

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 October 17, 2021, unless otherwise specified.

Highlights

Active COVID-19 Cases and Outbreaks

Public Health Sudbury & Districts is currently reporting:

- **65** active cases of COVID-19, of which **44 (67.7%)** have screened positive for a COVID-19 variant of concern (VOC)
 - **7** active cases (**10.8%**) are 19 years old or younger
 - **6** active cases (**9.2%**) are 60 years old or older
 - **13** active cases (**21.0%**) are linked to an outbreak
 - **10** active cases (**16.1%**) have no known epidemiological link (unknown exposure)
- **2** new hospitalizations due to COVID-19 in the past 7 days, with **3** cases in hospital at some point during that time.
- **0** active outbreaks declared in local hospitals, long-term care homes and retirement homes
- **0** active outbreaks declared in local schools and licensed daycares
- **6** 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:

- **2,567** cases of COVID-19, of which **1,283 (50.0%)** have screened positive for a COVID-19 variant of concern (VOC)
 - **640** cases (**24.9%**) were 19 years old or younger
 - **421** cases (**16.4%**) were 60 years old or older
 - **576** cases (**22.5%**) are linked to an outbreak
 - **412** cases (**16.1%**) have no known epidemiological link (unknown exposure)
- **165** hospitalizations due to COVID-19
- **31** deaths due to COVID-19. The local *case fatality rate* is **1.2%** (i.e., *Total Deaths / Total Cases x 100%*)
- **32** outbreaks declared in local hospitals, long-term care homes and retirement homes
- **32** outbreaks declared in local schools and licensed daycares
- **51** outbreaks declared in other community settings

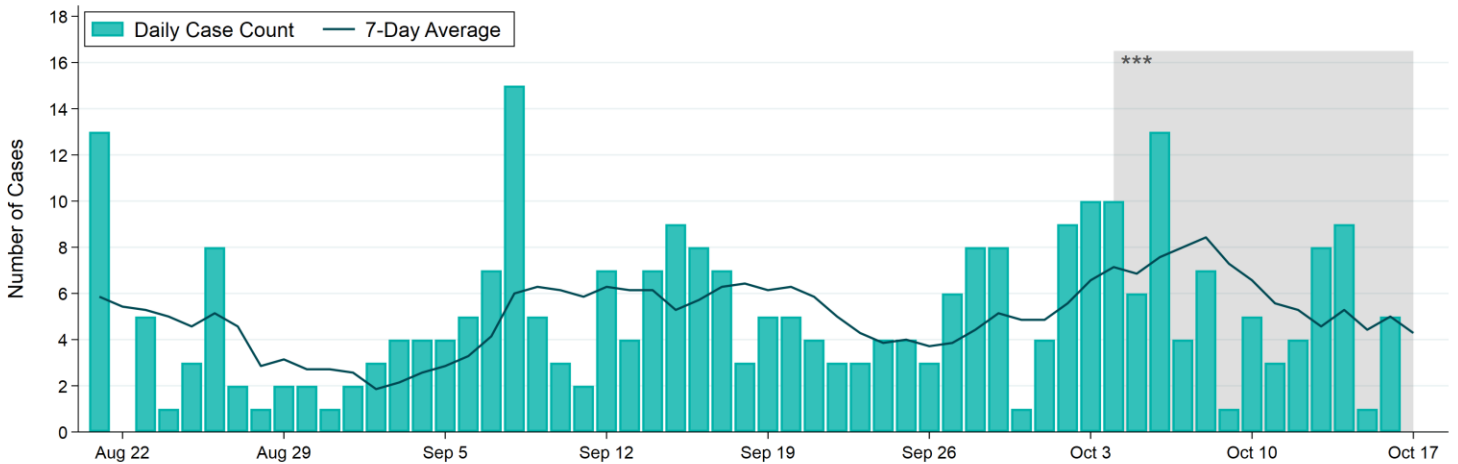
Epidemiology – Sudbury and Districts

Current Status

Public Health Sudbury & Districts has reported **2,567** cases of COVID-19 since the start of the pandemic. Of these, **65** cases (**2.5%**) are currently active, and **31** (**1.2%**) cases have died from COVID-19.

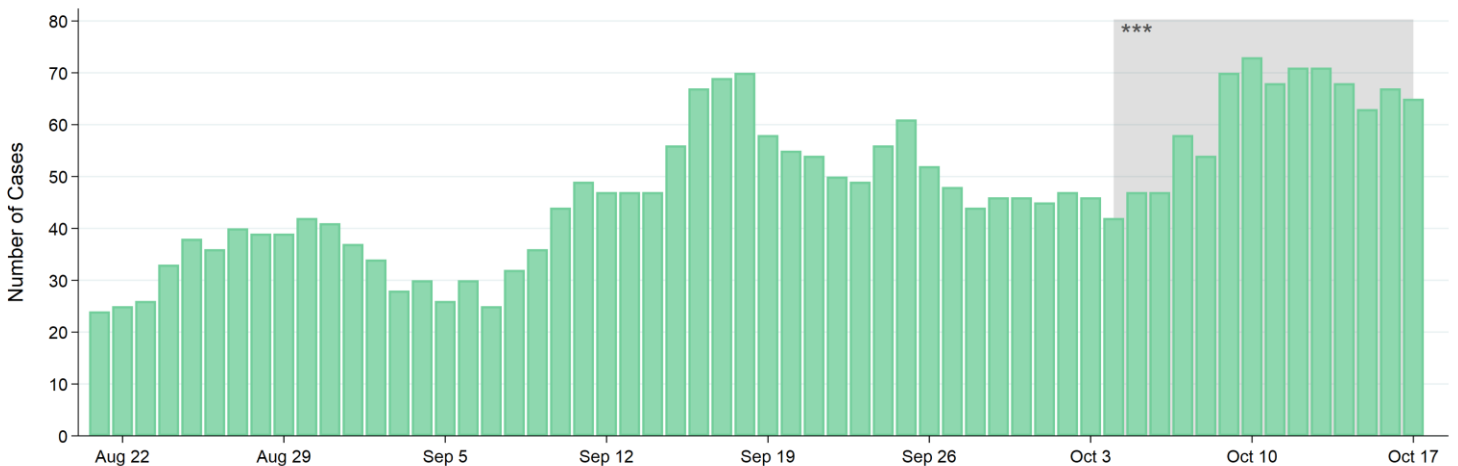
The current 7-day average rate of new COVID-19 cases is **4.3** cases per day.

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: October 18, 2021)

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

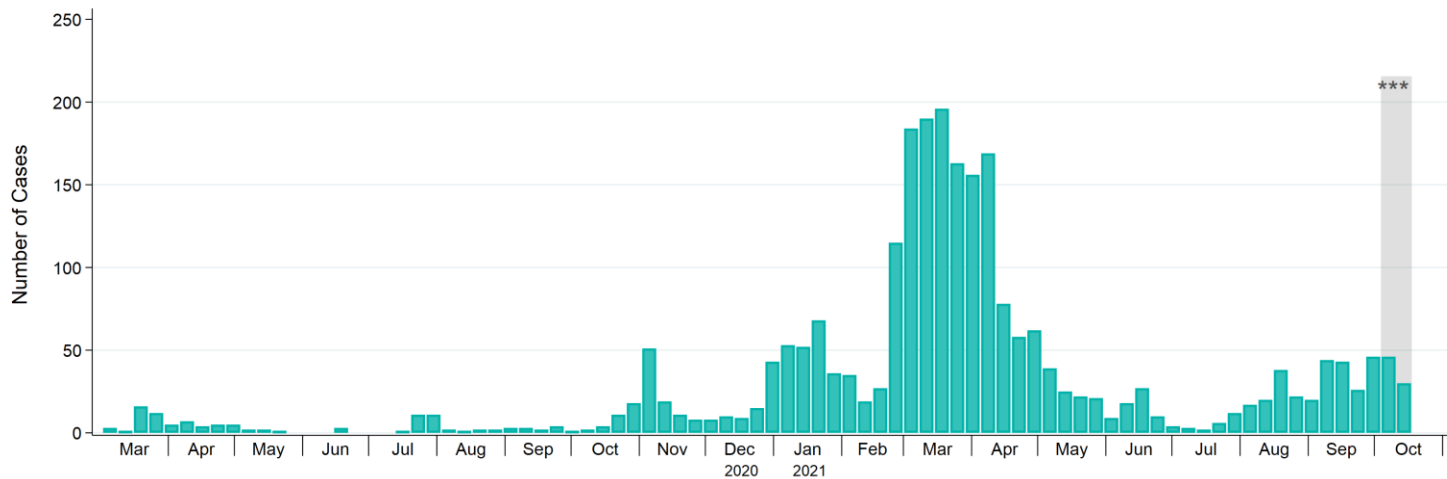


*** Infections occurring during this period may not yet be detected and/or reported. Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: October 18, 2021)

Case Counts by Week

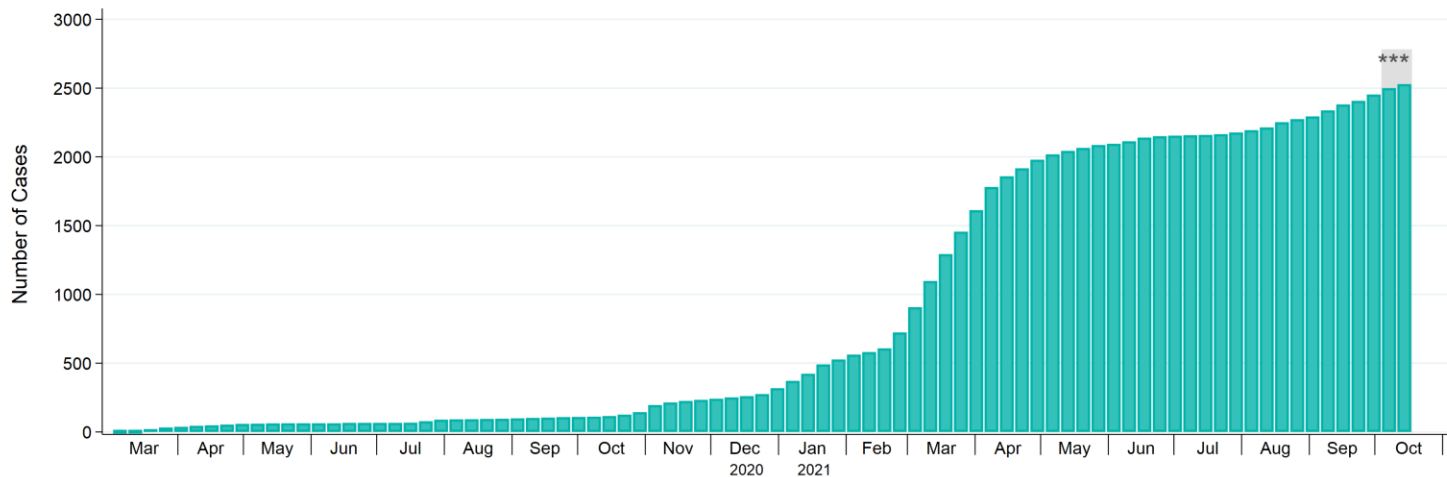
The following graphs show weekly COVID-19 case counts in Sudbury and districts since the first case was reported locally (Figure 3), and the cumulative weekly case count (Figure 4).

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: October 18, 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: October 18, 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	2,567	100%	65	100%
Change from 7 days ago	45	1.8%*	-8	-11.0%*
Cases screening positive for a variant of concern (VOC)	1,283	50.0%	44	67.7%
Sex: Male	945	36.8%	28	43.1%
Sex: Female	980	38.2%	30	46.2%
Sex: Not specified**	641	25.0%	7	10.8%
Ages: 19 and under	640	24.9%	7	10.8%
Ages: 20-39	890	34.7%	39	60.0%
Ages: 40-59	615	24.0%	13	20.0%
Ages: 60-79	322	12.5%	6	9.2%
Ages: 80 and over	99	3.9%	0	0.0%
Ages: Not specified**	0	0.0%	0	0.0%
Area: Greater Sudbury	2,362	92.0%	61	93.8%
Area: Manitoulin District	76	3.0%	0	0.0%
Area: Sudbury District, North	14	0.5%	1	1.5%
Area: Sudbury District, West	69	2.7%	3	4.6%
Area: Sudbury District, East	46	1.8%	0	0.0%

*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, **1,283** cases have screened positive for a VOC in Sudbury and districts, of which **44** 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.

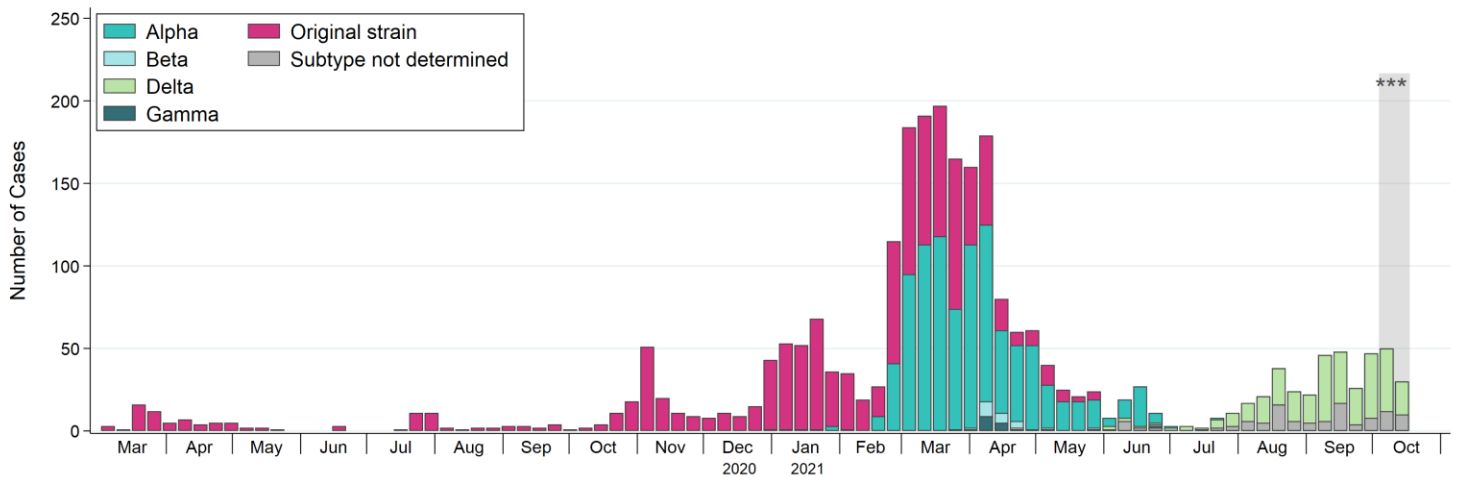
TABLE 2. Number of confirmed and probable COVID-19 variants of concern, by lineage / mutation

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	57	0
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(-)	244	44
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.

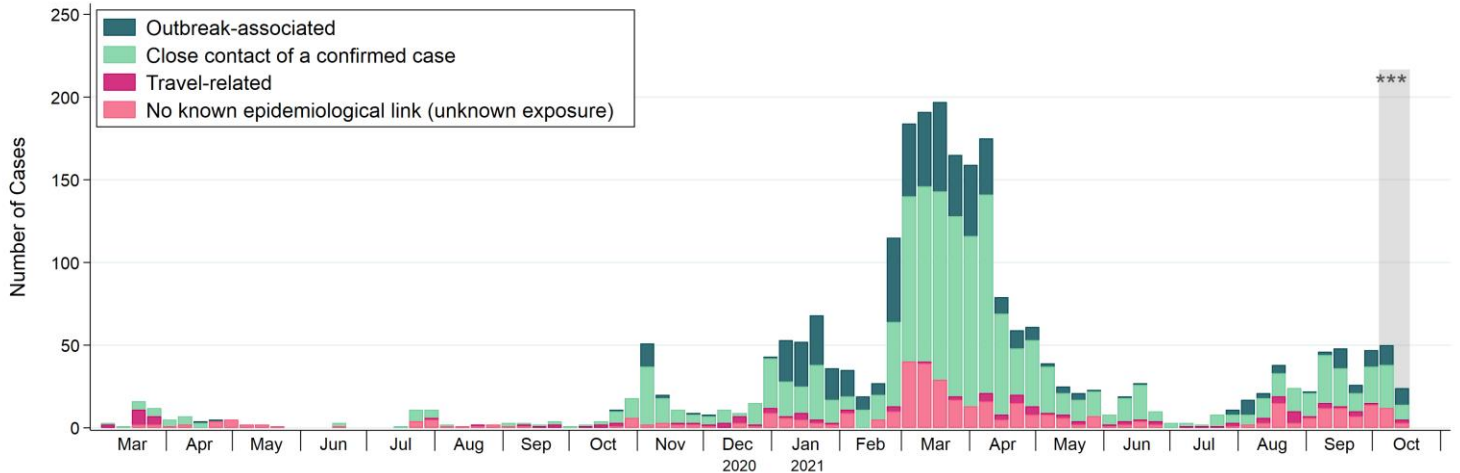
TABLE 3. Cases, by probable exposure, Sudbury and districts

Exposure	Total Cases	Percentage (%)	Active Cases	Percentage (%)
Outbreak-associated	576	22.5%	13	21.0%
Close contact of a confirmed case	1,454	56.7%	28	45.2%
Travel-related	116	4.5%	5	8.1%
No known epidemiological link (unknown exposure)	412	16.1%	10	16.1%
Under investigation	0	0.0%	0	0.0%

Data Source: Public Health Sudbury & Districts

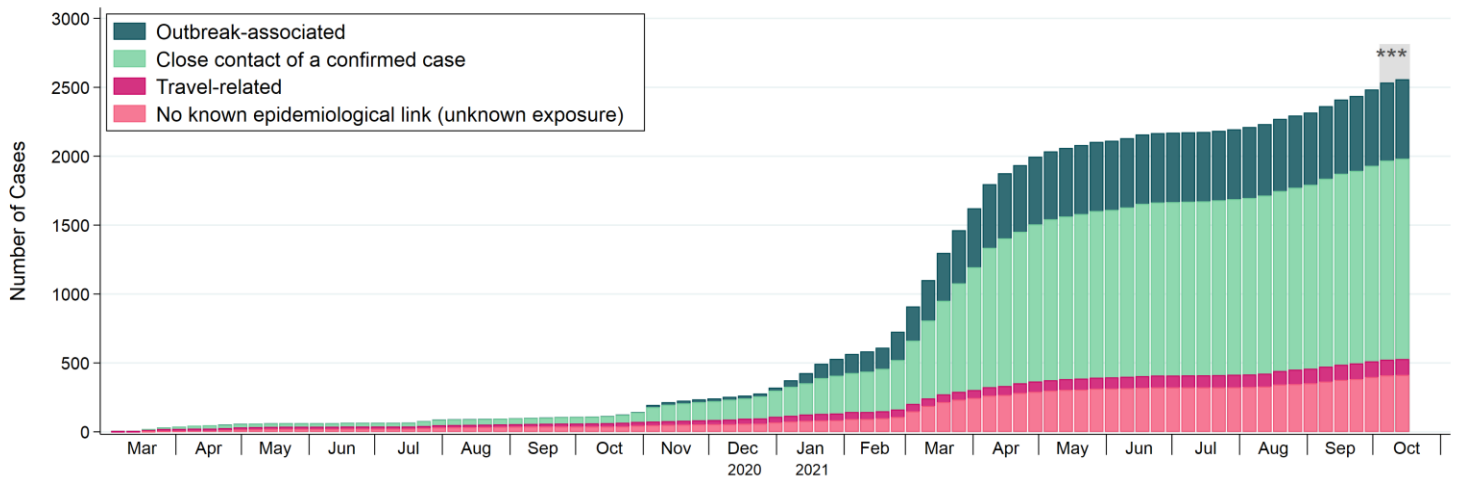
Figures 6 and 7, below, summarize the weekly and cumulative weekly COVID-19 case counts by the cases' probable exposure, respectively. The bars in the graph are stacked to illustrate the proportion of total cases each week that each exposure category represents.

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

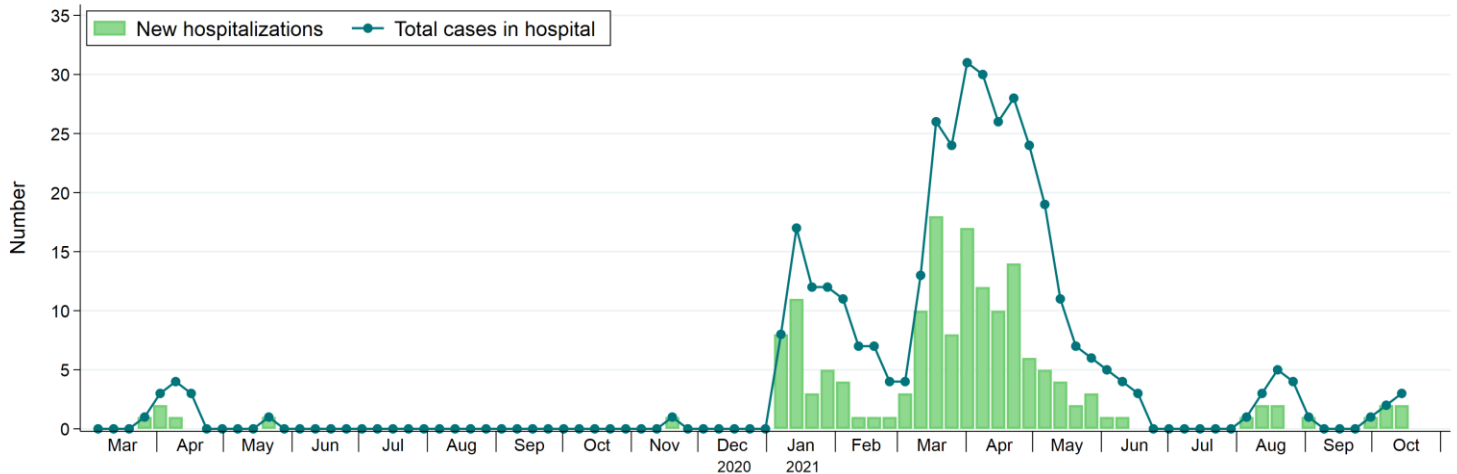


Weeks start on Monday and are the earliest of the following: the case's date of symptom onset, their date of testing, or the date the case was reported to public health. *** Infections occurring during this period may not yet be detected and/or reported. Cases for which the probable exposure is currently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

Hospitalizations

In total there have been **165** 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.

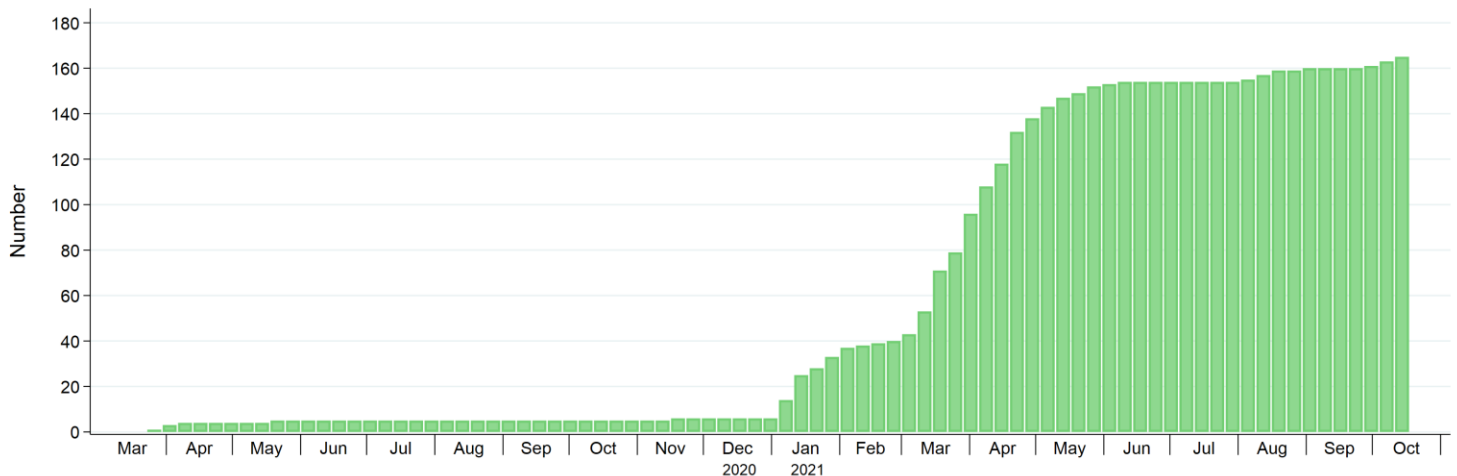
FIGURE 8. New and total COVID-19 cases in hospital, by week, Sudbury and districts



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



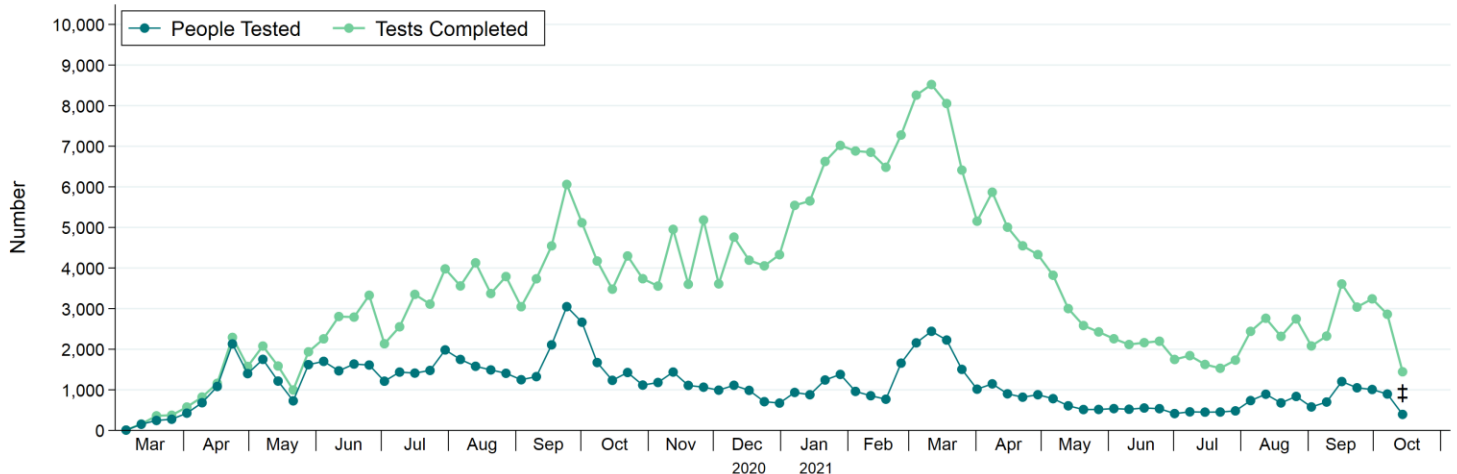
Weeks start on Monday. Cases hospitalized prior to acquiring their infection are counted only when they became an active case of COVID-19. These data exclude residents of other geographic regions receiving treatment at local hospitals unless their case is being managed by Public Health Sudbury & District.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

Testing

As of October 14, 2021, there have been **300,041** test 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.

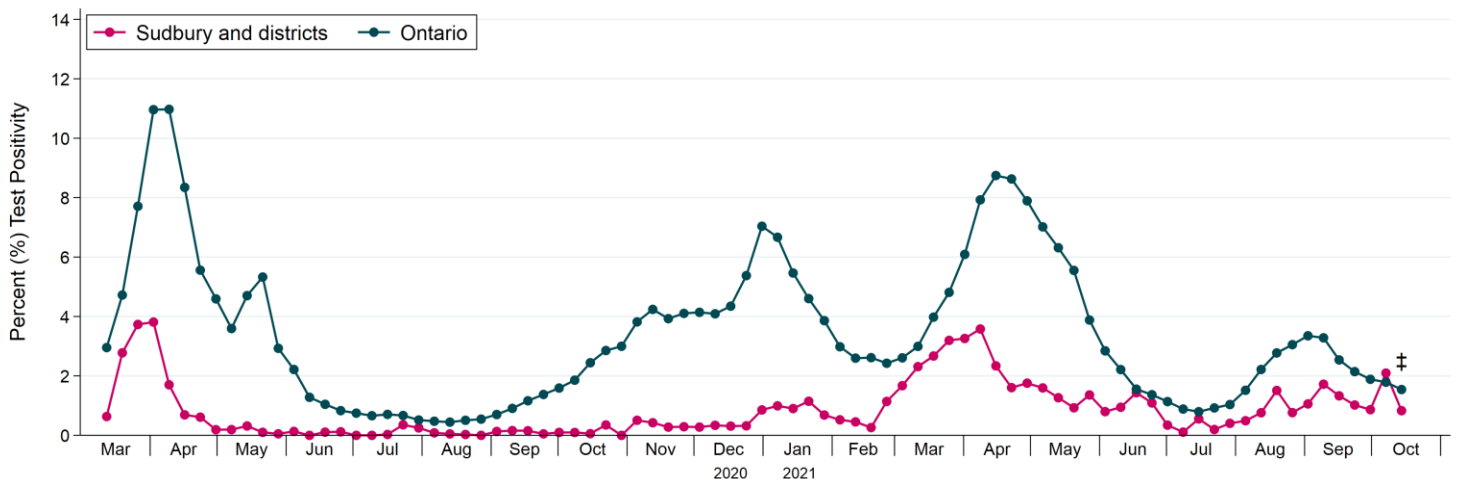
FIGURE 10. Number of tests and people tested, by week, Sudbury and districts



‡ 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, October 18, 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, October 18, 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 **32** COVID-19 outbreaks in local hospitals, long-term care homes and retirement homes.
- All outbreaks have now 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

There have been no active outbreaks in the past 7 days.

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 **32** COVID-19 outbreaks in area schools and licensed daycares.
- All outbreaks have now 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

There have been no active outbreaks in the past 7 days.

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 **51** COVID-19 outbreaks in community settings.
- Of the declared outbreaks, **6** are currently active, and **45** 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
Sudbury Jail	Correctional facility	Active	October 15	-
Peddlers Pub & Eatery	Workplace	Active	October 12	-
Memorial Park, Greater Sudbury	Community Public Setting	Active	October 12	-
Private Social Gathering	Private Social Gathering	Active	October 7	-
Sudbury Developmental Services	Congregate setting	Active	October 7	-
Lot 88 Steakhouse & Bar	Workplace	Active	October 6	-

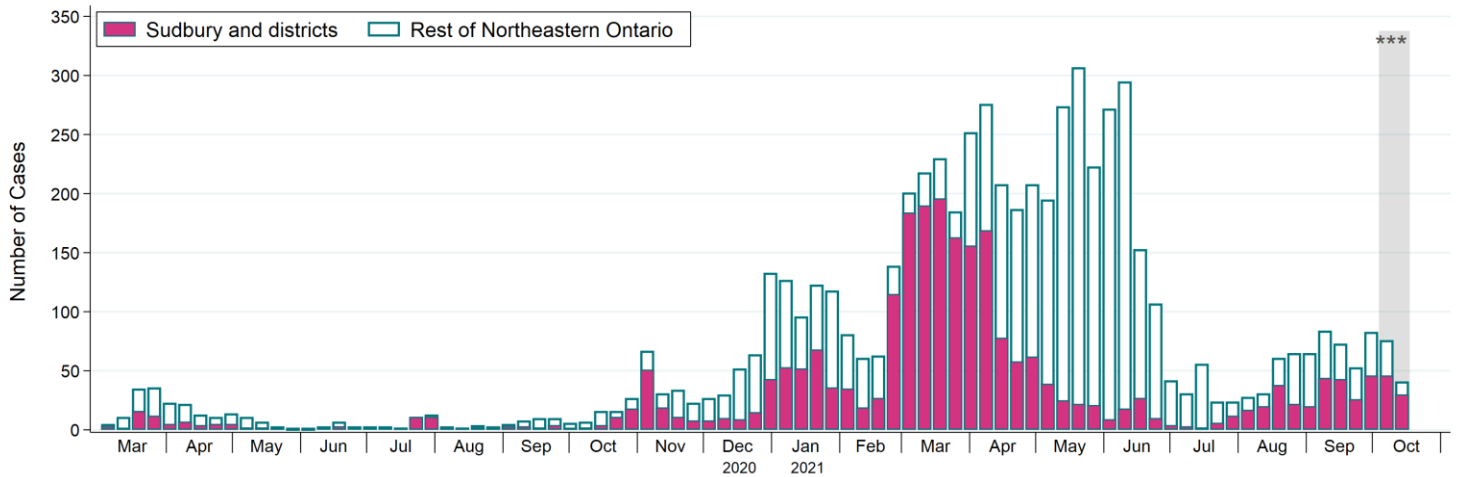
Data Source: Public Health Sudbury & Districts

Regional Context

Case Counts by Week

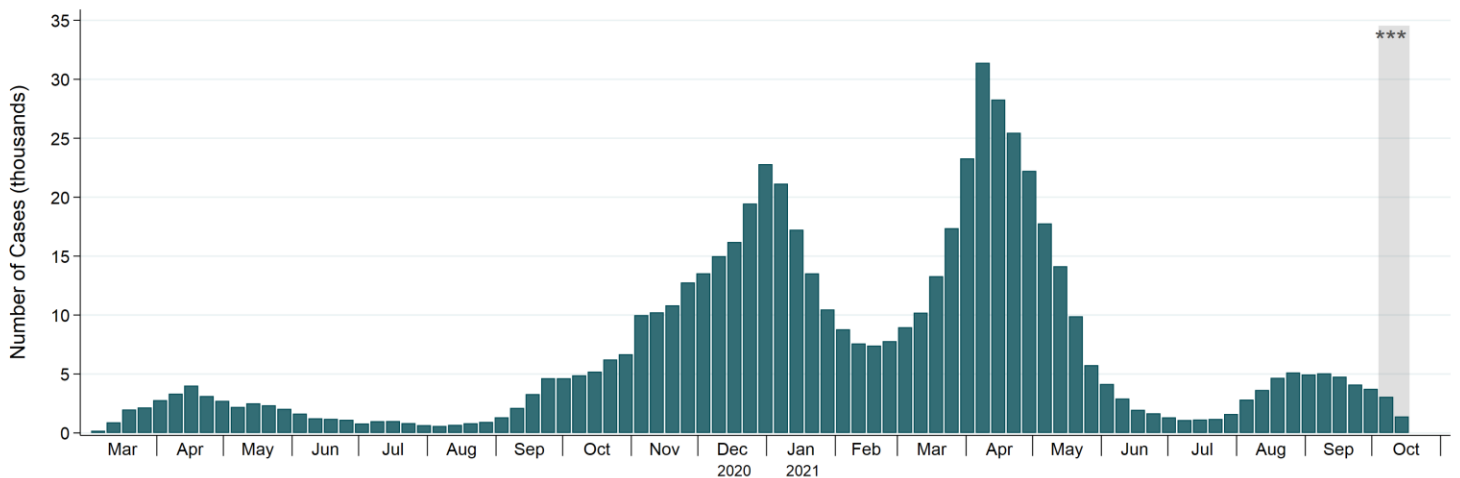
Figure 12, below, shows the number of new COVID-19 cases by week in both Sudbury and districts and Northeastern Ontario. Figure 13 shows the weekly count in Ontario overall. Note that the vertical axis in the Ontario graph is very different, since provincial case counts are much higher than local counts.

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: October 18, 2021)

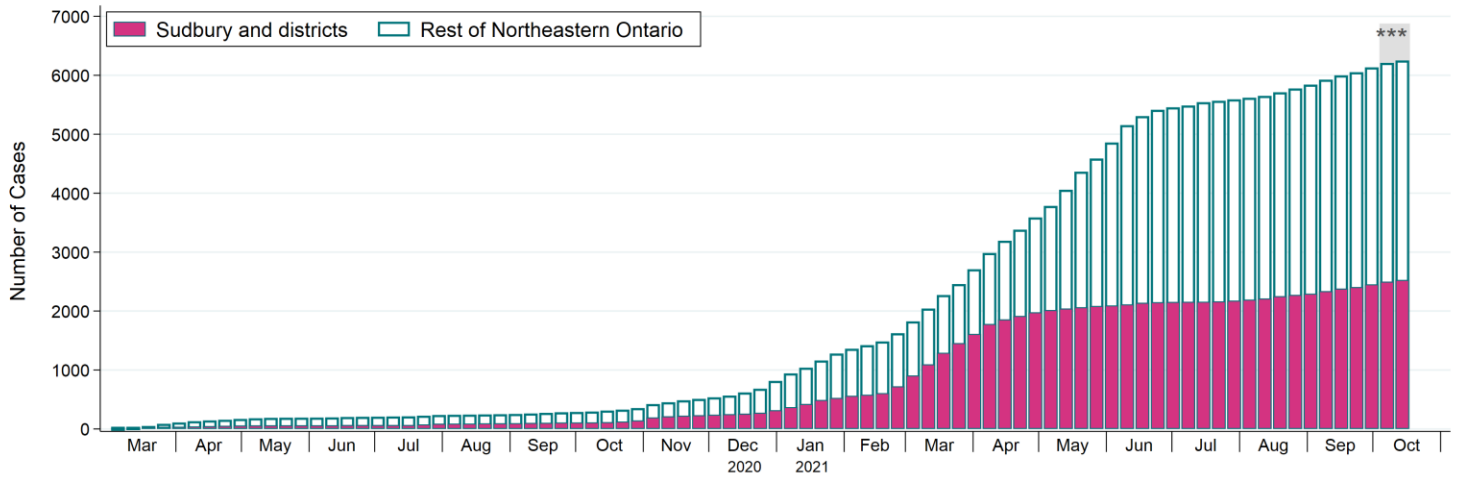
FIGURE 13. Confirmed COVID-19 cases, by week, Ontario



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: October 18, 2021)

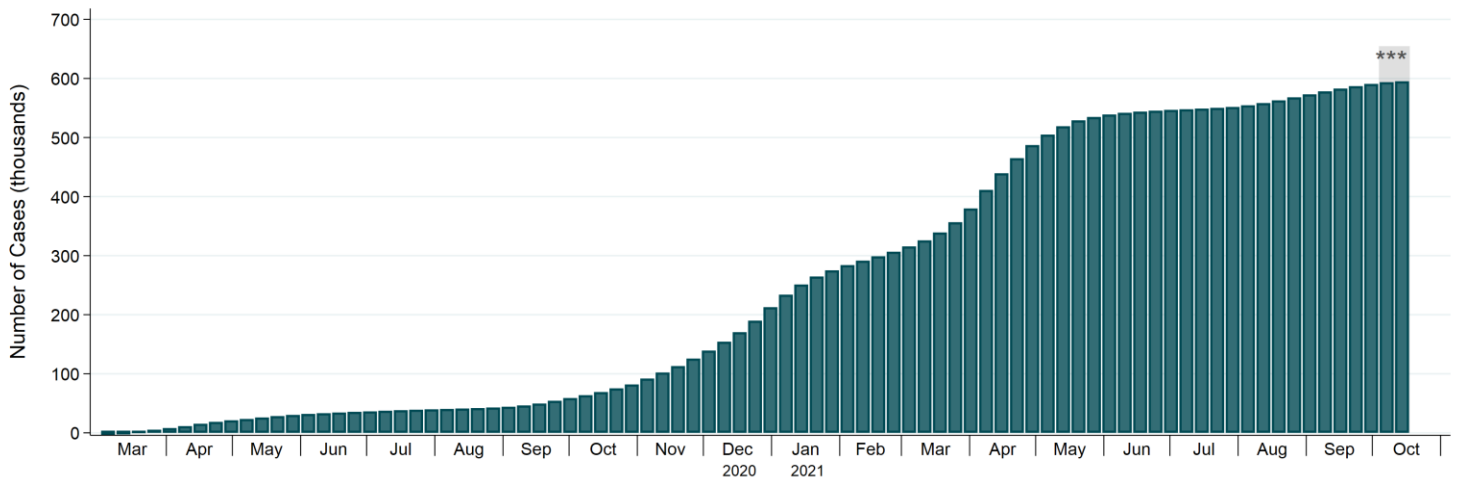
Figures 14 and 15 present a comparison of cumulative weekly case counts by region. Again, note the difference in the vertical axis for the Ontario graph.

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: October 18, 2021)

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

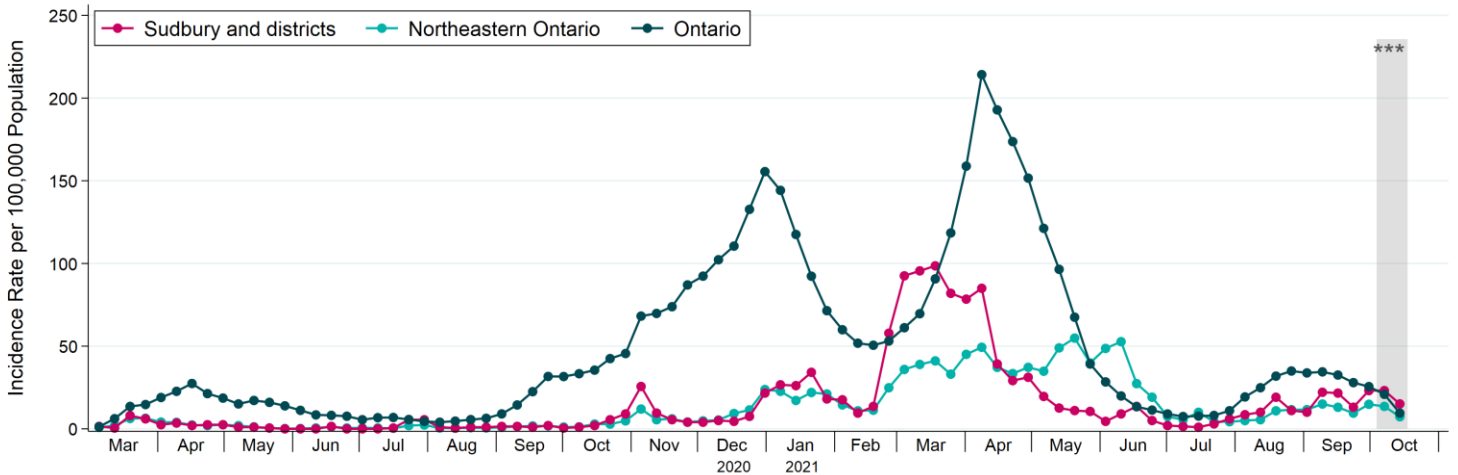


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Incidence Rates by Week

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: October 18, 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	1,676,846	4,461.0	34,802	92.6	1,642,044	97.9%	28,468	1.7%	October 15
Ontario	595,235	4,060.2	3,846	26.2	591,389	99.4%	9,815	1.6%	October 17
Northern Ontario	10,833	1,359.4	106	13.3	10,727	99.0%	153	1.4%	October 15
Northeastern Ontario	6,250	1,117.3	101	18.1	6,149	98.4%	80	1.3%	October 15
Public Health Sudbury & Districts	2,567	1,290.9	65	32.7	2,502	97.5%	31	1.2%	October 17

* 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	44,836,340	119,279	Not Available	Not Available	Not Available	Not Available	October 15
Ontario	16,438,360	112,129	3.5%	6,118,224	41,734	9.7%	October 16
Northern Ontario	1,103,629	138,488	1.0%	346,991	43,542	3.1%	October 16
Northeastern Ontario	766,072	136,944	0.9%	237,989	42,543	2.6%	October 16
Public Health Sudbury & Districts	300,041	150,887	0.9%	95,190	47,870	2.7%	October 16

* 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, October 18, 2021