (i.e., $\text{Total Deaths} / \text{Total Cases} \times 100\%$)
- **36** outbreaks declared in local hospitals, long-term care homes and retirement homes
- **42** outbreaks declared in local schools and licensed daycares
- **63** outbreaks declared in other community settings

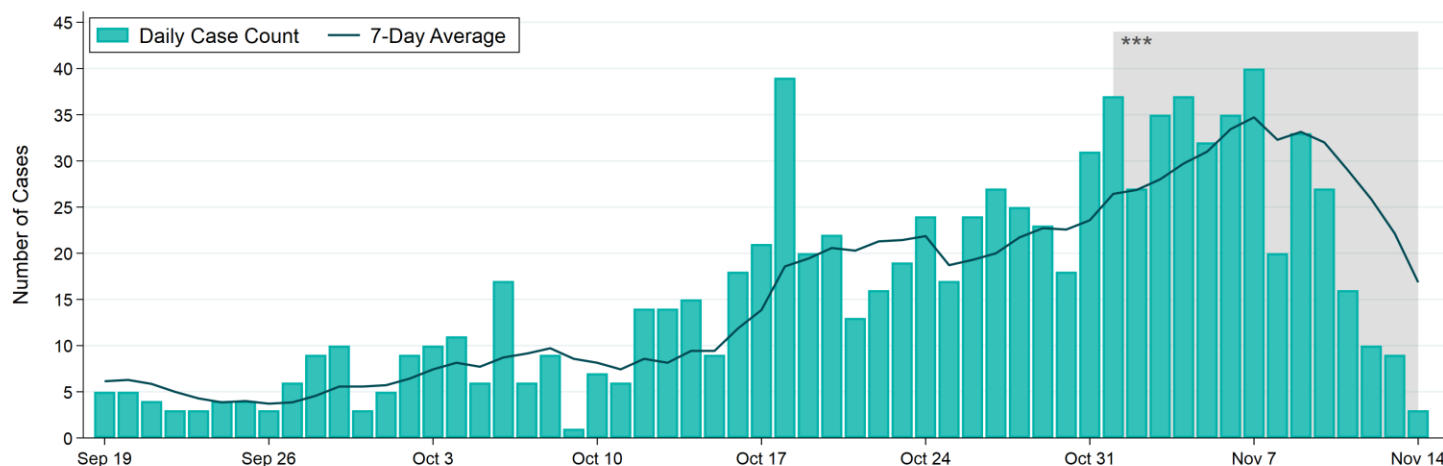
Epidemiology – Sudbury and Districts

Current Status

Public Health Sudbury & Districts has reported **3,338** cases of COVID-19 since the start of the pandemic. Of these, **264** cases (**7.9%**) are currently active, and **35** (**1.0%**) cases have died from COVID-19.

The current 7-day average rate of new COVID-19 cases is **14.0** cases per day.

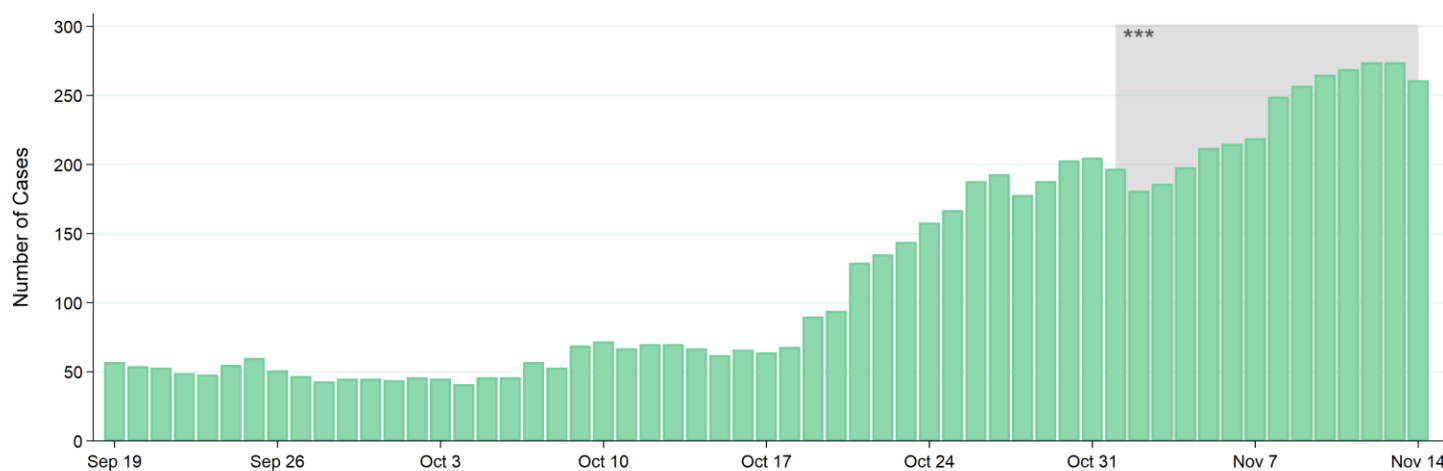
FIGURE 1. Daily confirmed COVID-19 cases and rolling 7-day average, past 8 weeks, Sudbury and districts



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 16, 2021)

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

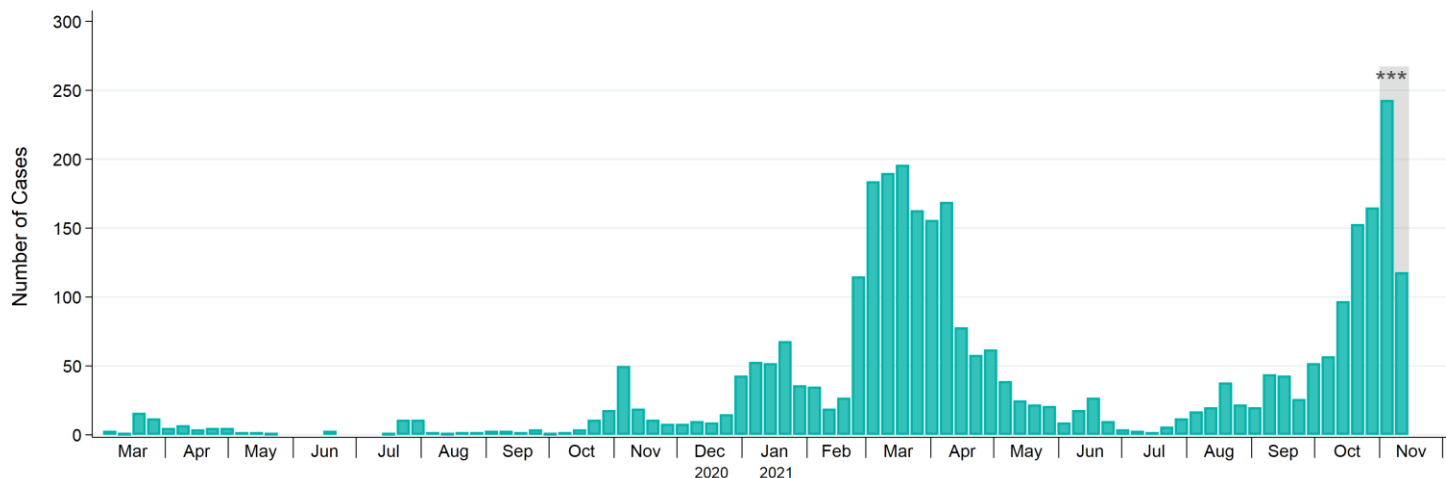


*** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: November 16, 2021)

Case Counts by Week

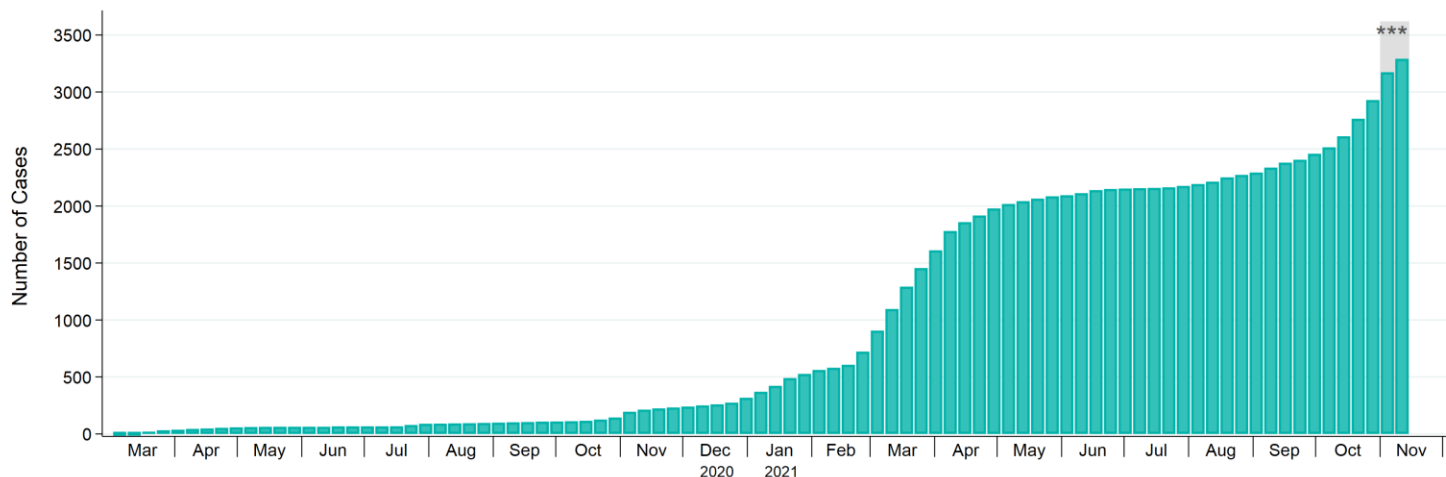
The following graphs show weekly COVID-19 case counts in Sudbury and districts since the first case was reported locally (Figure 3), and the cumulative weekly case count (Figure 4).

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 16, 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 16, 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	3,338	100%	264	100%
Change from 7 days ago	183	5.8%*	42	19.2%*
Cases screening positive for a variant of concern (VOC)	1,824	54.6%	124	47.0%
Sex: Male	1,311	39.3%	109	41.3%
Sex: Female	1,246	37.3%	97	36.7%
Sex: Not specified**	779	23.3%	57	21.6%
Ages: 19 and under	780	23.4%	59	22.3%
Ages: 20-39	1,229	36.8%	74	28.0%
Ages: 40-59	799	23.9%	68	25.8%
Ages: 60-79	396	11.9%	36	13.6%
Ages: 80 and over	132	4.0%	26	9.8%
Ages: Not specified**	0	0.0%	0	0.0%
Area: Greater Sudbury	3,097	92.8%	245	92.8%
Area: Manitoulin District	93	2.8%	12	4.5%
Area: Sudbury District, North	15	0.4%	0	0.0%
Area: Sudbury District, West	79	2.4%	2	0.8%
Area: Sudbury District, East	54	1.6%	5	1.9%

*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, of which **124** are currently active.

The process by which a case is determined to be a VOC involves two steps. First, the sample is screened for several mutations of interest. The results of this screening are usually available a few days after the case is initially reported. Cases may then undergo full genetic sequencing to determine its lineage, which can take weeks to complete. Not all samples are genetically sequenced. In such cases, their lineage can sometimes be presumed based on the presence of mutations and the local epidemiology.

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.

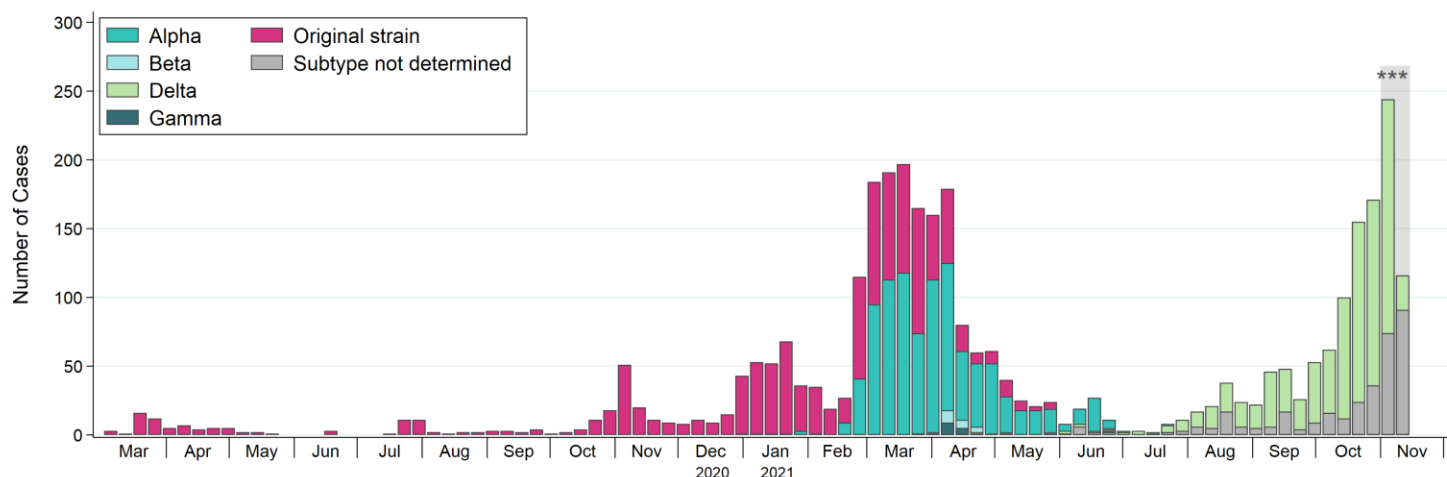
TABLE 2. Number of confirmed and probable COVID-19 variants of concern, by lineage / mutation

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	111	2
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(-)	731	122
Probable Gamma	Mutation N501Y(+), Mutation E484K(+), Mutation K417T(+)	5	0

*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



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.

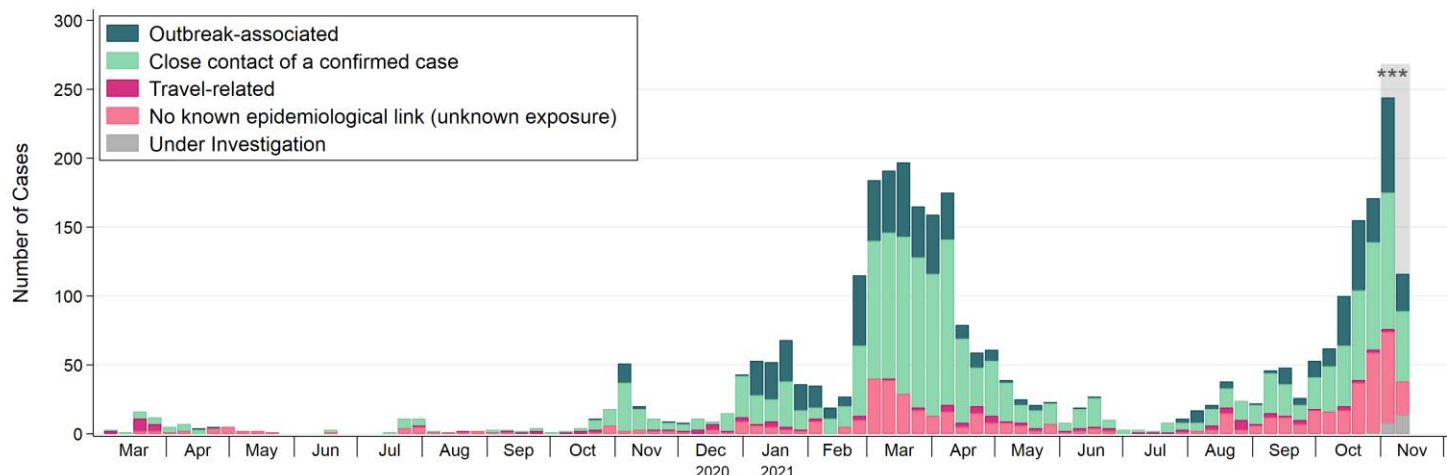
TABLE 3. Cases, by probable exposure, Sudbury and districts

Exposure	Total Cases	Percentage (%)	Active Cases	Percentage (%)
Outbreak-associated	784	23.5%	79	29.9%
Close contact of a confirmed case	1,791	53.7%	106	40.2%
Travel-related	123	3.7%	1	0.4%
No known epidemiological link (unknown exposure)	618	18.5%	59	22.3%
Under investigation	22	0.7%	19	7.2%

Data Source: Public Health Sudbury & Districts

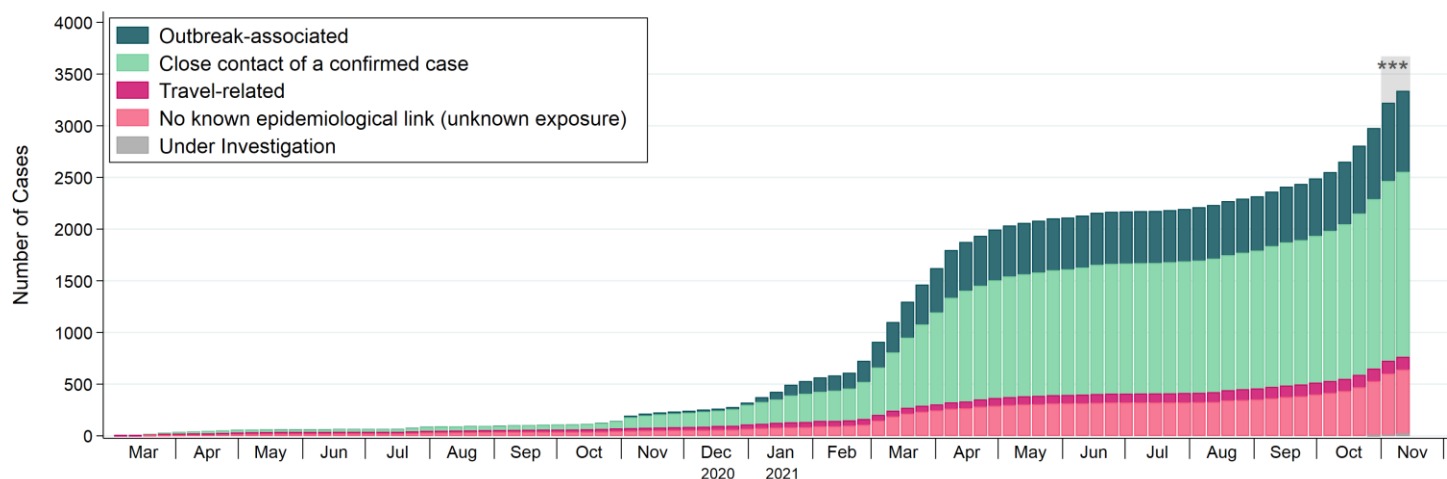
Figures 6 and 7, below, summarize the weekly and cumulative weekly COVID-19 case counts by the cases' probable exposure, respectively. The bars in the graph are stacked to illustrate the proportion of total cases each week that each exposure category represents.

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

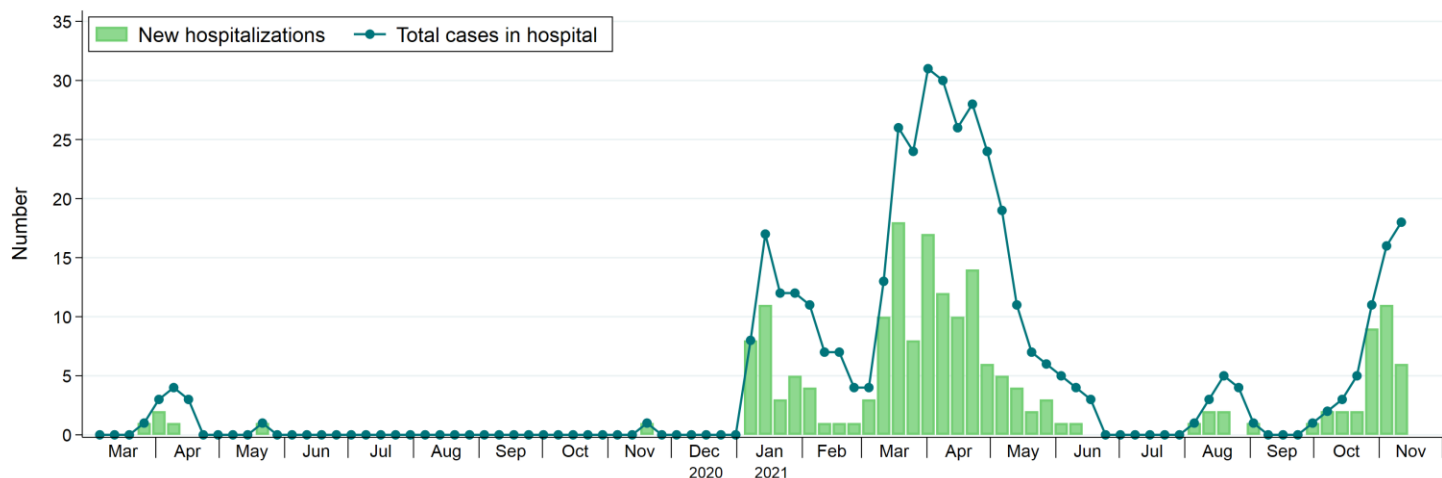


Weeks start on Monday and are the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. *** Infections occurring during this period may not yet be detected and/or reported. Cases for which the probable exposure is currently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

Hospitalizations

In total there have been **193** 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.

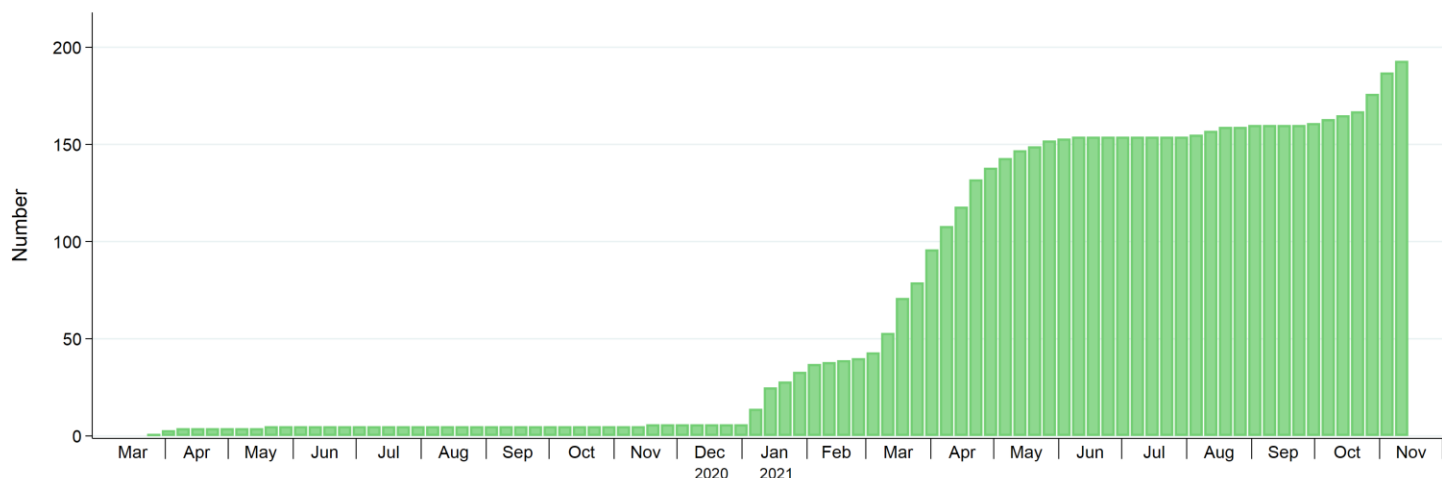
FIGURE 8. New and total COVID-19 cases in hospital, by week, Sudbury and districts



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



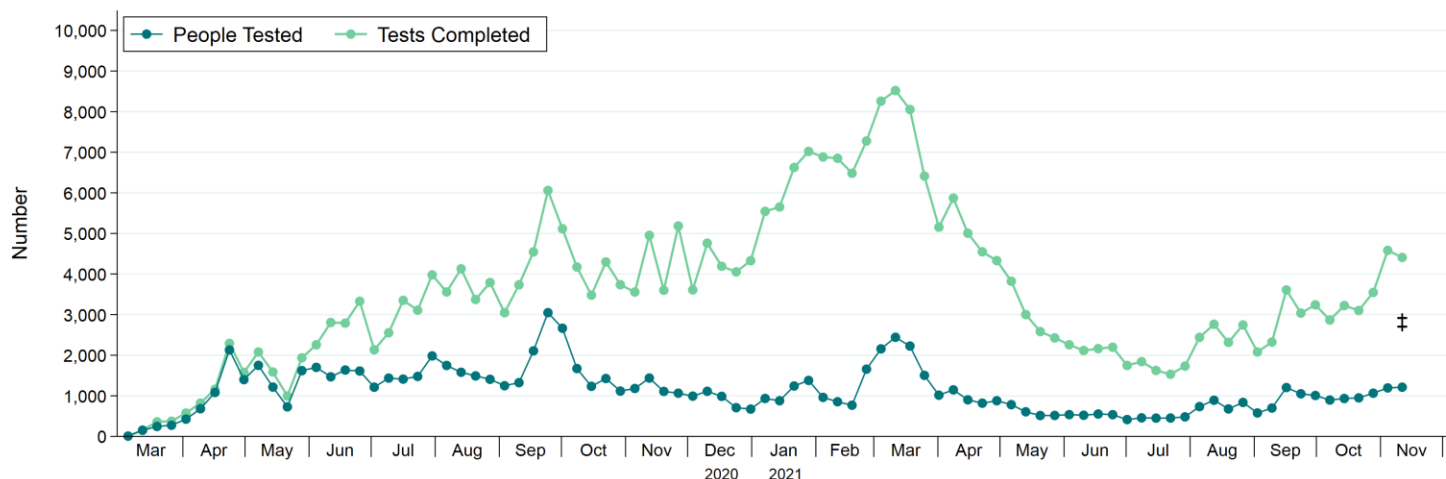
Weeks start on Monday. Cases hospitalized prior to acquiring their infection are counted only when they became an active case of COVID-19. These data exclude residents of other geographic regions receiving treatment at local hospitals unless their case is being managed by Public Health Sudbury & District.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

Testing

As of November 14, 2021, there have been **317,742** 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.

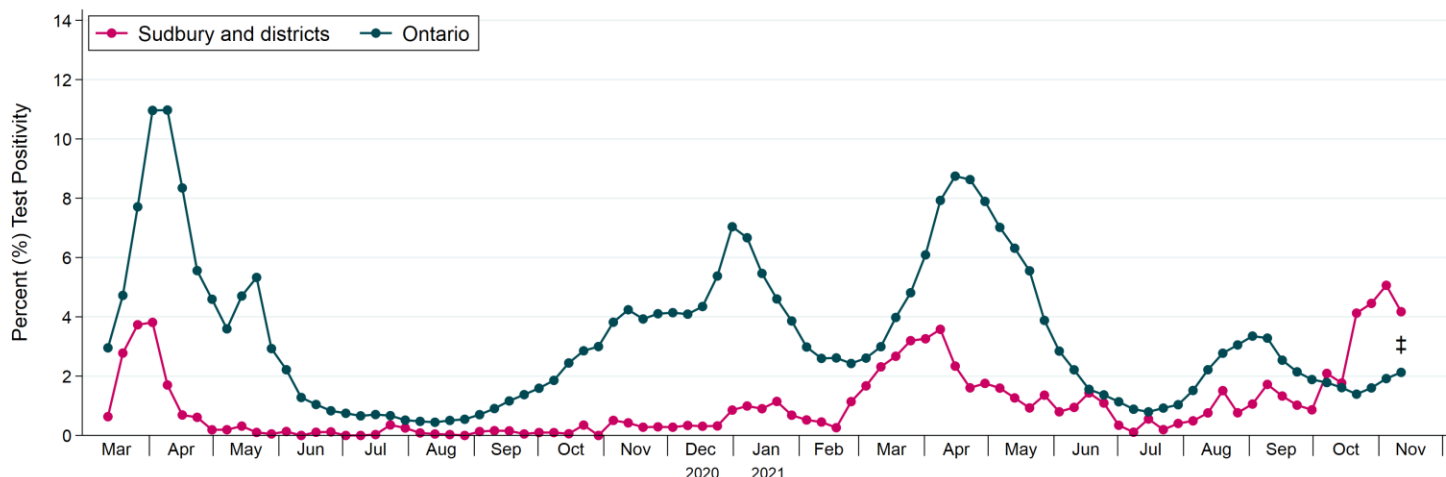
FIGURE 10. Number of tests and people tested, by week, Sudbury and districts



‡ 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 16, 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 16, 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 **36** COVID-19 outbreaks in local hospitals, long-term care homes and retirement homes.
- Of the declared outbreaks, **2** 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
Chartwell Westmount on William Retirement Residence	Retirement Home	Active	November 5	-
Health Sciences North, 4th Floor North Tower	Hospital	Active	October 30	-
Regent Manor	Retirement Home	Over	October 28	November 11
Pioneer Manor	Long-term Care	Over	October 22	November 12

Data Source: Public Health Sudbury & Districts

Outbreaks in Schools and 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 **42** COVID-19 outbreaks in area schools and daycares.
- Of the declared outbreaks, **7** 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
School Bus N705 afternoon	School	Active	November 15	-
School Bus L023 morning, afternoon	School	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	-
St. Charles College Elementary	School	Over	November 4	November 12

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 **63** COVID-19 outbreaks in community settings.
- Of the declared outbreaks, **8** are currently active, and **55** 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
Rehan's Your Independent Grocer	Workplace	Active	November 15	-
Manitoulin Panthers PeeWee Hockey Team	Community Outbreak	Over	November 11	November 11
The Rock Harley	Workplace	Active	November 9	-
The Grand Nightclub	Workplace	Over	November 9	November 15
Glencore Nickel Rim South Mine	Workplace	Active	November 5	-
March of Dimes	Congregate Living	Active	November 4	-
CMHA, Victoria Street Place	Congregate Living	Active	November 2	-
Vale North Mine	Workplace	Active	November 2	-
Fix Auto, Chelmsford	Workplace	Over	October 28	November 10
Vale South Mine	Workplace	Active	October 25	-
Memorial Park, Greater Sudbury	Community Public Setting	Active	October 12	-

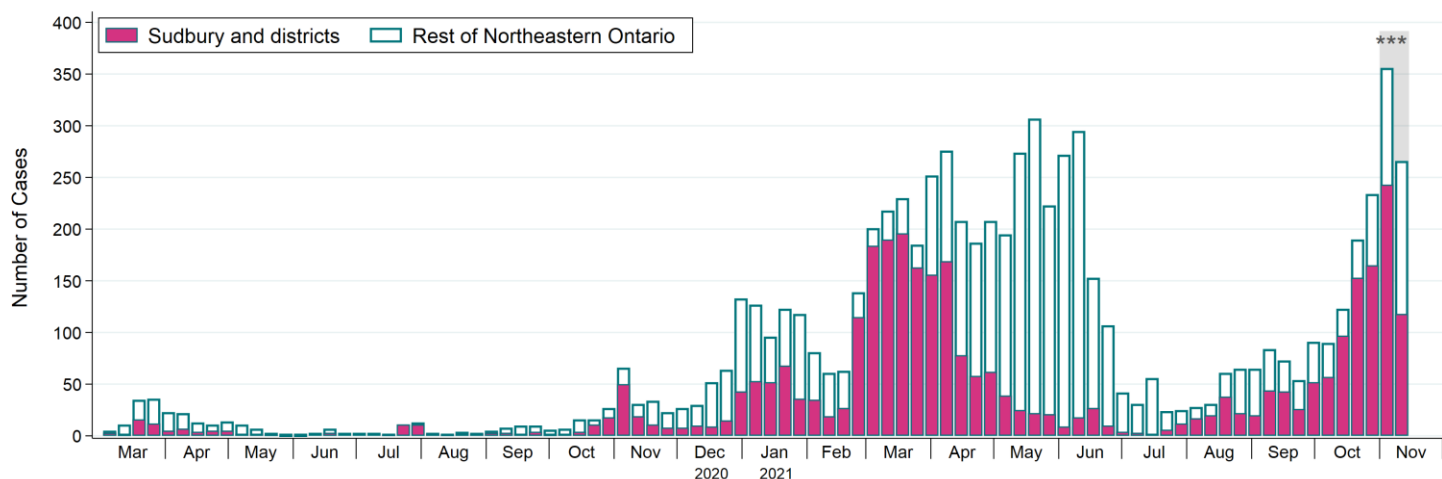
Data Source: Public Health Sudbury & Districts

Regional Context

Case Counts by Week

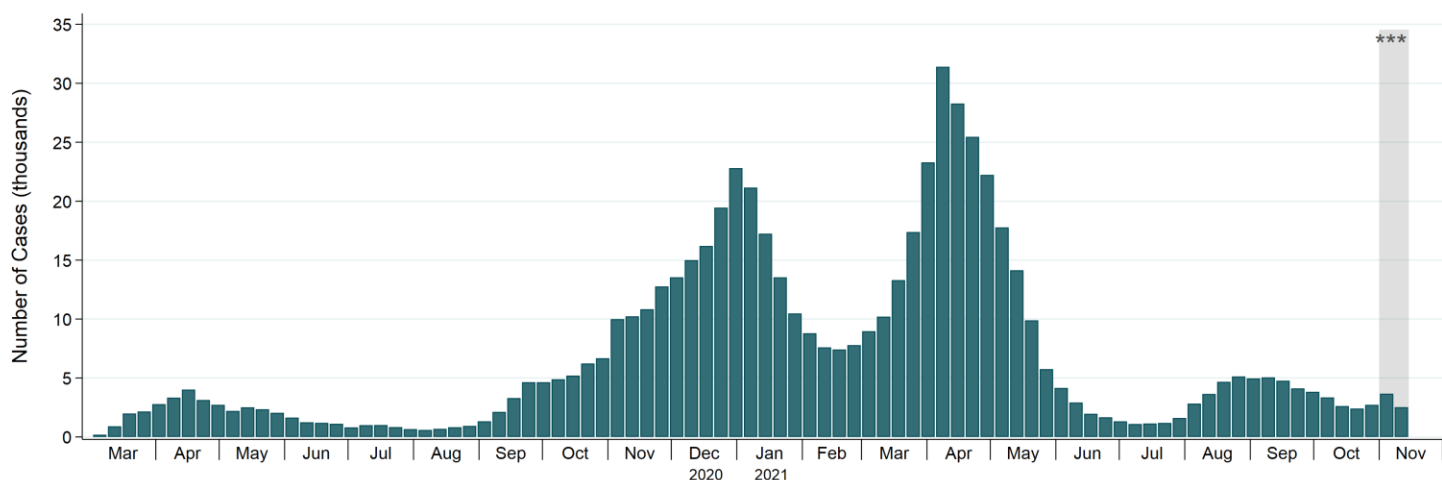
Figure 12, below, shows the number of new COVID-19 cases by week in both Sudbury and districts and Northeastern Ontario. Figure 13 shows the weekly count in Ontario overall. Note that the vertical axis in the Ontario graph is very different, since provincial case counts are much higher than local counts.

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 16, 2021)

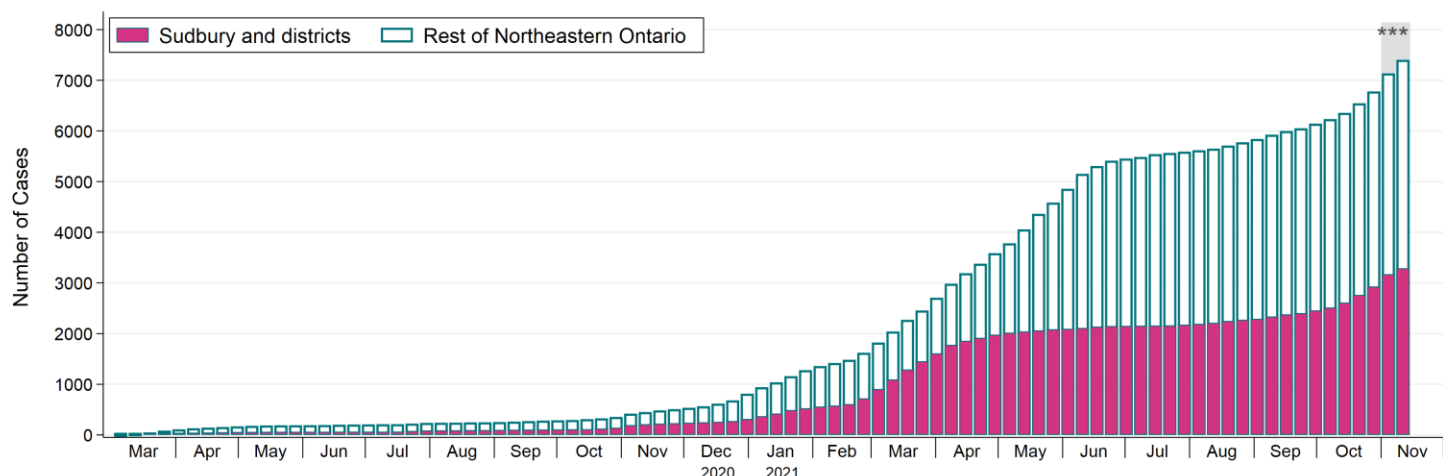
FIGURE 13. Confirmed COVID-19 cases, by week, Ontario



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 16, 2021)

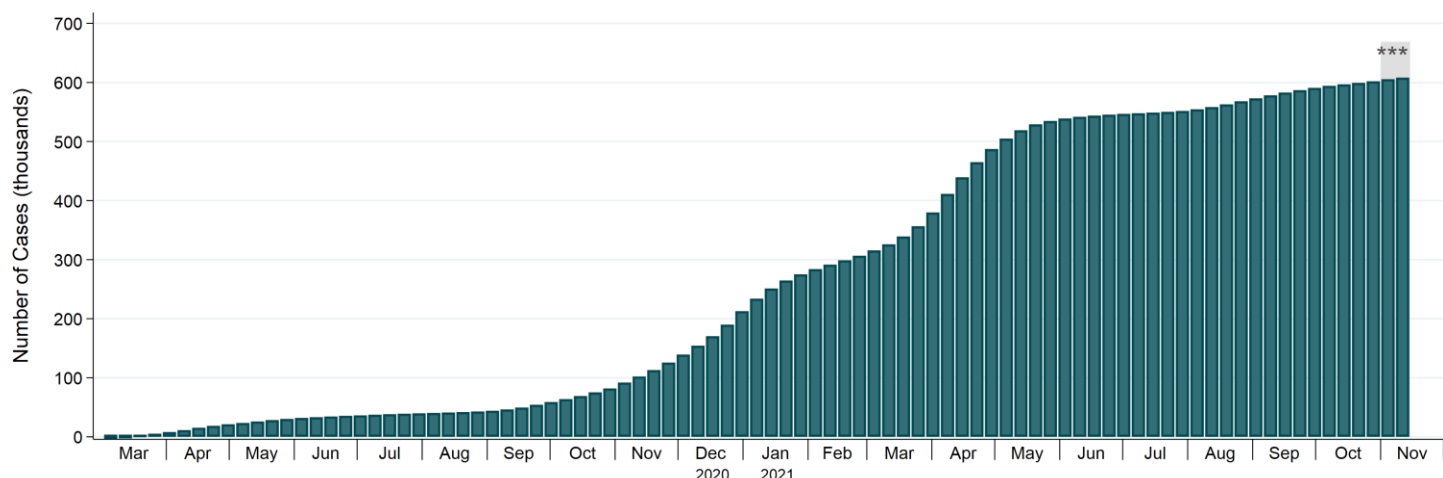
Figures 14 and 15 present a comparison of cumulative weekly case counts by region. Again, note the difference in the vertical axis for the Ontario graph.

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 16, 2021)

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

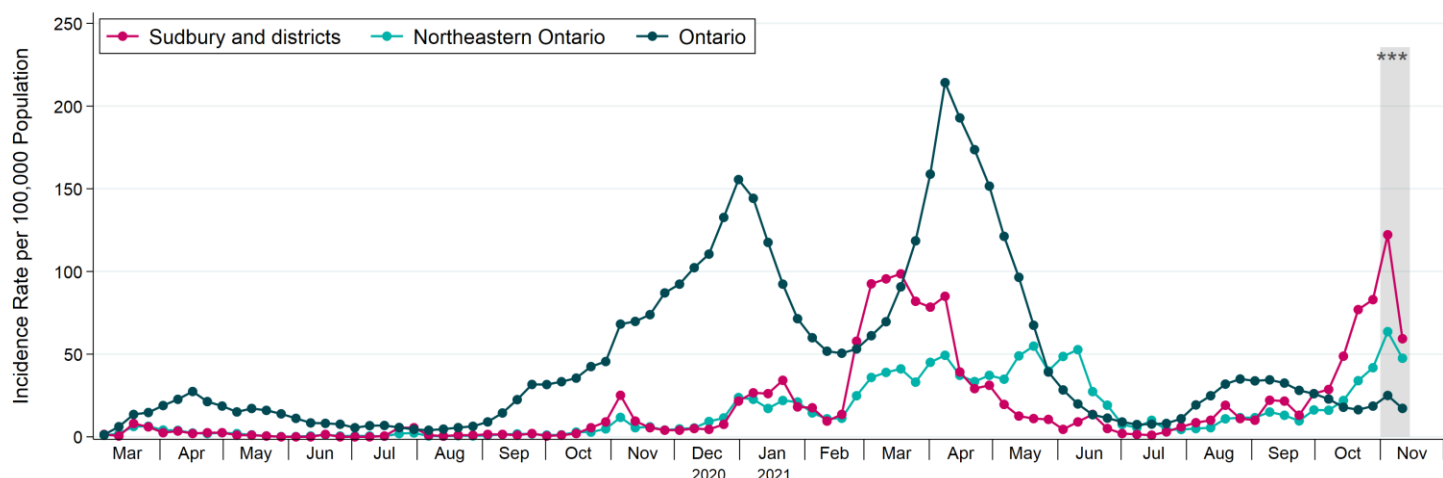


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Incidence Rates by Week

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 16, 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	1,752,517	4,662.3	24,563	65.3	1,727,954	98.6%	29,384	1.7%	November 15
Ontario	607,725	4,145.4	4,985	34.0	602,740	99.2%	9,937	1.6%	November 15
Northern Ontario	12,035	1,510.2	473	59.4	11,562	96.1%	159	1.3%	November 12
Northeastern Ontario	7,375	1,318.4	447	79.9	6,928	93.9%	85	1.2%	November 12
Public Health Sudbury & Districts	3,338	1,678.6	261	131.3	3,077	92.2%	34	1.0%	November 15

* 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	47,540,334	126,473	Not Available	Not Available	Not Available	Not Available	November 13
Ontario	17,191,741	117,268	3.5%	6,356,981	43,362	9.6%	November 14
Northern Ontario	1,147,473	143,990	1.1%	359,851	45,156	3.3%	November 14
Northeastern Ontario	800,562	143,109	1.0%	248,251	44,378	3.0%	November 14
Public Health Sudbury & Districts	317,742	159,788	1.1%	100,223	50,401	3.3%	November 14

* 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 16, 2021